CAPACITY BUILDING FOR A RESPONSIBLE MINERALS TRADE (CBRMT)

WORKING WITH PRODUCERS TO RESPONSIBLY SOURCE ARTISANAL GOLD FROM THE DEMOCRATIC REPUBLIC OF THE CONGO

MAY 2015

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COVER PHOTO: A miner pans for gold in Mukungwe, South Kivu. Photo credit for all photos used in this report: Shawn Blore

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ACRONYMS

3Ts	Tin, Tantalum, and Tunsgten
AGC	Artisanal Gold Council
ANR	*Agence Nationale de Renseignements*
ARM	Alliance for Responsible Mining
ASM	Artisanal and Small-Scale Mining
BGR	*Bundesanstalt für Geowissenschaften und Rohstoffe* (Federal Institute for Geosciences and Natural Resources)
CAMI	*Cadastre Minier de la RD Congo* (Mining Registry Office of the Democratic Republic of Congo)
CBMRT	Capacity Building for a Responsible Minerals Trade
CF	Congolese Franc
CEEC	Center of Expertise, Evaluation, and Certification (*des substances minérales précieuses et semi-précieuse*)
COMICA	*Coopérative Miniére des Creuseurs Affectés* (Namoya, Maniema Province)
DG	*Directeur Generale*
DGDA	*Direction Générale des Douanes et Accises* (Customs and Excise Directorate)
DRC	Democratic Republic of the Congo
EMMP	Environmental Management and Mitigation Plan
FARDC	*Forces Armées de la République Démocratique du Congo* (Congolese National Army)
FDLR	Democratic Forces for the Liberation of Rwanda
GDRC	Government of the Democratic Republic of the Congo
GPS	Global Positioning System
GSMD	Geological Survey and Mines Department
ICGLR	International Conference of the Great Lakes Region
IOM	International Organization for Migration
ITOA	*Initiative de Traçabilité de l'Or d'exploitation Artisanale* (Traceability Initiative for Artisanal Gold)
JMAC	Joint Mission Analysis Cell
LBMA	London Bullion Market Association

LSM	Large-Scale Mining
MONUSCO	*Mission de l'Organization des Nation Unies pour la Stabilisation en RD Congo* (United Nations Stabilization Mission in the DRC)
MOU	Memorandum of Understanding
NGO	Nongovernmental Organization
OECD	Organization for Economic Cooperation and Development
OGP	*Observatoire Gouvernance et Paix* (Peace and Governance Observatory)
PAC	Partnership Africa Canada
PDG	*Président Directeur-Général*
PE	*Permis d'Exploitation* (Exploitation Permit)
PR	*Permis de Recherche* (Research Permit)
PEPM	*Permis d'Exploitation de la Petite Mine* (Small-Scale Mining License)
PLG	*Permissao de Lavra Garimpeira*
PML	Primary Mining License
PPL	Primary Prospecting License
RCM	Regional Certification Mechanism
SAESSCAM	*Service d'Assistance et d'Encadrement du Small-Scale Mining* (Small-Scale Mining Technical Assistance and Training Service)
UN	United Nations
USAID	United Stated Agency for International Development
ZEA	*Zone d'Exploitation Artisanale* (Artisanal Exploitation Area)
ZRG	*Zone de Reserve Geologique*

1.0 EXECUTIVE SUMMARY

1.1 PURPOSE

The goal of this study was to analyze gold supply chains in the Democratic Republic of the Congo (DRC) for the Capacity Building for a Responsible Minerals Trade (CBRMT) project to determine how to promote responsible conflict-free sourcing of gold, and apply due diligence consistent with international best practices. The work included the following elements:

- A review of responsibly mined gold around the world to capture best practices, lessons learned, and opportunities for alignment based on similar international systems;
- Meetings with existing artisanal and small-scale mining (ASM) gold pilot projects and large-scale industrial gold operators in the DRC to identify best practices and challenges in establishing and scaling up legal export channels and supply chains for ASM gold from the region; and
- Assessments of the efficacy, cost, transparency, credibility, and sustainability of existing efforts to promote responsible conflict-free sourcing of artisanal gold from the DRC.

1.2 METHODOLOGY

- This study was conducted between August 20 and September 13, 2014.
- Research consisted of field visits and interviews in the DRC (South Kivu, North Kivu, Orientale, and Maniema), Uganda (Entebbe and Kampala), and Tanzania (Gaeta).
- Interview subjects included government officials, artisanal miners, gold traders and exporters, officials from large-scale gold mining companies, and members of civil society.
- The evaluation team collected extensive production data, tax rates, and map data during the field phase for analysis.

1.3 PRINCIPAL FINDINGS

Coercion versus Cooperation

- The precise amount of artisanal gold produced in the DRC is difficult to estimate, and ranges from 8 to 16 tons per year. Using a conservative estimate of eight million tons, and the DRC's current central government tax regime, at least $6 million in tax revenue is being lost annually.
- Industrial gold since 2012 now surpasses ASM production, with production from the two largest-scale industrial mines alone (Kibali and Banro) totaling approximately almost 20 tons in 2014.[1]
- Government of DRC (GDRC) efforts to formalize the artisanal gold sector have been essentially coercive, relying on a combination of regulation, taxation, and enforcement. These initiatives have provided few or no effective incentives to artisanal producers to enter or remain in the legal supply

[1] Federation of Enterprises of Congo, Mining Industry Annual Report 2014, The Chamber of Business of the DRC Chamber of Mines, 2014.

chain. As a result, the government has failed to win the cooperation of artisanal gold producers, gold traders, and exporters.

- Changing this situation will require far more than simple technical solutions. It will require that the policy environment in the DRC be addressed and key issues around taxation and mining tenure be examined and reformed, and different pilot models tested within this evolving reform context.
- Attempts to implement due diligence traceability schemes in the absence of incentives, policy reforms, and the cooperation of miners will not work. However, a combination of government incentives, the development of effective traceability measures, and other localized incentives incorporated into pilot projects (see below), could bring DRC artisanal gold back into legal channels.

Illegal Gold Flows

- About 97% of artisanal gold produced annually in the DRC exits the country illegally. On average, only 216 kg (of the estimated eight tons of artisanal gold) are declared for legal export. [2]
- Tax losses to the DRC exceed an estimated US $6 million. This illegal flow of artisanal gold is no longer driven primarily by differences in export tax rates, which have now largely equalized across the Great Lakes Region.
- Many of the drivers pushing DRC gold into illegal channels are driven by DRC provincial or national policies and taxation rates. These include:
  - Excessively high provincial taxation levels (in excess of 11% in most cases);
  - Lack of effective mining tenure for artisanal miners;
  - Lack of legal mine sites—of 662 active gold mine sites, only 18 (2.7%) are located in *Zones d'Exploitation Artisanales* (ZEAs), the areas considered legal by the GDRC; and
  - Illegal taxation by DRC government security forces (*Forces Armées de la République Démocratique du Congo* [FARDC], as well as illegal armed groups.
- Some drivers of illegal gold flows lie outside the GDRC's immediate control. These include:
  - Pre-financing networks tied to illegal buying networks (*négociant* networks), and
  - Countertrade networks (where gold is used as currency to facilitate intra-country or inter-regional trade, which is often illegal).

International Conference of the Great Lakes Region (ICGLR) Certification

Three elements are required for ICGLR Certification: validated gold sites, traceability, and a certification unit capable of verifying gold origin and traceability prior to export.

- The DRC lacks validated (green) mine sites:
  - Only 18 gold sites have been inspected;
  - Only six sites are currently green; and
  - Only three of the green validated sites are appropriate for a pilot project under CBRMT due to a deficiency of gold production, or lack of sufficient gold miners at the other three sites.
- The DRC currently lacks a functioning traceability system for artisanal gold that has proven to be scalable.

[2] 216 kg is the five-year average of DRC legal artisanal gold exports for 2005–2010. Source: Center of Expertise, Evaluation, and Certification (CEEC).

- Some traceability systems are currently in development, including the GDRC's *Initiative de Traçabilité de l'Or d'Exploitation Artisanale* (ITOA)—being developed by the Center of Expertise, Evaluation, and Certification (CEEC)—and the Better Sourcing Program/GeoTraceability system. These systems show promise but will function only if incentives for miners are properly adjusted. On their own, technical solutions will not effectively channel gold.
- CEEC is responsible for issuing certificates, but only the CEEC Bukavu office is capable of doing so. The CEEC offices in Goma, Kindu, and Kalemie have received some training in issuing certificates, but need at least one more session each to be fully competent. The CEEC offices in gold export points (including Bunia, Butembo, and Kisangani) have had no training in issuing certificates and will require extensive training (at least two sessions each) before they can be considered competent.

Regional Gold Flows/External Gold Networks

- Tax rates across the region have largely equalized and are no longer a significant driver of cross-border gold traffic.
- Countertrade (exchange of gold for commercial goods) between eastern DRC and Uganda continues to be a significant factor in cross-border gold smuggling.
- External gold smuggling networks located in Uganda still play an active role in the contraband movement of DRC artisanal gold.
- Some of the principal actors from these networks have expressed an interest in returning to the legal fold. This is a possibility that should be explored further.

Pilot Projects

- This report identifies a number of likely locations where pilot projects could be initiated.
- The goal of 80 sites is high and should be viewed as a long-term goal. To meet such a goal in the future, positive examples (successes) on a small number of sites will be an important first step. Between 10 and 20 sites is a more reasonable goal for the project. This will also allow the site selection process to be conducted more rapidly.
- The sustainability of any pilot will require buy-in by all stakeholders—most importantly by the miners, but also by GDRC stakeholders. The replicability of results will require more than downstream supply chain models or administrative capacity building for cooperatives on site; important incentives in the form of technical improvements and training of miners will also be needed.
- A variety of pilot project models were identified and strengths and weaknesses of each were elaborated. Pilot project models worth considering include:
  - FairTrade/FairMined,
  - Artisanal Gold Council Technical Assistance,
  - Partnership Africa Canada Trading House (Just Gold),
  - Contingent ZEA, and
  - Concession Holder-Cooperative.

1.4 IMPLEMENTATION MEASURES

Opening Conference—Kinshasa

- CBRMT should host a multi-day workshop in Kinshasa and invite senior government officials, large-scale mining (LSM) companies, *comptoirs*, experts in artisanal mining and its economic impacts, and experts on gold taxation.

- Conference presentations should seek to convey the following messages:

  - The DRC artisanal gold sector is an industry, and by far the largest gold producer in the country. It provides livelihoods for hundreds of thousands of miners but also contributes significantly to the financing of armed groups and criminal elements of the FARDC, while representing a loss of important tax revenue for the GDRC.
  - The artisanal industry requires a supportive policy framework, including security of mining tenure and reasonable levels of taxation.
  - Only by working cooperatively and by finding economic incentives with the ASM industry can the GDRC hope to legalize and formalize the sector.
  - The artisanal gold industry can be an engine of development.

- Conference goals should include the following:

  - A commitment from the Minister of Mines, the *Cadastre Minier de la RD Congo* (CAMI), and provincial governors to expedite the creation of at least 50 new ZEAs;
  - A commitment from DRC officials to implement a simple and transparent process for creating new ZEAs;
  - A written *protocole d'accord* template for LSM concession holders wishing to allow an ASM producer to operate on their concessions;
  - A commitment from each of the LSM companies to host at least one CBRMT gold pilot project on sites within their concessions;
  - A commitment from the International Organization for Migration (IOM)/United Nations Stabilization Mission in the DRC (MONUSCO) and the German Federal Institute for Geosciences and Natural Resources (BGR) to expedite validation missions to those ZEAs and other sites targeted for pilot projects; and
  - A commitment from provincial governors and other involved government services who generate fees or taxes to adjust provincial taxation rates or their fees.

Provincial Workshops—Taxes, Taxes, and Fewer Taxes

- CBRMT should hold multi-day workshops in each of the provincial capitals of Kisangani, Bukavu, Goma, and Kindu focused on:

  - A general understanding of what kinds of taxes work for gold production and provide incentives for lawful and responsible mining, what kinds do not, and how best to apply taxation to the artisanal sector; and
  - The threat posed by illegal taxation by the FARDC and illegal armed groups.

- Goals of the conference should include:

  - A commitment from provincial governors to eliminate the *négociant* tax;
  - A discussion with provincial governors regarding the reduction or elimination of provincial production taxes and replacing it with a "site" or "installation" tax;

- A commitment from the heads of the security services (FARDC, National Congolese Police [PNC], and *Agence Nationale de Renseignements* [ANR]) that they will not tolerate illegal taxation on any CBRMT pilot site; and
- A concrete solution to the challenge posed by "illegal" *chefferie* taxes.

Getting Things Going—Site Selection Study

- CBMRT should conduct a detailed site selection study.

Coordinating with IOM and other GDRC Ministries of Mines

- CBRMT should coordinate with officials at IOM and provincial and national Ministries of Mines to prioritize validation missions to pilot sites identified by the site selection study.
- The IOM plans for protected sales points (*pointes de vente*/*centres de négoce*) should be coordinated closely with CBRMT plans for pilot projects.

First Engagement with Cooperatives – Basic Training

- CBRMT should undertake a program of basic administrative training for targeted pilot project cooperatives. Topics should include basics such as keeping a list of members, collection and recording of dues, issuing receipts, opening and maintaining a bank account, and keeping and preparing minutes of meetings.
- DRC's civil society is a natural partner in this training effort.

Production Monitoring – Forms and Training for Cooperatives

- CBRMT should develop a common set of tools to help cooperatives collect production statistics and monitor production for exploitation done by their cooperative members.
- CBMRT should then train targeted cooperatives on how to use these forms to collect appropriate statistics.

Research on Finance

- CBRMT should commission a team—a micro-lending expert with an ASM expert—to evaluate how a system of production finance could be developed.

Pilot Project Models

- CBRMT should assemble identified stakeholders around each pilot model and sketch out a plan of action for bringing that pilot into being.
- There should be concrete implementation plans at one or more test sites for each of the pilot site models.

Regional Work – Exploring the Rehabilitation Option

- CBRMT should also explore the option of working with the Kampala-based regional gold traders in an effort to put their purchasing power to work in rehabilitating illicit gold networks.

Regional Work – Regional Mines and Customs Workshop

- CBRMT, in conjunction with the ICGLR and its technical partners (GIZ, Partnership Africa Canada [PAC], BGR), should sponsor a workshop of regional government officials directly involved in the processing of exports or imports of gold. These would include officials from countries such as the DRC, Uganda, South Sudan, Rwanda, Burundi, Tanzania, and Kenya.

Regional Work – Strengthening Entebbe Airport Controls

- CBRMT, in conjunction with USAID/East Africa, should sponsor a workshop of key ministries involved in supervising gold exports via Entebbe Airport. The goal of the meeting would be to tighten security procedures at the airport, with a view to curbing the incidence of illegal gold exportation via hand carry or cargo transport.

Regional Work – Countertrade and Money Flows

- CBRMT should work through USAID/DRC to make its colleagues at USAID/East Africa, the US State Department, and the US Treasury Department aware of the existence of the countertrade financial network between eastern DRC and Uganda, and its possible connections to untraced money flows and money laundering from elsewhere in the world.

2.0 THE DRC ARTISANAL GOLD INDUSTRY

The artisanal and small-scale mining (ASM) industry for gold in the Democratic Republic of the Congo (DRC) is vast. It is a major employer, a potential major source of tax revenue, and a potential engine of development for the Democratic Republic of the Congo (DRC). Unfortunately, over 97% of the ASM gold industry in the DRC is informal, extralegal, or illegal. Most artisanal gold producers are unregistered, most of the sites where they work are not authorized for artisanal mining, and the vast majority of artisanal gold is sold through clandestine channels and exported from the country illegally.

In addition, a portion of artisanal gold production is subject to illegal taxation by rogue elements in the police, secret service, and army. As a result, a portion of artisanal gold production, either via taxation or direct control, serves to finance various rebel groups and local militias that plague the eastern DRC. Exactly how much illegal gold finances each category of armed group is difficult to confirm with any precision. The United Nations Group of Experts, in their 2012 report, however, documented a case where the leader of the M23 exported 325 kilograms (kg) of gold, worth nearly $15 million.[6] The total of gold sales by armed groups is surely much more. The more recent 2014 report states that "between 1 January and 30 June 2014 five *comptoirs* exported 151 kg of gold produced by artisanal and small-scale miners in the country. The UN believes that this figure is far below actual [illegal] export levels and is indicative of the lack of progress in combatting smuggling in 2014."

Instead of serving as an engine of development, a vast portion of DRC's artisanal gold continues to fuel the corruption, instability, violence, and armed conflict that are seemingly endemic to the eastern DRC. While that is admittedly a discouraging starting point, opportunities do exist to rectify this situation, and will depend heavily upon political will and support within Government of DRC (GDRC).

Although the DRC, to some extent, has fallen victim to the predatory taxation policies of its eastern neighbors, that situation has now largely been rectified as tax rates have been harmonized or reduced across the region. The problem now lies within the DRC, particularly the taxes imposed at the national and provincial levels on ASM gold production, which serve to drive the trade underground. The imposition and lack of clarity surrounding the legality of provincial taxation of ASM gold further compounds the problem. This is regrettable, but it also means that targeted and appropriate governance reforms stand a strong chance of bringing DRC's gold into legal channels that could generate significant taxable income. This report elucidates a range of policy options and practical implementation measures the GDRC and its partners (USAID and other donors) could follow in charting a path from the current situation toward a path of legal responsibly mined and traded artisanal gold from the DRC.

One key finding concerns the approach: nearly all DRC efforts to date to bring artisanal gold into legal channels have involved some combination of either tighter enforcement or more stringent regulations. Essentially coercive in nature, these initiatives have provided few or no incentives to artisanal producers to enter or remain in the legal supply chain. As a result, they have consistently failed to win the cooperation of artisanal gold producers, gold traders, and exporters. A new approach is needed, one based on gaining the cooperation of artisanal producers via incentives— particularly incentives related to taxation, mining tenure, and improved production through technological interventions. By providing these

6 Final Report of the Group of Experts, 2012, S/2012/843, para. 141.

incentives, DRC authorities can transform artisanal producers into willing participants in efforts to track and regulate the flow of ASM gold. Without their active cooperation, efforts to track and trace artisanal gold production are not likely not succeed.

The *Initiative de Traçabilité de l'Or D'exploitation Artisanale* ([ITOA] or Traceability Initiative for Artisanal Gold), recently developed by the Center of Expertise, Evaluation, and Certification (CEEC), is a case in point. In its current form, the ITOA envisions a low-tech solution to the challenge of gold traceability via tamper-proof envelopes, forms, and agents to fill in and supervise the data collection, envelope sealing, and transport. The costs of the envelopes and supervisors are to be passed on to producers and traders. While there is nothing inherently wrong with low-tech traceability, the ITOA system offers no incentives to artisanal producers or traders to participate. DRC government officials argue that is the duty and legal obligation of producers and traders to declare and trace their gold. By the letter of the law, this is true. However, producers take a more calculated view, adding up the costs of government taxation and regulation and balancing them against the benefits they receive from government. As a result, the majority of ASM producers decide to remain in the informal sector. Without additional incentives, the ITOA as currently conceived is unlikely to prove successful.

Thus, while regulation is clearly necessary, it can only work with the willing participation of those being regulated. To win that cooperation, this report strongly recommends making use of incentives as well as penalties, so that in addition to the somewhat empty threat of government penalties, artisanal producers, traders, and exporters will have some positive incentive to cooperate with government efforts to legalize the flow of DRC artisanal gold.

The need for a new vision of the artisanal industry, with a clearer legal framework and a reformed tax structure, is a second important conclusion not only of this report but also of the recent Alliance for Responsible Mining (ARM) assessment of conflict gold minerals in the DRC.[7]

These findings are highlighted in various ways in the following sections of this report.

- The remainder of Section 2 briefly describes the ASM sector—its size, taxation potential, and the basic schematic of the gold chain and its various actors. A basic understanding of the chain, its actors, and the profit margins and percentages at various points in the chain is crucial to the sections that follow.
- Section 3 describes the internal barriers to legal gold exports. As noted above, most of these involve inappropriate governance, and should be amenable to reform.
- Section 4 describes the external barriers to legal gold exports. Here the convening power of USAID and other international partners can play a strong role in engendering the necessary reforms.
- Section 5 describes various concrete pilot projects that can be undertaken, including specific locations where such pilots can be established.
- Section 6 proposes concrete next steps that would enable the CBRMT to support pilot gold projects, beginning with policy and tax questions and moving on to more technical implementation aspects.

Note that reforming the policy framework for artisanal mining in the DRC, particularly as it pertains to artisanal gold, will be of critical importance to support implementation efforts. Getting the policy framework right—in particular taxes and tenure—is vital to giving actors in the ASM gold sector serious incentives for legalization. However, focusing exclusively on policy reform runs the risk of leaving pilot projects hostage to potentially slow process of governance reform. It also discounts the strong possibility

7 Alliance for Responsible Mining, Conflict Minerals Assessment in the DRC: Main Report, USAID/IOM Regional Office (DRC), September 2014, page 9–10.

that working pilot projects, and the example they provide, might be the strongest impetus to reform. The optimal strategy may be to follow a two-track approach—pursuing pilot projects and policy reform simultaneously. The tax and other policy solutions should be achieved provisionally for pilot project sites, and then extended to the rest of the artisanal gold sector as their efficacy is demonstrated via the pilots.

2.1 THE ASM GOLD INDUSTRY – ACTUAL PRODUCTION AND LOST TAX REVENUE

Vast as it may be, there are few accurate statistics on the value of DRC's artisanal gold industry. Estimates of the DRC's annual artisanal gold production have ranged from 6 tons to as high as 40 tons.[8,9] For years, DRC artisanal gold transited illegally to neighboring countries with lower tax rates, notably Uganda and Burundi. The best estimate for the DRC comes from the combined exports from Uganda and Burundi for 2006 (the last year before UN attention began to cause exporters to disguise these figures); these amounted to 11.5 tons.[10] Subtracting 1 ton that could have come from these countries' domestic production, and another 25% for safety's sake, yields a very conservative estimate of almost 8 tons per year. This is likely less than DRC's actual production, but can serve as a basis for tax and revenue calculations.

With this very conservative estimate, and using the DRC's current central government tax regime, one can calculate the potential taxes that would accrue to the GDRC were this gold production legally declared and exported. [11] As shown in Table 1, if current tax rates were applied to 8 tons of production annually, the result would be a total of $6.4 million per year: $3.2 million divided among the producing provinces, $1.6 million in *droits de sortie* (exit fees), and $1.6 million in fee-for-service taxes (*taxes rémunératoires*), to be divided up among the various service agencies. The CEEC alone would net just over $1 million.

Comparing these figures with the DRC's actual declared gold exports, as given in Table 1, shows just how much revenue the DRC is losing each year—over 97% of potential revenue accrual, or some $6 million per year, at a minimum. [12]

While these numbers are estimates only, Table 1 clearly illustrates that the DRC's current set of policies with respect to artisanal gold mining are inadequate: legally declared exports are less than 3% of the total, at best. Each year, at least $6 million in tax revenue is being lost. In summary, the DRC does not have any accurate statistics, production figures, or even estimates of what the potential production and revenues from a legal trade in ASM gold could yield, nor do they have a legal and policy framework to effectively govern and regulate the sector.

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8 Report of the Secretary-General pursuant to paragraph 8 of resolution 1698 (2006) concerning the DRC (UN Group of Experts, S/2007/68), p. 10.

9 Final report of the Group of Experts on the Democratic Republic of the Congo S/2009/603, p. 32.

10 De Koning, R., Conflict Minerals in the Democratic Republic of the Congo: Aligning Trade and Security Interventions, Stockholm International Peace Research Institute, June 2011, p 12.

11 *Arrêté Interministériel* 459 of 14 November 2011.

12 216 kg is the five-year average of DRC legal artisanal gold exports for 2005-2010. Source: CEEC.

TABLE 1: ACTUAL AND POTENTIAL ARTISANAL GOLD TAX REVENUE

	DRC Estimated Production		DRC Declared Exports[13]	Rate of Declaration	Lost Revenue
Estimated ASM Production (g)	8,000,000		216,000	2.70%	
Average Price (US$/g)	$40.00				
Total of Taxes at Export	2%				
Potential Export Tax Revenue	$6,400,000		$172,800	2.70%	$6,227,200
DRC Export Taxes	**Percent**	**US$**	**US$**		
Taxe Provinciale	1%	$3,200,000	$86,400	2.70%	$3,113,600
Droits de Sortie	0.5%	$1,600,000	$43,200	2.70%	$1,556,800
Taxes Rémunératoires	0.5%	$1,600,000	$43,200	2.70%	$1,556,800
Taxes Rémunératoires divided as follows					
• *Service Relevant du Ministère Mines*	23%	$368,000	$9,936	2.70%	$358,064
• DGDA	4%	$64,000	$1,728	2.70%	$62,272
• CEEC	65%	$1,040,000	$28,080	2.70%	$1,011,920
• OCC	1%	$16,000	$432	2.70%	$15,568
• OGEFREM	0%	$—	$—		$—
• *Trésor Publique*/DGRAD	7%	$112,000	$3,024	2.70%	$108,976

To be clear, DRC policy has been designed not to encourage ASM but rather to discourage (or at best tolerate) the practice, to foster a favorable investment climate for large-scale mining (LSM) projects for gold, which DRC authorities believe will bring both tax revenue and development. This policy has been followed consistently for almost a decade, with significant results: in 2012, one large-scale company (Banro) came online, and in 2014, Kibali Gold in Orientale Province became the largest gold mine in Africa. The two companies produced just under 20 tons of gold in 2014. However, two of the other three LSM companies active in the DRC (Loncor and KiloGold) have essentially shelved plans to further expand and develop their existing concessions.

Artisanal Miner, Maniema

The LSM industry has been the target and beneficiary of DRC mining policy levers for years. Nonetheless, after nearly 10 years, total production is somewhere between 12–25% of what the ASM industry produces under an unfavorable policy regime. The artisanal sector, as noted above, also plays a critical role in the economy as it employs a vastly greater number of people than the LSM sector. The DRC needs an approach that recognizes the size and importance of the artisanal gold industry (both in terms of production and employment), fosters cooperation between industrial and artisanal gold producers, and provides concrete incentives to ASM producers to encourage the legal production, sales, and export of artisanally produced DRC gold.

[13] 216 kg is the five-year average of DRC legal artisanal gold exports for 2005–2010. Source: CEEC.

2.2 THE ARTISANAL GOLD SUPPLY CHAIN IN THE DRC

A simplified schematic of the typical ASM gold supply chain in the DRC is presented in Figure 1. Beginning at the pit or tunnel, miners are organized under a pit boss and cooperative, or—more likely—a *Président Directeur Général* (PDG), or someone who has gained customary, informal and/or legal rights to control a particular site. In the graphic, the supply chain proceeds from left to right with Category B *négociants* (also known as *petits négociants*, commissionaires, or managers) to Category A *négociants*, and then exporters (possibly a legal *comptoir*, although more likely an illegal export house), to regional buyers and then the international market place.

The numbers in red represent the typical price paid for gold at each step, expressed as a percentage of the world market (London Bullion Market Association [LBMA]) spot price. A typical value is given in Figure 1, although these numbers vary in practice. Table 2 provides the ranges encountered at each of these steps in the chain.[14] What both figure and table show are generally increasing volumes of gold per transaction as one moves up the chain, with concomitantly decreasing margins: a Category B *négociant* at the pit side moves small quantities of material (often half a gram or less) at relatively high margins, while a regional buyer in Entebbe moves larger quantities (1–10 kg) at narrower margins.

As indicated by the blue arrows—representing gold flows— gold often leapfrogs over one or more actors in the chain. Miners sometimes sell directly to Category A *négociants*. Category A *négociants* frequently act as illegal exporters (particularly in Bukavu, where the bus trip to Bujumbura is quick and inexpensive). Legal and illegal tax points along the chain are indicated by blue and red boxes. Miners and pits are subject in most provinces to a provincially sanctioned production tax of 10% (collected by the *Service d'Assistance et d'Encadrement du Small-Scale Mining* [SAESSCAM]) and often an illegal—or at least unsanctioned—local or *chefferie* tax of about the same amount. As the first row in Table 1 demonstrates, miners successfully avoid paying the production tax more than 97% of the time, making the 10% production tax largely useless as a revenue collection device. Unfortunately, what the production tax does manage with great efficiency is to drive ASM gold production underground, greatly inhibiting the collection of the 2% tax at export. (Taxation issues are dealt with below in Section 2.4.)

Négociants in most provinces are legally subject to a 1% tax on their sales volumes (3–5% in Maniema). This, too, largely goes unpaid, and serves to drive gold flows further underground. In addition, although the security situation in the eastern DRC is improving all the time, many *négociants* are subject to illegal taxation at road barriers erected along the access routes to mine sites or mining villages. The culprits are most often the security services: FARDC, PNC, and ANR. Any gold subject to this kind of illegal taxation is of course yellow-flagged under both the International Conference of the Great Lakes Region's (ICGLR) Regional Certification Mechanism (RCM), as well as the Organization for Economic Cooperation and Development's (OECD) Due Diligence Guidance, making its ultimate destination in the black market a certainty.

[14] Values in this table courtesy of Partnership Africa Canada (unpublished data).

FIGURE 1: DRC GOLD SUPPLY CHAIN

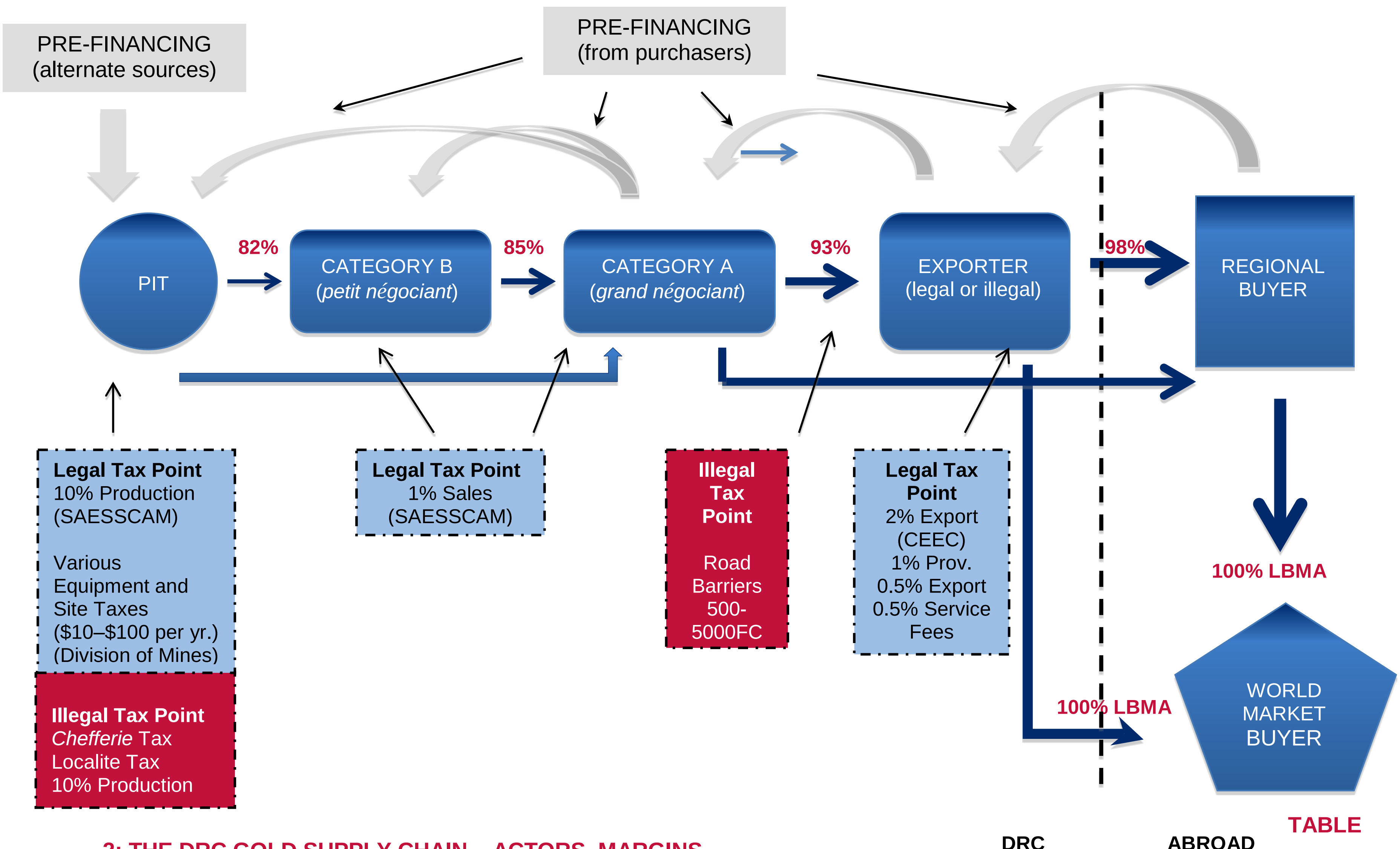

TABLE 2: THE DRC GOLD SUPPLY CHAIN – ACTORS, MARGINS,

VOLUMES

Increasing Volumes per Transaction →→→						
Actor	**Miner/ PDG**	**Category B** ***Petit Négociant***	**Category A** ***Grand Négociant***	**Country Exporter**	**Regional Buyer**	**World Market Buyer**
Location	Mine Site	Supply Village	Local Service Centre	Country Hub	Regional Hub	International Entrepot
Example Locations	Akwe	Ega Barriere	Bunia	Butembo	Entebbe	Dubai
Volume (g)	0.167	0.1–5	1–50	250–2,000	1,000–10,000	1,000–10,000
Frequency	Per day	Per purchase	Per purchase	Per purchase	Per purchase	Per purchase
Purchase Price (as % of LBMA)						
Range	n/a	75-88%	84-90%	89-94%	97-98%	99-100%
Typical	n/a	82%	85%	93%	98%	100%
←←← Increasing Margins per Transaction						

Sources: Data on miner daily production volume, and % of LBMA at various points in the chain courtesy of Partnership Africa Canada (unpublished data).

Ore Crushing, South Kivu

The light gray arrows in the figure show the flows of pre-financing money that facilitate both the production and the purchase of ASM gold in the DRC. As the figure attempts to show, much of the sales network is pre-financed, with funds originating with either the exporter or the external regional buyer. There are some exporters and some Category A *négociants* who work with their own capital, but these are a minority. Category B *négociants* are almost exclusively pre-financed, working on a commission basis (hence the name "commissionaire") with funds advanced by a grand *négociant* or exporter.

At the pit level, PDGs and pit bosses are usually pre-financed; sometimes *négociants* advance funds, and sometimes these come from relatives, local businessmen, or other partners. The difference here is crucial. Gold produced with *négociant* pre-financing is pledged to that *négociant* and thus captive to a clandestine sales chain before it even leaves the ground. Gold produced with alternative pre-financing can be sold into the legal market if the tax and price incentives can be appropriately adjusted.

Finally, it is worth noting that most ASM gold production in the DRC is still very much a manual activity. Mechanization is rare. Ore is dug from the earth with shovels, picks, hammers, and iron mine bars. It is then manually ground to a powder with a mortar and pestle, which often is made up of a pair of rocks, or an old iron tire-rim on a concrete floor. Gold is then extracted from this powder via a sluice, mining pan, and washing pool, either with or without the addition of mercury (depending on the ore source).

However, mechanization is coming. With the relative stability of the DRC over the past five years, new players have begun arriving on the scene. Tanzanian-style ball mills are crossing the border; these are now particularly common in Orientale. Chinese river dredges (of questionable legality) populate the rivers of Ituri, South and North Kivu. There is even a Brazilian-style hydraulic land dredge near Nia Nia in Orientale.

Panning for gold, Mukungwe, South Kivu

This incipient mechanization presents an opportunity. One of the more promising strategies for encouraging legalization—favored by PAC and the Artisanal Gold Council (AGC)—involves using mechanization as an incentive to coax artisanal miners back into the legal gold circuit. Opportunities to engage with miners through equipment upgrades and the possibility of providing more efficient mining techniques offers leverage points.

However, if current trends are any indication, the time to act on this strategy is now. Five to seven years from now, the DRC ASM industry may have largely mechanized on its own.

3.0 BARRIERS TO LEGAL CERTIFIED GOLD – INTERNAL BARRIERS

3.1 THE ICGLR REGIONAL CERTIFICATION MECHANISM

One key goal of the CBRMT project is to support and scale up legal artisanal gold production in the DRC, according to the standards of the ICGLR's RCM. The RCM demands:

1. **Validated (green-flag) mine sites**

   The mine from which the gold originated has to be inspected annually by a government mine inspector. The inspection is crosschecked by an annual independent third party audit. If yellow-flagged, operators have six months to resolve the situation. If red-flagged, the mine is "prohibited from producing minerals for a minimum of 6 months." The mine remains red-flagged until a validation mission can confirm the infractions are resolved.

2. **Traceability**

   There must be a chain of custody system that can be tracked from mine site to point of export, via traceability or a chain of custody system that can account for the gold along every step in the chain from miner to exporter.

3. **Certification at Export**

   For every export, a government agent (i.e., from the CEEC) must review the origin and traceability of all gold in the lot to ensure the gold came from a green mine site and was tracked from mine site to exporter.

ICGLR Certificate, DRC version

Certainly, there ***are*** barriers: at present only five green-flagged gold mine sites exist in the DRC; there is no functioning traceability system in place for gold. While the North Kivu, South Kivu, and Maniema offices of the CEEC have been trained on issuing ICGLR certificates, other divisions such as SAESSCAM and the Provincial Division of Mines have not been adequately trained. They lack the capacity to manage the CEEC software and complete the forms properly. At the most basic level, CBRMT could focus on three elements: (1) increase the number of government validation missions for gold sites; (2) support the establishment of a credible, transparent, and efficient traceability system; and (3) increase certification training for

CEEC export offices. Certainly, these elements can and should be part of the CBRMT project. However, they are only one component of what needs to be an integrated solution.

By way of contrast, Dodd-Frank Section 1502 and the OECD guidance provided the necessary “stick” at the international level to instigate change for the 3Ts (tin, tantalum, and tunsgten). Smelters in the 3T chain were a natural and highly visible choke point. Moreover, Dodd-Frank-compliant smelters were willing to pay a premium for tracked and certified material, which provided a large financial carrot. Once the technical challenges of inspections and traceability were overcome, there was a strong financial incentive pushing conformity. With the 3Ts, conformity with due diligence brings a financial pay off.

For gold, the situation is different. There are few natural choke points in the gold supply chain; gold is a highly fungible metal, and by long tradition, the functional equivalent of money. Although outreach work on due diligence standards has begun in large trading hubs such as Dubai, international traders and final consumers continue to have little knowledge of or respect for the sourcing standards of the Dodd-Frank law or the OECD guidance. Legal conformity in the current DRC policy regime brings with it paperwork, fees, taxes, extortion, and the possibility of being robbed. For DRC artisanal gold, conformity with government regulations and due diligence regulations is costly. Circumventing these requirements brings substantial financial rewards.

Due to perverse economic incentives, DRC gold has never been legally declared in its vast majority—not before Dodd-Frank, nor after. Indeed, since the advent of Dodd-Frank, OECD guidance, and UN efforts, a substantial portion of gold flows from the region has gone further underground (see Section 4.1). Changing this situation will require more than technical solutions. It will require addressing the policy environment in the DRC and examining and reforming key issues such as taxation and mining tenure. DRC authorities must examine the role of the artisanal gold industry in the DRC economy, and develop government policies that will foster formalization and legality. This is addressed in detail in the following section.

3.2 THE DRC ARTISANAL GOLD INDUSTRY – CHANGING ATTITUDES

The first thing to note about the DRC artisanal gold industry is that it *is* an industry. Using a conservative estimate of eight tons of gold per year, [12] artisanal mining in the DRC is the equivalent in scale to LSMs such as AnlgoGold Ashanti’s massive open-pit mine in Gaeta, Tanzania. In terms of employment, the artisanal industry dwarfs the industrial. Counting just miners, the artisanal gold sector directly employs anywhere from 150,000–300,000 people.[13] If one includes processors, buyers, suppliers, and all the related service industries, the number of people indirectly involved in the sector could be as high as 750,000 to 1 million people. Like any large complex industry, the artisanal gold sector requires the appropriate set of policies to function—to produce and export legally and to encourage the transition from artisanal to semi-mechanized production. The issues of taxation and mining tenure are especially important.

For the industrial gold sector, the state grants lengthy, statutory mining tenure permits (in the form of *Permis de Recherche* and then *Permis d’Exploitation*) and low taxation on gold production. The GDRC believes this policy mix of tax and tenure incentives is a relatively effective way to encourage the discovery and industrial development of gold deposits, although the rate of industrial development could

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[12] Extrapolation from daily production of 0.169 grams and a working period of 300 days per year. The number is of course an approximation.

[13] IPIS Analysis of the Interactive Map of Artisanal Mining Areas in DR Congo May 2014 estimated 221,500 artisanal miners, with 176,000 of those working in gold mines.

be significantly higher if a number of issues were addressed, including the perceived business climate, and concerns about insecurity, poor infrastructure, and irregular taxation and enforcement.

There is currently no mechanism for guaranteeing artisanal mining tenure in the DRC. The sole mechanism in place, the *Zone d'Exploitation Artisanale* (ZEA), must be requested by a provincial governor, declared by the national Minister of Mines, and can be dissolved with 60 days' notice at the sole discretion of the minister. Within a ZEA, any miner with a registration card is entitled to dig; that is, the ZEA itself offers neither exclusive rights nor security of tenure to a particular miner, cooperative, or small company that may have invested in developing the site. Given that ZEAs are not associated with a particular cooperative, they also do not serve to foster due diligence.

Temporary and imperfect as it is, the ZEA is also something the GDRC is wary to grant. Fewer than 20 gold ZEAs currently exist, many of them on areas of low-grade mineralization of little interest to miners. Although there are more than 50 ASM gold sites located on land where the mining rights have now reverted to the government (the *Zone de Reserve Geologique* [ZRG]), senior officials at the *Cadastre Minier de la RD Congo* (CAMI) appear to be resistant to declaring new ZEAs in these areas. According to officials, ZRGs are the patrimony of the state and destined for productive use as future LSM mining concessions.

Legal tax rates on artisanal gold production range from 13–16%, and represent another major barrier. Moreover, these taxes do not include the range of additional licensing and equipment taxes imposed on artisanal miners, nor the other illegal taxes imposed by various authorities and different branches of government. Finally, the GDRC's small-scale mining agency, SAESSCAM, is tasked with a dual mandate: provide technical outreach service to miners, and tax their production. Throughout its history, SAESSCAM has focused almost exclusively on the taxation role, at the expense of service provision. There is little evidence of any substantial SAESSCAM technical assistance to the ASM gold sector. This mix of policies with which the GDRC hopes to encourage formalization and legal sales—insecure tenure, excessive taxation, and predatory mining services—has led artisanal miners to respond with clandestine sales networks and a deep suspicion of government.

The sections below contain numerous detailed and concrete recommendations for adjusting the DRC policy mix to encourage legalization of the ASM gold industry and legal certified sales of gold. Most of these proposals aim to encourage legality through financial, technological, productivity, tax, and other incentives. That is, they are based on the premise that—like the industrial sector—the artisanal gold industry needs to be encouraged and directed by a mix of tax, tenure, and capacity-building incentives. Opportunities to improve miner's incomes and health through technological interventions that reduce the use of mercury while increasing production have also proved to be valued incentives. Miners cannot be forced into the formal sector. They must be enticed, encouraged, and assisted to participate.

3.3 BARRIER 1 – LACK OF LEGAL MINE SITES

3.3.1 CURRENTLY VALIDATED GOLD SITES

Under current DRC law, artisanal gold is legal only when produced by a registered cooperative, working within either a ZEA or, if within a mining concession, with a formal written agreement with the concession holder on a site that has been inspected and found green within the past year by a government-accredited validation mission.

To date, 18 gold mine sites have been visited by inspection missions and declared as red, yellow, or green. The results for these 18 sites are shown in Appendix A: six sites were found to be red, four sites yellow, and eight sites green. Of the eight green sites, two were inspected in 2011 and have not been re-inspected. By RCM standards (and DRC law), these sites have reverted to red. While these sites could be re-inspected, they are also located within the Twangiza mining concession owned by Banro, which has requested an exception from the national minister to legally enable ASM operations on their concession.

Two of the green sites—Lwizi and Ruzirantaka—lie within a concession held by the DRC parastatal SAKIMA. This would ordinarily be quite promising, as SAKIMA has expressed a strong interest in working with ASM producers. However, these two sites hold too little gold and too few miners to be of much interest.[14] The same is true of the Nakabindi site, located within the Akoma minerals concession. That leaves only the three sites near Matete in Maniema—Kamungazi, Kimbawe, and Lubdonzi—which are in effect one site, located just outside Banro's Namoya concession, under the control of the COMICA cooperative. Thus, in the whole of the DRC, only one site exists where a pilot project sourcing legal artisanal gold currently could be located. Clearly, if the CBRMT project is to come close to achieving its goal of scaling up responsible ASM gold pilot sites, the validation missions are going to have to move quickly and seek out new sites for validation.

There is currently no accurate or complete GDRC database of ASM gold sites. According to a 2014 report, the International Peace Information Service (IPIS) visited 1,088 mine sites, at which 78% of the miners were mining gold. A presentation made by CAMI (which uses IPIS data), however, cites there are 857 artisanal gold mine sites, with approximately 20,000 active artisanal miners. The best approximation may be from a database developed and maintained by BGR that incorporates data drawn from IPIS Center, Joint Mission Analysis Cell (JMAC)/MONUSCO, PAC, and BGR's own field research.[15] Although by no means comprehensive, the BGR database lists 746 gold mine sites in the DRC. Overlying mineral title information is available for 662 of those sites. An analysis of the type of mineral title into which these mine sites fall is given in Table 3 and Figure 2.

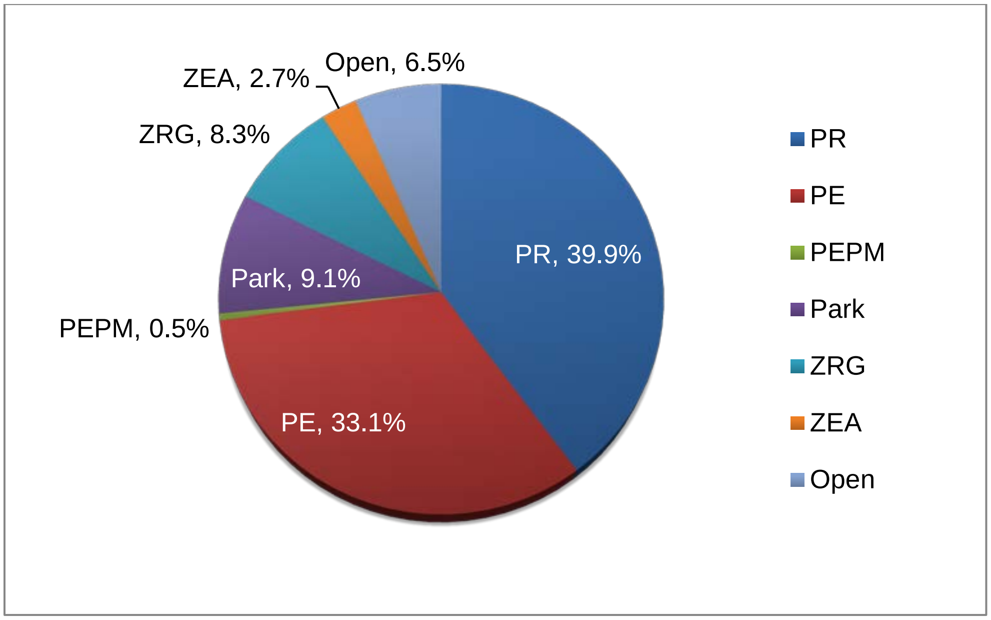
TABLE 3: ASM GOLD SITES AND THEIR OVERLYING MINERAL TITLE

MINING TITLE	NUMBER OF SITES	PERCENTAGE OF TOTAL
PR (*Permis de Recherche*, or Research Permit)	264	39.9%
PE (*Permis d'Exploitation*, or Exploitation Permit)	219	33.1%
PEPM (*Permis Exploitation Petite Mine*, or Small-Scale Mining License)	3	0.5%
Park/Protected Area	60	9.1%
ZRG (*Zone Reserve Geologique*, or Geological Reserve Zone)	55	8.3%
ZEA (*Zone d'Exploitation Artisanale*, or Artisanal Exploitation Zone)	18	2.7%
No mineral claims (i.e., open to claims)	43	6.5%

[14] Data on size, number of miners, and production courtesy of PAC.

[15] The author thanks BGR for their generosity in sharing this file.

FIGURE 2: ASM GOLD SITES AND THEIR OVERLYING MINERAL TITLE



Just over 9% of gold sites in the BGR database (60 sites) are located in national parks or protected areas, and thus can never be certified under any circumstances. Less than 3% (18) sites are located within ZEAs and are considered legal under DRC regulations. Verification of the activity level and security status of these ZEA sites was beyond the scope of this work, but it is likely that it is possible to find locations where a pilot project could be located among the 18 ZEAs. (A longer analysis of potential pilot site locations is included in Section 4.2.). Establishing and scaling up a legal gold supply from the DRC will require that more ZEAs are designated; however, even this is likely to prove inadequate to facilitate large-scale legal artisanal gold exports from the DRC. Instead, efforts should also focus on ways to legalize and formalize a portion of the 487 sites that find themselves within the bounds of an overlying mineral title (a *Permis de Recherche* [PR], *Permis d'Exploitation* [PE], or *Permis Exploitation Petite Mine* [PEPM]). These two topics—the creation of ZEAs, and the challenge of overlying mineral titles—are covered in the following two sections.

3.3.2 ZEAS AND SECURITY OF TENURE

Security of tenure is one of the basic requirements for the stability of a successful mining enterprise, be it a large-scale company like Banro or a small-scale artisanal industry miner. The DRC policy tool for guaranteeing security of tenure for artisanal sector players is the ZEA. As noted briefly above in Section 2.2, the ZEA as it currently exists does not provide sufficient security of tenure for artisanal or small-scale miners.

According to the DRC Mining Code, a ZEA can be declared only via an *arrête* from the national Minister of Mines, following a request from the provincial governor and provincial Division of Mines.[16] While in force, a ZEA confers no exclusive mining rights to any particular artisanal miner or cooperative. Any miner with a valid artisanal miner's card has the right to mine within that ZEA. Once declared, a ZEA can be revoked with 60 days' notice, at the sole discretion of the minister. Thus, a ZEA provides neither the

[16] Law No 007/2002 of 11 July 2002, Mining Code, Article 110, 111.

security nor the exclusivity that any mining enterprise, large or small, requires to invest in developing a mining site. To put it in investment terms, any investment backing a small-scale mining initiative in a ZEA would have to have a 60 day payback period—a highly unlikely condition in the mining industry.

In the medium term, the DRC could consider replacing the ZEA with a form of small-scale artisanal mineral claim, of the kind successfully employed in both East Africa and South America. In Brazil, the *Permissao de Lavra Garimpeira* (PLG) gives exclusive mining rights for up to 50 hectares for an individual, or 200 hectares for a cooperative. The process for obtaining a PLG is a simplified version of the process for a research or mining permit— the miner consults the online mining cadaster, identifies an area with no outstanding claims, and then submits the GPS coordinates for the desired area. If there are no other overlapping claims, the PLG is granted. The permit is valid for a period of five years and renewable. In Uganda, the location license is similar: exclusive mining rights are granted for artisanal production for up to 16 hectares for a Ugandan national for a period of two years (renewable). Rwanda and South Sudan also have similar licensing systems for small-scale/artisanal miners.

In Tanzania, the government has taken a number of steps to address the insecurity and lack of clarity around miner's tenure rights and strengthen formalization of the sector. The 2010 Mining Act allows small-scale miners to obtain primary prospecting licenses (PPLs) and primary mining licenses (PMLs) for seven years—the latter provides the right to mine an area of up to 10 hectares. Moreover, a PML could be mortgaged, renewed, or transferred to another holder. This has made it easier for license holders to conduct long-term operational planning. To improve access to PMLs, Tanzania also decentralized the permitting process and established zonal mining offices that can process PML applications.

In these countries, the system is first come, first served—whoever makes the first claim has priority. As well, approval is automatic, provided the applicant meets all licensing criteria. Approval does not lie within the political discretion of a minister, governor, or other elected official. In existence since 1989, the Brazilian PLG has helped transform Brazil's ASM sector from a largely artisanal industry to one in which the majority of sites feature extensive mechanization and thus higher productivity and better wages. Ugandan officials hope the location license will bring similar results. In the short term, however, as ZEAs are the only tool at hand, it is recommended that DRC authorities work to expedite the declaration of new ZEAs, and render the process for obtaining a ZEA more automatic and transparent.

To facilitate the creation of more ZEAs, mining cooperatives could be encouraged to submit applications covering their mining areas to their local *Division des Mines*. Where the applied-for site does not overlap with a park, PE, PR, or PEPM, it is approved by the *Division des Mines* and provincial governor, and then forwarded to the national Minister of Mines. The minister, in turn, would approve these applications as a matter of course. To facilitate the work of traceability, these ZEAs could be issued to a single cooperative or PDG, and then made contingent on certain performance criteria, notably a certain level of legal sales. This pilot model is explored in detail in Section 5.5. Some resistance to this proposal can be expected at the national level, where both CAMI and the Ministry of Mines perceive ZEAs as a last resort, and that both ZRGs and open areas should be preserved for possible LSM research or mining permits. However, there appears to be increasing acceptance among DRC officials that the designation of ZEAs and ZRGs are potential solutions to regulate and control the growing ASM gold sector. Designation of a PEPM could also be a potential solution, but legally requires that sufficient geological prospecting and surveying be undertaken to confirm the presence of a deposit, and the presence of at least semi-mechanized technologies.

Other options exist, although they are extralegal and do not guarantee the security of title. For example, for years in the artisanal sector, individuals, PDGs, or cooperatives that wished to secure their mining rights to a particular area would make an application to the provincial Division of Mines, and receive (for a yearly fee of around $100) a "carrier" license to mine an area of up to 4 hectares. While the practice is extralegal and the mining titles granted are not valid in the eyes of CAMI or the central government, this informal system could be adapted, formalized, and put to use to expand the number of ZEAs.

3.3.3 LIVING WITH ASM – ARTISANAL SITES AND FORMAL MINING CONCESSIONS

The numbers in Table 3 and Figure 2 show that just over 486 active gold sites—73% of the total—lie within a formal mineral concession (a PR, PE, or PEPM). Achieving the larger goal of a significant scale up of legal production and export of DRC artisanal gold will therefore require some method for reconciling the fact of ASM production on LSM concessions. Currently, the DRC Mining Code prohibits the transformation of any part of a PE or PR into a ZEA, although this is currently under discussion as part of the larger reform of the 2002 Mining Code, and may soon change.[17]

DRC officials have also at times stated that artisanal exploitation on a PE or PR can be accepted via conclusion of a written *protocole d'accord* between a concession holder and a legally registered mining cooperative. This solution that has been effective in Burkina Faso, where some 240 ASM entities have negotiated agreements with LSM concession holders. Under Burkina Fasan law, ASM areas can be a maximum of one square kilometer (km^2), and must be registered with government authorities. In the DRC, however, the Ministry of Mines has not clearly articulated what would constitute a legally valid *protocole d'accord*, and have given differing interpretations as to what effect signing a protocol agreement might have on a concession holder's mineral title.

As a result, LSM companies have been understandably hesitant to enter into any agreement that might affect the legality and security of their mineral titles and create additional reputational risk given that there would be less control over the ASM activity. In practice, the few companies that have pursued this route have submitted each new agreement to the DRC central government for careful vetting and approval. Progress in establishing LSM-ASM agreements via *protocoles d'accord* has thus been painstakingly slow.

To fast track this kind of arrangement between ASM producers and LSM concession holders, the Ministry of Mines, in cooperation with its development and industry partners, should develop a standardized *protocole d'accord* agreement for use between artisanal producers and LSM concession holders. Development of a standardized *protocole d'accord* would need to include consideration of issues such as the responsibilities of both parties, and the risks and liabilities to LSM companies entering into such accords. The Ministry of Mines would need to make it clear in writing that any LSM concession holder that makes use of this template protocol with an ASM producer will not have its concessionary rights affected in any way. The GDRC, as part of the reform of the 2002 Mining Code mentioned above, is reportedly considering including such a provision; however, the current iteration of the new Mining Code does not address the issue.

For Banro, the challenge presented by artisanal miners on their concessions involve liability and security, but are also grounded in economics when artisanal miners exploit deposits that the company had planned on exploiting itself in due time. However, Banro has come around to the view that it may be better to concede one or two deposits—in particular where mining communities seem entrenched—to secure cooperation with local residents, and protect the company's operations over the long term. Banro's engagement in the DRC can be credited for taking the lead among LSM actors in stating their commitment to identifying and supporting suitable sites for ASM gold production on their concession. In addition, they have been working with a local cooperative to build their capacity to manage and oversee a more formalized ASM gold sector on their concession. The company awaits clarification from the GDRC, and permission of its board and shareholders to continue on this course.

Although less likely, the company is considering the possibility of acting as a purchaser for ASM gold produced on its concessions. This is a particularly intriguing possibility, as developing clean and legal buying networks will be one of the big challenges to the CBRMT project and its effort to create legal

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17 *Code Minier*, Article 109.

certified gold chains. Having Banro as buyer would also depend upon both the development of reliable traceability technologies for gold, and the acceptance by international refiners such as Rand Refinery.

Also of note is the case of South African-based Casa Mining (Leda Mining). As part of their transition from prospection to exploitation (and from PR license to PE), the company was asked to cede 50% of its original concession in South Kivu (south of Fizi) to the public domain for three years. A September 2014 conference was organized where it was discussed whether certain areas might be appropriate for artisanal mining, and the possibility for the designation of a ZEA on the ceded land. This conversation is still continuing among state officials in collaboration with Casa Mining.

The DRC parastatal company SAKIMA has expressed interest in working with artisanal miners on its concessions and has signed several Memoranda of Understanding (MOUs) with provincial governments to that end. As SAKIMA holds vast concessions in North Kivu, South Kivu, and Maniema, this is a particularly interesting development. SAKIMA has expressed an interest in reviving the type of partnerships that existed previously between artisanal miners and DRC parastatals such as SOKIMO and KILOMOTO, whereby the company grants the artisanal miners permission to exploit on its concession in return for a percentage of their production. This model becomes particularly interesting when combined with the possibility of new and more rigorous traceability technologies, which could help mitigate the reputational risk concerns of LSM titleholders.

3.4 BARRIER 2 –EXCESSIVE TAXES AND ILLEGAL TAXATION

ASM gold exploitation suffers from a combination of excessive taxation and illegal taxation. Both are significant barriers to legal, certified gold exports. The two are covered separately in the sections that follow.

3.4.1 EXCESSIVE PROVINCIAL TAXATION – THE PROBLEM

More than any other mineral, gold is extremely sensitive to small variations in price. Small variations in tax rates can thus have inordinate effects on gold flows. For many years, differences in export tax rates between the DRC (at 3.5%) and neighboring countries such as Burundi (1%) and Uganda (0.5%) diverted vast amounts of DRC gold to these lower tax jurisdictions. (See Section 3.1 for an update on this situation.) Recognizing this problem, the GDRC has reduced the total export tax to 2% and the cost of establishing a gold *comptoir* to a reasonable $7,500.[18]

The DRC Mining Code (2002) is clear that official royalties and taxes are paid to the national government, and a portion therein is to be returned to the provincial governments. In practice, however, DRC provincial governments impose a percentage of tax for each actor in the supply chain, which are clarified in provincial "*arrêtés*," The legality of these provincial taxes is questionable; however, national authorities have largely allowed the practice to continue to maintain the status quo. Provincial authorities are generally not receptive to lowering their tax rates (the exception being Orientale Province, which has indicated an interest in exploring this option). The problem is further compounded by other unofficial taxes, charged by provincial authorities, particularly the "fees for service" imposed by SAESSCAM, which have remained in place and even increased over time.[19] Table 4 lists the *effective* provincial sales and production taxes paid in South Kivu, North Kivu, Maniema, and Orientale. In most cases, the total tax load is 13% or above.

[18] The "export tax" is actually a combination of a *droit de sortie* (0.5%); *taxes remuneratoir* (0.5%) and a tax sent back to the provinces (1%). For simplicity, it is known here simply as a single export tax.

[19] SAESSCAM claims its levies are "fees for services rendered." Given that payment of these fees is not voluntary, and that the only "service" provide by SAESSCAM is the collection of these fees, they are taxes in all but name.

TABLE 4: LEGAL PRODUCTION AND SALES TAXES ON GOLD PER DRC PROVINCE

Province	Export Tax (Central Government)	*Négociant* Tax (Sales Tax)	Production Tax (SAESSCAM)	Total Tax Load
South Kivu[20]	2%	1%	10%	13%
North Kivu[21]	2%	1%	10%	13%
Maniema[22]	2%	3.25%[23]	11%	16.25%
Orientale[24]	2%	1%	5%	8%

In practice, the excessive tax burden means that most sales and production taxes are rarely paid, for the simple reason that diggers, *négociants*, and *comptoirs* avoid them by not declaring their production. As noted in Section 2, declaration rates are less than 3%, which brings a nominal tax rate of 13% down to 0.4% in practice—at the cost of driving most gold production underground.

Any formal assistance project must consider all taxes. For one, it is a requirement of both the ICGLR RCM and the OECD that all legal taxes be paid. Secondly, once a formal project began, SAESSCAM would inevitably collect its provincially sanctioned fee. Clearly, miners—especially *négociants* willing to travel as far as Kampala or Bujumbura to gain a 1.5% tax advantage—will go to vast lengths to avoid any requirement that mandates them to pay over 10–13% of their gold to SAESSCAM. It is a classic case of "*trop de taxes tuent les taxes.*" To bring gold flows back into legal channels, tax rates would need to be radically reduced, and at the same time reconfigured to focus away from production and more on physical assets, such as pit, tunnels, and other assets or infrastructure which are explained in more detail in the following section.

3.4.2 EXCESSIVE PROVINCIAL TAXATION – SOME POTENTIAL SOLUTIONS

As shown above, provincial governments already receive half the 2% collected by the CEEC at export. By eliminating or reducing excessive "front-end" taxes, particularly those imposed by SAESSCAM for services, they could encourage greater declaration and recoup tax revenue at the "back end" at export. While this makes economic sense, it may be difficult to convince officials at the provincial level, where there is a deeply ingrained perception that artisanal miners are undertaxed and obligated to pay.

The sections that follow outline potential strategies for consideration, which could reduce provincial tax rates, and shift the focus away from production taxes—which are very difficult to collect and serve to drive artisanal gold underground—to "installation taxes" (on pits and tunnels, pumps, and other fixed capital assets) that could be clearer, and easier to collect. This approach could, in the author's view, help to drive a slow, steady accumulation of taxation wealth, but the model remains to be tested at scale in the DRC and the ability and willingness of miners to pay this tax is unknown. The tables below demonstrate, however, that provincial treasuries could gain from the transition from the current production taxation system to more easily enforceable installation taxes, assuming of course that stakeholders are able and sufficiently incentivized to pay the taxes.

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20 Tax rates as per *Arrete Provincial No 14/002 du 25/02/2014 Portant Fixation de la Siette des Impots, Droits, Taxes et Redevences a Percevoir par l'Entite Province du Sud-Kivu*.

21 Tax rates as per *Arrete Provincial no 01/198 du 04 Jul 2014*.

22 Tax rates as per *Arrete Provincial no 11/062 du 18/5/2011.*

23 Actually, $1.3/gram, which works out to about 3.25% at present gold prices; as gold at *négociant* level is not 100% pure, and is not selling at the international price, the effective tax is actually closer to 5-7%; 3.25 is used as a minimum value.

24 *Arrete Provincial no 1/130 du 13 Jan 2012.*

Eliminate the 1% *Négociant* Tax. First, the "sales tax" levied on *négociants*—normally 1% of the value of gold transactions—could be eliminated entirely. *Négociants* are highly mobile, and highly motivated to avoid taxation by diverting gold into clandestine channels. Attempting to impose a 1% tax on these actors encourages them to sale the gold illegally. From the point of view of revenue collection, the effort is counterproductive. Moreover, the attempt to impose a 1% tax at the *négociant* level serves to reduce the number of stakeholders also willing to pay the 2% tax collected at the export level. It should be noted that provincial officials might be tempted to offset the reduction in sales tax via an increase in the licensing fees levied on *négociants*. This should be avoided. Many *négociants* already work without a valid license. It is the author's view that increasing the licensing fees will only drive more *négociants* into illegality.

Provincial officials may also argue that *négociants* can afford an increased license fee and have an obligation to contribute something to the provincial treasury. These assertions are true, but the reality is that *négociants* are highly mobile, secretive by nature, and are the weakest link in any formalized/legal supply chain. Government policy should do all it can to avoid corroding their already tenuous connection with legality. Provincial treasuries could also make up for the loss of the mostly unpaid *négociant* taxes by increasing collections at export.

Production and Mine Site Taxes—From One Big Score to Slow Steady Revenue Accumulation. Current provincial taxation policy with respect to artisanal gold is based largely on the concept of what can be referred to as the "big score." SAESSCAM—the body in charge of collecting the production tax—may not score often, but when it does, it scores big. Table 5 shows how this strategy plays out in practice.

TABLE 5: SOUTH KIVU GOLD PRODUCTION AS DECALRED TO SAESSCAM AND THE CEEC, JANUARY–JULY 2014

Cooperatives	Gold (g)	*Comptoirs*	Gold (g)	South Kivu Total Production	Gold (g)
COOMIKI	4,055.21	Cavici	16,195.69	Annual DRC Production	8,000,000
COODEXAF	1,240.00	Alfa Gold	247,065.36	South Kivu Share[25]	40%
COOMITRAID	3,000.00	Namukaya	37,367.10	Prorating to 7 months	58%
Total	8,295.21		300,628.15		1,866,667
SAESSCAM Capture Rates	—		2.76%		0.44%
CEEC Capture RATES	—		—		16.11%

The first two columns of Table 5 show gold declared to SAESSCAM (and taxed at 10%) during the first seven months of 2014 in South Kivu. All of the SAESSCAM gold comes from three cooperatives (COOMIKI, COODEXAF, and COOMITRAID) in the Fizi area of South Kivu, visited repeatedly by SAESSCAM agents. The total for the seven-month period is just over 8.295 kg.

The second two columns of Table 5 show legal gold exports from South Kivu's three legal gold *comptoirs* during the same period. The total comes to just over 300.628 kg. The "SAESSCAM Capture Rates" row shows just how much gold (even that which is legally declared) SAESSCAM is able to register and subject to provincial taxes—a miniscule 2.76%. Compared with the estimated actual ASM gold production in South Kivu for the same period, the SAESSAM capture rate drops to 0.44%—less than one-half of one percent.

Put another way, the nominal 10% provincial production tax works out in practice to a tax rate of just 0.276% (10% tax times the capture rate of 2.76%), even for gold that producers and *négociants* are

[25] This is also an estimate. The author estimates DRC production as follows: 40% South Kivu, 30% Orientale, 10% Maniema, 10% North Kivu, 5% Katanga, 5% other.

willing to sell into the legal system. With respect to total production levels, the provincial (SAESSCAM) tax is closer to 0.05%.

As an aside, note that the CEEC capture rate is 16.11% (300 kg out of an estimated 1,800 kg). Recall from Table 1 that the five-year average (2005–2010) for legal gold exports from the DRC was only 216 kg, and the capture rate (declaration rate) was about 2.7%. During this period, DRC export taxes hovered at 3.5% and above, while taxes in Burundi—a four-hour bus ride away—remained down at 0.5%. By 2014, tax rates in the two countries had equalized at 2%, and DRC legal exports in Bukavu—for just the first seven months—had shot up to 300 kg, 1.5 times the five-year average for the entire country. By reducing the tax rate and increasing the capture rate, the CEEC (and the DRC) actually netted just under $170,000 in extra tax revenue for this period.[26] Getting the tax policy levers into the right place could indeed move gold flows around in the real world.

Table 6 shows the net provincial tax income from SAESSCAM's efforts in South Kivu. Taking the total gold declared to SAESSCAM and estimating the value at $40/g yields a value of $331,808.40. Ten percent of this value is $33,180.84. Amortizing this value over the seven-month period in which it was collected yields a value of $4,740.12.

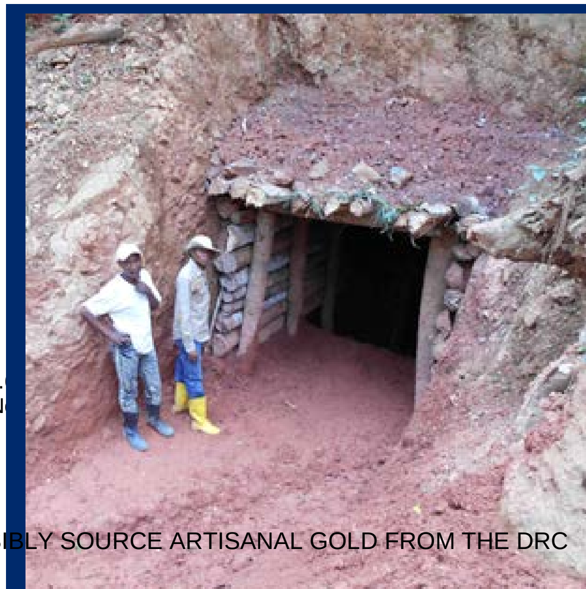
TABLE 6: SOUTH KIVU PROVINCIAL TAX INCOME FROM ASM GOLD (JANUARY–JULY 2014)

Provincial Taxes collected by SAESSCAM	
Gold Declared (g)	8,295.21
Price (US$/g)	$40.00
Value	$331,808.40
Total Provincial Tax	$33,180.84
Tax (per month)	**$4,740.12**

For provincial officials interested in an effective and efficient taxation system, the salient question is this: Is there another way of collecting $4,740.12 per month, in a manner that does not drive gold production underground?

The Better Alternative. For an answer to this question, let us look at a fairly typical South Kivu gold site: Namurhale.[27] Located about 60 km southwest of Bukavu near the city of Wulungu, Namurhale consists of a number of pits or tunnels dug into the site of a small hill. According to the on-site cooperative, CAMILN, there are some 50 active pits, and a registered mining population of 320 miners. This yields a calculated value of 6.4 miners per pit (see Table 7 below), which fits well with CAMILN's own assertion of between 5 and 10 miners in each pit or tunnel.

The Namurhale cooperative keeps no effective production statistics. However, during its production phase, the PAC pilot project in Orientale Province found that, for a mining population of 270 miners, the average daily production per miner was 0.167 g. This is likely a low estimate, as the PAC project was located on a site that was reworking ore exploited in the colonial era. However, for the purposes of a tax



Tax this Tunnel – COMICA Cooperative, Maniema

[26] Estimated gold exports with a capture rate of 2.7% = 50,384.
this period (300,628.15 g x$40/g x 2%) = US $240,502.52. N

[27] All data from Namurhale courtesy of PAC.

estimate, it will serve. Taking the number of miners per pit at 6.4 and estimating a working month of 25 days (Sundays off) yields an average production per pit of some 26.72 grams. Total monthly production for the site comes to 1.336 kg, which matches reasonably with the cooperatives own estimate of 2.1 kg/month.

If one uses the estimate of $40/g, the gross revenue per pit per month comes to $1,068.80. Using the same numbers, the gross revenue for the Namurhale site as a whole is approximately $53,000 per month. These figures are collated below in Table 7.

With these basic economic facts in hand, the question becomes, How best to tax Namurhale?

The Pit and Tunnel Tax. Using the current production tax strategy, SAESSCAM would attempt to levy a 10% tax against the cooperative's total monthly production of 1.336 kg, which would nominally yield monthly tax revenues of over $5,300. However, miners usually hide their production, thus preventing SAESSCAM from collecting on the full amount. Over a period of years, what SAESSCAM has been able to manage is a capture rate of about 2.7%. Factoring this in yields an actual net of production tax for the entire Namurhale site of just $144 per month. These figures are shown in Table 7 as Tax Option 1.

Another strategy, shown in Table 7 as Tax Option 2, is to levy a flat pit tax of $10 per month on every active pit on the site. The tax would be payable by the pit boss responsible for that pit. For Namurhale, the total for a pit tax would be $500 per month, over three times the amount collected via the production tax, with the added advantage that a pit tax does not drive production underground.

The pit bosses would likely perceive this pit tax to be excessive and unaffordable, but the analysis in Table 7 may demonstrate otherwise. Ten dollars per month amounts to a little less than 1% of the monthly gross revenue from the pit. While a 1% tax levied on *négociants* or *comptoirs* can and will divert or drive gold flows underground, 1% levied as a tunnel tax could just become part of the cost of doing business. Miners cannot very well hide or disguise a tunnel, and the tax is set low enough that it will not cause them to give up mining.

What effect would a $10/month pit/tunnel tax have on the provincial treasury? The pit tax revenue for just Namurhale is $500/month. Recall that provincial tax receipts from the production tax for the ASM gold sector in all of South Kivu amount to $4,750 per month. To surpass this figure, the province would need to extend the pit/tunnel tax to just 10 sites like Namurhale. According to the BGR mine site database, there are about 150 gold mine sites in South Kivu. Applying the pit/tunnel tax province-wide could approximately result in $900,000 of tax revenue per year, over 25 times the amount currently captured by the production tax. As an added bonus, dropping the production tax should bring more gold into the legal sales circuit, increasing eventual provincial revenues via the provinces' 1% share of the export tax.

In fact, flat taxes on mine site installations are already a feature of many provincial tax regimes. South Kivu currently charges $100 per year to each cooperative, $30 per year per pump, $100 per year on an entire site (or *chantier*) such as Namurhale. What is required then is merely a small modification of the existing tax regime: dropping production taxes entirely in return for an increase in the installation and site taxes.

TABLE 7: TAX OPTIONS FOR DRC ARTISANAL MINE SITES

NAMURHALE	SITE STATS	REVENUE PER MONTH
Number of pits or tunnels	50	
Number of miners	320	
Miners per pit	6.40	
Production per miner (g/day)	0.167	
Work days per month	25.00	

NAMURHALE	SITE STATS	REVENUE PER MONTH
Production per pit per month (g)	$26.72	$1,068.80
Total production (Namurhale) per month (g)	$1,336.00	$53,440.00
Tax Option 1—10% Production Tax		
Production Tax	10%	
Capture Rate	2.70%	
Net of Production Tax	$144.29	
Tax Option 2—Monthly Pit Tax		
Pit Tax (US$/month)	$10.00	
Effective Rate of Pit Tax	1%	
Net of Pit Tax (per month)	$500.00	
Provincial Tax Revenue from Pit Tax		
Number of Sites (South Kivu)	150.00	
Net Provincial Pit Tax (per month)	$75,000.00	
Net Provincial Pit Tax (per year)	$900,000.00	

3.4.3 ILLEGAL TAXATION

Illegal taxation is an incentive for miners to hide their gold production, and thus to continue to sell their gold via clandestine channels. When practiced by army, police, customary authorities or other political-administrative elites, illegal taxation is a condition for yellow-flag status under the RCM and OECD, thus rendering a site ineligible for legal, certified exports. While there are numerous forms of illegal taxation and extortion in practice, this study targets two specific types: road barriers and local, or *chefferie*, taxes.

Road Barriers. Road barriers of questionable legality or outright illegality are a common feature of the eastern DRC. Three of the sites examined in this study suffer from illegal road barriers where government agents (usually FARDC, ANR, or PNC) demand payments of CF 500–CF 5,000 from every passing miner or *négociant*. Many of the areas suggested by this study as a potential pilot project zone suffer from illegal road barriers. Any intervention at this site would need to find a way of removing these barriers as part of its effort to produce legal, certified gold exports.

The GDRC's control of the eastern part of the country is steadily improving. Senior-level commanders in the police and military are now less likely to be illegally involved in the mining sector. The topic of illegal taxation should be included on the agenda for the provincial taxation workshops, proposed as part of the CBRMT project for reforming the ASM policy environment (see Section 4.2 below). Regional military commanders, senior police officials, and representatives of the ANR should be invited to attend these workshops, and then encouraged to use their authority to bring lower-ranking members of their services into conformity with the law.

Local or *Chefferie* Taxes. At many mine sites in North and South Kivu and Maniema, a local authority—the chef *coutumier*, the *chefferie*, or the district administrator—often levies a tax on gold production. The tax rate can be as high as 10%. The *chefferie* tax poses two problems: 1) when combined with the provincial (SAESSCAM) levies, it raises the nominal tax rate on ASM gold production up to 21–24% (an impossibly high figure); and 2) the tax has no basis in DRC law, and so runs the risk of resulting in a yellow flag for the site. The RCM will assign a yellow flag if "Government officials (mines officials, secret service, municipal or provincial governments, military units, etc.) extract significant taxation or other payments that are disproportionate to any service provided from the workers or production of a Mine Site, in a manner not authorized by the Member State's mineral code or mineral regulations."

Unlike the SAESSCAM levies, diggers and cooperatives often accept the local/*chefferie* tax as, to some degree, legitimate, especially as local officials often frame the *chefferie* tax as a kind of "land rental"—the price miners have to pay in return for the right to mine that parcel of land. However, the DRC's mine section inspection form is very clear on the subject. Section 7.4 (a yellow flag question) reads as follows: "State Agents receive non-authorized payments on the mine site: Yes (identify) or No?"[28] Whatever the opinion of cooperatives and diggers, the *chefferie* tax has no legal basis in the Mining Code or in provincial or national regulations; a site where it is imposed would almost certainly be yellow-flagged.

Most provinces, in the formula they use to divide the proceeds of the 10–11% tax rates, include local government in the division of tax revenue. (North Kivu allocates 10% to the *Collectivite*; Maniema, 6% to *Entites Territoriales Decentralisee*). While the intention to pass on some revenue to local authorities is laudable, local or *chefferie* authorities clearly do not think the percentage they have been allocated is sufficient, or they simply believe that they are not receiving their share. The topic of *chefferie* taxes could thus be included on the agenda for the provincial taxation workshops, proposed as part of the CBRMT project for reforming the ASM policy environment (see Section 4.2 below). The tendency to issue an edict banning the practice should be avoided, as higher-level government officials in the DRC have a long tradition of issuing edicts and lower-level government officials have a long tradition of ignoring them.

Instead, local or *chefferie* authorities should be included in the discussions that need to be held regarding reforming provincial taxation. The ideal would be for *chefferie* taxes to be included in a reformed overall provincial taxation model. One possibility would be for these local *chefferie* taxes to be devoted to a local development fund. If neither of these can be accomplished, provincial authorities may have to officially recognize and authorize some level of *chefferie* taxation, to avoid all mine sites being subject to yellow flags.

Contradictions and Legality of Provincial Taxation. Title IX of the DRC Mining Code (2002) is clear that "tax and customs regime applicable to mining activities in the national territory are defined in Title IX of the Code, exclusive of all other forms of taxes imposed in the present and future (p.103). In short, the Mining Code decrees that taxes are collected at a national level, a portion of which are earmarked for the provincial governments, and that all provincial taxes are illegal.

In practice however, provincial authorities rarely receive these revenues, and accordingly have each issued decrees (or *Arretes*), which refer to the " Law 08/012 de 31 July 2008 *Portant Principes Fondamentaux relatifs a la Libre administration des Provinces*," or their basic rights to administer their territories, and (presumably) collect taxes. As a practical matter, the national government is not pushing the court to take a position on this, nor is it contemplating changes to Law 08/12, nor making any move to enforce its will in the provinces and stop provincial governments from levying these taxes. The issue is particularly salient when (technically illegal) provincial and local taxes are imposed on artisanal gold supply chains, and not industrial gold mining operations.

This conundrum raises numerous challenges. Efforts should be made to ensure the legal proportion of taxes collected by the national government are returned to the provincial level (per the DRC Mining Code). This, however, falls outside the mandate or capacity of the CBRMT project. From a practical standpoint, when it comes to the taxation of artisanal gold by provincial authorities, it is the author's view that persuading provincial governments to lower taxes will be more successful in incentivizing stakeholders to trade gold within legal channels rather than attacking their authority or powers of taxation (either perceived or real).

[28] *"Les Agents de l'Etat perçoivent des paiements non autorisés sur le site minier: Oui (a preciser) ; ou Non ?"*

3.5 BARRIER 3—FINANCE, PRE-FINANCE, AND MORE FINANCE

Along with taxation and tenure, finance is one of the three key challenges that need to be addressed to develop legal certified ASM gold exports in the DRC. Like everything else, gold flows follow the money. Unlike the other two barriers, the question of finance offers no easy solutions.

There are, in fact, two distinct networks of finance in the DRC artisanal gold industry: the production finance network, which advances money to PDGs and pit bosses to pre-finance the costs of production; and the sales financing network, which advances money to *négociants* to pre-finance the purchase of gold in the field. In terms of fostering legal gold sales, the main problem arises when these networks merge and blend—when Category A *négociants* begin pre-financing production. Part of the deal in such cases is that the miner (PDG or pit boss) is obligated to sell his gold back to that *négociant*. Once the gold is in the Category A *négociant's* hands, as Table 1 clearly shows, 97% of the time it winds up smuggled out of the country. When illegal *négociants* pre-finance, the gold is contraband even before it comes out of the ground.

The challenge then is to encourage the separation of legal and illegal finance networks, and to strengthen the legal pre-finance structures. Miners, given the financial freedom to sell where they will, often choose the legal path. *Négociants*, on the other hand, are unlikely to want to join the legal trade. This is because there are no effective policy tools available to encourage or force the cooperation and legal compliance of *négociants*. Absent some external actor that could force their cooperation (for a recommendation along this line, see "Rehabilitate Clandestine Gold Networks" under Section 4.3.1), *négociants* will continue to choose to smuggle, as they have done 97% of the time for the past decade or more. Further details on these two finance networks are included below.

3.5.1 PRODUCTION PRE-FINANCING

Artisanal gold miners in the DRC typically live hand to mouth. This is true of ordinary diggers in the pits, their immediate bosses (the *chefs du puits*), and the PDGs (or as they now are known, the cooperative presidents). One goal of the business training recommended below (see Section 3.6) is to teach pit bosses and PDGs how to save and reinvest some portion of their revenue stream, with the goal of eventually escaping their chronic dependence on outside capital. That, however, must be a longer-term goal.

Nearly all ASM gold production in the DRC is pre-financed by some external actor, in return for a share of the proceeds. Loan values vary from $250 to $5,000 or more, depending on the size of the pit and the depth of the overburden. The share of production owed to the lender begins at 25% and works its way upward, depending on the size of the loan.

In a typical case, production might be divided as follows. Land rents, *chefferie* taxes, and the percentage owed to the *chef du puit* is taken off the top—often 10% of production. The remaining portion is divided between the pit boss and his crew of miners. The division begins at 50-50, but in cases where the loan was exceptionally large (for example, where several weeks or months of work were required to clear the overburden and reach the gold-bearing ore), the miners' share drops as low as 25%, while the lender's share correspondingly increases. The pit boss then divides his half share 50-50 with the lender.

In summary then, a typical division of proceeds might look like this:

PDG/*chefferie*/other land rents: 10%

Pit Boss:	**22.5% (half of 45%)**
Lender:	**22.5% (half of 45%)**
Mining crew:	**45% (a typical crew of six miners might end up with 7.5% each)**

Site Selection and Pre-Finance. The ways in which these percentages are distributed varies a great deal; this is a matter of some importance when it comes to the selection of pilot sites. At many sites, pit bosses, miners, and financers divide up sacks of ore as they come out of the pit. Each actor is then responsible for processing and washing his allocated ore sacks. Gold in hand, miners and pit bosses are free to sell their gold where they will.

At other sites, all of the ore is processed together and the division is made by weight once the gold has been separated out of the ore. Where this occurs, miners again are at liberty to sell their gold where they will. More often, if the ore is processed together, the pit boss then sells all of the gold to his chosen *négociant* and pays the appropriate percentages in money to his mining crew and financer. This is often the situation when the financer is also the *négociant*. In such cases, all of the gold from the site is effectively channeled into a contraband sales channel.

Production pre-financing by *négociants* is not universal. At many sites—particularly those sites closer to a larger center such as Bukavu— pit bosses and PDGs find financing through networks of relations, friends, or business associates. Where there is free capital in some reasonable proximity to a mining area, there are those interested in taking a risk in ASM gold. (Note as well that one must be careful when defining pre-finance. Nearly all Category B *négociants* make small gifts or advances to miners—a sack of rice, a pack of cigarettes, and small amounts of cash here and there—to establish and maintain loyalty and foster future sales. These gifts do not drive production; rather they divert gold from one Category B *négociant* to another. Far more significant are the larger loans—$250 and upward—advanced to pit bosses to pay for production.)

Microcredit Alternatives? Few attempts have been made to create alternative financing networks for artisanal miners, even with the spread of the microcredit movement. That is perhaps not surprising: risks are high, the field is complex, and the loan values ($500 to $5,000 for a single pit) often exceed typical micro-lending thresholds. Moreover, the potential borrowers are perhaps the antithesis of the tried-and-true micro-lending profile (female participation, group liability, strong social bonds). Given the size of DRC's artisanal gold industry, and the critical role played by production pre-finance, it could be beneficial to field a team made up of a micro-lending expert and an ASM or mining finance expert to examine the situation in the DRC and evaluate whether and how a production finance network could be established.

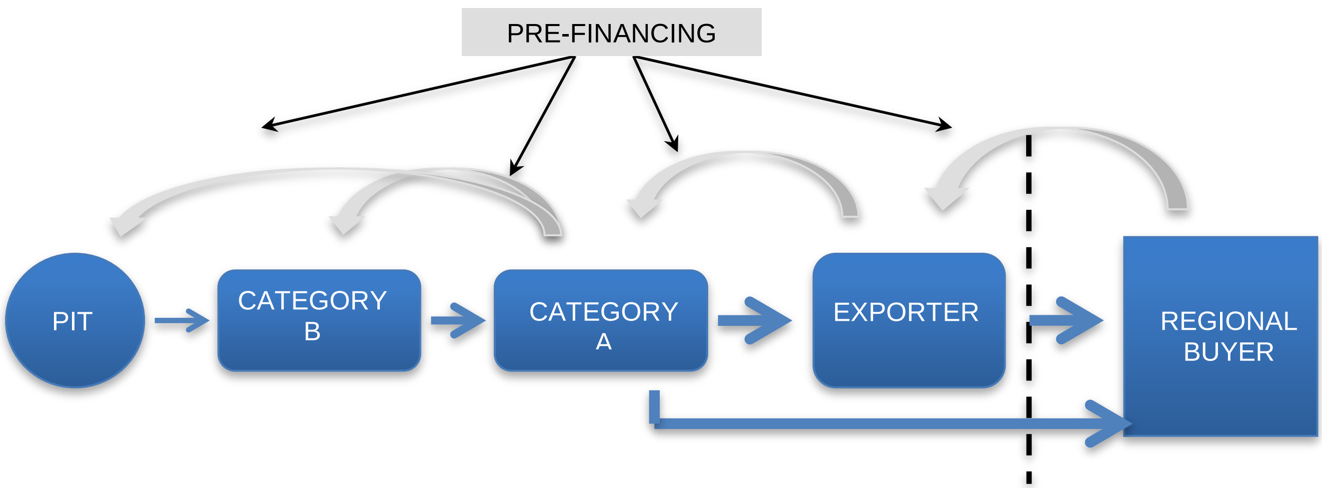
As described above, the manner in which production at a site is financed has a critical effect on whether the gold from that site can be diverted into legal channels. For CBRMT—absent a head-first plunge into ASM finance—the best option may be to seek out pilot sites where there are non-*négociants* pre-finance networks in place and the division of production is conducive to channeling ore through legal channels. The provision of technical interventions can help to centralize ore processing, for example, and may be able to overcome the challenge of pre-financing.

3.5.1 SALES FINANCING NETWORKS AND *NÉGOCIANTS*

Négociants are the weak link in the drive to create a legal sales chain in the DRC. They are frequently uninterested in collaborating in the effort to forge a legal sales chain, and there are few or no tools at hand to force them to do so. It is the author's view that it may be necessary to replace or subvert the existing sales networks to achieve legal certified gold exports from the DRC. Removing or blocking the participation of *négociants* from supply chains does, however, carry risks, given the critical linkages and socioeconomic networks they have established within mining communities. As such, care should be taken to avoid a backlash or sabotaging of a pilot effort by *négociants* who feel left out of the process.

The Existing Chain. Figure 3 shows a typical pre-finance chain for the DRC. An exporter (likely illegal) located in a larger city such as Bukavu, Butembo, or Bunia advances a tranche of money to a Category A *négociant*. A typical advance would consist of $5,000–$10,000. The exporter may be working with his own money. He may have a pre-financing source located in a regional center such as Bujumbura or Kampala. The Category A *négociant* travels out to a mining area and begins buying gold. He may buy directly from miners. He may advance smaller sums to Category B *négociants* located pit side at even more remote locations deeper in the countryside. Often, he will do both.

FIGURE 3: PRE-FINANCING OF DRC PRODUCTION CHAIN



The Category B *négociant*—often known as a commissionaire—makes his money off the margin or commission he can achieve buying small quantities (0.1–5 g) of gold directly from miners and ferrying it up to the Category A *négociants* who financed him. Category B *négociants* almost never work with their own capital, and are beholden to whoever has financed them.

Category A *négociants* profit in much the same way, making their money on the margin they can achieve between the price paid in the mining zones and the price on offer in Bunia, Butembo, Bukavu, or Bujumbura. There are a small but not insignificant number of Category A *négociants* who work with their own capital. Most, however, are pre-financed.

The services performed by the Category A *négociant* are essential to the smooth functioning of the ASM gold industry: transporting money to the mining areas, aggregating small quantities of gold into larger volumes, and transporting that gold back to the export points. Ideally, one could win the cooperation of Category A *négociants* and put their expertise to use in the service of legal gold exports. To date, however, such efforts have not been successful.

Attempts to Enlist *Négociants*. In a pilot project in Orientale Province, PAC attempted to offer technical assistance to miners in return for legal gold sales. A technical mission to the chosen site analyzed the grain size distribution and mining technique and quickly developed inexpensive improvements that on-site trials showed an increase in gold yields of 20–50%. Equipment was quickly brought in, and the project production phase got underway.

The way the chain was set up, project miners were directed to sell to designated Category B *négociants*,

Gold *Negociant*, South Kivu

who were in turn required to sell to designated Category A *négociants*. In Kisangani, meanwhile, a legal gold *comptoir* was standing by to purchase and export the gold.

PAC had carefully chosen Category A *négociants* who worked with their own capital. PAC explained upfront to everyone in the project that as the gold was going into the legal chain, the price would be some 2% lower. For miners, the increased yield would make up for the lower price. For *négociants*, the increased volume of sales, combined with the provision of technical assistance to "their" miners was offered as an offset to the lower purchase price. During outreach and planning sessions, all stakeholders accepted this as a reasonable tradeoff.

As the project rolled out, miners mined, achieving yields some 25% greater than before. They duly sold this gold to the designated Category B *négociants*, who then sold it on to the Category A *négociants*, who then consistently sold the gold into the illegal market. Attempts to discuss this with the chosen *négociants* ran into a single economic fact: the legal *comptoir* paid 2% less than his illegal competitor. For a Category A *négociant*, the 2% price difference represents anywhere from 20–40% of his profit margin. From the perspective of the *négociants*, passing up CF 1,000 extra per gram of gold was economically irrational. Had the project continued for a longer period, extended discussions might have convinced the *négociants* to sell at least a portion of their project gold into the legal sales chain.[29]

In Bunia, a new legal gold *comptoir* attempted to partner with local Category A *négociants* by taking on the role of (legal) pre-financer.[30] In place of illegal tranches of $5,000 apiece, he made advances of legally sourced money in much the same amounts. Ordinarily, buying $5,000 worth of gold and returning to the city takes a *négociant* less than a week. The legal *comptoir* found that his Category A *négociants* were taking his money, making two or three return trips in which they would buy gold with his cash and sell it to his illegal competitors (at a price that was 2% higher) and then return after a month, $5000 worth of gold in hand (at least), with an excuse about the difficulty of finding supply in the bush.

In both cases, faced with a choice between an immediate 2% price difference and a building a longer-term relationship, Category A *négociants* have opted consistently and *en masse* for short-term profit. It is highly unlikely that these attitudes can be changed soon, or that other efforts to enlist Category A *négociants* will prove more successful.

Alternatives to *Négociants*. Different pilot models are developing different techniques for dealing with the economic incentives of Category A *négociants*. In its East African test sites, the FairTrade model, which offers a premium price in return for production according to FairTrade standards, plans to set up designated purchasing points at banking outlets located in close proximity to the producing areas. How this might play out in the DRC has not yet been delineated. FairTrade could team up with IOM to establish secure buying centers, and place their own designated FairTrade buying in a center located close to their targeted mine site.

The PAC Trading House model, planned as a follow-on to the earlier pilot effort in Orientale, would establish a project buying house on-site as close as possible to the area of production.[31] Miners who took advantage of PAC technical assistance would be required to sell their gold to the Trading House, which would purchase at rates competitive with other local *négociants*. The costs of the buying house itself, traceability and due diligence services, and ongoing equipment maintenance would be financed by the project, taking advantage of the margin in gold price between mine site and export point. As with the FairTrade model, the PAC Trading House model would benefit from the establishment of a secure local buying center established under the aegis of MONUSCO.

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29 A delay in funding and a problem with mine site title brought the project to a premature close.

30 Metal Precieux, pers comm, 4 Sept 14.

31 Recently rebranded as *Alimasi ya Sawa*/Just Gold.

The Contingent ZEA model (described in detail in Section 5.5.4) offers another possibility of working with *négociants* rather than replacing them. In this model, the GDRC would grant a ZEA to a particular cooperative, contingent on that cooperative meeting certain performance criteria—chief among which would be a certain volume of legal sales. (A variation on this model might involve Banro or some other large concession holder granting similar rights on part of its concession in return for similar criteria.) If the cooperative could not meet the performance criteria, the ZEA would be taken away.[32] A rigorous system of production monitoring would be put in place, together with a sophisticated traceability system that could follow gold from mine site to export. Once this was achieved, there could be strong pressure from the cooperative on *négociants* to sell through legal channels (as their license depends on it). If a legal *comptoir* could pre-finance a cadre of Category A *négociants* and station them on this site, there would also be strong pressure from above. Between the two, with a tracking system showing where the gold has gone, it might be enough to incentivize some *négociants* back into the legal gold chain.

In the technical assistance model being implemented by the AGC in Burkina Faso, *négociants* are by-passed. The AGC plans to establish its own dedicated export house that will buy gold directly from the targeted artisanal producers who have received AGC technical assistance. Gold thus travels directly from ASM producer to AGC export point. How *négociants* would react to such a model in the DRC is not known.

All of these models are worth considering, and each should form part of the CBRMT project. Further details on proposed pilot project models are included in Section 5.5.

3.6 BARRIER 4 – ASM GOLD COOPERATIVES: NEW, UNTRAINED, UNREADY

The mining cooperative is not a natural feature of the DRC mining landscape. Instead, cooperatives were forced on miners as a formalization measure by a central government seeking to establish some local authority that could control and be held responsible for miner behavior. Traditionally, DRC gold miners have been organized in a hierarchical PDG structure, with a boss or owner—the *President Directeur Generale*—his immediate assistant (often known as *Directeur Generale* [DG]) and technical supervisor (*Chef Technique*), and various pit or tunnel bosses (*chefs du puit*) and the rank-and-file miners. With the advent of the government's new cooperative drive, PDGs simply took out cooperative documents, changed the name of the executive positions (PDG became "Cooperative President") but maintained the basic hierarchy. The DRC's gold cooperatives remain, for the most part, highly hierarchical institutions governed by local elites; more often than not act they act on behalf of elite interests rather than their membership and few have adequate training in administrative and financial procedures.

COMICA Cooperative, Maniema

A well-functioning, democratic and active cooperative is a critical prerequisite for larger tasks such as traceability and due diligence. However, after formalizing the sector into cooperatives, the DRC has done little to develop capacity within these newly formed cooperatives. Most of these organizations have only a

[32] The Achilles heel here is the GDRC's ability to enforce its will in the mining zones.

founding document and lack the capacity to handle basic administrative tasks. For example, most do not have a current list of members, nor a register of dues paid (if any), nor a ledger showing income (member dues, pit fees, etc.) and expenses (office costs, salaries). Bookkeeping skills at most cooperatives are non-existent and most have little understanding of how to manage equipment, plan and pay for repairs, and amortize replacement costs over time.

There is thus a clear need to develop basic organization and management skills at miners' cooperatives. Additionally, democratic decision-making is almost entirely absent at the cooperatives studied. Cooperatives are typically run as de facto small businesses, with all decisions taken by a president (the PDG) with perhaps some token consultation with one or two other cooperative members.

As a first step in its engagement with ASM gold coops (after site selection), CBRMT could undertake a program of basic administrative training for targeted pilot project coops. Topics should include basics such as keeping a list of members, collection and recording of dues, issuing receipts, opening and maintaining a bank account, and keeping and preparing minutes of meetings.

As a second step, CBRMT could begin training cooperatives on basic production tracking, using paper ledgers. Cooperatives should keep track of the number of active pits on their site, the names of worker and pit bosses, and the daily (or weekly) production of each pit or tunnel. Training cooperatives to keep their own records will help to demystify the topic of production tracking, and lay a solid basis for later efforts at traceability. DRC civil society will be a natural partner in this training effort. There are civil society organizations in each of the targeted provinces in the east with strong track records in the ASM field.[33] These organizations all have excellent relations with ASM producers, and experience in the basics of running small organizations in the DRC.

With the very basic administrative and statistical training out of the way, CBRMT may want to move on to business training. Currently, DRC's artisanal miners do not see their occupation as a business. While one goal of the DRC's cooperative policy was to foster creation of a business-minded middle class of small mine operators, the reality is that most miners and mine cooperatives see theirs as a subsistence occupation. Money is spent as quickly as it is earned, with little set aside for savings or reinvestment. Fostering the hope for a mining middle class will require changing these attitudes and helping miners develop the skills and mindset to develop into small-scale business people.

CBRMT may also want to hold out the promise of business training as a bonus for cooperatives that successfully complete the first two tasks of administration and statistical record keeping. Topics for this training might include savings, reinvestment, machinery life cycles and cost amortization, mining mechanization, spreadsheets and cost/revenue projections, and basic business administration. Again, civil society would be natural partners in this endeavor.

3.7 BARRIER 5 – SAESSCAM'S DUAL ROLE

SAESSCAM, the DRC's artisanal and small-scale mining agency, is tasked with two separate and somewhat contradictory roles. It is first mandated to provide technical assistance and extension services to artisanal miners. At the same time, SAESSCAM is delegated by the state to tax these same miners, both to pay for the extension services and to contribute to general state revenue.

To date, SAESSCAM has focused exclusively on its role as tax collector.[34] As a result, SAESSCAM's relationship with artisanal miners typically runs from poor to outright hostile. Miners resent paying their

33 In South Kivu, these include CENADEP, OGP, and BEST. In Orientale, there is Haki na Amani. COSOC-GL, an umbrella organization that includes civil society organizations from the DRC, Rwanda, Burundi, and Uganda, is another strong contender as a partner.

34 Officially, SAESSCAM's charges are known a "fees for services rendered," but they are in effect taxes.

money to fund what they view as non-existent "services." In addition, by focusing on tax collection, SAESSCAM staff have not developed the necessary skills and expertise to provide technical assistance and extension services to artisanal miners. At the same time, many miners would benefit from technical advice on prospection, processing, and mechanization. Educating miners on environmental mitigation and remediation and mercury reduction would also be a natural role for SAESSCAM, but would require a radical shift from their current role. Thorough reform of the DRC's mining sector and SAESSCAM in particular is beyond the scope of the CBRMT project, efforts could be made to strengthen the capacity of SAESSCAM agents and deploy them to CBRMT pilot sites to fulfill the other half of their mandate - technical assistance and training.

3.8 THE ICGLR RCM – REPRISE

As noted in Section 3.1, a key goal of the CBRMT project is support and scale up legal artisanal gold production in the DRC, according to the standards of the Regional Certification Mechanism. The requirements for RCM certification include:

1. **Validated (green-flag) mine sites**
2. **Traceability**
3. **Certification at Export.**

These will be dealt with in turn in the sections below. As traceability (requirement 2) is the most complex of the three, it will be dealt with last.

3.8.1 VALIDATED (GREEN FLAG) MINE SITES

The process for validating artisanal mine sites in the DRC is well documented. The standards of the RCM have been adapted into a DRC Mine Site Inspection form; BGR and PAC have together conducted training for mine site inspectors from government and civil society in Bukavu and Kinshasa, and BGR plans to continue the training sessions for government inspectors in North Katanga (Kalemie) and Orientale (Bunia). The GDRC has, however, delayed somewhat in developing a mine site database and publishing the full reports of mine site inspections. Both these are requirements of the RCM.

For the CBRMT project, the major challenge will be ensuring that mine sites targeted for pilot projects can be inspected and validated within a reasonably short timeframe. Validation missions, though directed by the GDRC, are financed and in part organized by IOM and BGR. Close coordination with these two agencies will be required to ensure that CBRMT pilot projects can be validated expediently.

3.8.2 ICGLR CERTIFICATES AND CERTIFICATION PROCEDURES

The ICGLR Certificate is a critical element for ensuring the market acceptance of DRC artisanal gold. It is true that many gold buyers are indifferent to the provenance and production conditions of the gold they buy. However, for those reputable buyers who have expressed an interest in sourcing DRC artisanal gold (e.g., Emirates Gold, PAMP/MKS, and Rand Refinery), the ICGLR Certificate is a critical guarantee that the gold has been mined, traded, and sold in conformity with the standards of the ICGLR and OECD Due Diligence Guidance.

However, there have significant challenges in the rollout of the certification process in the DRC. Initially—as the number of validated mine sites was minimal and traceability non-existent—it was the recommendation of the technical partners assisting the GDRC in implementing the RCM that certification be brought online gradually, as mine sites were validated and traceability became available. In early 2014, however, the Minister of Mines issued a decree: all exports for 3T minerals and gold must be accompanied by an ICGLR Certificate.

The decree left agents of the CEEC—those in charge of processing exports and issuing certificates—in something of a quandary. The standards of the RCM said that certificates should not be issued where there was not proof of origin from a validated mine site and traceability from mine to export. In most parts of the DRC, these did not and do not exist. On the other hand, the minister was demanding that no exports leave the country without a certificate. CEEC officials were faced with a choice of either denying exports, or assigning certificates with little or no validity.

The minister was made aware that essentially certificates of dubious credibility were exiting the country, damaging the reputation of the RCM brand. He then issued a further directive, requiring that no certificates be issued where RCM standards could not be met. This in turn created its own problems; with no green mine sites established for gold, it effectively banned gold exports. This directive too has since been relaxed. For consumers of DRC minerals, there are now certificates backed by mine site inspections and traceability, and certificates without, which further confuses the situation.

To resolve this issue, the DRC could adopt a phased-in approach. Once a critical mass of gold mine sites has been validated—for example, 20 in any particular producing province—DRC authorities could require gold exports from that province to bear a certificate, backed by mine site inspections and traceability. Gold exports without a certificate would not be permitted. Provinces below the threshold could be allowed to export without certificates.

For the CBRMT project, one element worth considering is the capacity of CEEC offices to process and issue certificates, once valid mine sites and traceability come online. To date, the Bukavu, Goma, Kalemie and Kindu CEEC offices have been fully trained in certificate issuing procedures, with support from PAC, No training has yet been conducted in Bunia, Kisangani, Butembo, or Lubumbashi, nor has there been any specific training for officials from SAESSCAM or *Division des Mines* on the appropriate procedures for gold. For the provinces in which CBRMT pilot projects are located, CBRMT may wish to consider partnering with PAC to extend training on certification procedures for gold supply chains to the appropriate CEEC, SAESSCAM and *Division des Mines* offices.

3.8.3 TRACEABILITY

There are few examples of successful traceability systems for artisanal gold worldwide and none at all in East or Central Africa. The DRC thus will become something of a testing ground for new techniques and technologies. It is clear that traceability for gold will be highly dependent on context. It is unlikely that there will be a one-size-fits-all traceability solution for artisanal gold. On some sites, a simple, rigorous system of production tracking (on paper registers) combined with paper receipts and inviolable envelopes may suffice. On another, an electronic tracking solution may be called for. Whether sophisticated or simple, however, all the successful solutions will have one element in common: Adherence should be voluntary, as coercion is not a viable long-term solution.

The CEEC has recently proposed a system of inviolable envelopes and paper forms, known as the Traceability Initiative for Artisanal Gold (*Initiative de Traçabilité de l'Or d'exploitation Artisanale*, or ITOA). This initiative could work if combined with a series of incentives to win the cooperation of the artisanal sector. Many in the DRC government (and some outside of it) have suggested mandatory trading centers, supervised by a cadre of sharp-eyed government inspectors, where *négociants* must go to buy their gold, and miners to sell, with every transaction recorded and every scrap of gold tucked into an inviolable CEEC envelope. Such solutions have been tried before. An aquarelle from early 1730s Brazil shows a long line of miners washing for diamonds, with an equally long line of overseers—one for every two miners—scrutinizing the miners' every move. Even so, colonial Brazil had a thriving black market in contraband stones.[35]

[35] So much so that the international prices had collapsed by 1735.

This is not to say that trading centers and inviolable envelopes will not have a role. The FairTrade/FairMined model may well benefit from a single secure location in which to trade gold. The PAC Just Gold Trading House model depends on it (more details on these models in Section 5.5). Whatever the technology employed—CEEC paper envelope or a GeoTraceability electronic tracker—the system will only work if an important non-government actor in the chain—producer, trader, concession holder, or exporter—wants the material tracked. Additionally, someone in the chain must be willing to pay the costs of tracking.

For the FairTrade/FairMined model, that willing party will likely be the cooperative. FairTrade/FairMined works on the basis of a premium price, paid in return for meeting certain production standards, one of which is traceability. In practice, the major risk for this model in an environment such as the DRC will be outside gold entering the premium-paying stream. The solution will be rigorous production monitoring—possibly paper-based, although an Excel sheet with built-in flags to catch anomalies might be more effective. As the gold would go straight from the mine site to export points under this model, simple sealable bags and a receipt in duplicate could be enough to guarantee traceability. .

The PAC Trading House model aims to provide technical assistance to artisanal miners in return for legal sales. A project-run trading house would purchase gold directly from miners after processing at the mine site. Traceability and other administrative services will be paid for by capturing the margin that normally accrues to Category A *négociants*. As with FairTrade/FairMined, the key to chain of custody in this model is robust production monitoring. Once gold is captured by the trading house, the minerals move directly to an exporter. Some form of inviolable container will likely suffice here as well.

The AGC technical assistance model aims to forge a direct sales link between project producers and an AGC-established export point. As with the PAC and FairTrade/FairMined models, the key to traceability thus lies in robust monitoring of production levels, which can then be matched to exports. The Concession Holder-Cooperative model presents an additional interesting test case. In this model, a concession holder grants a cooperative the right to work on its concession, in return for some percentage of production. The concession holder has a strong financial interest in tracking all production from the source, and might well be willing to pay the costs of a more sophisticated electronic tracking solution. As a variation on this model, one could imagine a concession holder such as Banro granting a cooperative the right to dig, demanding only legal sales (or perhaps sales to Banro) in lieu of a percentage. Here the cooperative would need to pay the costs of traceability, in return for the right to dig. In either case, the system would have to include not only production monitoring but also the ability to track gold through the supply chain, from producer to *négociant* to exporter.

A second variation on this model might be where the government grants a ZEA to a single cooperative, and in return for a performance bond, the ZEA would remain valid only as long as the cooperative produced a certain amount of legal gold per year, and ensured this gold was tracked through legal channels to an exporter.

All of these models have a need for rigorous production monitoring. The AGC has developed a methodology for production monitoring that involves collecting and then correlating data from three independent data sources: interviews with miners (which could be extended to paper recordkeeping); physical site monitoring (depth of pits, sacks of ore moved); and analysis of local economic activity. The AGC model could be usefully implemented in one or more of the CBMRT pilot sites, in conjunction with other traceability efforts.

These models are elaborated in Section 5.5.

4.0 BARRIERS TO LEGAL CERTIFIED GOLD – EXTERNAL BARRIERS

4.1 REGIONAL TAXATION

The DRC for many years was victim to predatory taxation policies of its regional neighbors, which set their own gold taxation rates well below those of the DRC in a successful attempt to divert DRC gold flows to their own countries. Fortunately, that problem has now largely been resolved. As shown in Table 8, Burundi, in 2014, raised its export tax on gold to match that of the DRC.[36] Both are now set at 2%. The increase in legally declared exports from Bukavu, to 312 kg in the first seven months of 2014—as compared to a five-year countrywide average of only 216 kg—may in part be a result of this harmonization. Uganda has raised its export tax on imported gold to 1%, and its tax on domestically produced gold to 3%. Tanzania—also a hub for regional gold smuggling—has a tax rate of 4%. Kenya's export rate is also 2%.

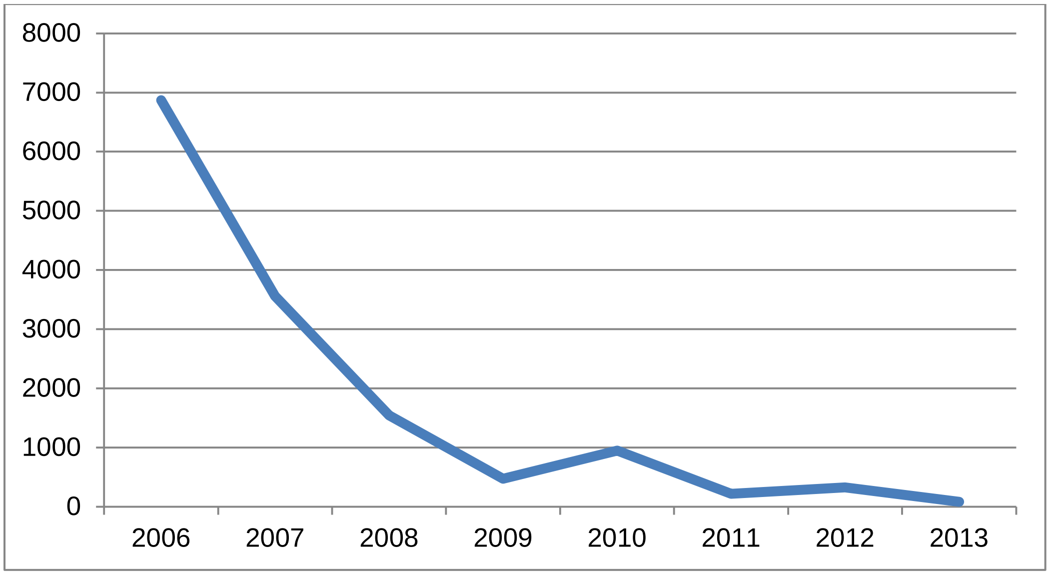
There is still the 1% differential between the DRC and Uganda's tax rate for imported gold. Eventually, this gap could be closed, however the UN Group of Experts and other investigators have clearly demonstrated that a significant percentage of the DRC artisanal gold production continues to be smuggled to Uganda with no legal export taxes collected. An additional problem is that since Uganda began tightening its documentation requirements and export procedures on transiting gold, regional gold dealers have given up making use of the re-export loopholes. Figure 4 shows the dramatic collapse in gold exports from Uganda between the years 2006 to 2013. The collapse has no apparent linkages with the downturn in the DRC gold industry, nor any international drop in the price of gold. It does neatly follow on the heels on tightened enforcement by Ugandan officials. The challenges posed by gold smuggling networks based out of Kampala are addressed below in Section 4.3.

TABLE 8. TAX RATES IN THE GREAT LAKES REGION

Country	Royalty Rate
DRC	2%
Burundi	2%
Uganda – imported gold – domestic production	1% 3%
Tanzania	4%
Kenya	5%
South Sudan	5%
Rwanda	6%

36 *Ordonnances Ministérielle* n°760/540/1758 du 26/12/2013 et no760/540/1757 du 26/12/2013.

FIGURE 4: UGANDAN GOLD EXPORTS TO DUBAI



Source: COMTRADE

4.2 SWIFT AS GOLD – COUNTERTRADE AND THE ROLE OF GOLD AS AN IMPORT FINANCE TOOL

Gold is often used in cross-border exchanges as an international financial tool, because it allows traders to circumvent the time and expense of using traditional banking services. The consequent demand for gold as a banking tool puts a significant upward pressure on gold prices in the eastern DRC. There are two different types of gold countertrade at work in the eastern DRC, one wholly domestic, the other international.

4.2.1 DOMESTIC COUNTERTRADE

Domestic countertrade is best explained via the example of a dealer in cooking oil who plies his trade between Bunia and Butembo. Over the course of a month, the dealer sells 2,000 tubs of cooking oil from his shop in Ega Barrier, just north of Bunia. As the most common denomination of paper money in circulation in the DRC is CF 500, monthly trade leaves the dealer with vast piles of Congolese Francs. Travelling with such a vast quantity of paper money is nearly impossible. The dealer could put it in a bank, but he does not trust Congolese banks. Instead, he buys gold. At the end of the month, the dealer travels to Butembo where he turns his gold into dollars, which he uses to replenish his stock of cooking oil. He then returns to Ega Barrier to begin the cycle again. The dealer makes no money on the gold. He is happy just to break even. He says that his healthy 15% profit comes from the cooking oil trade.

This story is repeated all over eastern DRC, notably by the mostly Nande merchants who travel far into the bush bringing alcohol, shovels, rice, soap, and other goods to the many small mine sites in Orientale. Like the oil dealer, these traders make their money on the consumer products trade. Gold is just a banking vehicle, and even in the most remote mining camps of the eastern DRC, there are merchants who will be happy to buy gold at the price for which it is selling back in the city. Their travel and lodging costs have already been paid by selling off their wares. For any prospective pilot projects that hope to intervene directly in the purchase of gold, the existence of a domestic countertrade means there will be some competition.

4.2.2 INTERNATIONAL COUNTERTRADE AND IMPORT FINANCE

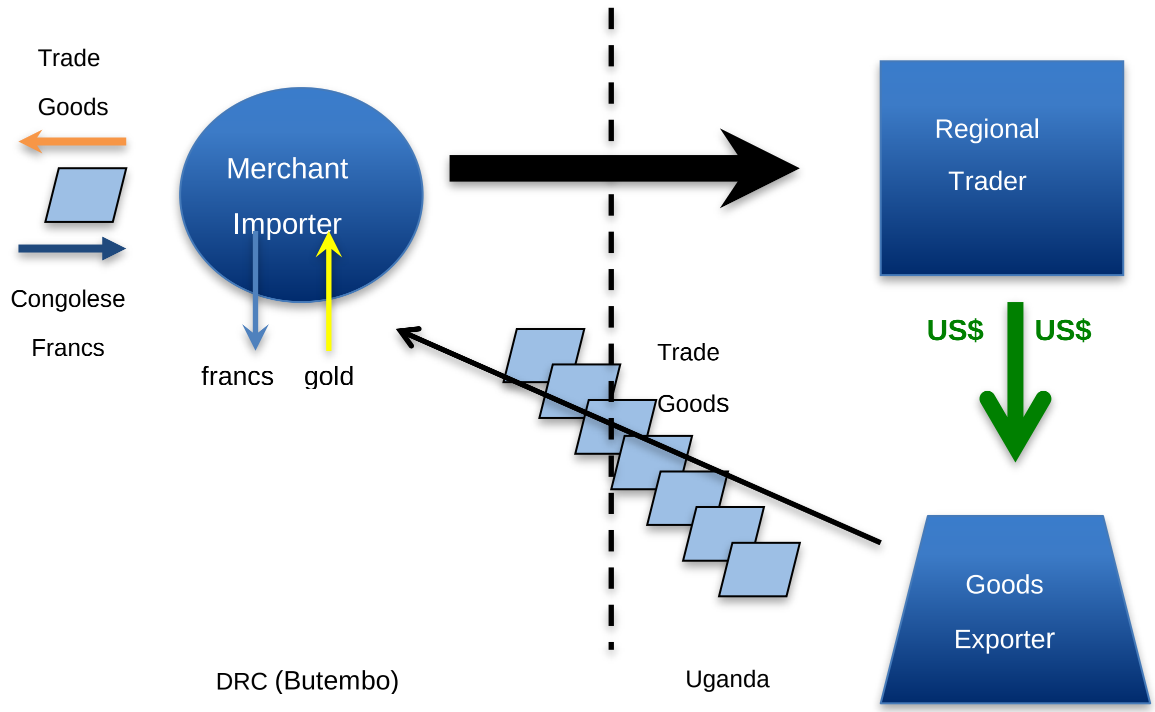
The international version of countertrade is somewhat more problematic, involving large volumes of money transferred untraceably through non-banking networks between unidentified individuals unmonitored by any government institution or system of financial regulation.

The system works as follows. (A diagram of the system is shown in Figure 5.) A merchant importer in Butembo sells goods such as motorcycles, cement, or rice. He brings these products in by the container load and sells them, and he receives enough Congolese Francs to fill a small soccer stadium. He uses the Francs to buy gold. He could take the gold to Kampala, exchange it for dollars, and use those dollars to buy more motorcycles (or rice, or cement). However, this importer’s primary trade is not buying and selling gold, but importing and selling merchandise so he likely does not want to take the time to travel to Kampala.

Instead, the Butembo merchant importer calls his contact in Kampala and asks him to send, for example, US$1 million to the exporter in Mombasa (or Dar es Salaam, Dubai, or Shanghai) who sells goods wholesale. The man in Kampala uses his own contacts in the location requested to ensure that the money reaches the exporter. A container load of the goods in question is duly dispatched to Butembo, and the name of the merchant importer is identified as the recipient on the bill of lading. The merchant importer then dispatches 25 kg of gold to his contact in Kampala.

In this example, no large volumes of US cash ever have to make the transit from Kampala to Butembo, and no commercial banks need to be involved in the thriving consumer products trade in the eastern DRC. Those who want to make a living solely through buying and selling gold from the eastern DRC find themselves outcompeted by people for whom gold is a banking vehicle in other words a soft, yellow, and clandestine version of a wire transfer, or SWIFT.

FIGURE 5: ILLEGAL BANKING NETWORK AND COUNTERTRADE BETWEEN THE DRC AND UGANDA



It is not entirely clear how the merchant exporter deals with variations in the international gold price between the ordering of the trade goods and the delivery of the gold. Nor is it completely clear what the costs of this system are in comparison with the costs of a formal bank transfer. However, the popularity of the system suggests that the cost advantages are significant. In the final analysis, bringing the majority of the DRC's artisanal gold production back into legal export channels may well require a sustained effort to separate the "gold as gold" market from the "gold as clandestine banking vehicle" market. This is clearly beyond the scope of the CBRMT project, and beyond the technical capacity of Tetra Tech, yet it is an important goal to keep in mind.

Pursuing such a goal is not overly complex or technical. It would require first and foremost a tightening of the DRC's customs and import procedures, particularly at the border posts adjoining the Rift Valley towns like Beni and Butembo and others. Just as *comptoirs* legally buying gold and diamonds in the DRC have to provide banking documents showing where their money comes from, so importers bringing in more than, for example, $50,000 worth of goods should have to show via banking documents a trail of money that originates in a Congolese bank. When the container load of goods arrives at the border post, customs officials would need to see not just the bill of lading with the name of a Butembo merchant importer, but the trail of banking information leading back to the merchant importer's Butembo bank.

Putting such a program into place would require a constant presence over several years in both Butembo and border posts such as Rutshuru, Mahagi, and Kasindi-Bwera. Also worth consideration is the fact that the Butembo merchant importers are possessed of no small political heft. Reforming the Rift Valley customs posts is thus not something to undertake lightly. It might well require the resources and political backing of some large international government and development agency working hand in hand.

If there were sufficient government will and support, an international donor or development agency could, in conjunction with national enforcement measures, work with local banks to expand commercial banking services, perhaps by offering deposit insurance for large commercial banking clients, or guarantees on short-term import-directed international money transfers. The rationale for pursuing such an ambitious project is grounded in the sheer size of the industry. The DRC artisanal gold industry alone produces at a minimum some $320 million worth of gold every year, an estimated 97% of which vanishes into the clandestine market (the remaining 3% passes through the legal system and is taxed at both provincial and national levels, as described earlier). The development of a commercial banking sector in the thriving commercial hubs of the Rift Valley could help cement peace and development in eastern DRC, and further commercially integrate these centers with the booming East African community. Strong political will and support, even from just a few powerful "champions" in government would be necessary to launch and sustain

4.3 REGIONAL SMUGGLING NETWORKS

4.3.1 WHERE IS THE GOLD GOING?

As noted in Section 4.1, regional tax variations, in particular the nearly 3% difference between DRC export taxes (for years set at 3.25%) and Uganda export taxes (long set at 0.5%), created a strong financial impetus for cross border gold smuggling.[37] In Kampala, networks of Indians and Anglo-Indians with strong connections in Dubai and Mumbai would take gold from exporters in the Rift Valley towns of Butembo, Beni, and Bunia, and export it via Entebbe Airport to Dubai. These networks began during the Ugandan military occupation of the northeastern DRC, and have continued mostly unchecked since.

There have been countermeasures. As noted in Section 4.1, regional tax rates have since 2012 largely harmonized: DRC, Kenya, and Burundi are all now set at 2%. Tanzania is at 4%. The remaining 1% difference between DRC and Uganda is significant, and should be closed, but is likely no longer a major driver of cross-border traffic.

Starting in about 2010, Ugandan officials at the Geological Survey and Mines Department (GSMD) began tightening up procedures and documentation requires for so-called re-exports of gold—i.e., gold that had supposedly been legally declared and taxed in its country of origin, and was just making a stopping point in Uganda on its journey to a final destination abroad. Uganda's two-tier taxation regime for gold was in fact based on this assumption—that re-exported gold had already been taxed by some government in the region, and so to tax it again at the full rate would be excessive. Domestic Ugandan production was always taxed at a "full rate," initially 2% and since 2013 at 3%.[38]

Around 2010 the GSMD began demanding some form of proof that these home country taxes had indeed been paid. Initially, these documentary demands were simple, and almost any piece of paper would do. Exporters would present two bills of lading with identical fonts and layouts, prepared on the same ink-jet printer, one ostensibly from an export house in South Sudan showing all taxes paid, the other from the actual exporter in Kampala, showing a destination in Dubai. Although the GSMD rarely questioned these documents, the mere demand was enough to deter a good deal of exporters. GSMD officials report that many exporters who regularly traded with Dubai simply stopped coming in after the demands for documentation began.

In 2012, the GSMD began enforcing that documents from the producer country governments be presented—certificates of origin—showing that all taxes has been paid for the exported gold and it had

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[37] The DRC "export tax" is a mix of tax and royalty, as is the Uganda export tax. For simplicity's sake, these are referred to simply as taxes.

[38] Most Ugandan artisanal production was in fact falsely declared as being of foreign origin to win the more favorable tax regime. Uganda thus lost out on tax revenue on domestic gold, even as it gained on re-exported gold.

left its home country legally. The more brazen exporters upgraded their printers and began forging certificates of origin. Examples of their work are shown below, one for the DRC, the other for South Sudan.

Forged Certificate of Origins: South Sudan (left) and DRC (right)

Again, in the majority of cases, these forgeries worked. GSMD officials are not documents experts, and many have never seen genuine Certificates of Origin or ICGLR Certificates. Additionally, most do not have telephone, email, or personal contacts with any of their counterparts in the DRC or Sudan and lack the resources to follow up on suspicious documentation (see Section 5.11 for suggestions for ameliorating this situation). Nonetheless, the demand for more rigorous documentation was enough to deter a large number of exporters and legally declared re-exports declined once again. However, as legally declared re-exports declined it is highly likely that smuggling increased - although confirming this correlation is difficult given the illicit nature of the trade.

Moreover, while officials at Uganda's Office of Geology and Mines report a dramatic decline in gold re-exports via Uganda—and concomitant decline in their own departmental tax collection—they know there has been no corresponding increase in official exports from the DRC. One result, according to Ugandan officials, is that the trade has shifted to Tanzania, while also taking a significant portion of the domestic Ugandan production along with it.

It is difficult to confirm theses suppositions but putting yourself in the place of a gold smuggler from the eastern DRC in search of a buyer, where would you go? Travel by small plane is possible, but expensive, border controls are tighter at airports and gold sets off metal detectors necessitating extra expenses in bribes. Land travel is thus often preferred, although this requires staying awake and alert for possible dangers the entire duration of the journey. Within a three-day bus ride of Butembo, neither Burundi nor Tanzania nor Kenya offer better tax rates, South Sudan had until very recently no direct air links to the Emirates, and Somalia may not be too dangerous to risk traveling there with 2 kg of gold in your pocket.[39,40] Which brings the buyer back to Kampala.

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39 *Ordonnances ministérielle* n°760/540/1758 du 26/12/2013 et no760/540/1757 du 26/12/2013.

40 Fly Dubai apparently now has thrice weekly direct flight service.

Figure 6 shows an intriguing comparison—drawn from Comtrade—between Uganda's gold export statistics and Dubai's gold import statistics. The corresponding figures are shown in Table 9. The Ugandan figures, drawn from customs declarations at export, show the rapidly declining gold exports discussed above. The Dubai figures, drawn from customs declarations at import, shows strong and gold exports from Uganda to Dubai.

FIGURE 6: DIFFERENCE BETWEEN UGANDA GOLD EXPORTS TO DUBAI AND DUBAI GOLD IMPORTS FROM UGANDA

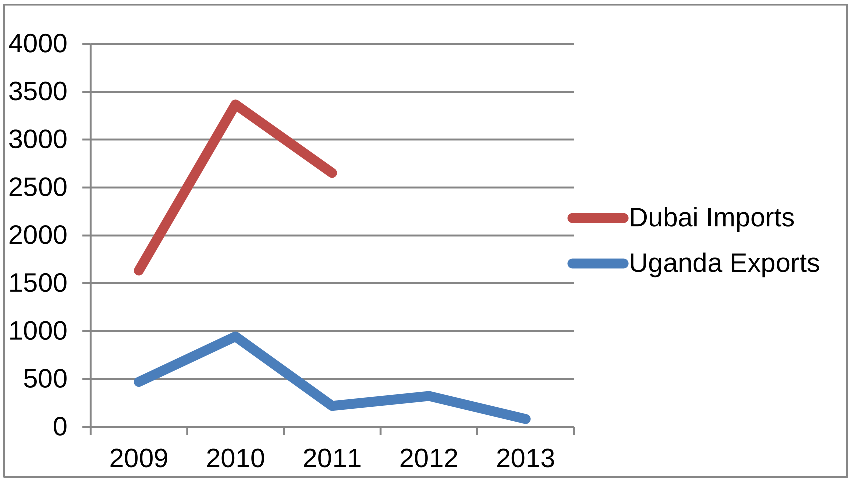

TABLE 9: DIFFERENCE BETWEEN UGANDA GOLD EXPORTS TO DUBAI AND DUBAI GOLD IMPORTS FROM UGANDA; THE BALANCE IS SMUGGLED GOLD

Year	Dubai (from Uganda) (kg)	Uganda (to Dubai) (kg)	Difference (kg)
2009	1633	471	1162
2010	3366	946	2420
2011	2652	219	2433
2012	n/a	324	n/a
2013	n/a	84	n/a

Source: Comtrade

Why the mismatch? It comes, likely, via a Dubai customs loophole known as the hand-carry exemption. Arriving in most places in the world with a few kilograms of gold in a carry will necessitate an explanation. However, in Dubai, and the formalities are minimal. Customs can be cleared tax free, and travelers are free to sell their gold in the souk. Unlike their counterparts at the Ugandan GSMD, Dubai officials do not ask for Certificates of Origin. What Table 9 shows is smuggled gold: 1.16 tons in 2009, 2.42 tons in 2010, and 2.43 tons in 2011. The most likely vehicle for this traffic is the daily Air Emirates flights from Entebbe Airport to the international airport in Dubai.[41]

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[41] Intriguingly enough, the Minister of Foreign Affairs, Mr. Sam Kuteesa, is 45% owner of the principal luggage handling company, ENHAS. The minister's daughter is also married to President Museveni's only son, a brigadier general and potential presidential successor. This investigation found no direct involvement by ENHAS in gold smuggling activities, but the connections are troubling.

A brief investigation at Entebbe airport reveals two likely methods for getting contraband gold aboard a Dubai-bound plane. The first involves the direct plane-to-plane transfer of goods marked transit. According to the manager of customs at Entebbe Airport, goods from an incoming plane —for example, from the eastern DRC—could be transferred directly to an outgoing plane —for example, to Dubai—provided they had the appropriate bills of lading and DRC customs documents showing them to be in transit for Dubai. Verifying the contents of such parcels is not a priority for Ugandan Revenue Authority (Customs), as no revenue collection is involved (customs revenue comes from duties on in-coming goods, not goods in transit). Given staffing levels at the airport, the transfer of such parcels is often effected with no oversight from Customs.

This method has two potential drawbacks. First, it is not clear how secure a gold containing parcel would be in the cargo hold of an Emirates-bound plane. In late 2011, 20 kg of outbound gold were actually stolen from a cargo hold at Entebbe Airport.[42] As the owner had neither insurance, nor the full set of customs declarations, the entire shipment was effectively a write off.[43,44] It is also not clear that such a parcel could be recovered and put through the hand-carry exemption in Dubai.[45]

Another method is simply to carry the gold in one's briefcase, backpack, or carry-on. The airport metal detectors will pick up this gold. However, according to a customs chief at Entebbe, staffing levels do not allow him to station his officers at either of the two security checkpoints at Entebbe Airport. As with transit goods, this is not a Customs priority. The two security points at Entebbe airport—the first at the Departure entrance, the second in the Departure lounge—are staffed by agents of Entebbe Airport security. Normally, a crew chief and two to three agents each staff an X-ray machine. According to a senior security officer at Entebbe Airport, individuals hand-carrying gold do pass through the airport two to three times per week, carrying volumes of two to five kilograms per person. When such individuals are detected, the security crew chief asks to see the accompanying documentation. The security crew chief is not required to verify these documents with Customs, nor to report the incident to his superiors. Security at Entebbe keeps no log of these incidents; estimates of their frequency are from memory only. Security staff at the airport have not been trained in legal export documentation, nor do they have models of such on hand.

According to an individual with extensive experience purchasing and transporting gold from Kampala to Dubai, hand-carry is the most commonly used method, and smooth passage through security at Entebbe airport is facilitated via the medium of cash payments. This informant would not state to whom or how these payments are made, but the size of the payments is substantial, amounting to close to 1% of the value of the gold. For five kilogram, this would amount to close to $2,000. This information could not, of course, be confirmed with either Customs or airport security.

4.3.2 WHAT TO DO ABOUT SMUGGLING?

As with internal drivers of the clandestine trade, strategies for dealing with the still-rampant smuggling of DRC gold via points in East Africa (notably Uganda) should involve both incentives and increased enforcement: the carrot and the stick.

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42 "Airport staff jailed over stolen gold", Daily Monitor, 28 January, 2012; http://mobile.monitor.co.ug/News/-/691252/1314966/-/format/xhtml/-/pgoc9/-/index.html.

43 One of the disadvantages of informality is exactly this kind of situation. As a smuggler, it's hard to seek compensation for lost goods.

44 Sameer Bhimji pers comm, 30 Aug 14.

45 Dubai was beyond the scope of this study, and the author is not familiar enough with Dubai customs procedures to make a pronouncement on the subject.

Tighten Up at Customs. The experience of Uganda's GSMD—tightening up on documentation requirements for gold only to see the somewhat suspect gold slink off into the fully clandestine market—actually contains a hopeful lesson: Gold flows do respond to customs regulations.

The lesson is disputed enough that it is worth repeating: **Gold flows do respond to customs regulation.**

The task now is to further tighten up on export procedures and customs controls, starting with Entebbe but extending as needed to those airports/export points within three days land travel of Butembo. Longer-term targets might include Dar es Salaam, Arusha, Nairobi, Zanzibar and Juba all of which now have air links to Dubai. An initial start could be made with a regional workshop, coordinated by the ICGLR, of officials from the Ministry of Mines and Custom Officials from ICGLR Member States, where they could share examples of what constitutes legal documentation from their jurisdictions. Mines and Customs from Uganda or South Sudan would then at least know what legal export documentation from the DRC looked like. Such a workshop could engender personal contacts, so that officials from one country would know who to contact in the other when confronted with a questionable situation. Key countries to invite to such a workshop would include the DRC, South Sudan, Uganda, Rwanda, Burundi, Kenya, and Tanzania.[46] Dubai should also be invited to participate in such a meeting.

Entebbe Airport clearly should be an early and principal target. Here, a simple gathering of GSMD, Customs, and airport security would help to clarify which documents are required for legal export of gold, and what inter-agency procedures should be followed when processing individuals with hand-carried gold. In the medium term, international donors may want to consider a program of customs training and support at Entebbe Airport, particularly as the airport expands and a new cargo terminal comes online.

Dubai itself is also an immediate and important target. The hand-carry exemption encourages the illicit trade of gold. Officials from Dubai may argue that if the hand-carry loophole is closed, smugglers will by-pass customs altogether and take their gold straight to the souk. Those familiar with souk say it offers a plenitude of buyers ready to take quantities up to 10–15 kg with no questions asked and no need for paperwork, and that these buyers simply launder the gold into their books as scrap. This may well be true, however Dubai should still close the loophole, as due diligence measures coming on line such as the OECD, World Gold Council, and Responsible Jewelry Council will begin to make the costs of the souk buyers' accountancy fraud prohibitive.

The ultimate goal is not to curtail or apprehend gold flows from the DRC via East Africa to Dubai. The goal is to make smuggling difficult and costly enough that smugglers will conclude that it is easier and cheaper to do things legally.

Rehabilitate Clandestine Gold Networks. In the 2014 report by the UN Group of Experts, three Kampala-based families—the Vayas, the Lodhias, and the Bhimjis—were identified as the principal financers and facilitators of the illegal export of gold from the eastern DRC and its transshipment to Dubai.[47] Companies owned or controlled by two of those three families—the Vayas and the Lodhias—have been placed on the sanctions list by the UN Security Council.[48] Despite this, according to the UN Group of Experts, these families have continued to purchase large volumes of illegal gold originating in the eastern DRC.[49]

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[46] Not forgetting the quasi-independent revolutionary Republic of Zanzibar, that appears to have some independent control of customs procedures and a growing reputation as a gold smuggling hub.

[47] Final report of the Group of Experts on the Democratic Republic of the Congo, 2014, S/2014/42, paragraph 183.

[48] Machanga Ltd., Uganda Commercial Impex Ltd. (UCI Ltd.), placed on the sanctions list March 2007; S/2009/603, p 34.

[49] Final Report of the Group of Experts, 2008, 2009, 2012: S/2009/603, paragraphs 133, 243; S/2008/773, paras. 91-92; S/2012/843 , para. 193.

However, things may be changing. In discussions held in Kampala in September 2014 it was suggested by the families themselves that they would consider returning openly, and legally, back into the DRC gold trade. Specifically, they proposed putting their financial resources and family contacts to work, in collaboration with DRC authorities and outside partners, in the service of a revived and legalized DRC gold supply chain. The families could buy gold from Bunia and Butembo and ship it to Dubai, paying all due taxes and declaring everything legally. There are clear risks to supporting the reintegration of these families back into the legal gold trade. First, the reputational risks to purchasers, such as Emirates Gold or PAMP/MKS, are so great that they would be unlikely to participate unless the provenance of the gold was vouched for by a reputable outside actor such as an NGO or Western government agency. This is true even of entities that blithely source gold they more or less know to be smuggled. Second, support for such a scheme could result in an NGO or government in the position of vouching to buyers for gold being proffered by entities on the UN Security Council sanctions list.

Third, the UN Group of Experts has not ceased its interest in the activities of these three families. In early 2014, a representative of the Group of Experts met with senior representatives of the Ugandan government, including the ministries of Mines and Customs, and the police services, and strongly urged Uganda to begin a police investigation into these families' activities. The Ugandan government is considering this advice. Should they pursue collaboration, CBRMT or USAID could find themselves working with individuals or companies subject to a Uganda police investigation.

Despite the challenges, this author recommends pursuing this opening as the advantages simply outweigh the risks. As regional buyers, pre-financers of *négociants*, and facilitators of the counter-trade, these actors exert significant control. Exporters and *négociants* depend on them for finance; merchant importers need them to facilitate the purchase of trade goods. They could, in fact, play a role of a choke point, analogous to that played by smelters in the 3T chains. Where the drive among *négociants* now is to get their gold into the hands of illegal exporters, the constraining effect of regional buyers demanding legal sourcing could change that, so that *négociants* would compete to get gold into the legal market.

The individuals interviewed for this report expressed various motivations for this initiative, including the decrease in taxes in the DRC, the increase in taxes in Uganda, the reputational damage and ongoing pressure of being on the UN sanction list.[50] The desire to be taken off the sanctions list is also a particularly strong motivator. It is possible that the hassle, cost, and risk of working under the table have reached the point where it may be better to return to doing things legally.

Of course, this solution could also backfire. For example, the family in question could set up a legal network to process a token amount of gold—100 kg per year, for example—which could be used as cover for their illegal activities. Such a strategy could be easily countered, however, by requiring they export a significant quantity of DRC gold—for example, one ton each per year—for a certain period of time. Even two tons per year would be a ten-fold increase over what the DRC has managed on its own these past ten years. It is the prospect of that scale of success that makes further explorations with these families possibly worth pursuing (see Section 5.10).

50 The increasing costs of moving gold through clandestine channels was alluded to, though as neither ever openly acknowledged ongoing involvement in the illegal gold trade, this bit of information was imparted only elliptically.

5.0 PILOT PROJECTS – WHERE TO START, WHAT TO DO

The CBRMT project calls for scaling up traceable artisanal gold production across the DRC. However, given the paucity of legal gold sites, the challenges inherent in developing traceability systems for gold, and the limited timeframe and resources of the project, it is recommended that CBRMT focus less on the number of sites and more on testing the proof of concept. Solid successes on fewer sites will likely have a greater salutary effect than indifferent results on a larger number of sites. The sections that follow provide site evaluation criteria, guidance on promising site locations, and which groups to work with in developing these pilots.

5.1 A DIVERSE APPROACH: PILOTS AND PARTNERS

This study highly recommends that various pilot project models be attempted simultaneously. No one model has shown such overwhelmingly positive results that it can be considered a front-runner. Moreover, some models have yet to be tried. Rather than committing vast resources to a single model in the attempt to ramp up production—and risk being saddled permanently with a functional but sub-optimal solution—this study recommends giving each of the differing models one or more sites as a test bed, and letting them run for the duration of the CBRMT project and comparing results at the end. This approach can yield solid results and establish a solid foundation for a follow-on ramp up phase.

A diversity of pilots absolutely necessitates a diversity of implementation partners. A single implementation partner for the traceability ramp up will not work if a variety of pilot models is to be implemented. In the gold sector, implementation capacity for each model remains endemic to the model's creator. FairTrade and Fair Mined are the provinces of FairTrade and ARM, respectively, and only they have developed the consumer networks able to offer a premium for their gold. The integrated technical assistance model developed by the Artisanal Gold Council remains that group's specialty, and only they have the capacity to execute it on the ground. Finally, the PAC Trading House model—recently re-branded as *Alimasi ya Sawa*, or Just Gold—remains a specialty of that organization.

The other two models—the Contingent ZEA and the Concession Holder-Cooperative Model—have yet to be tried, and so would be open to any organization with capacity and experience with DRC artisanal gold. Both of these models require strong production monitoring and traceability along the entire chain, so a partnership with a traceability provider such as GeoTraceability might also be indicated.

All of these various models will be heavily dependent on the active participation of DRC civil society, a topic covered below in Section 5.5.

5.2 SITE EVALUATION CRITERIA

The sections below indicate the criteria by which any prospective site must be evaluated. In effect, this section provides a standard through which final site selection can be made.

5.2.1 EXPLANATION OF CRITERIA

Not every artisanal mine site will serve as an appropriate site for an intervention. In selecting an appropriate site, the following criteria must be considered

Legality. An artisanal mine site must be able to legally source gold into the marketplace. Under DRC law, artisanal production is legal only if sourced by a registered cooperative operating in a ZEA, or if there is explicit written permission from the concession holder on a mining concession.

Security. ICGLR standards require that mine sites, their environs, and trade routes be free of the presence and influence of armed groups, and free of illegal activity by public or private security organs. No leeway is permissible for this requirement

Access. As project managers are unlikely to remain permanently at the mine site, a site should be within a reasonable distance (one day's travel) from the center from which the project will be managed. Also important is the proximity of government personnel from SAESSCAM and Division of Mines, as well as the availability of experienced civil society organizations that can aid in organizing and working with miners.

Population/Production. To be significant and sustainable, any intervention requires a substantial population of diggers and a reasonable production of gold. Though these numbers are variable, reasonable benchmarks would include a miner population of at least 100 diggers, with production of at least one kilogram of gold per month.

Certifiability of Site and Chain. The DRC now requires that all gold exports be accompanied by an ICGLR Certificate, as proof that the production, trade, and export were carried out according to the standards of the ICGLR RCM. The goal of any intervention must thus be a gold chain that can qualify for certified export. The basic requirements under the RCM are a green-flagged mine site, a system of traceability, and a CEEC office capable of issuing certificates.

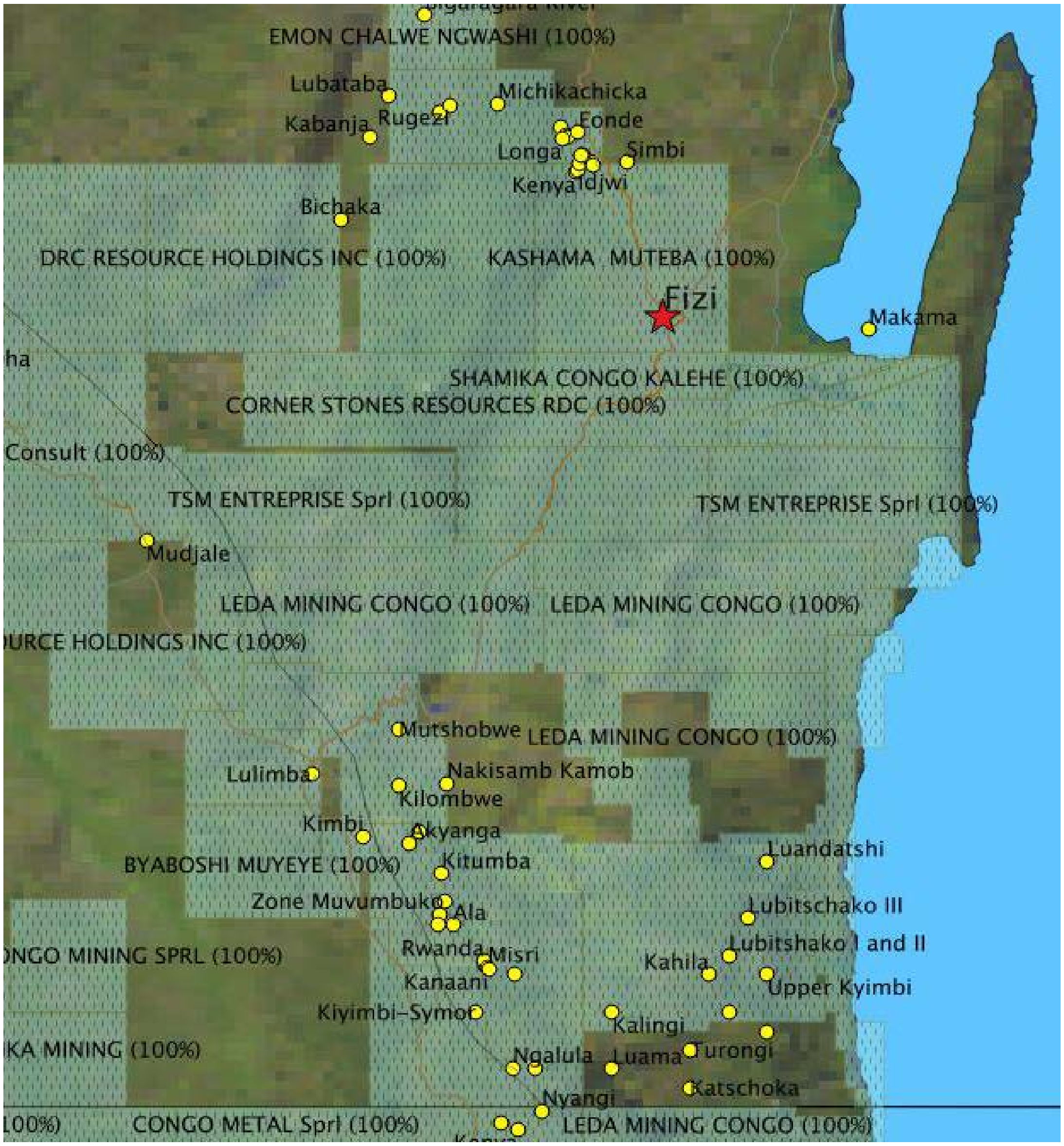
Leadership/Local Buy-In. Miners at potential pilot sites must be willing not only to participate but to play a strong role in making sure the project is successful. In addition, there must be clear leadership at the site that is answerable to the project.

5.3 PROMISING AREAS TO FIND SITE LOCATIONS

The identification of specific ASM gold sites to be targeted for pilot projects is beyond the scope of this study. The sections that follow indicate fairly localized areas where follow-up on-the-ground research could locate viable site locations.

Follow-up site selection research, including mapping, should be an immediate priority of the CBRMT project when developing the implementation plans for the scaling up of ASM gold pilots.

5.3.1 SOUTH KIVU – SOUTH OF FIZI (LEDA MINING LANDS)

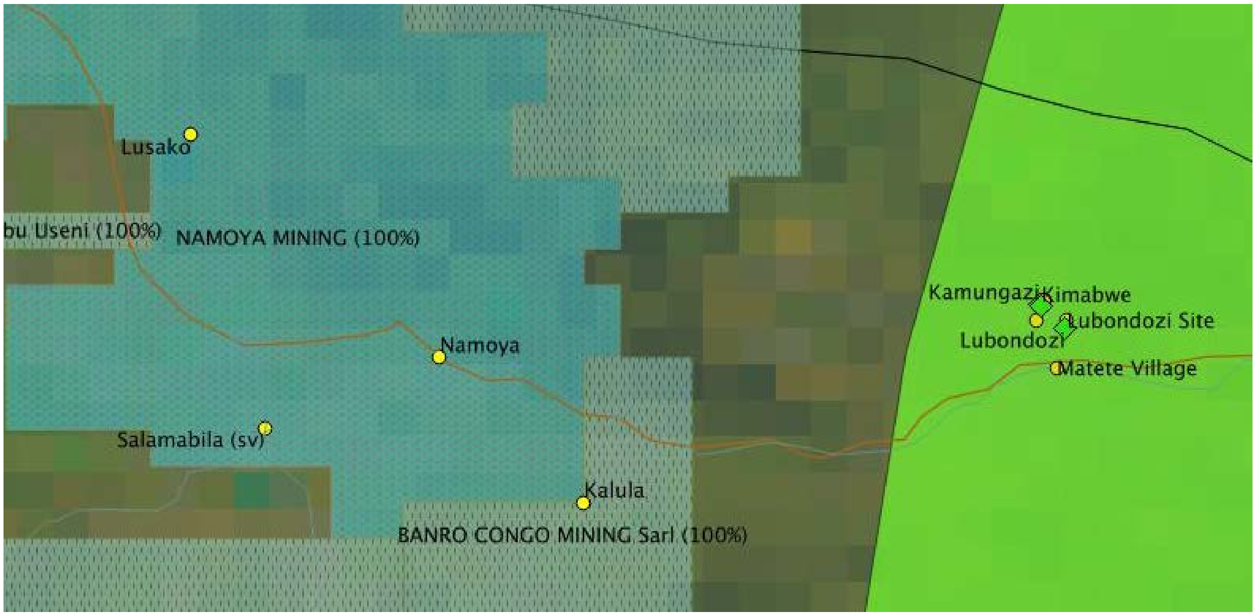


MAP 1: FIZI, SOUTH KIVU

The mining areas to the immediate south of Fizi, South Kivu, fall within the research concession of South African-based Casa Mining (Leda Mining). However, as part of its plans to switch from a PR to a PE (from prospection to production), Leda has agreed to give up a large portion of its concession to be used for artisanal mining. The exact areas to be ceded have yet to be determined.

The area has a significant population of miners and excellent gold production. The regional center of Fizi would make a reasonable project base. Bukavu is also within a day's drive. The drawback to this area is that there is significant FARDC involvement in the mine sites. A concerted effort with the full backing of the provincial government and FARDC army commanders would be required to make these sites acceptable from a conflict-free standpoint.

5.3.2 MANIEMA – MATETE SITE



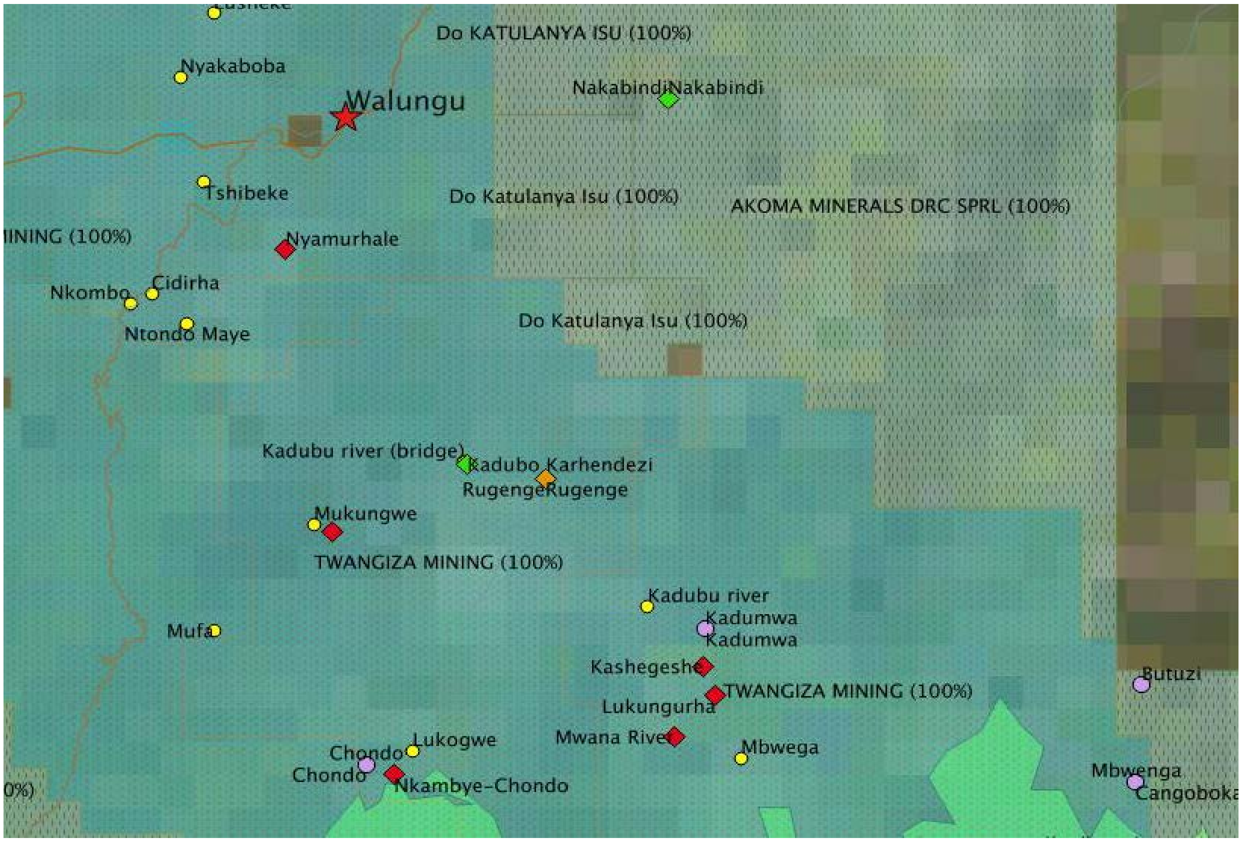
MAP 2: MATETE, MANIEMA

A project at the Matete site in Maniema would be strongly supported by the Banro corporation, which would be a significant advantage in terms of logistics and technical support. The site also has the advantage of having already been inspected and validated by a DRC joint inspection team.

Road transportation to the site is difficult, but access to the regular Banro flights would likely be able to overcome this challenge. Also, the mine site is located inside of a DRC protected area, the *Domaine de Chasse Luama-Kivu*. From a legal standpoint, according to the DRC Mining Code, mining is not prohibited in a hunting reserve. Legally, therefore, there is no impediment to establishing a pilot project on this site. However, this might pose a reputational risk for USAID and may not be congruent with consumer's demands who are paying a premium price.[51] Another drawback is the current lack of significant mining activity and gold production. Banro claims to have prospected the geology of the area, however, and believes there to be significant deposits of gold. It may just take some time before miners at Matete locate the best seams. The other potential drawback to the site is the very significant expectations of the COMICA cooperative on the site, fuelled somewhat by generous equipment donations from Banro. Managing cooperative expectations may make working here a challenge.

[51] FairTrade, for example, has the following standard: "FairTrade excludes mining operations in Protected Areas and may exclude mining in Critical Ecosystems on request from the FairTrade certification scope, according to the procedure for Temporary Excluded Areas (TEA)." Much will depend on the exact definition of "protected area."

5.3.3 SOUTH KIVU – WALUNGU



MAP 3: WALUNGU, SOUTH KIVU

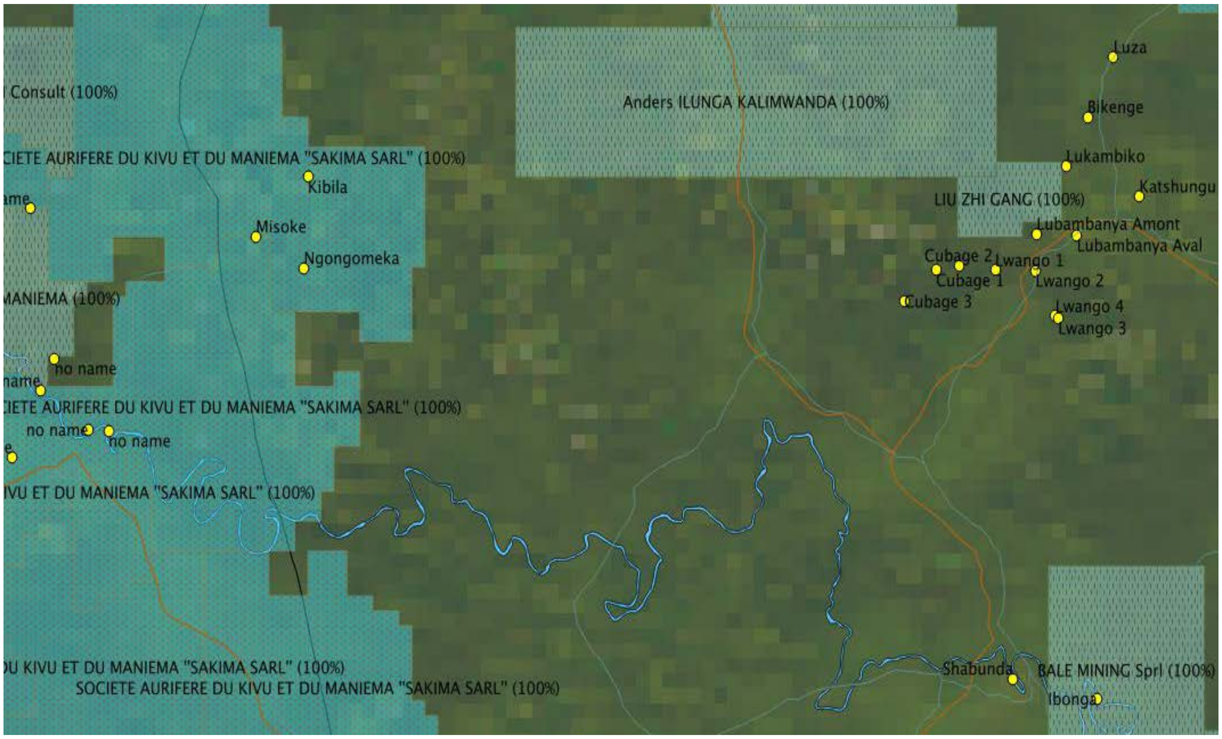
The area around Walungu in South Kivu offers a number of specific sites that would make excellent pilot locations. The area is only a 90-minute drive from Bukavu on a good dirt road. Namurhale, five kilometers south of Walungu, has been inspected once already by a joint inspection mission. Although the result of that inspection was a red flag (for FARDC involvement), that issue reportedly has been resolved. There may also be some issues to resolve before obtaining the permission of the concession holder, Congo Eco Project. However, the site has a large population of miners, excellent production of gold, and problems with security that can be resolved.

To the southeast (bottom right hand corner of the map) lies the site of Butzuzi, which has excellent production levels, a willing cooperative, and minimal potential sources of conflict. The site lies within the concession of the BroadTec company, although according to cooperative leaders, this PR has fallen into abeyance for non-payment of annual claim fees. This would need to be verified with CAMI.

Chondo and Nkambye could equally serve as pilot sites, provided the project could receive permission from Banro, which holds the overlying mineral concession. Were this forthcoming, this might be an excellent place to test out the Concession Holder-Cooperative model.

The Mukungwe site is another that Banro might consider giving over to artisanal production, if only because the community there is so thoroughly entrenched that Banro is unlikely to dislodge them. However, the site is currently also prey to night attacks by the Democratic Forces for the Liberation of Rwanda (FDLR), which would put it out of consideration for a pilot project until this issue can be resolved.

5.3.4 SOUTH KIVU – SHABUNDA

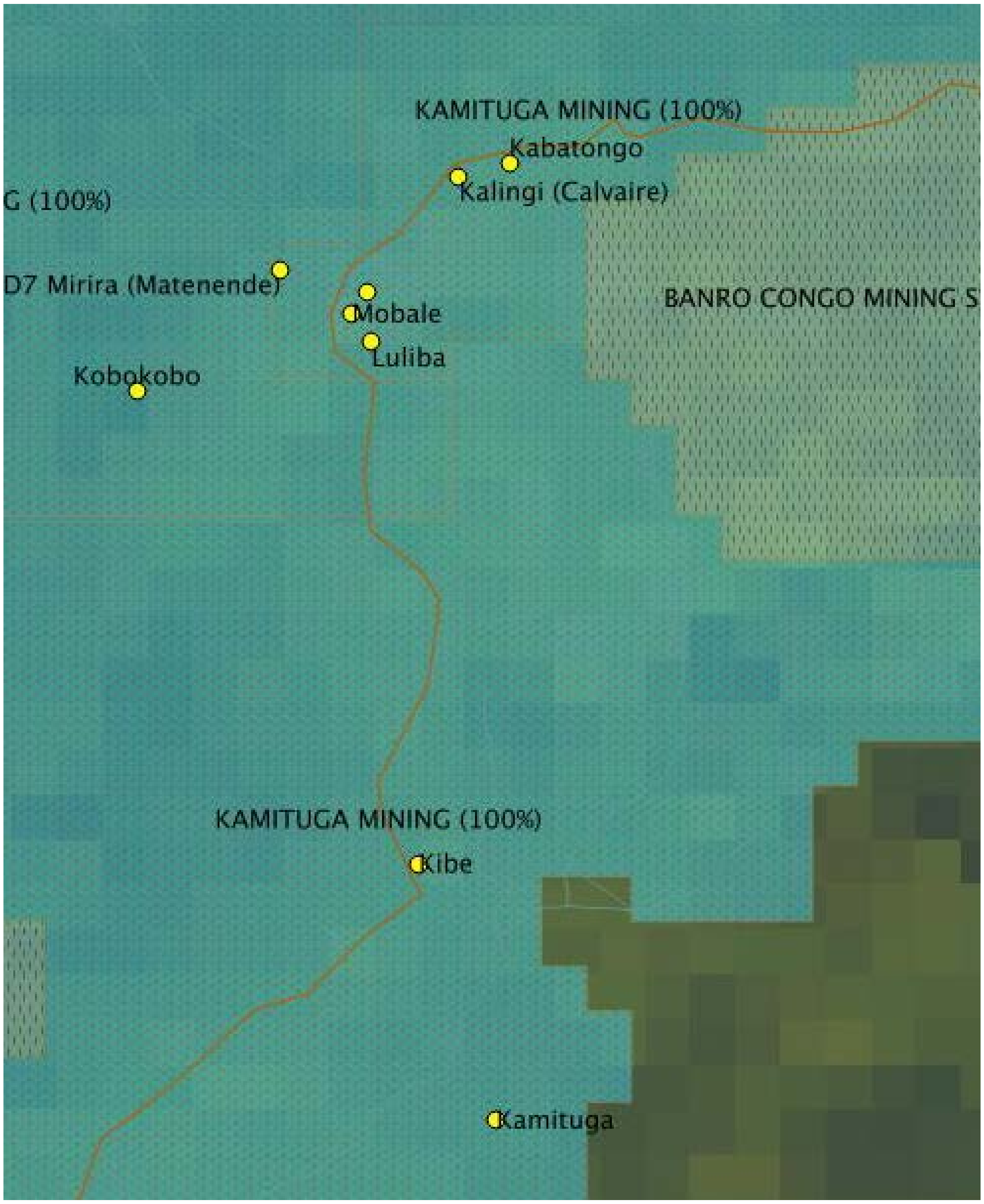


MAP 4: SHABUNDA, SOUTH KIVU

A year ago, Shabunda would likely have been discounted due to security issues. The ongoing improvements in the DRC security situation have now made it a candidate for a pilot site, but caution should still be exercised. Road access to the town of Shabunda (lower right corner of the map) is difficult—a day or more by 4x4 from Bukavu—but there are two weekly flights by Antonov from Bukavu.

There are two centers of gold production near Bukavu, one due north of the town, the other to the north and west. The northern center is free of overlying mineral title. The location in the west lies in a concession owned by SAKIMA, the DRC parastatal with a strong interest in working with artisanal miners. Both sites have strong involvement by the FARDC in gold production. This would need to be resolved before a project could begin. Both areas have significant production of gold. Recent MONUSCO reports also indicate a growing presence of Chinese in Shabunda who are introducing semi-mechanized mining methods in the area.

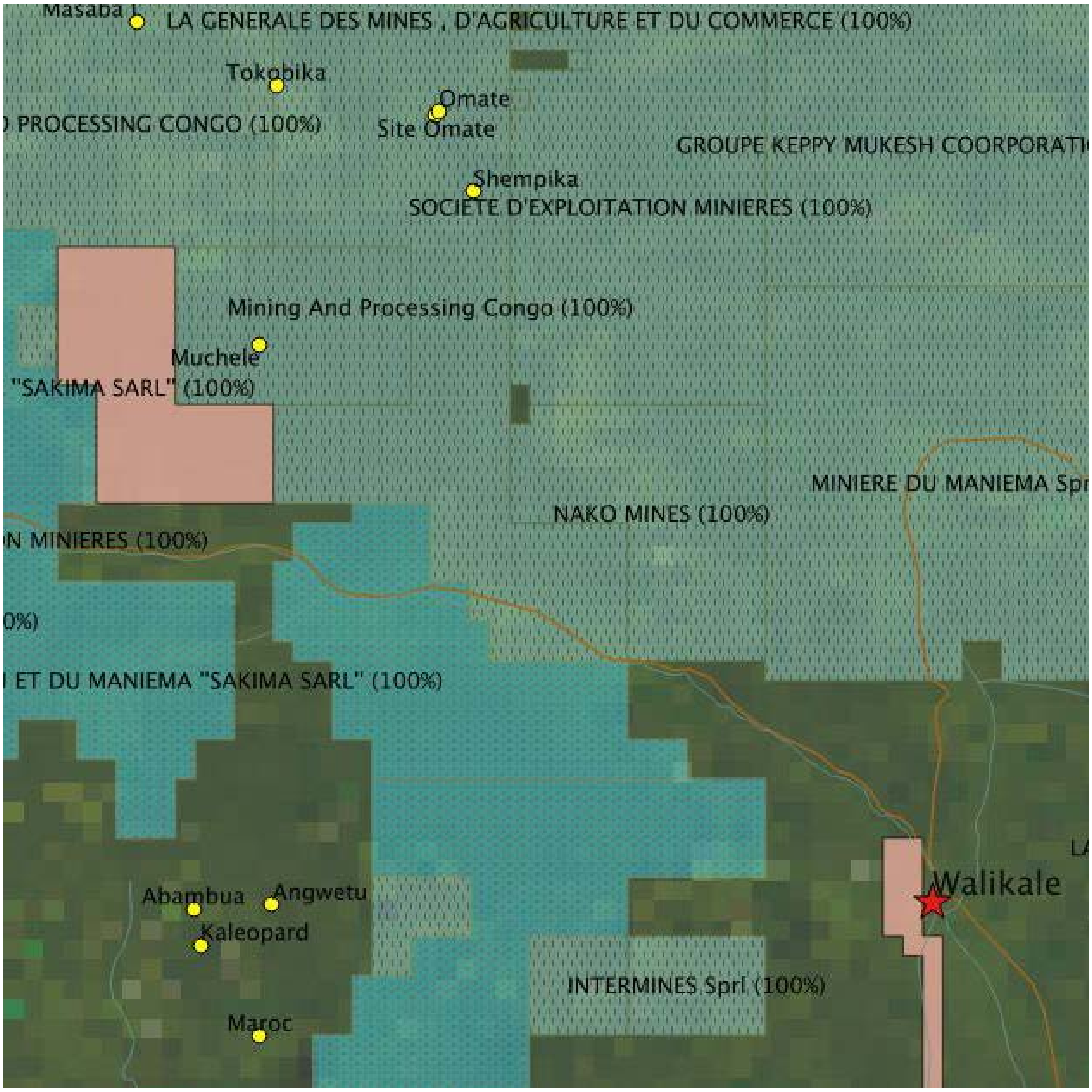
5.3.5 SOUTH KIVU – KAMITUGA



MAP 5: KAMITUGA

The Kamituga sites are in one of the largest production areas in the east of the DRC. Some 5,000 artisanal miners make their living in this area. Establishing a pilot project on any site in this area would require the permission of the Banro corporation, which owns the overlying mineral title. This would likely take some extended discussion, as Banro has Kamituga in its sites for longer-term industrial development. In the opinion of many observers, however, Banro is unlikely to displace such a large and well-entrenched mining community. If the company could be convinced of this, Kamituga would be an excellent location to test out any of the models, particularly those that have the concession holder either purchasing or demanding a share of the production. Conflict is not currently an issue at Kamituga, and the site is less than a day's drive from Bukavu.

5.3.6 NORTH KIVU – WALIKALE



MAP 6: WALIKALE

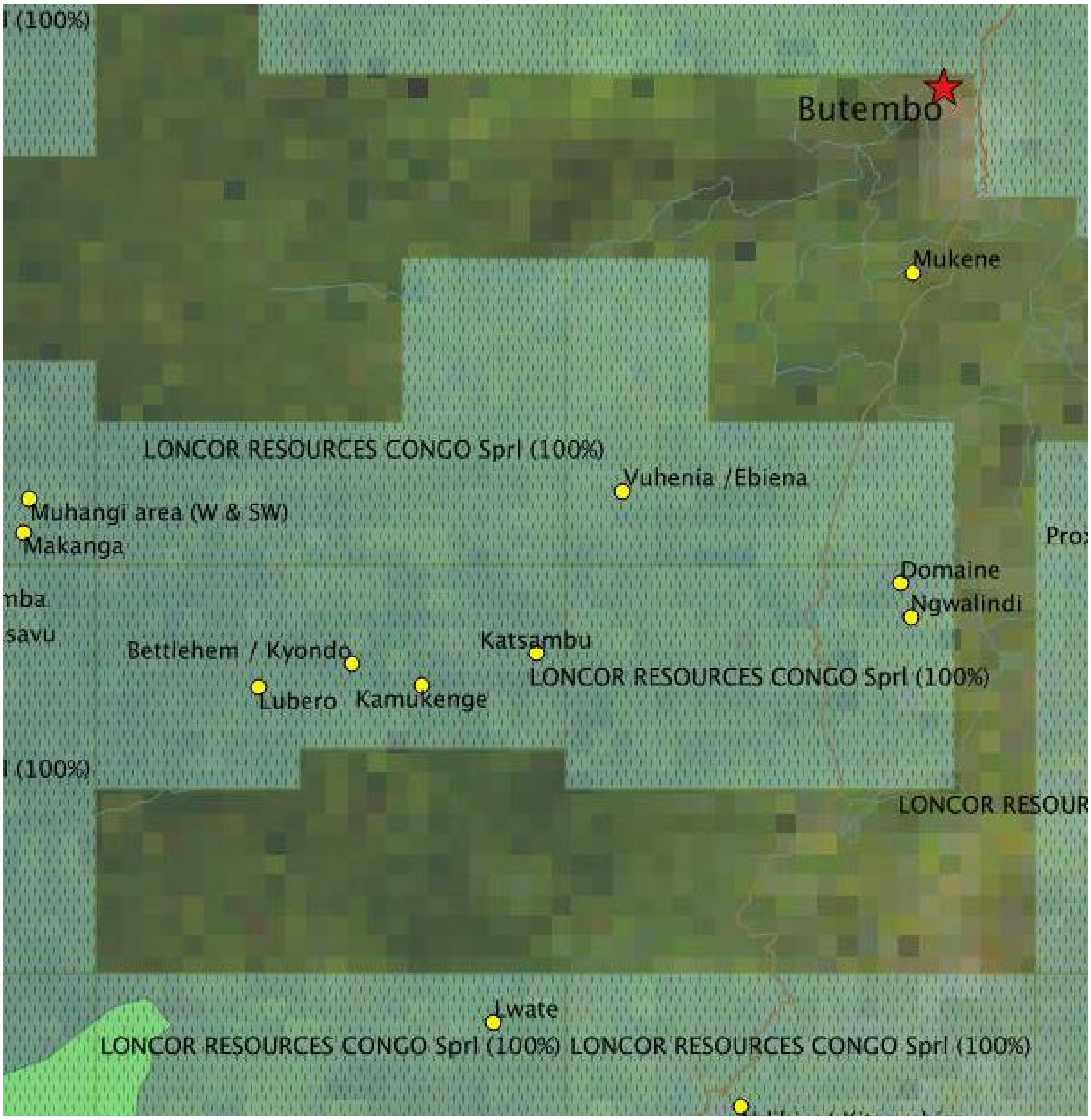
Walikale is another area that has been opened up by recent improvements in the security situation. Until very recently, the area was under the control of the armed group Sheka, but they appear now to have been driven off to the north and east. The current security problems involve the FARDC, which may be solvable with appropriate political pressure. There are two areas worth considering. One, without overlying mineral title, lies due west of the town of Walikale, to the south of the main highway. Access to this area is by 4x4 only, some hours travel from Walikale. There are currently no security issues in this group. To the north of the highway, the Shampika site is large and productive, but currently on the border of Sheka-controlled areas. Should the security situation continue to improve, this site should soon become available. SAKIMA officials claim this area falls within their concessions. This would have to be verified.

5.3.7 NORTH KIVU – BEYOND KAHUZI-BIEGA

MAP 7: BEYOND KAHUZI BIEGA

Also in North Kivu, there is a string of artisanal gold mine sites along the dirt highway leading west from Walikale, on the far side of the Kahuzi-Biega National Park. Most appear now to be under the control of the FARDC, an improvement over their previous landlords, the RM militia. These areas are potentially of interest because gold production in the area is significant and the sites fall within the bounds of a SAKIMA concession, which is eager to work with ASM producers. That said, transport to this area is long and difficult. The isolation may make resolving the security situation more difficult.

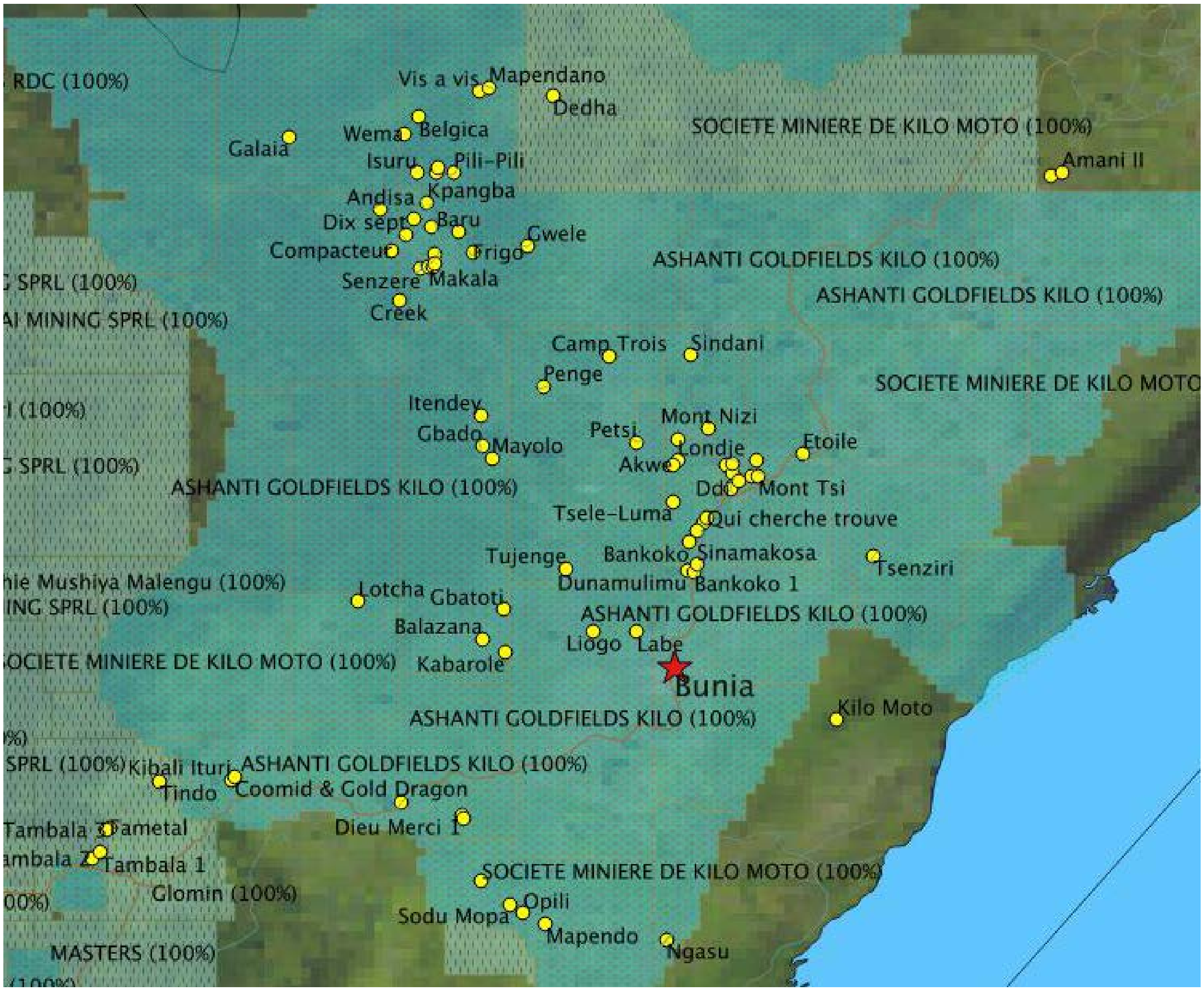
5.3.8 NORTH KIVU – BUTEMBO/LUBERO



MAP 8: LUBERO

The zones to the south and west of Butembo, due east of the regional center of Lubero (home to a Mines and SAESSCAM office) offer a few sites worth considering. Permission from Loncor would be required. Also, the sites are controlled by the FARDC, so some work on the security situation would be required. Further west, the sites at the edge of this map are currently controlled by the FDLR, though that could change.

5.3.9 ORIENTALE – BUNIA



MAP 9: BUNIA

The long arc stretching from Bunia up to Watsa is rich in gold and artisanal mine sites. FARDC activity is common in sites in this area, often through road barriers and illegal tolls. Still, gold production is significant, as are the mining populations. Significant preliminary discussion would be required with the concession holders, notably Anglo Gold Kilo, which to date has not come out in favor of ASM projects on its land.

5.4 CIVIL SOCIETY PARTNERS

Working with Congolese civil society will be critical to pilot and ramp up production at artisanal gold sites in the DRC. There are three principal roles in which DRC civil society would be a natural partner: training of ASM cooperatives; participation in statistical gathering and production monitoring at project sites; and ongoing monitoring of conflict and due diligence situations at mine sites and in adjacent areas.

Training. All of the pilot project models proposed in this study involve a component of basic training for the DRC's newly formed gold mining cooperatives. The core curriculum of training involves basic administration for a small organization— membership, finance, meetings, decision making, etc.—as well as a component of basic record keeping and statistics gathering on site production. This portion of the project could usefully be entrusted to one or more civil society partners.

Production Monitoring. A key component of traceability for all of the sites will include reliable and rigorous monitoring of production and collection of production statistics. CBMRT should, in conjunction with civil society partners and ASM producers, develop a standard set of forms and templates that cooperatives can use to collect statistics on such key elements as cooperative members, pit or tunnel staffing (i.e., name of pit boss, names of workers assigned to that pit per day or shift); gross production per pit, and division of that ore among workers, pit boss, and financial backers; gold yield per bag of ore per miner/pit boss; and disposition of that gold. CBMRT and its civil society partners should train targeted cooperatives on how to use these forms to collect appropriate statistics. Some civil society partners or CBMRT personnel should be left on site for the duration of each pilot to guide, correct and supervise the collection of these critical statistics.

Due Diligence Monitoring. Monitoring of due diligence and especially the conflict environment is a key element of the RCM and the OECD Due Diligence guidance. One effective tool in this regard is the creation of local oversight committees (*comites de suivi*) that can monitor conditions in and around targeted mine sites, and report on any issues of concern. Establishing these local committees requires an upfront commitment in training, and then ongoing support for meeting and reporting costs. Several DRC NGOs (CENADEP, Peace and Governance Observatory [OGP], BEST) already have experience in this regard, and can assist in the effort to create such local monitoring networks. CBRMT may also want to ensure a structure is in place to receive and act on information reported by the local level committees. This would likely be a role for the CBMRT project itself to take on, in conjunction with any traceability or due diligence providers involved in the project.

Due diligence monitoring should also apply to the environment and health risks associated with the gold pilots. This is particularly important with respect to the use of mercury and cyanide to extract gold from the ore, which is a preferred recovery method employed by artisanal gold miners in the DRC. According to the United Nations Environment Program (2011), approximately 15 tons of mercury are used annually in the DRC's artisanal gold mining operations, making it the second largest source of mercury emissions in Africa. The DRC has one of the highest levels of biodiversity in the world, and one of Africa's largest and growing artisanal mining workforces.

According to DRC law, the use of mercury and explosives is illegal but enforcement is negligible, and the degree to which the new ASM mining policy and legislation in the DRC can address and enforce environmental concerns remains to be seen. CBRMT can however collect baseline data, conduct regular monitoring and provide training and capacity building in an effort to reduce and/or prevent the use of mercury and pilot sites. Understanding the potential environmental impacts during the design of the pilot projects, and having pragmatic plans in place *before* impacts occur is critical. CBRMT will require all implementing partners to adhere closely to the project's Environmental Management and Mitigation Plan (EMMP); conduct regular monitoring relative to specific indicators; and submit baseline, mid-term, and final reports of mitigation and management activities. Local implementing partners, NGOs and participating cooperatives could also receive training to increase their understanding of the risks associated with using mercury, and introduced to technologies that allow for increased gold yields without the use of mercury. Civil society in particular can play a key role in helping to provide regular, credible on-the-ground monitoring regarding the availability and use of mercury and cyanide at pilot sites. Critical to the success of this approach will be a balance between education, enforcement and incentives such that miners themselves elect not to use these dangerous chemicals, and can do so without reducing their yields.

5.5 PILOT PROJECT MODELS

5.5.1 FAIRTRADE/FAIRMINED

The FairTrade model offers miners a premium price for their gold (approximately 5% above LBMA), in return for their compliance with a rigorous set of standards regarding the production and trade of that gold.[52] One advantage of this model is that it obviates the market advantage enjoyed by the illegal market; the 5% premium more than compensates for the 2% tax. The model has been successfully piloted in South America and there are ongoing pilots in Senegal and Tanzania.

Meeting the standards could be difficult for the typical DRC cooperative, but it is an achievable goal over time. Challenges might include the establishment of a grievance procedure for disaffected workers, taking a lead role in planning and promoting local sustainable development, or recording all payments made to all workers in writing. (This last requirement should be part of the basic production monitoring training, provided to all cooperatives are part of the core curriculum).

The traceability standards of the FairTrade system were also developed for a non-conflict environment, and would likely not meet the current requirements of the RCM; some upgrade of their chain of custody work would thus be required. In particular, use of the model would need rigorous and credible production monitoring, so that only gold produced at the selected site would make it into the premium chain. This, however, could be accomplished as part of the CBRMT project.

The model does not offer miners any kind of pre-finance, which could mean that, although gold is eligible for a premium, it has already been pledged to a pre-financing *négociant* who is not part of the system. The problem of pre-finance, however, is common to all the available models. Of more serious concern, neither FairTrade nor FairMined have yet articulated a fully convincing model for a buying network. In Tanzania, FairTrade plans to establish buying counters at local branch banks located in close proximity to the production sites. These counters would merely weigh the gold, seal it, and transport it out to a central processing facility. The miner would be paid in two tranches. In the first, the miner receives some large percentage of the final price based solely on measured weight and claimed purity. After an assay at the central facility, the miner would receive the remainder of the purchase price, along with any premium.

In a stable and relatively well-serviced country like Tanzania—where roads are good and banks have branches in mining areas—this model is theoretically possible. In the DRC, it is clearly non-viable, except on a site like Matete, where Banro could perhaps act as the buying agent. Trust and a desire to establish and maintain a long-term relationship are required for such a model to work. FairTrade has to trust that miners will not lard up their gold parcels with copper shavings and pyrite. Miners have to trust that FairTrade will assay honestly and eventually come through with balance and premium. Establishing this trust, and working with the cooperatives so that they can meet the established standard, will be undertaken during the preliminary on-the-ground work to be performed by FairTrade/FairMined agents.

In their African pilots, both organizations have taken a minimum of two years from inception to the point where the producer was ready for a first attempt at an audit (a pre-condition to sales). This timeframe does not fit well with the accelerated implementation plans of CBRMT. However, according to FairTrade's point person in Tanzania, this schedule could be advanced simply by devoting more time on the ground to training. The existence of a more advanced FairTrade pilot in Tanzania also provides an intriguing possibility for peer learning. FairTrade's site near Gaeta is only about one and a half days of road travel from Bukavu. Miners at the site speak Swahili, the lingua franca of the eastern DRC. It could

[52] Chain of custody conditions are a relatively late addition to the FairTrade standard. Due diligence requirements for conflict and high risk areas are only now under discussion.

thus be possible to facilitate exchanges between Gaeta and whichever site in eastern DRC targeted by FairTrade/FairMined.

In this author's opinion, FairTrade/FairMined might best be attempted at a relatively well-serviced site such as Matete, where some of the preliminary work of cooperative formation has been achieved, and where Banro could help facilitate the buying network. Given this model's longer rollout times, work should begin as soon as possible.

5.5.2 ALIMASI YA SAWA/JUST GOLD —THE PAC TRADING HOUSE MODEL

Alimasi ya sawa/Just Gold, the recently rebranded Trading House model championed by PAC, involves trading technical assistance to miners in return for legal sales. More specifically, miners are taught better exploitation techniques and offered the usage of project equipment, in return for which any gold thus produced must be sold through legal channels. The model has already had one brief pilot in Orientale Province, which offered both extremely promising results and some learning opportunities. The techniques and equipment offered to miners at the test site did indeed increase gold yields by some 25%. Miners then duly sold some 92% of what they produced into the hands of Category B *négociants* registered with the project, after which the gold left the legal stream in the manner described in Section 2.5.1.

There were two drawbacks to this initial pilot. The first was the inability of the project to convince or coerce Category A *négociants* to sell the gold on to a legal *comptoir*. The second was the lack of a longer-term financing model for ongoing equipment replacement and provision of traceability services. The revised Just Gold model addresses both of those issues. In the revised Trading House model, technical assistance to miners is contingent on their selling their gold through a trading house established by Just Gold on the project site. The trading house purchases gold at prices competitive with other local *négociants*, then packages and sells the gold on to a partnering *comptoir*, thus capturing the 8–11% margin that exists between pit and point of export. From this margin, 1% is kicked back to community via a local development fund, and the remainder pays for project costs, traceability, and the ongoing maintenance and replacement of equipment. Figure 7 shows a diagram of what the Just Gold supply chain would look like.

As an example, a Just Gold pilot at Namurhale in South Kivu likely would intervene technically by installing a crusher and mill combination. Miners currently perform both these services manually, at a cost of $10 per 30-kilogram sack of ore. They also lose gold due to the limits in milling quality inherent in pounding together two flat stones.

The mill would be owned and operated by Just Gold. Miners on the site would have the option of using the mechanical mill for crushing, or continuing to use of the traditional method (i.e., miners would not be forced to take part). However, those miners who did opt to make use of the project mill would be required to sell all resulting gold through the Just Gold buying house. Prices offered by Just Gold would be competitive with those being offered by other *négociants*.

PAC would know both how much ore had been milled and the ore grade of the site or tunnel it came from; calculating the volume of gold produced would thus be trivial, and would require no direct supervision of the washing process. Miners who made use of the Just Gold mill but did not sell their gold to the buying house would simply be cut off; no further use of the mill would be permitted to such a miner.

Ideally, the buying house would be located inside a *point de vente*, or trading center, established by JMAC/MONUSCO, thus assuring the safety and security of the buying environment. PAC would partner with one or more of the legal *négociants* in Bukavu, who could then provide the funds with which to purchase the gold. For these *négociants*, Just Gold would be playing the role of on-site Category A *négociant*, thus assuring them a steady supply of gold.

Pushback from competing Category A *négociants* is to be expected. To counter this, Just Gold should offer the community development fund and training and technical assistance to the cooperative, and reiterate that participation in the project is voluntary.

Traceability upstream at the pit level would be taken care of by production monitoring, undertaken by the project, by the cooperative, or both. This would involve consistent collection of production statistics for each pit or tunnel (e.g., number of bags per day), along with the names of the miners working each tunnel. Once the gold enters the buying house, traceability would be straightforward—point to point, buying house to *comptoir*.

FIGURE 7: "JUST GOLD" MODEL SUPPLY CHAIN

Traceability costs, transport, security, salaries, the community development fund, and the maintenance and upgrade of equipment would be paid for via the 8–11% margin that exists between pit and exporter. Preliminary pro forma calculations by PAC suggest that the Just Gold trading house project would be sustainable with production levels of between three and six kilograms per month, depending on the level of technical investment and due diligence oversight. A site with a reasonable level of production would thus be a pre-requisite.

5.5.3 ARTISINAL GOLD COUNCIL - THE TWO KILO MODEL

The Artisanal Gold Council (or AGC), is a nongovernmental organization (NGO) based in Victoria, British Columbia, which has developed a promising technical assistance model that has been successfully implemented on several sites in Burkina Faso. In this model, AGC provides an integrated processing plant consisting of a generator, crusher, mill, sluices, and a shaking table, along with training on gold purification and health and safety. The plant extracts 75% of the gold present in local ore—a significant improvement on the 40–50% achieved by traditional local methods. The AGC system has the added advantage of being mercury-free.[53]

On its first pilot site, AGC provided the processing equipment as a kind of demonstration operation and test bed. In subsequent installations, to replicate the system, AGC has shifted over to a cost-recovery basis; AGC installs the equipment and provides training on its operation and maintenance. The mine owner/cooperative repays AGC from ongoing gold production. The cost of the equipment, installation, and training is approximately $80,000 per system, the equivalent of two kilograms of gold.

This replication approach is called the "two kilo model." AGC participates in the operation of the system until the two kilograms have been repaid. The time required for this varies from 30 days to six months. Once the equipment has been paid for, it becomes the property of the mine owner. The expectation of paying off the equipment via legal sales is one of the chief incentives for miners to work through a legal sales chain. There is additionally a third kilo option to fund a specific community project such as the installation of a health post or sanitation upgrades. AGC has developed ASM health training materials and curricula for health professionals and village level health care providers with specific information about health concerns around ASM.

According to the AGC, the two-kilo approach has been quite successful. Once miners (and the government) saw an integrated processing plant, they became eager to acquire the technology. Two AGC installations are operating in Burkina Faso, four more are in progress, and there is demand for more in that country. An installation is also in place in Senegal, and one is in progress in Nicaragua. Upfront technical intervention has allowed AGC to work on other policy and market goals as well, by acting as a strong convening and relationship-building force with all stakeholders.

Part of the model involves the establishment of an export company capable of legal gold exports. There are now AGC-registered companies in Burkina Faso and Nicaragua. The intent is for these companies to by-pass local gold traders and purchase gold directly from the AGC-assisted miners, at a higher price than that offered by local *comptoirs*.

For the AGC, the result will be a completely closed pipe from mine site to international market. While the AGC model does not depend on a premium price for gold, this closed pipe production would have the cachet of being both artisanally produced and mercury-free. However, pre-financing from traders is a factor in Burkina Faso production methods. Whether this proposed closed pipe system will function in practice remains to be seen.

Implementing the AGC model in the DRC would likely require some adaptations. One difference between the Burkina Faso context and that of the DRC is the relatively shorter distance between production and export points in Burkina. In addition, the more diversified economy in Burkina likely makes finding alternative sources of pre-financing slightly easier. Both of these factors make bypassing *négociants* a simpler prospect in Burkina Faso than it would be in the DRC. For a DRC implementation, the AGC would also need rigorous production monitoring, a fairly simple task given how the AGC processing plant centralizes gold production. To ensure that this gold remains in legal channels, the AGC might have to maintain an ownership interest in the processing plant, and make its usage conditional upon legal sales. Some provision would also have to be made for paying for the costs of traceability from production plant to export point.

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[53] A demonstration of the AGC setup is available at www.youtube.com/watch?v=L--nWTITIZs

These are the kinds of issues that could be worked out during a project pilot. The fact that AGC has demonstrated success significantly increasing gold yields—without mercury—and using technology that artisanal producers can both afford and understand makes it an extraordinary promising option.

5.5.4 CONTINGENT ZEA

The Contingent ZEA model has not yet been tried anywhere in the DRC. In this model, the government grants a ZEA to a particular cooperative, contingent on that cooperative achieving certain performance goals—chiefly, a certain volume of legally produced and exported gold. A variation of this model could include a concession holder such as Banro signing a *protocole d'accord* with a coop, again with the condition that the cooperative channel a certain volume of gold into legal exports.

In such a model, traceability would thus become the responsibility of the cooperative, which would be required to finance and pay for traceability costs, perhaps via a cooperative levy or via individual charges to individual pit bosses. To implement such a model, CBRMT would need to bring together a cooperative, a government stakeholder (or concession holder able and willing to grant a contingent ZEA or *protocole d'accord*), a traceability provider, a legal *comptoir* able to station *négociants* at the site, and an implementation NGO or CBMRT staffers.

The cooperative and government/concession holder would negotiate the terms of the deal (with support from CBRMT). The implementation NGO would begin providing basic training to the coop. Everyone—cooperative, traceability provider, *comptoir*, and implementers—would begin working out the technical details of traceability, and the fee scheme that would pay for it. The traceability provider consulted as part of this study (GeoTraceability) did not have specific details on techniques or costs for ASM gold, but set an approximate upper limit on traceability costs at 2% of the value of the material. This estimate coincides fairly well with the author's own estimates from involvement in the PAC pilot project in Orientale. Possibly, costs could be reduced as low as 1%, but less than that should not be expected.

Miners themselves—via their cooperative—would be expected the bear the full cost of this service. The question, not yet determined through field trials, is whether miners are truly prepared to pay this price. In interviews, ASM producers and their cooperative leadership claim they are prepared for this, in return for surety of tenure and the right to work in peace. Whether this assertion will be backed up by a willingness to pay 2% is something that needs to be tested in practice. Independent *négociants*, and *négociants* pre-financed by clandestine buyers, are not willing to pay such a price, nor the additional 2% that comes with legal sales. For this reason, it will be critical to the success of such a project to have a legal *comptoir* willing and able to finance a cadre of *négociants* and station them at the mine site. Pressure from below (on the part of the cooperative) and from above (by the *comptoir*) may be enough to successfully channel the gold flow.

The advantage to such a model is that it does not require specialized knowledge of a particular scheme (such as FairTrade or PAC) to implement. It can be tried anywhere a suitable location can be found. If successful, it could be scaled up to the available number of contingent sites. The disadvantage of this model is that the stick—withdrawal of the ZEA/concession, and thus the license to operate—may not be credible. Miners currently operate illegally on concessions and in the absence of ZEAs. There are drawbacks for them from their illegal situation. As noted above, whether eliminating these drawbacks is worth a 2–4% hit on gold price is something that will have to be tested.

5.5.5 CONCESSION HOLDER-COOPERATIVE

In the concession holder-cooperative model, a concession holder such as SAKIMA gives to a cooperative the right to work on its concession in return for a share of the cooperative's production. An interesting variation on this model could involve a concession holder (such as Banro) granting exploitation privileges but insisting that all gold be sold to and through the concession holder.

In this model, the concession holder becomes responsible for production monitoring and traceability. The estimated 2% cost of this service will be paid for from the concession holder's share of production. The concession holder is the one who will contract with the traceability provider, paying any upfront costs for this service and then recouping these costs down the line from gold flow. Necessary partners are much the same as those listed above: concession holder, cooperative, traceability provider, and *comptoir*. Advantages, weaknesses, questions, and unknowns are much the same as well. One advantage this model has over the Contingent ZEA model is the placement of responsibility for the traceability system with the concession holder, and not the cooperative. Concession holders, simply put, have more resources, and may better be able to afford the upfront installation costs required for a more sophisticated traceability solution.

6.0 PUTTING SOLUTIONS INTO PRACTICE

The recommendations below cover both policy reform—taxation and tenure—and pilot projects. Given the ambitious timeline of the CBRMT project, these two tracks should be pursued simultaneously. While work goes ahead on conferences and workshops regarding ASM tenure and provincial taxation levels, planning work on pilot project sites should be undertaken, and discussions with different pilot project implementation partners should begin, to get the CBRMT projects up and running in the available time frame.

6.1 KICK OFF CONFERENCE—CHANGING ATTITUDES AND FINDING SPACE TO WORK

It is recommended that CBRMT hold a multi-day workshop in Kinshasa to kick off the ASM gold project work. Invitees should include the Minister of Mines and his Cabinet Director(s); heads of CAMI, SAESSCAM, and CEEC; the World Bank PROMINES program; provincial governors and/or mining ministers; representatives of the LSM companies with significant interests in the DRC (e.g., Banro, Loncor, AngloGold, Leda Mining, and SAKIMA); legal gold *comptoirs* or potential *comptoirs*; experts on the role and impact of artisanal mining on the economy; experts on gold mining and taxation; DRC civil society; and representatives of gold cooperatives, JMAC/MONUSCO, and BGR.[54] The conference should address longer-term attitudes, as well as short-term tasks.

With respect to longer-term attitudes, conference presentations and discussions should seek to convey a few simple, salient points to DRC officials:

- The DRC artisanal gold industry *is* an industry, by far the largest gold producer in the country.
- Like its LSM cousin, the artisanal industry requires an intelligent and encouraging policy framework in which to function. Of particular importance are security of mining tenure and reasonable levels of taxation.
- Only by working cooperatively with (and providing incentives to) the ASM industry, can the GDRC hope to legalize and formalize the sector; coercive measures will not work.
- Properly governed, the artisanal gold industry can be an engine of development and a driver of the economy.

In terms of short-term goals, CBRMT should focus on trying to achieve:

- A written commitment from the Minister of Mines, CAMI, and provincial governors to expedite the creation of new ZEAs on gold mining sites. Fifty new ZEAs in the next four months would be a reasonable target.
- A written commitment from DRC officials (see list above) to implement a simple and transparent process for creating new ZEAs. Ideally, a registered cooperative should be able to submit an

[54] CENADEP, COSOL-GL, OGP, Haki na Amani, BEST

application through the Division of Mines that could then be approved by the provincial governor and recognized by CAMI. If the proposed ZEA falls either within open territory (no claims or titles of any kind) or within a ZRG, approval should be automatic.

- A written *protocole d'accord* template for cases where an LSM concession holder wished to allow an ASM producer to operate on its concession, together with written Ministry of Mines assurance that any LSM concession holder who signs such an agreement with an ASM producer is protected as far as its concessionary rights are concerned.
- A commitment from each of the LSM companies represented to host at least one CBRMT gold pilot project on sites within their concessions. DRC officials will commit to supporting these LSM-ASM pilots with legal or administrative measures the LSM companies may request.
- A commitment from JMAC/MONUSCO and BGR to expedite validation missions to those ZEAs and other sites targeted for pilot projects under CBRMT.
- A commitment from provincial governors/mining ministers to re-consider provincial taxation policies. These will be addressed in follow-up workshops in each provincial capital.
- A commitment from the head of SAESSCAM that for the CBRMT gold pilot projects, SAESSCAM field staff will focus on providing outreach services to miners and cooperatives. The group will not engage in tax or service-fee collection at CBRMT pilots.

A potential medium-term goal could be:

- A commitment from DRC officials (Minister of Mines, CAMI) to study the kind of small-scale artisanal mining titles currently in use in East Africa and Brazil (location licenses, PLGs) with an eye to incorporating some form of artisanal mining claim into DRC law within two to five years.

6.2 PROVINCIAL WORKSHOPS—TAXES, TAXES, AND FEWER TAXES

CBRMT should hold multi-day workshops in each of the provincial capitals of Kisangani, Bukavu, Goma, and Kindu. Invitees should include: provincial governors and their DirCab(s); provincial ministers of mines and their DirCabs; the provincial heads of CAMI, SAESSCAM, and CEEC; regional FARDC commanders; provincial heads of the PNC and ANR; representatives of *chefferies* and local governments in areas where gold mining takes place; representatives of the large-scale mining companies with significant interests in that province (Banro, Loncor, AngloGold, Leda Mining, SAKIMA, and others); legal gold *comptoirs* or potential *comptoirs*; experts on the role and impact of artisanal mining on the economy; experts on gold mining and taxation; DRC civil society; and representatives of gold cooperatives, JMAC/MONUSCO, and BGR.[55]

Like the conference in Kinshasa, this meeting should have a larger, longer-term goal of changing attitudes, as well as specific short-term asks. The longer-term goals are much the same as in Kinshasa. The short-term tasks should focus on taxes.

In addition to the topics covered in Kinshasa, the provincial workshops should focus on:

- A general understanding of what kinds of taxes work on gold production, what kinds do not, and how best to apply taxation to the artisanal sector; and

[55] CENADEP, COSOL-GL, OGP, Haki na Amani, BEST

- The serious threat to the ASM gold sector posed by illegal taxation, whether that be from the FARDC, PNC, ANR, local or *chefferie* governments, or other government actors.

In terms of short-term goals, CBRMT should focus on trying to achieve:

- A written commitment from provincial governors/mining ministers to eliminate the négociant tax (province wide and permanent);
- A written commitment from provincial governors/mining ministers to eliminate the 10% provincial production tax, and replace it with a "site" or "installation" tax, such as a $10/month pit or tunnel tax (province-wide and permanent);
- A written commitment from provincial governors/mining ministers, and the heads of the security services (FARDC, PNC, ANR) that illegal taxation by their operatives on any CBRMT pilot site in their area of jurisdiction will not be tolerated, and when alerted by CBRMT of such a practice, they will use all available means at their disposal to eliminate said occurrences; and
- A concrete solution to the challenge posed by "illegal" *chefferie* taxes—either a recognition of such practice, incorporation into the new site tax model, or elimination.

If CBRMT cannot achieve the above goals, it should focus on:

- A commitment from provincial governors/mining ministers that, for the CBRMT pilot projects in their province, the 10% provincial production tax will not apply. For these pilot sites, provincial authorities will have the option or trying out a "site" or "installation" tax, such as a $10/month pit or tunnel tax.

- A commitment from the head of SAESSCAM that for the CBRMT gold pilot projects, SAESSCAM field staff will focus on providing outreach services to miners and coops; the group will not engage in tax or service-fee collection at CBRMT pilots.

If CBRMT cannot achieve the two very limited goals above, it should make it clear to provincial officials that no pilot projects will take place in that province, and that CBRMT activities in that province will cease.

6.3 GETTING THINGS GOING – SITE SELECTION STUDY

CBRMT should commission a researcher to conduct a detailed site selection study as soon as possible. The researcher should focus on the potential site areas identified in Section 5.3. The study should identify and then evaluate these sites based on the criteria—legality, security, access, population/production, certifiability of site, and chain—elaborated in Section 5.2. The result of this study should be a shortlist of 25 sites, identified by name, GPS coordinates, and cooperative name, with details on the relevant criteria.

6.4 POTENTIAL PARTNERS

The CBRMT team should begin making contact with all of the actors from various realms who will have to be brought together to make any pilot projects possible. No firm commitments are needed, but discussions should at least begin. Potential partners include:

- **LSM:** Banro Corporation, SAKIMA, Emeko, KiloGold
- **Pilot Model Implementation Organizations:** FairTrade, FairMined (ARM), PAC, AGC
- **Potential Civil Society Partners:** CENADEP, COSOC-GL, HRA, OGP, BEST

- ***Comptoirs*:** Alfa Gold, Cavici, Namukaya, John Kanyoni, MetalPrecieux
- **Traceability:** GeoTraceability, Better Sourcing Program

6.5 COORDINATING WITH STAKEHOLDERS ON VALIDATION PRIORITIZATION

Once the site selection study is finalized, CBRMT should coordinate closely with IOM, BGR and all the other stakeholders involved in validation to coordinate efforts. In particular, efforts should be made to prioritize validation missions to pilot sites identified by the site selection study. IOM plans for protected sales points (*points de vente/centres de negoce*) and the pilot efforts being pursued by BGR in support of legal artisanal gold should also be coordinated closely with CBRMT plans for pilot projects.

6.6 FIRST ENGAGEMENT WITH COOPERATIVES —BASIC TRAINING

CBRMT could undertake a program of basic administrative training for targeted pilot project cooperatives. Topics should include basics such as keeping a list of members, collection and recording dues, issuing receipts, opening and maintaining a bank account, and keeping and preparing minutes of meetings. This training will form a kind of core curriculum for every cooperative targeted as part of the CBRMT project, no matter which implementation model is eventually chosen for a particular site. As such, the training work can begin the moment the particular target sites have been identified.

CBRMT may want to hold out the promise of business training as a bonus for cooperatives that successfully complete the first task of administrative and statistical record keeping. Topics for this training might include savings, re-investment, machinery life cycles and cost amortization, mining mechanization, spreadsheets and cost/revenue projections, and basic business administration.

DRC civil society should be a natural partner in this training effort. In each of the targeted provinces in the east, there are civil society organizations with strong track records in the ASM field and excellent relations with artisanal producers. In South Kivu, these include CENADEP, OGP, and BEST; and in Orientale, there is Haki na Amani. Regionally, COSOC-GL unites civil society organizations from the DRC, Burundi, Rwanda, and Uganda.

6.7 DEVELOPING PRODUCTION MONITORING – FORMS AND TRAINING FOR COOPERATIVES

A key component of traceability for all of the sites will include reliable and rigorous monitoring of production and collection of production statistics. To facilitate this effort, CBRMT should develop a common set of tools to help cooperatives collect production statistics, economic impacts and production monitoring for exploitation performed by their members.

CBMRT should, at a minimum, develop a standard set of forms to collect key information, such as:

- Cooperative members;
- Average income of miners, including baseline income data
- Pit or tunnel staffing (e.g., name of pit boss, names of workers assigned to that pit per day or shift, gross production per pit);
- The daily (or weekly) production (yields) of each pit or tunnel;
- Division of that ore among workers, pit boss, and financial backers; and
- Gold yield per bag of ore per miner/pit boss.

CBMRT and its civil society partners should then train targeted cooperatives on how to use these forms to collect appropriate statistics. Some civil society partners or CBMRT personnel should be left on site for the duration of each pilot to guide, correct, and supervise the collection of these critical statistics. Training cooperatives to keep their own records will help to demystify the topic of production tracking, and lay a solid basis for later efforts at traceability.

6.8 RESEARCH ON FINANCE

Given the size of DRC's artisanal gold industry, and the critical role played by production pre-finance, CBRMT should commission a team—consisting of a micro-lending expert and an ASM or mining finance expert—to examine the specific situation in the DRC and evaluate whether and how some kind of production finance network or system could be assembled.

Results for this study should be ready before pilot projects roll out.

6.9 PILOT PROJECT MODELS – ASSEMBLE, SKETCH, GO

With the site selection study completed and the identities and characteristics of potential pilot sites known, CBRMT should assemble identified stakeholders around each pilot model and sketch out a plan of action for bringing that pilot into being. CBRMT may want to assemble each pilot separately, or gather all of the various pilot stakeholders together to sketch out plans together.

This work should begin as soon as possible after the selection study is complete. (It may or may not depend on the results of the initial conference/workshops.) The goal would be concrete plans for at least one (and preferably several) test sites for each of the models identified in Section 5.5. With plans sketched out, CBRMT and its partners should move to implementation as soon as possible.

6.10 REGIONAL WORK – EXPLORING THE REHABILITATION OPTION

CBRMT, preferably together with USAID, could also explore the option of working with the Kampala-based regional gold traders—the Lodhia sand the Bhimijis—in an effort to put their purchasing power to work in rehabilitating submerged gold networks.

6.11 REGIONAL WORK – REGIONAL MINES AND CUSTOMS WORKSHOP

CBRMT, in conjunction with the ICGLR and its technical partners (GIZ, PAC, and BGR), could sponsor a workshop of government officials directly involved in the processing of exports or imports of gold. Countries would include the DRC (CEEC and Customs), Uganda (GSMD and Customs), South Sudan, Rwanda, Burundi, Tanzania, and Kenya. The purpose of the workshop would be for each country to present the document or documents that serve as proof of legitimate export from that country (ICGLR Certificates in some cases, and other documents in others). The workshop should include representatives from Dubai.

6.12 REGIONAL WORK – STRENGTHENING ENTEBBE AIRPORT CONTROLS

CBRMT, perhaps in conjunction with USAID/East Africa, could sponsor a workshop of key ministries involved in supervising gold exports via Entebbe Airport. These would include GSMD, customs, police, and airport security. The goal of the meeting would be to harmonize procedures between agencies, and tighten security procedures at the airport, with a view to curbing the incidence of illegal gold exportation via hand carry or cargo transport.

6.13 REGIONAL WORK – COUNTERTRADE AND MONEY FLOWS

With additional resources, CBRMT could work with USAID, the US State Department, and the US Treasury Department to increase awareness about the existence and functioning of the countertrade financial network between eastern DRC and Uganda, and its possible connections to untraced money flows and money laundering. This could lead to more specific plans at a regional level to combat this phenomenon.

APPENDIX A: ASM GOLD SITES THAT HAVE RECEIVED VALIDATION MISSIONS UP TO JUNE 2014

	Mine Name	Longitude	Latitude	Date Visited	Province	License	License holder	N°Arrêté
1	Kamungazi	27.7052	-4.0211	15-10-2013	Maniema			0682/31 Déc 2013
2	Kimabwe	27.7056	-4.0217	15-10-2013	Maniema			0682/31 Déc 2013
3	Lubondozi	27.7111	-4.0266	15-10-2013	Maniema			0682/31 Déc 2013
4	Lwizi	28.8795	1.7334	11-02-2014	Nord Kivu	PE 2598	Sakima	0078/21 Fév 2014
5	Luzirantaka/Nyamukubi	28.8832	1.6989	11-02-2014	Nord Kivu	PE 76	Sakima	0078/21 Fév 2014
6	Cirehe	28.5925	-2.6045	11.06.2011	Sud Kivu	PE 44	Twangiza Mining	0189/23 Mars 2012
7	Kashegeshe	28.7337	-2.8491	23,06.2011	Sud Kivu	PE 42	Twangiza Mining	0189/23 Mars 2012
8	Lukungurha	28.7367	-2.8564	23.06.2011	Sud Kivu	PE 42	Twangiza Mining	0189/23 Mars 2012
9	Mukungwe	28.6440	-2.8146		Sud Kivu	PE 41/ PE 43	Twangiza Mining	0189/23 Mars 2012
10	Mwana River	28.7267	-2.8670	20.06.2011	Sud Kivu	PE 44/ PE 43	Twangiza Mining	0189/23 Mars 2012
11	Nakabindi	28.72511	-2.70418	18-02-2014	Sud-Kivu	PR 7297	Akoma Minerals DRC Sprl	0126/17 Mars 2014
12	Namadava	28.4670	-2.7350	16-06-2011	Sud Kivu	PE 26/ PE 44	SAKIMA SARL/ Twangiza Mining	0189/23 Mars 2012
13	*Namurhale*	28.6328	-2.7428	2014-02-18	Sud Kivu	PR 6565	Congo Eco Project	0126/17 Mars 2014
14	Ntula	28.6161	-2.6173	13.06.2011	Sud Kivu	PE 44	Twangiza Mining	0189/23 Mars 2012
15	Kadubo Karhendezi	28.6766	-2.7976	20-06-2011	Sud Kivu	PE 48	Twangiza Mining	0189/23 Mars 2012
16	Kaji Katanga	28.6083	-2.6385		Sud Kivu	PE 44	Twangiza Mining	0189/23 Mars 2012
17	Rugenge	28.6955	-2.8011		Sud-Kivu	PE 43	Twangiza Mining	0189/23 Mars 2012
18	Nkambye-Chondo	28.6590	-2.8766	2013-10-21	Sud Kivu	PE 43	Twangiza Mining	0189/23 Mars 2012

APPENDIX B: RED AND YELLOW FLAG CRITERIA FOR ARTISANAL EXPLOITATION

Table B.1: Red Flag Criteria for Artisanal Exploitation				
Red Flag Criteria				
Artisanal Exploitation				
Conflict	**Working Conditions**	**Environ-ment**	**Formality/Transparency**	**Community Development**
Non-state armed groups or their affiliates illegally control mine sites or otherwise control transportation routes, points where minerals are traded and any upstream actor in the supply chain.	Children below the minimum working age as defined in that Member State are employed in exploitation in the mine site.		Payments are made by the mine site owner or operator to illegal or criminal organizations.	
Non-state armed groups or their affiliates illegally tax or extort money or minerals at points of access to mine sites along transportation routes or at points where minerals are traded.	Forced labor is practiced on the mine site; workers are required to work for no compensation; workers are required on certain days of the week to surrender the fruits of their labor to the mine site boss.		Payments are made by the mine site owner or operator to political parties or political organizations, in contravention of a Member State's laws.	
Non-state armed groups or their affiliates illegally tax or extort money or mineral shares from mine site owners, mine site operators, intermediaries, traders, export companies, or any other upstream actors in the chain of custody.			Designated Minerals sourced in an Un-Certified (Red Flag) Mine Site are entering into the Mine Site or being mixed with Designated Minerals produced at the Mine Site.	

Table B.2: Yellow Flag Criteria for Artisanal Exploitation				
Yellow Flag Criteria				
Artisanal Exploitation				
Conflict	**Working Conditions**	**Environ-ment**	**Formality/Transparency**	**Community Development**
Non-state armed groups are stationed in or operating in the immediate vicinity of a mine site.			Mineral shipments exit the mine site without having been registered or recorded by a chain of custody system that can track the minerals to their next destination beyond the mine site.	
Public or Private Security Forces or their affiliates illegally control mine sites or otherwise control transportation routes, points where minerals are traded and any upstream actor in the supply chain.			Government officials (mines officials, secret service, municipal or provincial governments, military units etc.) extract significant taxation or other payments that are disproportionate to any service provided from the workers or production of a Mine Site, in a manner not authorized by the Member State's mineral code or mineral regulations.	
Public or Private Security Forces or their affiliates illegally tax or extort money or minerals at points of access to mine sites along transportation routes or at points where minerals are traded.			Material from another unknown mine site is entering into the mine site or being mixed with the material produced at the mine site.	
Public or Private Security Forces or their affiliates illegally tax or extort money or mineral shares from mine site owners, mine site operators, intermediaries, traders, export companies or any other upstream actors in the chain of custody.			Mine site owner, mine site operators, intermediaries, traders, export companies or any other upstream actors in the chain of custody and operating on the mine site, offer, promise, give or demand bribes to conceal or disguise the origin of minerals, to misrepresent taxes, fees and royalties paid to governments for the purposes of mineral extraction, trade, handling, transport and export.	
			Mine site owner, mine site operators, intermediaries, traders, export companies or any other upstream actors in the chain of custody and operating on the mine site, do not pay all taxes, fees, and royalties related to mineral extraction, trade and export from conflict-affected and high-risk areas to governments and fail to disclose such payments in accordance with the principles set forth under the Extractive Industry Transparency Initiative (EITI).	
			The mine owner or operator refuses to allow Analytical Finger Print (AFP) sampling or sampling for a similar diagnostic tool to a government mine site inspector, auditor, or designated agent of the ICGLR.	

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