COMPARATIVE STUDY OF CERTIFICATION AND TRACEABILITY SYSTEMS
ENGLISH VERSION

Final Report -3rd April 2015

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ESTELLE LEVIN LTD

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Disclaimer

About this Report

This report, dated 3rd April 2015, is the FINAL version of this Etude Comparative for PROMINES. A prior draft was submitted to the client on 8th December 2014, which was distributed to participants of a workshop held by ELL and PROMINES in Kinshasa on 11th December 2014. This final report has been revised in accordance with client feedback and the discussion and recommendations raised by participants in that workshop.

This report has been translated into French from the English original.

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Acronyms and Glossary

3Ts	Tin, tantalum and tungsten
3TG	Tin, tantalum, tungsten and gold
AFP	Analytical Fingerprint
AMI	American Meat Institute
ARDERI	Association Régionale pour le Développement Rural Intégré
ARM	Alliance for Responsible Mining
ASM	Artisanal and Small-Scale Mining
BEPAT	Bureau d'Etudes des Projets et d'Application Technique
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe (*German Federal Institute for Geosciences and Natural Resources*)
BSP	Better Sourcing Program
CAMI	Cadastre Minier
CBRMT	Capacity Building for Responsible Minerals Trade
CDMC	Congo Artisanal Mining Cooperative
CEEC	Centre d'expertise, d'évaluation et de cértification (DRC)
CFGS	Conflict-free Gold Standard (WGC)
CFS	Conflict-Free Smelter (Assessment Programme)
CFSI	Conflict-Free Smelter Initiative
CFSP	Conflict-Free Smelter Programme
CLS	Comité Local de Suivi
CoC	Chain of Custody
CoP	Code of Practice
CPS	Comité Provincial de Suivi
CSR	Corporate Social Responsibility
CTC	Certified Trading Chains
CTCPM	Cellule Technique de Coordination et de Planification Minière
DDG	(OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
DFA	Dodd-Frank Wall Street and Consumer Protection Act (Dodd-Frank Act)
DGDA	Direction Générale des Douanes et Accises
DGRMA	Direction Générale des Recettes du Maniema
DMCC	Dubai Multi Commodities Centre
DRC	Democratic Republic of the Congo
EC	European Commission
ELL	Estelle Levin Ltd
EICC	Electronic Industry Citizenship Coalition
EITI	Extractive Industries Transparency Initiative
EU	European Union
FARDC	Forces Armées de la République Démocratique du Congo
FLO	Fairtrade Labelling Organisation
FSC	Forest Stewardship Council
FT	Fairtrade

GDRC / GoDRC	Government of DRC
GeSI	Global e-Sustainability Initiative
GLR	Great Lakes Region
GMO	Genetically Modified Organism
GPS	Global Positioning System
GRI	Global Reporting Initiative
GSM	Global System for Mobile Communications
ICGLR	International Conference on the Great Lakes Region
ICMM	*International Council on Mining and Metals*
ILO	International Labour Organisation
IMCA	Independent Mineral Chain Auditor
IPSA	Independent Private Sector Audit
IRMA	Initiative for Responsible Mining Assurance
ISEAL	ISEAL Alliance
IT	Information technology
iTSCi	International Tin Supply Chain Initiative
KP	Kimberley Process
KPCS	Kimberley Process Certification Scheme
LBMA	London Bullion Market Association
LSM	Large-scale mining
MC	Mineral Care
MHI	Mwangachuchu Hizi International
MONUSCO	United Nations Organisation Stabilisation Mission in the DRC
MoU	Memorandum of Understanding
MMR	Mining Mineral Resources
MSC	Marine Stewardship Council
NGO	Non-governmental Organisation
OECD	Organisation for Economic Co-operation and Development
OECD GUIDANCE	OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
OECD GME	OECD Guidelines for Multinational Enterprises
OCDE-CIRGL-NU	Organisation de Coopération et de Développement Économiques - Conférence Internationale sur la Région des Grands Lacs – Nations Unies
PAC	Partnership Africa Canada
PACT	Pact (NGO)
PWC	Price Waterhouse Cooper
RCM	Regional Certification Mechanism (ICGLR)
RF	Radio frequency
RFID	Radio frequency Identification
RGG	Responsible Gold Guidance
RINR	Regional Initiative against the Illegal Exploitation of Natural Resources
RJC	Responsible Jewellery Council
SAESSCAM	Service d'Assistance et d'Encadrement du Small Scale Mining (DRC)
SDR	Specialized Disclosure Report

SEC	Securities and Exchange Commission (US)
SRSP	Signet Responsible Sourcing Protocols
STAREC	Programme de Stabilisation et de Reconstruction des Zones sortant des conflits armés
T.I.C.	Tantalum-Niobium International Study Centre
UN	United Nations
UNGoE	United Nations (Security Council's) Groups of Experts of the Democratic Republic of the Congo
UNGP	United Nations Guiding Principles on Business and Human Rights
UNSC	United Nations Security Council
USAID	United States Agency for International Development
WGC	World Gold Council
ZEA	Zone d'Exploitation Artisanale

0. Executive Summary

0.1. Introduction

The purpose of this assignment is to compare the systems of certification and traceability in place in DRC and in the world, with a view to **proposing a system that is appropriate to the needs of the country, coherent with the procedures of the ICGLR's Regional Certification Mechanism, and responsive to international requirements**. Ultimately, the study should propose a traceability system that responds to the realities of the Congolese context and the expectations of the Congolese government in terms of efficacy and cost, whilst being in conformance with the demands of the ICGLR and the final consumers of relevant minerals.

Given the 200+ page length of the overall report, in this executive summary we focus on the traceability and certification initiatives and the study's conclusions and recommendations.

Research for this work began in July 2014 and completed in March 2015. It involved a launch meeting in Kinshasa with PROMINES on 31 July, fieldwork for seven weeks until 17 September, participation in the 8th meeting of the ICGLR-OECD-UN Forum on Responsible Mineral Supply Chains in Kinshasa November 3-5, the hosting of a workshop for Congolese government and other stakeholders on December 13, and reporting. Over the course of this research, over 200 Congolese and 50 international interlocutors representing a wide range of upstream and downstream conflict mineral supply chain stakeholders. Fieldwork covered sixteen mining and associated trading sites, ten of which were for gold. ELL also collaborated closely with USAID's CBRMT project during this time. Further details on Research Approach can be found in the Introduction and Annex A.

0.2. Analytical Framework

There are a range of initiatives designed to cut links between the exploitation of minerals and the financing of armed groups in the Democratic Republic of the Congo. The Government of the DRC requires clarity on **which initiative is appropriate to the needs of the country, coherent with the procedures of the ICGLR's Regional Certification Mechanism, and responsive to international requirements.**

In order to recommend such a system, two analytical frameworks were developed and used. The first establishes the key elements of a conflict minerals assurance system (i.e. traceability / certification system), categorising the focus of control into three main domains:

1. **Entity**: Designing and implementing procedures to dictate the terms under which a business can legally operate.
2. **Geography**: Knowing the provenance of minerals and the places through which the mineral passes as it is transported along the supply chain.

3. **Mineral**: Using tracking and tracing to monitor a material's 'chain of custody'.

This system was used to make sense of the initiatives and details can be found in Annexes.

The second analytical framework evaluates whether a system is **sustainable**. A sustainable conflict minerals initiative will add value for its users and regulators, enfranchising them to support and enable it and avoiding disgruntling stakeholders to the point that they obstruct the system. The extent to which a system is sustainable can be analysed based on:

1. **Credibility**: The system must have a vision and goals that are relevant but also achievable. The system framework must be oriented toward delivering these goals. It must be appropriately governed and have an accountability framework. It must be credible, and be *perceived to be credible.*
2. **Efficacy:** The system should achieve its stated goals efficiently, bringing higher output for the lowest possible input. One measure of efficacy is value for money.
3. **Feasibility:** The system should obtain its desired impact with best use of available resources. A feasible system must be cost-effective, with achievable goals. It is adapted to the risk environment, and to the capacities of users and implementers. It leverages opportunities for greater impact through joint or targeted efforts

Any initiative must take into account what is already in place. The composition of the current Congolese conflict minerals assurance system is determined by three critical compliance frameworks: (1) a suite of related international normative frameworks comprising the United Nations Guiding Principles for Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the OECD Due Diligence Guidance for Minerals from Conflict-Affected and High Risk Areas; (2) a regional framework for supply chain management in the form of the Regional Initiative against the Illegal Exploitation of Natural Resources; and (3) national legislation for governance of the artisanal mining and mineral supply chains in DRC. The terms these set for how Congo's conflict minerals national certification system should work are scoped in chapters 3 and 4.

0.3. The Initiatives

0.3.1. Certification Initiatives

Four conflict minerals systems are compatible as 'certification initiatives'. Two are presently operational:

1. **CTC**: BGR & the Government of the DRC's Certified Trading Chains scheme

The Certified Trading Chains (CTC) is the Congolese national certification scheme designed to foster traceability, transparency, and ethical production standards in the

artisanal and small-scale mining sector. The CTC is a Standard, and therefore also a tool, with which mining companies can measure themselves and the government can regulate supply chain due diligence and encourage improvements and formalisation in the artisanal mining sector. Whereas other conflict minerals initiatives are singularly concerned with chain of custody and risk management of the most serious human rights abuses and benefits to illegal armed groups, CTC additionally considers labour and working conditions, the behaviour of security forces, community consultation and development, and environmental protection. The CTC's scope therefore may match up better with downstream buyers' broader expectations for sourcing responsibly in line with the normative frameworks. It is operation in the DRC, is partially incorporated into national law (having formed the basis of the ICGLR RCM and DRC arretes 0057 and 0058), though use of the tool is seemingly voluntary.

2. **iTSCi**: ITRI's Tin Supply Chain Initiative

iTSCi[1] is an industry led, not-for-profit, multi-stakeholder initiative developed by ITRI, the international tin association that has as its members around 60% of the tin sector.[2] The iTSCI programme operationalizes three components: Tracking System, Risk Assessment and Management; and Audits. ITSCi also assists upstream companies of all scales and at all supply chain tiers from mine to smelter comply with the five steps of the OECD Guidance. By expanding due diligence to include criminal networks, and sanctioned individuals and entities, it also ensures conformance with the recommendations of the DRC United Nations Group of Experts.[3] iTSCi covers tin, tantalum and tungsten ores (mineral concentrates), but *not gold.* It is operational in the DRC and the incumbent tool for supply chain due diligence since 2010.

3. **BSP**: The Better Sourcing Program

The Better Sourcing Program (BSP) is a private sector initiative founded in 2013. It offers a due diligence assurance and conflict-free export validation solution for supply chains from artisanal, small-scale and semi-mechanised mines. BSP could apply to any mineral but it is seeking to pilot its programme with gold, tantalite, wolframite or cassiterite in the DRC, building on an on-going pilot with a tantalum producer in Congo-Brazzaville. The BSP is not yet operational in DRC but has been working hard to enter the market in DRC, in partnership with Geotraceability as partner traceability service-provider, and has been in discussion with exporters, international buyers and smelters to this effect.

4. **MineralCare**: MineralCare's GoldCare & 3TCare (5.1.4)

MineralCare is an ICT-based credential system and platform that validates the actors, the product, and the transactions in a given supply chain from extraction to the end user. The credential assures that the person is who they say they are, and that they operate in conformance with the Mineralcare guidelines. These guidelines include requirements from the OECD Due Diligence Guidance, applicable domestic and regional law, special

[1] Much of the uncited information in this report is based on text provided by Kay Nimmo, ITRI, on 29th October 2013.
[2] Interview with Kay Nimmo, 22.8.2014.
[3] UN ITU, 2012.

conditions imposed by downstream certification initiatives (e.g. LBMA, DMCC, CFSP), available criminal lists or other blacklists. MineralCare now offers specifically adapted platforms for diamonds, gold, and the 3Ts. It is not yet operational in the DRC but signed an MOU with the Governor of Orientale in 2015 to pilot its system there.

A comparative analysis was done of these four systems. These can be found in Chapter 5 of the report.

0.3.2. Traceability Initiatives

The four conflict minerals certification systems include traceability as a component of certification: iTSCi and MineralCare offer their own proprietorial traceability solution; CTC and BSP allow for traceability to be provided by multiple providers. Three additional schemes, which offer traceability as a primary offering, are important for consideration. These schemes primarily service the Chain of Custody needs of supply chain operators, so offer tracking/tracing and data management services. As such, they are more tools than systems and are less comprehensive than CTC, ITSCi, BSP and MineralCare, all of which include due diligence and/or certification.

1. **GeoTraceability**: Price WaterhouseCoopers' GeoTraceability

GeoTraceability offers traceability, data collection, and data management solutions mainly for the agricultural, but also the mining sector. GeoTraceability provides the technology for traceability based on tagging of minerals with barcodes and tracking them along the supply chain using a technology combination of mobile phones, GPS and GIS. Tagging and bagging can start either at the level of the mine site or at the pit or tunnel, depending on the configuration of the mine site and the prior risk assessment conducted by the due diligence operator. GeoTraceability signed an MoU with the Government of DRC in 2014.

2. **MetTrak**: MetTrak's software solution

MetTrak is a software solution that allows real time tracking and tracing of minerals from the all scales of mine to the end consumer and can be integrated into database management systems. MetTrak has not been implemented in the DRC to date, but was tested and is operational at Rutengo, a semi-industrialised cassiterite mine in Rwanda, since 2011. It could work in any of the 3TG, as well as precious stones, but is concentrating on gold at present.

3. **SERCAM**: IBES AG's SERCAM

SERCAM is a special technological solution to support certified raw material flow for mining, which includes tagging and tracking minerals in the upstream supply chain from the mine to the refiner. It consists of advanced hardware components for remote monitoring of mineral transports, mobile handhelds for semi-automated process documentation and a powerful central web application for administration and reporting.

A comparative analysis was *not* done for these three systems since they are *tools for traceability and data management*. Their utility can only be known through piloting. Pilots have been done for GeoTraceability and MetTrak, but the details of any *evaluation* of these pilots were not available.

0.3.3. Other Relevant Standards

There is also a range of voluntary standards that *are not presently used in DRC* and could be used to exert controls and manage risk better in DRC's minerals sector. Implementation of any of these would support conformance with the OECD Guidance. The GDRC could promote their use by ASM organisations, mining companies and/or traders operating in DRC, and communicate this prominently to trading partners, businesses in DRC and their stakeholders in order to start to address some of the additional issues that are a concern to the market.

- **RJC's Code of Practice & Chain or Custody Standards**: The RJC Chain of Custody standard includes provision on chain-of-custody management, systems to confirm eligibility of material, and issuing chain-of-custody documentation. For Congolese gold mining and trading companies, membership in the RJC and voluntary conformance with the CoC would mean not only that they were operating in conformance with the OECD Guidance, but that they are also addressing the other risks that the market and other stakeholders see as being inadequately addressed in conflict minerals due diligence presently. The Government of DRC could provide incentives to mining companies and gold traders that are RJC certified. One large caveat is that the RJC is not directly applicable to artisanal and small-scale mining organisations. Instead, it has a process for recognising other responsible mining standards that allows ASM organisations certified against these to supply gold to RJC members and still have their mineral conform to the RJC CoC. The Fairmined and Fairtrade standards hold this recognition.
- **The Fairmined Standard for Gold and Associated Precious Metal**: The Alliance for Responsible Mining offers Fairmined certification for ASM organisations (ASMOs) that can meet its wide range of performance criteria. ARM carries a wealth of expertise in how to organise and formalise ASM, including through a route to certification. Related to this, ARM has recently provided consulting services on ASM in DRC, providing ARM with the understanding necessary to consider operating in DRC. It is feasible that a Congolese ASM organisation could become Fairmined certified, if the right support structures were in place.
- **The Fairtrade Standard for Gold and Associated Precious Metals**: Fairtrade recently completed a review of their standard to ensure it was aligned with the OECD Due Diligence Guidance. Like Fairmined, its standard is designed to reward organised ASM with improved trading terms and the ability to drive community and organisational development through a fair price and premium. At a recent webinar, Fairtrade announced their willingness to operate in DRC, inviting any

Congolese ASM gold organisation that is interested in becoming Fairtrade certified to use their standard and apply for certification. In reality, what would need to happen is an ASM Organisation would need to work with a 'Local Support Organisation', who would build their capacity to come to compliance with the Fairtrade standard.

- **The World Gold Council's Responsible Gold Guidance:** The WGC's Guidance may come in useful for DRC's ASM sector in that it provides scope for enabling large scale mines to source from ASM as "Externally Sourced Gold" and report as 'conflict-free'. The WGC Standards provide a workable framework should the GDRC wish to incentivise LSM companies to source from ASM operating on their concession as an avenue for creating an additional means by which ASM can be legitimised and formalised.
- **The Initiative for Responsible Mining Assurance Standard:** IRMA has a chapter on conflict-affected and high-risk areas that establishes requirements for mining companies operating in such a context. IRMA is considering developing a chapter on how LSM companies should deal with artisanal and small-scale miner stakeholders. Like the RJC, IRMA is oriented at large, corporate, professionalised mining entities and so is not applicable to ASM organisations. However, the IRMA standard could be used as a *tool* by concession-holders, like MMR or Shamika, who wish to know what good practice would involve and seek to implement what is a.) material and b.) feasible.

0.4. Gold

Gold certification represents distinct challenges. There is currently no operational gold traceability and/or certification system in the country and virtually all of the eastern DRC's gold production is traded illegally. A key differential is the fungibility of gold, as well as its high value. Unlike the 3Ts, untreated gold can be easily smuggled across borders, secreted upon an individual's person. Also unlike the 3Ts, and despite sharing their designation as conflict minerals, smuggled DRC gold can be easily traded beyond the country's borders, whether in neighbouring countries or further afield.

There have been and there are currently in development a number of promising pilot projects.

- ***Alimasi ya sawa*/Just Gold**: AKA the Trading House model, developed by Partnership Africa Canada (PAC) – pilot project in Orientale Province, currently discontinued
- **CEEC Gold Traceability and Certification Initiative**: in development, envisaged as a model scalable nationally, security bag with sequential serial numbering.
- **ARM's Gold traceability system**: involving "a secure pocketable transparent security bag with features of tamper evident seals and sequential serial numbering", in conjunction with RFID tagging. This is at a gestational stage of development compared with the already tested PAC pilot project, or the CEEC ITOA initiative

- **MineralCare's GoldCare**, a technology-intensive system, which has a proven track record in the traceability and certification of diamonds in Angola, pre-Kimberley Process. Pilot project planned in Orientale for 2015.
- **BGR/CTC**, **Geotraceability/BSP**, and other traceability schemes for gold: pilot project planned for 2015 in Maniema

PAC's Just Gold is the only system that has been successfully piloted, and publicly evaluated. Lessons learnt from the trial indicate that there may be potential synergies Just Gold and other complementary systems, such as CEEC's ITOA. The latter, deploying software already successfully operationalized for LSM gold, would make use of existing government resources, as well as building capacity in the relevant agencies – CEEC, SASSCAM, and Administration des Mines. It would be "a Congolese solution for a Congolese problem".

There is potential for complementarity and synergy between the respective traceability systems, whether, for example, between PAC and ITOA, ITOA and MineralCare, or ITOA and BSP, or other combinations. It may be that, given the relatively low margins in the gold supply chain, some of these combinations, although technically effective, will prove financially unsustainable. Again, it requires their field-testing at the pilot project stage to establish to what extent they might be financially sustainable.

For ASM gold, the fiscal and parafiscal burden at the provincial level is over-onerous and disincentivises declaration of production or sales by miners and négociants. The provincial levies currently make the DRC uncompetitive in the regional context, when compared with tax rates of neighbouring countries. This encourages trans-border smuggling.

While there are tensions between artisanal and large-scale gold mining ventures, there are also considerable opportunities for cooperation and mutually beneficial coexistence. One possibility is that LSM entities could serve as a comptoir for ASM miners (see possible frameworks for enabling this, above). While this has an attractive logic, it will face considerable opposition from LSM actors, not least because of reputational risk. Another option would through the possible ceding of sites to miner cooperatives from within an LSM concession. Given the vastness of some LSM concessions, sites could be identified which might be suitable to transfer on a permanent or renewable basis to ASM gold cooperatives.

I**t is estimated that 97% of the DRC's ASM gold is undeclared.** The sub-sector is almost entirely informal. A crucial component to ASM gold traceability and certification will be formalisation, bringing the sub-sector under the supervision of the regulatory agencies. A key impediment to both the process of formalisation and the implementation of traceability and certification is the lack of opportunity for ASM miners, in the form of cooperatives, to acquire secure and exclusive title to land. Fewer than 20% ZEAs (Zone

d'Exploitation Artisanale) have been granted, representing less than 3% of the total number of DRC gold sites.

A significant complicating factor in any discussion of gold traceability is the role it plays in the broader DRC economy. Gold is not merely a commodity, or mineral resource. It is a financial instrument, often used for laundering money and tax evasion.

A multifaceted, triangulated approach to ensuring gold traceability would benefit from the application of both pressure and inducements at different stages in the supply chain. Miners and négociants are incentivized to integrate within the mining governance framework and declare their gold, through the reduction in rates of tax and fees. Formalisation, technical assistance and such benefits as increased productivity and recoverability, better labour conditions, genuine cooperative structures as opposed to rent generation by well-connected elites, would also act as further incentives. Beyond the DRC's borders, sensitisation and lobbying of trading hubs, such as Dubai's DMCC, and international financial institutions, could also contribute to the stigmatization of non-declared DRC gold.

The relatively abrupt transition from certificat d'origine to ICGLR RCM export certification has created a number of challenges. Firstly, there are very few validated ASM gold mine sites. Secondly, there is currently no functioning system of traceability for ASM gold production and export. This could threaten the integrity and reputation of the ICGLR RCM, which after all exists for and depends upon the confidence of downstream consumers.

0.5. Conclusion

The purpose of this assignment is to compare the systems of certification and traceability in place in DRC and in the world, with a view to proposing a system that is appropriate to the needs of the country, coherent with the procedures of the ICGLR's regional certification mechanism, and responsive to international requirements.

0.5.1. General Conclusions

Transparency, traceability, flexibility, and accountability should be the key principles for responsible sourcing and the implementation of the DRC traceability / certification mechanism. At the same time a range of normative documents serve as bedrock for the mechanism – Congolese law; the ICGLR RCM; Dodd-Frank Act, pending EU regulations; international policy frameworks such as OECD Guidance, OECD Guidelines, and UN Guiding Principles for Business and Human Rights; CSR commitments undertaken by end users, e.g. UN Global Compact; and other compliance frameworks, e.g. LBMA, RJC, CFSP.

Considerable progress has been made but there are still gaps. Different market realities require different strategies for engaging 'responsible buyers' through measures

to assure the sustainability performance of Congolese mineral supply chains. Good governance of conflict minerals supply chains requires a broader set of interventions and fundamental reforms. Traceability and certification initiatives should be accompanied with tangible technical, material and financial support for artisanal mining communities, to work on the gaps.

There are a lot of systems for doing due diligence on conflict minerals supply chains, but there is not a system for doing due diligence on the performance of the conflict minerals initiatives. The market needs reassurance that these conflict minerals initiatives are robust and effective. This will come through improved mechanisms for accountability, including transparency, *standardized* and ongoing evaluation, and additional field-testing. Ad hoc studies such as this one are not sufficient, though they may contribute.

Traceability and due diligence are not the same thing! We wish to emphasise that traceability is but one feature of a certification or due diligence initiative and not the only aspect upon which feasibility, efficacy, credibility, and thus sustainability rest. Traceability is a means to an end. Traceability may be easier to rally round, measure and deliver on than goals such as transparency, good governance or conflict prevention, but an emphasis on traceability as *the* tool for formalizing gold supply chains may entirely miss the mark; it is absolutely essential to widen the lens and come back to the original goal: to break the link between minerals and conflict. Widening the lens further, one might expect to arrive at a goal to build a viable and developmental mineral sector that attracts responsible buyers for the long-term. The absence of a clear vision for DRC's ASM sector is an obstacle to taking the focus from traceability and onto the bigger picture, to properly unleash the development potential of DRC's mineral resources.

Ensuring responsible sourcing contributes to development and stability in DRC. Regardless of whether the higher goal is simply to deliver a service (traceability) or to contribute to peace, stability and socio-economic development in DRC (certification), the fact is that these initiatives could be doing more for development in all cases, especially in the context of improved mining governance and formalization, with all the attendant benefits therein.

Protection of vulnerable people. Imposition of traceability and due diligence systems generally has created additional costs for upstream actors in DRC and in particular the miners. Any pilot of a conflict minerals system should seek to safeguard participants and vulnerable third parties against direct or indirect negative social or economic impacts of the pilot.

The lack of secure and exclusive title for ASM actors impedes ASM formalization, making access to legitimate supply chains extremely challenging. In the case of gold - fewer than 20 artisanal mining permits (ZEA's) have been issued to ASM miners throughout the DRC, making this a huge impediment to formalization and legitimization

of the sector. ZEA's currently occupy less than 3% of the total number of gold mine sites in the DRC. ASM miners need more *possibility* of formalising through increased security of tenure and allocation of ASM permits.

Competition and complementarity. The MOU between GDRC and GeoTraceability now opens the door for competition and pilot projects to evaluate each system. It is crucial to maintain market stability and credibility whilst introducing alternatives. The capacity of state agencies to cope with the diversity of systems needs to be addressed. As well as harmonization between systems, their potential complementarity should also be emphasized. Different systems suit different situations; not all are universally appropriate, which is a benefit. Greater specialisation between the systems will serve users and stakeholders better.

The GDRC could push through efficiencies in the upstream supply chain assurance system. The GDRC already carries out a range of elements of the upstream supply chain assurance system, in line with the RCM in particular. There is more GDRC could potentially do in each regard, such as building due diligence on key points required by the OECD DDG into its licensing approval system, and requiring initiatives to share data generated through Chain of Custody system implementation in certain forms (aggregated and disaggregated).

Mine Site Validation and Certification could be significantly rationalised. The validation process can be streamlined, made more sustainable, so viable over the short to medium-term. The validation process undoubtedly has a knock-on effect on the costs of and perceived effectiveness of the traceability and due diligence systems in place. A validation process, sustainable and viable over the long-term, is crucial for sectorial stability and growth.

0.5.2. Gold-specific Conclusions

The absence of any functioning traceability system for ASM gold is both a challenge and an opportunity for the DRC government. Unlike the 3Ts, there is no entrenched incumbent system. The imminent onset of pilot projects, initiated by CBRMT and BGR, provides a unique opportunity to field-test both individual traceability / due diligence systems and combinations thereof. Field-testing and evaluation should ensure that stakeholders would be confident that the designation of approved certification or traceability system(s) would have been based upon a thorough analysis of their respective strengths and weaknesses in the DRC context.

It is hard to incentivize miners to declare their gold production. The successful implementation of any traceability system depends upon persuading miners to declare their production, and négociants their transactions. While the tax rate at the national level is regionally competitive, current high rates of taxation at the provincial level serve

as a significant disincentive against such declarations. Given the fungibility of gold, stakeholders have to be persuaded that it is in their interests to declare their gold.

Validation of ASM gold mine sites has been slow, and needs to be accelerated. This is a general point but especially urgent in the case of gold ASM sites. While some stakeholders have taken the position that validation of ASM gold sites should wait until a functioning traceability system is in place, this runs the risk of falling into a 'chicken and the egg' dilemma, as is evinced by the fact that there are currently very few legitimate sites at which pilot projects can be rolled out.

In the DRC and broader GLR context, market access for gold is significantly different to that of the 3Ts. There is currently no market penalty for non-certified DRC gold. Non-certified DRC gold will almost inevitably find a market beyond the DRC borders. The DRC government could consider phasing in the traceability / due diligence system(s) for gold progressively and taking into account the realities on the ground. It may be more appropriate, therefore, for traceability requirements on conflict-free areas (e.g. Bas Congo, Kasai, and Equateur provinces) to be made more lax (from physical to documentary tracking, for example) and emphasis to be placed instead on miner, negociant and comptoir registration and support to these supply chain operators to formalize and professionalize their business activities more generally.

The abrupt transition from the previous system of certification, through certificats d'origine, to the ICGLR RCM export certification, runs a significant risk of undermining the credibility of the ICGLR RCM. ICGLR export certificates are currently being issued to ASM gold, which, albeit declared to CEEC, is non-compliant with RCM Standards, especially with regard to CoC and transportation routes. The DRC government could consider a twin-track approach to export certification, with certificats d'origine, which involve a less rigorous CoC due diligence, co-existing with the gradual and phased implementation of ICGLR RCM export certification. Certificats d'origine would be particularly suited for provinces outside the known conflict areas of eastern DRC.

Only one traceability / due diligence system for ASM gold has been tried, tested, and then publicly evaluated in the DRC context – PAC's Just Gold. The other systems, such as CEEC's ITOA, GeoTraceability/BSP, MineralCare, and the ARM model, are seeking to be operational in the DRC. Issues such as sustainability, cost and ownership are crucial considerations. In that light, it may be that the CEEC ITOA system has a definitive advantage, certainly in terms of ownership, as a "Congolese solution for a Congolese problem", as well as in terms of utilizing and building capacity in existing government human resources.

The creation of a market penalty for gold that is not conflict-free could be helpful, *if conditions are created that make conflict-free gold much more feasible for ASM*. The DRC government can over the medium-term work with international partners (such as international trading hubs, financial institutions, international media and advocacy

groups) to create a market penalty. This would gradually lead to a stigmatization of non-certified DRC gold, and thus contribute to shutting down, or at least limiting, market access to the global supply chain for non-certified DRC gold.

0.6. Recommendations

0.6.1. General Recommendations

Mine site validation to be streamlined and accelerated. The number of DRC government validation missions should be increased. This process should be streamlined, involving fewer stakeholders, and capacity developed for DRC government agents to undertake validation missions, without the need for international partners on-site. Looking beyond the pilot projects, as the respective traceability and certification system(s) is/are rolled out across the DRC, the implementing partners and DRC government agents could undertake joint validation missions as part of mine site traceability implementation. *This is especially urgent for ASM gold.*

ASM permits. ASM miner cooperatives and small companies should be granted greater security of tenure and should be issued with an increased number of ASM permits. This is necessary as part of the DRC government's push to formalize ASM through the development of cooperatives. Exclusive rights and security of tenure are needed to ensure investment by ASM stakeholders. ASM permit holders should also have exclusive title, renewable for 2-3 years. The process for issuance of ASM permits should be streamlined, and decentralized to the level of the provincial Division des Mines.

Democratization of cooperative structures. The DRC government needs to ensure that cooperatives bring tangible benefits to ASM miners. Otherwise the temptation for miners, often faced by relatively high percentages of their production being payable as dues to the cooperative, will be to bypass the cooperative, not declare their gold, and sell illicitly to négociants. As part of the pilot projects and subsequent roll-out of the traceability system(s), cooperatives need to be moved towards democratization, and forego the rentier/PdG model whereby influential local personalities control the cooperative for their own interests, often at the expense of the miners. Where cooperatives function essentially as sub-contracted trading entities that gather product from ASM miners on behalf of the concession-holder, they should not be called a co-operative. This is a misnomer and hides the reality of continued marginalization of the miners.

Building capacity of government agencies. Any traceability system, whether a pilot project or more widely operational, will depend upon the government agents tasked with its implementation, management and supervision, from mine site to exporter. At the mine site level, SAESSCAM agents are most often underpaid, irregularly paid, if paid at all. Building the capacity of government agencies will not only ensure their ability to do their jobs, it will disincentivise corruption and enable higher performing traceability

and certification systems, so protecting the overall credibility of these systems and DRC's access to responsible markets.

Protection of vulnerable people. GDRC needs to work with supply chain operators to consider how the costs of upstream due diligence can be distributed more fairly so the burden is not placed disproportionately on the most vulnerable in the chain. This should also be mandated as a key consideration for the piloting of initiatives: how will costs be distributed? Pilots must also take action to know and mitigate risks of negative impacts of piloting on vulnerable people.

Impact assessment. The GDRC, donors, the ICGLR, and other stakeholders should seek to understand and publish if and how each of these initiatives contributes to achieving improved minerals sector governance, formalization and legitimization of the ASM sector (per Appendix I of the Gold Supplement of the OECD DDG), development, and stability. This will ensure GDRC and other stakeholders can understand their value in these regards, and help them choose between them if need be.

MOU's and OECD Guidance conformance. In order for companies to be able to rely upon assurance systems operational in DRC, DRC must insist that any initiative with which it signs a Memorandum of Understanding has undergone an OECD DDG conformance check by a knowledgeable and credible independent body to ensure that, once operational, the initiative will be judged as adequate by the market.

Data reliability and Transparency. DRC should aggregate and publish data, statistics and reports of relevance to downstream buyers of 'conflict minerals' on its website (www.mines-rdc.cd). This could act as a portal of data gathered from each of the initiatives that can be made public. This and more sensitive data could also then be passed to the IMCA and database of the RCM in aggregated and disaggregated form. DRC should include data disclosure requirements in the MoUs they have with initiatives, including requesting certain data points, and types of data to enable standardisation of data to ensure comparability and meaningful aggregation.

Sustainability of systems. As part of its consideration as to allowing new initiatives to operate in DRC, GDRC should demand that these initiatives present information on their business model including how they will be financed (start-up capital and ongoing income), and how profits or excess income will be distributed to ensure costs are reasonable and fairly distributed. Donors may wish to work with GDRC to elaborate on how this can be done appropriately.

Permitting initiatives to operate in DRC. The GDRC needs to establish and publish its procedure for vetting and approving a conflict minerals initiative or traceability service provider that wishes to pilot and become operational in DRC. The approval process should be run by a steering committee involving the national ministry of Mines, provincial Ministry of Mines and the independent evaluator. The process for applying to

operate as a traceability system in DRC should be published on www.mines-rdc.cd to enable other initiatives to do this efficaciously (in the interest of ultimately reducing upfront costs and the price that industry will have to pay for implementation). Guidance on this process is given in the conclusion to the report.

0.6.2. Gold-specific Recommendations

Pilot projects. Both CBRMT and BGR are in the process of developing pilot projects for gold traceability. CEEC's ITOA, making use of existing DRC government human resources as well as building institutional capacity, should be encouraged to work in tandem with other traceability / due diligence models. The two pilot project programs, CBRMT and BGR, should be encouraged to work together to avoid duplication, and maximize the possible permutations of traceability system combinations, as well as geographical locations.

Realistic and legal taxation at the provincial level. For there to be any hope of increased declaration of gold at the mine site or négociant levels, there needs to be a significant rationalisation of fiscal and parafiscal charges at the provincial level. The overall tax burden should be reduced to 4%: maintaining the national 2% levy at export, reducing the provincial taxes to 2%, and abolishing the 1% négociant taxe de vente. As part of the pilot projects, implementing partners should negotiate with provincial governments for fiscal exemptions or significant reductions regarding *frais rémunératoires*. This will be an opportunity to demonstrate that a lower tax rate encourages fiscal compliance on the part of stakeholders, thus increasing the tax take for both provincial and national government.

Certificats d'origine co-existing with ICGLR RCM. ICGLR RCM export certificates should only be issued where compliance with RCM Standards can be assured. As a **temporary and immediate** measure, certificats d'origine should be re-introduced for certain sites and provinces. This would effectively mean that gold sourced from sites which have not as yet been integrated into a functioning traceability / due diligence system should be subject to certificats d'origine for export. This would be especially relevant to DRC gold-producing provinces not affected by conflict, such as Bas-Congo, Kasai and Equateur.

Increased cooperation between LSM and ASM. LSM gold producers, such as Banro and the eventual successor entity to Anglo Gold at Mwongbwalu, should be encouraged and enabled to engage in increased cooperation with ASM miners on and around their concessions. These LSM concessions cover vast tracts of land, are home to significant numbers of ASM miners and their families, and contain gold deposits, which are unsuited to industrial production. The new mining code may well allow for such cooperation between ASM cooperatives and LSM companies.

International stigmatization of non-certified DRC gold. As part of a multi-faceted approach to ensuring compliance with OECD Guidance, the DRC government and its

international partners should increase efforts to sensitize downstream stakeholders, such as the authorities managing trading hubs (e.g. DMCC), regarding the need to deny market access to non-certified DRC gold. Financial institutions operating in such trading hubs should be encouraged to deny banking facilities to proceeds from illicit DRC-sourced gold. International media and advocacy groups should be encouraged to internationalize awareness of the negative impacts associated with DRC non-certified gold, as part of a process aimed at limiting market access to gold smuggled from the DRC.

0.7. Comparative Evaluatory Tables of Initiatives

0.7.1. Comparative Analysis of Existing and Potential 3T Certification Initaitives (Table 1)

Initiative	**Sustainability** *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	**Credibility** *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	**Efficacy** *Effective and efficient*	**Feasibility** *Achieving goals with best use of available resources (value for money, realism, universality)*	**Scope for Improvement**
CTC	Ultimate value to the market and to mining companies is not apparent. Ultimate sustainability in DRC IS not apparent because not phase out plan give that this is a bilateral cooperation project.	High and is integrated into legal framework and national mining governance. Not enough information in the public domain on key elements of their system	This could be greatly improved.	It is a resource-intensive programme. Not clear if it can achieve scalable goals affordably under the current model (e.g. multi-stakeholder audits done by northern auditors) Value for money needs to be ascertained if there was a cost benefit analysis.	
iTSCi	It is adding value, especially for downstream brands (knowledge base, people on the ground, established relationships with Congolese agencies, broad scope) but could add even more value if it were willing to consider these downstream players' communications, transparency, and CSR priorities. It is adding value in ways that stakeholders and members do not realise; this needs to be better communicated. It is not adequately enfranchising stakeholders, especially those downstream and some upstream.	Yes. Good norms, policies, procedures. Credibility is undermined by stakeholders' preoccupation with a range of perceived issues: its dependence on government agents to implement its track/trace system; its use of paper-form tracking systems; its susceptibility to fraud and leakage of minerals in some situations; its scope being only on the human rights and business practice issues in the OECD Guidance's Model Supply Chain Policy; its 'reliance' upon donor funding; its ownership and	It is effective – see Table 3 on volumes of minerals, numbers of miners in system. As a system it picks up issues, including with how it as a system is operating, and addresses them. But there is room for expansion to new parts of DRC. It is helping improve governance generally in DRC. Its use of government agents to fulfil functions is a huge strength (builds capacity and ownership) and weakness (perceived issues with reliability of data, corruption risks and events). Can't definitely judge efficiency	iTSCi has an MoU with the Government of DRC. iTSCi has proven to be feasible. iTSCi's benefits outweigh the costs because it has brought millions of dollars' worth of business back to many economically bereft regions in DRC. There is a perception that iTSCi is *dependent* upon donor funding. According to iTSCi, this is not the case. Donor funding enables iTSCi to scale up faster by providing the start-up capital for new sites. However, iTSCi and its members also invest in 'start	iTSCi should publish all normative documents on its website. It needs to improve **communications** generally, including on: how it adds values for members; how it adds values for other members; the roles and responsibilities of all implementing partners; its vision for expanding scope to include other issues, including practical steps on how it is going to achieve this. Other scope for improvement in communications includes: improving the management of data generated by its traceability and incident

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	It needs to move phase 3 to expand scope from enabling responsible sourcing to enabling responsible mining generally. iTSCi's ground presence at 265 sub-sectors with 318 active sites in these mines in DRC, involving around 35,000 miners, [4] and relationships with a diversity of stakeholders provides a form of social infrastructure and a substantial foundation for addressing other aspects of minerals governance and human rights risks in the 3Ts sector. It has the big advantage of the being the incumbent, it has enormous institutional memory and has been through and addressed most teething problems. It demonstrates local innovation in tackling the commercial barriers to getting mineral flowing and enough commercial opportunity *and* available local capital for joint risk-sharing by industry actors. Donor reluctance to invest in	administration by ITRI. Stakeholders don't understand that iTSCi is not there to eliminate risks, but to ensure good mitigation, per the OECD Guidance. Stakeholders do not understand that the fact that these risks occur, are picked up and managed (including through local and provincial level multistakeholder for a) is a positive sign that iTSCi is working. Stakeholders do not understand that responsibility for iTSCi's success does not just sit with its secretariat but all the institutions who have a role in implementation and oversight, e.g. government DRC, international and local civil society, ITRI, etc. Credibiility is negatively affected by how and what iTSCi communicates. iTSCi is often unwilling to respond to data requests from third parties, especially for projects seeking to evaluate iTSCi	as a cost-benefit analysis could not be done. The timeliness of incident reporting is a concern to some stakeholders. iTSCi's prudence is merited given the sensitivity and implications of releasing certain data, which makes fact-checking and the right of response essential. Greater efficiency could be achieved through: • Alignment with the joint validation missions, e.g. making these more meaningful as risk assessment exercises • Improving data collection technologies. • Increasing the role of local CSOs • Attracting donor funding for the capacity building of government agents. iTSCi needs a Theory of Change and Monitoring and Evaluation	up' at new mine sites. Once iTSCi is operational, the levy generates enough capital to cover ongoing costs across the sector, according to iTSCi. These claims need to be evaluated as part of the cost-benefit analysis. Liquidity remains a vital barrier to scaling iTSCi as quickly as stakeholders would like.	tracking system in the interests of improving timeliness; by identifying information types where it could be more transparent; and working harder with the Government of DRC and the ICGLR to enable transfer of data to these stakeholders in a way that is more convenient and usable by them. iTSCi would build credibility and sustainability by supporting and fully enabling a third-party evaluation of iTSCi. iTSCi members, the Government of DRC and any donors funding iTSCi are best placed to call for this. They would probably need to call for it as a group, otherwise iTSCi could argue for partial evaluation only. A performance evaluation would include opening up iTSCi's books to independent financial evaluation, to confirm for members – and concerned stakeholders – the value for money it really offers, on the one hand, whilst also considering financial strategy,

[4] iTSCi 2014 iTSCi Overview: November.

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	start-up of itSCi in new areas, to enable iTSCi to do more to build the capacity of local actors (government, CSOs) to take over elements of the system better and sooner, and to expand iTSCi's scope is an impediment to achieving sustainability of the system. iTSCi's sustainability may be more assured if it were more willing to introduce diversity into certain elements, e.g. working with different traceability service-providers for its traceability element.	without engaging iTSCi appropriately.[5] iTSCi, claims to be overwhelmed by the sheer frequency and amount of time meaningful engagement would take,[6] the number of studies that have the same repetitive and overlapping scope, and the lack of preparation of the researchers.[7] iTSCi releases more information than is required by the OECD Guidance, including publishing all incident reports, production data, other field reports besides due diligence, updates on development outcomes associated with the initiative, and so on. [8]	System to prove it is delivering on its goals.		including funding streams for different parts of iTSCi and taking a judgement on the initiative's financial sustainability. This financial evaluation should be part of a broader cost-benefit analysis to assess iTSCi performance generally. This evaluation would need to also consider how iTSCi could raise the money to implement whatever might be the evaluation's recommendations. The evaluator must have intimate understanding of the business environment in DRC, the commercial terms and cultures of procurement by mineral smelters, and the ability to handle information confidentially whilst reporting on the right information points that would a.) reassure stakeholders and b.) reveal practical opportunities for introducing efficiencies. Improved communications and PR, and greater transparency

[5] Levin and Cook, 2013; Douma, N. and Weinbegr, R. 2014; Kay Nimmo, pers. Comm. to Estelle Levin, 01.12.2014.
[6] iTSCi receives requests to engage with one or two studies a week. Kay Nimmo, pers. Comm. to Estelle Levin, 01.12.2014
[7] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[8] Interview with Kay Nimmo, 22.08.2014

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
					are essential to credibility and longer-terms sustainability. The iTSCi website is not at all user-friendly; improving it with a focus on transparency and availability of information should be a priority. Government DRC could do more to proactively communicate to international stakeholders on its role in ITSCi, challenges, and what it's doing to improve them. The government of DRC needs to ensure its agents are adequately resourced and incentivised to perform their roles efficaciously and with integrity. iTSCi could be using its advisory board more effectively to enhance credibility and performance, and be involved in strategic decision making, performance evaluation, and act as ambassadors for the organisation.
BSP	BSP is not yet tested in DRC. The BSP has identified value propositions that are likely to appeal to certain downstream and upstream businesses: the emphasis on communications,	Cannot definitively judge credibility until it is tested and developed more fully. For example, some normative documents do not yet exist, e.g. audit protocol. The	Norms are adequately robust, concise and targeted to allow for piloting, but may need adjusting to have deliver impact and value for users and the system's wider beneficiaries.	BSP does not have an MoU with the Government of DRC itself; it is mentioned in Geotraceability's MoU with the Government of DRC, which provides an entry point	BSP should look to ISEAL for inspiration on how to achieve satisfactory levels of integrity and independence, even if the fit is not perfect. BSP should focus on building a

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
	supply chain transparency, building broader CSR issues into supply chain due diligence, management systems advice, flexibility in traceability system choice, releasing data to buyers before export. It has a broad range of sustainability issues in scope, beyond what is required by the OECD Guidance. It is a business, so financial sustainability is crucial to its operation. It is therefore also driven by a profit motive (it is not a social enterprise).	standard needs work, being built on other standards that are not fit for purpose for the target beneficiaries. The standard also needs proper consultation with Congolese stakeholders. This could be included in the pilot but adequate consultation for any Congolese situation would require something fairly extensive. Governance needs to be improved. There is not adequate separation between certain parts of the governance structure. Potential conflicts of interest with the other business interests of the directors, which may discourage some industry players for using the system, trusting it, or collaborating with it. Has credibility with some downstream stakeholders. No third-party OECD Conformance check yet.	BSP needs a Theory of Change and Monitoring and Evaluation System to prove it is delivering on its goals.	for piloting. Goals appear to be realistic and achievable Access to finance for start-up is anticipated to be a challenge. Overall value for money cannot be judged since financial costings were not shared with the authors. Scalable – not possible to be universal, but could reach scale if proves to be sustainable if it can get economies of scale. Inevitably probably better suited to larger scale ASM operations.	sourcing standard, and leave responsible mining to existing initiatives which already incorporate progress-based requirements (e.g. CTC, Fairtrade, Fairmined). If BSP is to be piloted in DRC, it must be meaningfully evaluated and in a standard way to allow comparison with other initiatives. Do an OECD Conformance Check.
MineralCare	Not yet tested in DRC. MineralCare will add value in a range of ways: its agreement with the Dubai MultiCommodities Center ; its	Concept is sound. No third-party OECD Guidance Conformance check yet. MineralCare's credibility with upstream stakeholders could	The MineralCare solution is comprehensive and seemingly robust. It has the right goals. MineralCare needs a Theory of Change and Monitoring and	MineralCare does not have an MoU with the Government of DRC; it has an MOU with the provincial government of Orientale. It is not clear if it	If MineralCare is to be piloted in DRC, it must be meaningfully evaluated and in a standard way to allow comparison with other initiatives.

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
	MoU with the Governor of Orientale which provides a basis for piloting; its foundation upon financial due diligence. MineralCare could offer a universal solution for DRC's gold sector, not just for responsible sourcing but as a governance tool overall. MineralCare offers a technology-based solution that is more advanced than any other of the 'certification initiatives' in this chapter. It combines the IT savvy of the traceability offerings with the due diligence and assurance offerings of the systems analysed herein. In this way it is unique. It is a business, so financial sustainability is crucial to its operation. It is therefore also driven by a profit motive (it is not a social enterprise).	be improved by having an existing credibility figure promote the initiative to Congolese stakeholders. The Governor of Orientale may also be able to support interest amongst upstream stakeholders. Evidence of credibility could be gained further from consulting the government of Angola, where its diamond solution, DiamCare, has been tested. MineralCare has been endorsed by prestigious members of the conflict diamonds community.	Evaluation System to prove it is delivering on its goals. MineralCare lacks a solution for managing the risk of illegal payments along transportation routes, except to place onus on the receiver of goods to do additional due diligence on this issue.	needs the national level MoU in addition. Feasibility depends on which model is to be implemented: a universal model (building it into national level sector governance) or market-driven model (building it up supply chains through market demand). MineralCare's costs appear to be supportable by the different supply chain stakeholders. If the universal system were pursued, initial funding for the system by a donor would allow it to get up and running, and as it rolls out and enfranchises increasing members of the industry, revenues to the State would theoretically increase too until such a point as they would cover the system's ongoing costs. MineralCare needs to deepen its understanding of the DRC context to be able to compete with other options. MineralCare's system rests upon incentivising artisanal miners to participate in the programme through achieving social benefits as a reward.	Do an OECD Conformance Check. Consider alternative means for incentivising ASM to participate in the programme, e.g. tie the distribution of the RFID wristband with the delivery of the carte d'orpailleur, penalise/reward ASM that do not use the wrist-band by denying/fulfilling certain privileges. MineralCare must identify another initiative, NGO or consultancy that can do the sectoral risk assessment and ongoing montoring of its use. MineralCare needs to build deeper relationships with other initiatives to be able to get going in DRC. It could do more to pursue joint efforts.

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				This has worked in other contexts but feasibility in DRC may be problematic. MineralCare's solution is technology intensive. This will be very reassuring to the market, on one hand. On the other, it can be off-putting to observers who judge that Congolese stakeholders do not have the wherewithal to cope with such technology-heavy solutions. We find this judgement problematic; the technology should be trialled before a decision is made on its feasibility based on it being technology intensive. Whilst MineralCare is technically sophisticated in design, it is easy to use for supply chain operators and those doing due diligence on them. Because of this reliance on advanced technology, it may not be appropriate for every site in DRC at this moment in time, but could provide a desirable destination for those presently outside its feasibility.	

0.7.2. Comparative Analysis of Potential Gold Certification Initiatives (Table 2

Initiative	**Sustainability** *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	**Credibility** *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	**Efficacy** *Effective and efficient*	**Feasibility** *Achieving goals with best use of available resources (value for money, realism, universality)*
ITOA	Currently appears to be potentially lowest cost program. Building on and consolidating existing human resource capacity, so avoiding duplication of existing resources. Ownership belongs to CEEC, so DRC government. Increased likelihood of buy-in from state agencies at national and provincial levels.	As a government agency, responsible for export certification, CEEC's vision for ITOA is backed up with deep experience of the supply chain. Depends upon SAESSCAM and Division des Mines agents at the mine site / initial negociant stages. These could be a weak link due to lack of capacity and poor conditions of pay. Miners also need to be incentivised to declare production to government agents.	Implementation involves already existing software – currently successfully deployed for LSM gold. Pilot projects will ascertain whether the software can handle the different data collation and management demands involved in ASM gold traceability.	Takes advantage of already existing institutional infrastructure. Scalable program, not technology-intensive – so suitable for diverse mine site environments. Could be piloted in tandem with PAC's Just Gold. The latter has proven success in incentivising miners to declare production at the mine site / cooperative level. CEEC's sequentially numbered secure envelopes and data management solution could provide better traceability through the CoC to grand negociant / exporter level.
PAC / Just Gold	Involves knowledge/skills transfers for miners – leading to improved productivity. Driver for formalisation. As non-profit NGO, committed to transfer ownership to DRC stakeholders, so potentially attractive to DRC government.	Proven track record in Orientale. Successful pilot project up to the grand négociant level - where traceability of gold broke down in the original pilot. This is where it needs reinforcement of traceability.	Yes, efficient and effective	Could be piloted in tandem with CEEC ITOA. PAC has proven, successful track record at mine site / interface between miner and négociant. ITOA's secure envelope system would reinforce CoC traceability all the way through to grand negociant and export. PAC has deep experience of the DRC ASM gold context. Just Gold builds upon this. Scalable program, not technology-intensive – so suitable for diverse mine site environments.
ARM	Not yet tested in DRC. Remains to be seen whether the RFID secure envelopes are sustainable in	Has a clearly defined and appropriate vision, as well as goals. Concept is sound.	Remains to be seen. Needs piloting in the DRC context	ARM does not have an MoU with the Government of DRC. Costing is as yet unclear for key

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*
	terms of cost. More technologically complicated than the similar ITOA program. It remains to be seen whether this technology will be appropriate in the DRC context. As non-profit NGO, committed to transfer ownership to DRC stakeholders, so potentially attractive to DRC government	Has wide market acceptance as a responsible mining and supply chain solution.		components such as sealable RFID envelopes ARM needs to deepen its understanding of the DRC context to be able to compete with other options. Scalable program, suitable for diverse mine site environments.
MineralCare	Not yet tested in DRC. MineralCare will add value in a range of ways: its agreement with the Dubai MultiCommodities Center; its MoU with the Governor of Orientale which provides a basis for piloting; its foundation upon financial due diligence. MineralCare could offer a universal solution for DRC's gold sector, not just for responsible sourcing but as a governance tool overall. MineralCare offers a technology-based solution that is more advanced than any other of the 'certification initiatives' in this chapter. It combines the IT savvy of the traceability offerings with the due diligence and assurance offerings of the systems analysed herein. In this way it is unique. It is a business, so financial sustainability is crucial to its	Concept is sound. MineralCare's credibility with upstream stakeholders could be improved by having an existing credibility figure promote the initiative to Congolese stakeholders. The Governor of Orientale may also be able to support interest amongst upstream stakeholders. Evidence of credibility could be gained further from consulting the government of Angola, where its diamond solution, DiamCare, has been tested. MineralCare has been endorsed by prestigious members of the conflict diamonds community.	Remains to be seen. Needs piloting in the DRC context. MineralCare lacks a solution for managing the risk of illegal payments along transportation routes, except to place onus on the receiver of goods to do additional due diligence on this issue.	MineralCare does not have an MoU with the Government of DRC; it has an MOU with the provincial government of Orientale. It is not clear if it needs the national level MoU in addition. Access to finance for piloting is anticipated to be a challenge. Feasibility depends on which model is to be implemented: a universal model (building it into national level sector governance) or market-driven model (building it up supply chains through market demand). MineralCare needs to deepen its understanding of the DRC context to be able to compete with other options. MineralCare's system rests upon incentivising artisanal miners to participate in the programme through achieving social benefits as a reward. This has worked in other

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*
	operation. It is therefore also driven by a profit motive (it is not a social enterprise).			contexts but feasibility in DRC may be problematic. Because of this reliance on advanced technology, it may not be appropriate for every site in DRC at this moment in time, but could provide a desirable destination for those presently outside its feasibility. Inevitably probably better suited to larger scale ASM operations.
Geotraceability / BSP	BSP is not yet tested in DRC. The BSP has identified value propositions that are likely to appeal to certain downstream and upstream businesses: the emphasis on communications, supply chain transparency, building broader CSR issues into supply chain due diligence, management systems advice, flexibility in traceability system choice, releasing data to buyers before export. It has a broad range of sustainability issues in scope, beyond what is required by the OECD Guidance. It is a business, so financial sustainability is crucial to its operation. It is therefore also driven by a profit motive (it is not a social enterprise).	Concept is sound. Cannot definitively judge credibility until it is tested and developed more fully. For example, some normative documents do not yet exist, e.g. audit protocol. The standard needs work, being built on other standards that are not fit for purpose for the target beneficiaries. The standard also needs proper consultation with Congolese stakeholders. This could be included in the pilot but adequate consultation for any Congolese situation would require something fairly extensive. Governance needs to be improved. There is not adequate separation between certain parts of the governance structure. Has credibility with some downstream stakeholders.	Remains to be seen. Needs piloting in the DRC context.	BSP does not have an MoU with the Government of DRC itself; it is mentioned in Geotraceability's MoU with the Government of DRC, which provides an entry point for piloting. Goals appear to be realistic and achievable Access to finance for start-up is anticipated to be a challenge. Because of this reliance on advanced technology, it may not be appropriate for every site in DRC at this moment in time, but could provide a desirable destination for those presently outside its feasibility. Inevitably probably better suited to larger scale ASM operations.

1. Introduction

There is a range of initiatives operating in the Democratic Republic of Congo (DRC) that aim to cut the links which exist between the exploitation of minerals and the financing of armed groups. The effective implementation of these initiatives is commonly constrained owing to a number of factors that are typical or fixed features of the operational landscape in DRC; examples include on-going insecurity; the sheer geographical extent of mineral production, transportation and trade; and a lack of capacity of supply chain operators and government agents to ensure responsible business practices, amongst other reasons.

In accordance with the Terms of Reference for this report (see Annexes), the purpose of this assignment is to compare the systems of certification and traceability in place in DRC and in the world, with a view to **proposing a system that is appropriate to the needs of the country, coherent with the procedures of the ICGLR's Regional Certification Mechanism, and responsive to international requirements**. Ultimately, the study should propose a traceability system that responds to the realities of the Congolese context and the expectations of the Congolese government in terms of efficacy and cost, whilst being in conformance with the demands of the ICGLR and the final consumers of relevant minerals.

1.1. Assignment scope

Initiatives. The project goal refers to traceability systems as the focus of the research whilst also emphasising the importance of certification systems as a whole. Traceability is but one element of a conflict minerals system and, while a crucial part, is meaningless without consideration of the other elements. For this reason, the researchers have considered conflict minerals certification systems as the primary object of analysis, with traceability being one element of a certification system that is worthy of attention. The researchers have also concentrated on initiatives that are scalable, and so closed pipe solutions have not been part of the comparative analysis. The following initiatives were reviewed for this study:

Table 1 Initiatives Operational or Seeking to be Operational in DRC

Initiative	Owner / Manager	Status in DRC	Minerals in scope	Relevance
Regional Certification Mechanism (RCM) *is the first tool of the Regional Initiative against the Illegal Exploitation of Natural Resources (RINR)*	The International Conference on the Great Lakes Region (ICGLR) Governments	Active since domesticated into national law in DRC in 2012	3Ts and Gold	A responsible mining and sourcing standard for domestication into national law by ICGLR member states. Builds on the CTC
Certified Trading Chains	Created by the Bundesanstalt für Geowissenschaften und Rohstoffe, now domesticated into national law German government	Active. DRC government has produced two certification manuals based on the CTC Standards, one for gold and one for the 3Ts. These were incorporated into the legal framework through ministerial decree in 2011.[9] These were superseded by arretes 0057 and 0058. BGR's analytical fingerprint (AFP) project started in July 2006 with coltan. The DRC project was launched in September 2009. Since 2011, has been attempting to integrate AFP technique into ICGLR's RINR scheme.[10]	3Ts and Gold	A responsible mining standard involving supply chain traceability, and sustainability performance requirements for the mine. The AFP is a unique type of traceability system in the landscape of options in DRC, and can be used by any initiative or company that sees value in it. It is separate to CTC, but developed in relation to it.
iTSCi	ITRI, T.I.C. as iTSCi Secretariat. Industry associations. Government of DRC is co-manager in DRC.	First companies accepted as full members in 2012. Presently, it is the only tracking and traceability system operational for the 3Ts in the DRC.	3Ts	A responsible sourcing standard to support conformance with the OECD Due Diligence Guidance and other industry-specific compliance needs
MetTrak *Seeking to compete with iTSCi*	MetTrak Private company	Not implemented in DRC to date, but running in Rwanda, since 2011. Piloted at Kalimbi in 2012.	3Ts and Gold	A traceability and data management system to aid responsible sourcing
MineralCare *Seeking to compete with iTSCi*	MineralCare Private company	Not currently operational, but has MOU with Governor of Orientale Province to pilot there (as of 2015)	3Ts and Gold	A due diligence, traceability, data management, and certification system to aid responsible sourcing

[9] Näher, U. 2012
[10] http://www.geozentrum-hannover.de/EN/Themen/Min_rohstoffe/CTC/FAQ/FAQ_node_en.html

Initiative	Owner / Manager	Status in DRC	Minerals in scope	Relevance
SERCAM *Seeking to compete with iTSCi*	IBES AG Private company	Not currently operational	3Ts and Gold	A traceability and data management system to aid responsible sourcing
GeoTraceability *Seeking to compete with iTSCi*	PricewaterhouseCoopers Private company	Start-up – December 2, 2015 achieved an MOU with the DRC Gov allowing it to operate in the DRC. Piloted at Rubaya in 2012.	3Ts and Gold	A traceability and data management system to aid responsible sourcing
Better Sourcing Programme	Better Sourcing Programme Private Company	Currently being piloted in Congo-Brazzaville. Not yet operational in DRC but actively seeking to be.	All minerals	A due diligence and data management system to aid responsible sourcing. Includes standard for responsible mining.
Initiative de Traçabilité de l'Or d'exploitation Artisanale (ITOA)	CEEC Government	Internally trialled by CEEC. Awaiting full pilot.	Gold	A traceability and certification system
Conflict-Free Gold Standard	World Gold Council Industry Association	Standard was published in October 2012. No Congolese gold mines are using the standard.	Gold (LSM but includes provision for sourcing from ASM)	A responsible sourcing standard for large-scale mines to demonstrate conformance with the OECD Due Diligence Guidance and aid Dodd-Frank reporting
Alimasi va sawa/Just Gold/ Trading House model	Developed by Partnership Africa Canada (PAC) NGO	Piloted in Orientale Province; currently discontinued	Gold	A traceable conflict-free mineral chain for artisanal gold from the eastern DRC, from mine site to refiner. Aimed to formalise/legalize ASM; increase production; facilitate legal exports

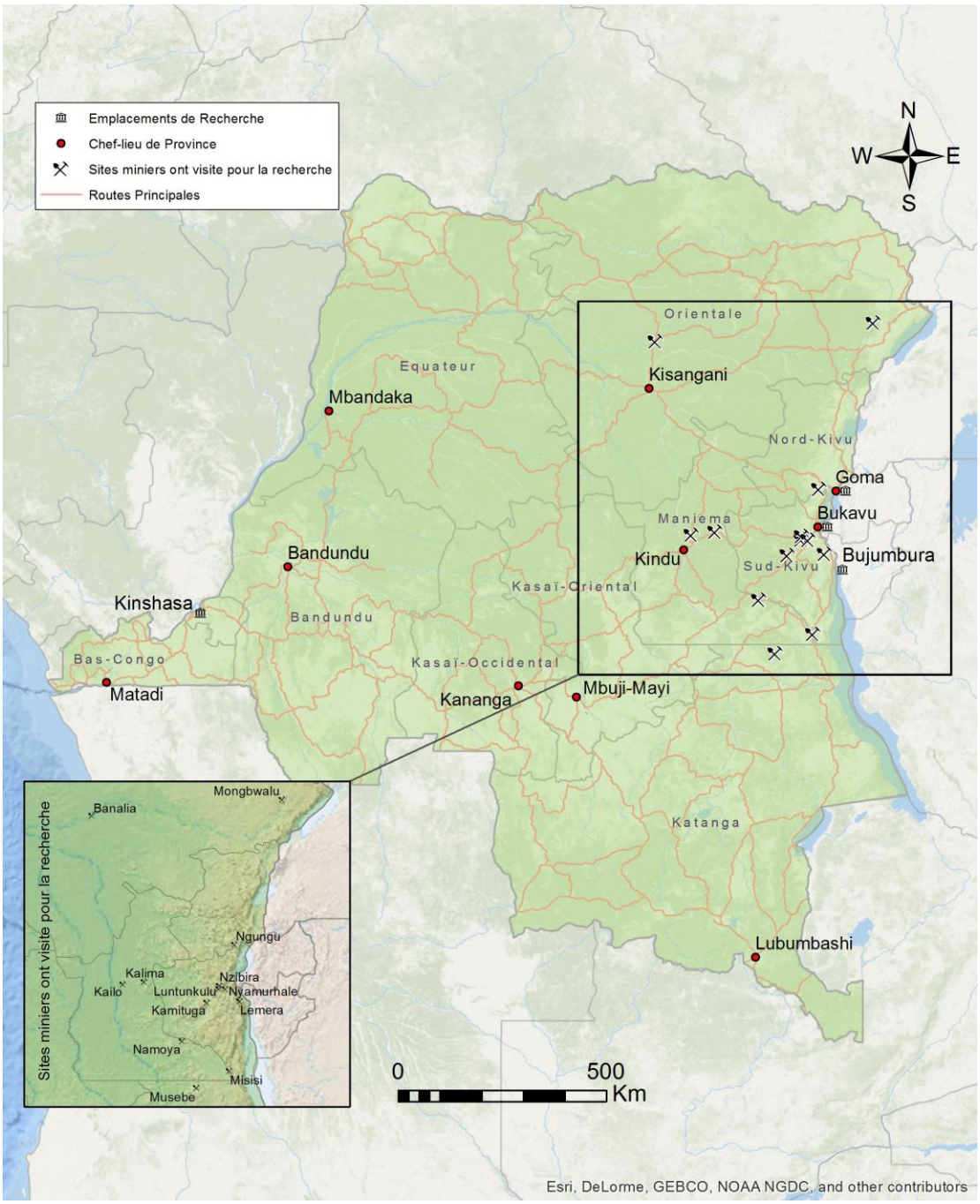
Table 2 Initiatives not Operational in DRC, but with Relevance for Responsible Sourcing from DRC

Initiative	Owner / Manager	Status in DRC	Minerals in scope	Relevance
Upstream *only* (mine to smelter or refiner)				
IRMA Standard	Initiative for Responsible Mining Assurance (IRMA) Multi-stakeholder Organisation	Expects to start certifying mine sites in 2015	Any	Responsible mining standard
Development Diamonds Standard	Diamond Development Initiative NGO	Not operational for its standard	Diamonds, but could conceivably expand into other minerals	Responsible mining and trading standard. DDI operational in DRC in gold miner registration.
Upstream and downstream (full supply chain coverage possible for mineral control)				
Responsible Jewellery Council Code of Practices (CoP) and Chain of Custody Standard (CoC)	Responsible Jewellery Council (RJC) Industry association	No Congolese upstream operators are RJC members.	CoP – diamond, gold or platinum group metals (Platinum, palladium, rhodium) CoC- gold & platinum group metals only	CoP assures sustainability performance of each member, which can include medium-scale mines, refiners. CoC is a responsible sourcing standard.
Fairtrade Standard for Gold and Associated Precious Metals	Fairtrade International NGO	Not active in DRC, but active in neighbouring countries. New conflict minerals requirements for miners and traders added November 2014	Gold and Associated Precious Metals (ASM only)	Responsible Mining, Trading, and sourcing standard.
Fairmined gold Standard	Alliance for Responsible Mining NGO	Not active in DRC	Gold and Associated Precious Metals (ASM only)	Responsible Mining, Trading, and sourcing standard. ARM's gold traceability system is in the early stages of development.
Downstream *only* (smelter/refiner to end-user)				
Conflict-Free Smelter Program (CFSP)	Conflict- Free Sourcing Initiative (CSFI) Industry Association initiative (EICC)	Applicable globally, as of 2014, 120 smelters or refiners had been audited as compliant.	3Ts and Gold	Sets the terms by which Congolese minerals can enter the 3Ts market, generally. Fairly high take-up amongst gold refiners also.
Good Delivery List *refiners qualify by complying with the*	London Bullion Market Association (LBMA)	Any Congolese gold producer or trader seeking to market to these	Gold	>140 members located in > 30 countries refined 4,700 tonnes of

Initiative	Owner / Manager	Status in DRC	Minerals in scope	Relevance
Responsible Gold Guidance	Industry association	major refineries will need to deliver chain of custody and DD info to them		gold in 2011. Massive market control.
Practical Guidance for Market Participants in the Gold and Precious Metals Industry (DMCC Guidance)	Dubai Multi-Commodities Centre (DMCC) Government of Dubai	Mandatory for all DMCC member refineries on Dubai Good Delivery List (currently 15 refineries)	Gold and Precious Metals	Dubai is the main export destination for Congolese ASM gold.
Signet Responsible Sourcing Protocol (SRSP)	Signet Private Company	1 January 2013 internal company policy	3T and Gold	Signet is the world's largest jewellery company, and has created conflict minerals / responsible sourcing requirements for its suppliers.

Geography: The relationship between the conflict in DRC and the minerals economy is manifest in five provinces: Katanga, Maniema, South Kivu, North Kivu, and Orientale. Our research focused on these areas. Where examples of supply chain certification and traceability systems are pertinent from other places, these are also taken into account.

Figure 1: Carte des sites visités



Minerals presently implicated in conflict in DRC are gold, coltan, cassiterite and wolframite.[11] Congo's diamond economy has previously been related to conflict[12], but presently not. For this reason, diamonds and related initiatives (e.g. the Kimberley Process) are out of scope except where there are lessons to be taken to support refinement of initiatives seeking to 'sanitise' other mineral economies.

[11] UN group of Experts on DRC 2014a; UN Group of Experts on DRC 2014b
[12] Global Witness 2006

1.2. Report Outline

There are a range of initiatives aimed at cutting links between the exploitation of minerals and the financing of armed groups. The Government of the DRC requires clarity on what initiative is appropriate to the needs of the country, coherent with the procedures of the ICGLR's Regional Certification Mechanism, and responsive to international requirements.

The researchers established the scope of this assignment to include conflict minerals certification systems, with traceability being one element of those systems. The scope is also limited to scalable initiatives, to the exclusion of closed-pipe solutions. The initiatives appropriate to this scope are listed in Table 1.

Two analytical frameworks were used to evaluate the systems. The first framework establishes the key elements of a conflict minerals assurance system (2.1) and allows classification into three main domains of intervention: entity, geography, mineral (Figure 2). The second framework establishes how to evaluate whether a system is sustainable, based on its credibility, efficacy, and feasibility (2.2).

The current theoretical context of the Congolese conflict minerals assurance system is a composition of a regional framework (3.1) and DRC national legislation (3.2). The extent to which this theoretical system is applied and enforced is discussed to describe the reality of sector governance (3.3).

The Congolese conflict minerals assurance system is also derived from international normative frameworks and downstream expectations (4). This chapter provides explanation of other gold sector assurance systems that make demands of minerals coming from DRC and elsewhere (refiner systems) and other mineral upstream systems that could be implemented in DRC but are not yet.

Four systems are introduced and evaluated against the analytical frameworks (established in chapter 2) and taking into consideration the theoretical and real context. The four systems are:

- **CTC**: BGR & the Government of the DRC's Certified Trading Chains scheme (5.1.1)
- **iTSCi**: ITRI's Tin Supply Chain Initiative (5.1.2)
- **BSP**: The Better Sourcing Program (5.1.3)
- **MineralCare**: MineralCare's GoldCare & 3TCare (5.1.4)

CTC and iTSCi are presently operational in DRC; BSP and MineralCare are not.

All four systems include traceability as a component of certification: iTSCi and MineralCare offer their own proprietorial traceability solution; CTC and BSP allow for traceability to be provided by multiple providers. Three additional schemes, which offer traceability as a primary offering, are introduced and evaluated against the frameworks. These schemes primarily service the Chain of Custody needs of supply chain opertaors, so offer tracking/tracing and data management services. As such, they more tools than systems being less comprehensive than CTC, ITSCi, BSP and MineralCare, all of which include due diligence and/or certification.

- **GeoTraceability**: Price WaterhouseCoopers' GeoTraceability (5.2.1)
- **MetTrak**: MetTrak's software solution
- **SERCAM**: IBES AG's SERCAM (5.2.3)

The findings of considering the schemes through the analytical framework are compiled and analysed against each other (5.3).

There is currently no operational gold traceability and/or certification system in the country and virtually all of the eastern DRC's gold production is traded illegally. The analytical frameworks used for the 3T initiatives are therefore not yet appropriate. The challenges to developing a system are established and discussed (6.1). Pilot projects – past, present, and future – are introduced and evaluated (6.2), as are opportunities for alternative approaches such as collaboration between ASM and LSM (6.4) and formalisation (6.6) and multifaceted approaches (6.8).

The conclusion summarises the report's analytical findings and identifies the key factors for selecting the traceability system that best responds to the realities of the Congolese context and the expectations of the Congolese government in terms of efficacy and cost, whilst being in conformance with the demands of the ICGLR and the final consumers of relevant minerals.

The conclusion is followed by a comprehensive range of primary and secondary recommendations. These address both the selection and trial of the most appropriate traceability system(s) for the DRC, for 3Ts and for gold, as well as other broader measures which should be adopted in terms of sectorial mining governance, in order to enable the implementation of traceability and certification for 3TG in DRC, in the most efficient way possible.

2. Frameworks for Analysing Conflict Minerals Traceability and Certification Systems

In order to recommend a system that is suitable to the needs of DRC, two analytical frameworks are required. First, one must understand the different elements of a conflict minerals assurance system – what are the key components one must have in place to make it work? This is used later in the report to explain the logic of the different traceability and certification systems, to aid comparison.

Second, one must understand what makes such a system sustainable. This then allows for assessment of which systems are most suitable for DRC.

2.1. Key Elements of DRC's Conflict Minerals Supply Chain Assurance System

When seeking to understand a conflict minerals supply chain assurance system it is helpful to break this down into its different core elements and how these work together to provide assurance. This section sets out these key elements to ensure definition and understanding as a basis for analysis later.

When establishing control of an upstream mineral sector, there are three main **domains of intervention**: the *entities* doing business and handling the mineral; the *localities* where the mineral is extracted, transported, processed, traded, exported; and the actual *mineral* itself. These are set out as Entity, Geography, and Mineral in Figure 2 below. Although neither normative framework refers to these domains explicitly, the OECD Guidance and Congolese law mandate for a suite of activities that facilitate control of the upstream mineral sector through setting out activities and responsibilities for business, government and potentially third parties in each of these three domains. Some of these elements are reflected in the Regional Certification Mechanism (RCM) of the International Conference on the Great Lakes Region (ICGLR), as the first tool of the Regional Initiative against the Illegal Exploitation of Natural Resources (RINR), and in other tools of the RINR (e.g. regional mineral tracking database, whistleblowing mechanism).

Figure 2 demonstrates the different elements of DRC's conflict minerals supply chain assurance system using this logic. Brown indicates a domain through which controls can be exerted. Green is activities for which the responsibility sits with government. Blue is activities for which responsibility sits primarily with business. Purple is activities which occur across all three domains, and are crucial to the effectiveness of any due diligence system.

2.1.1. Entity Control: Licensing and Know Your Customer Procedures

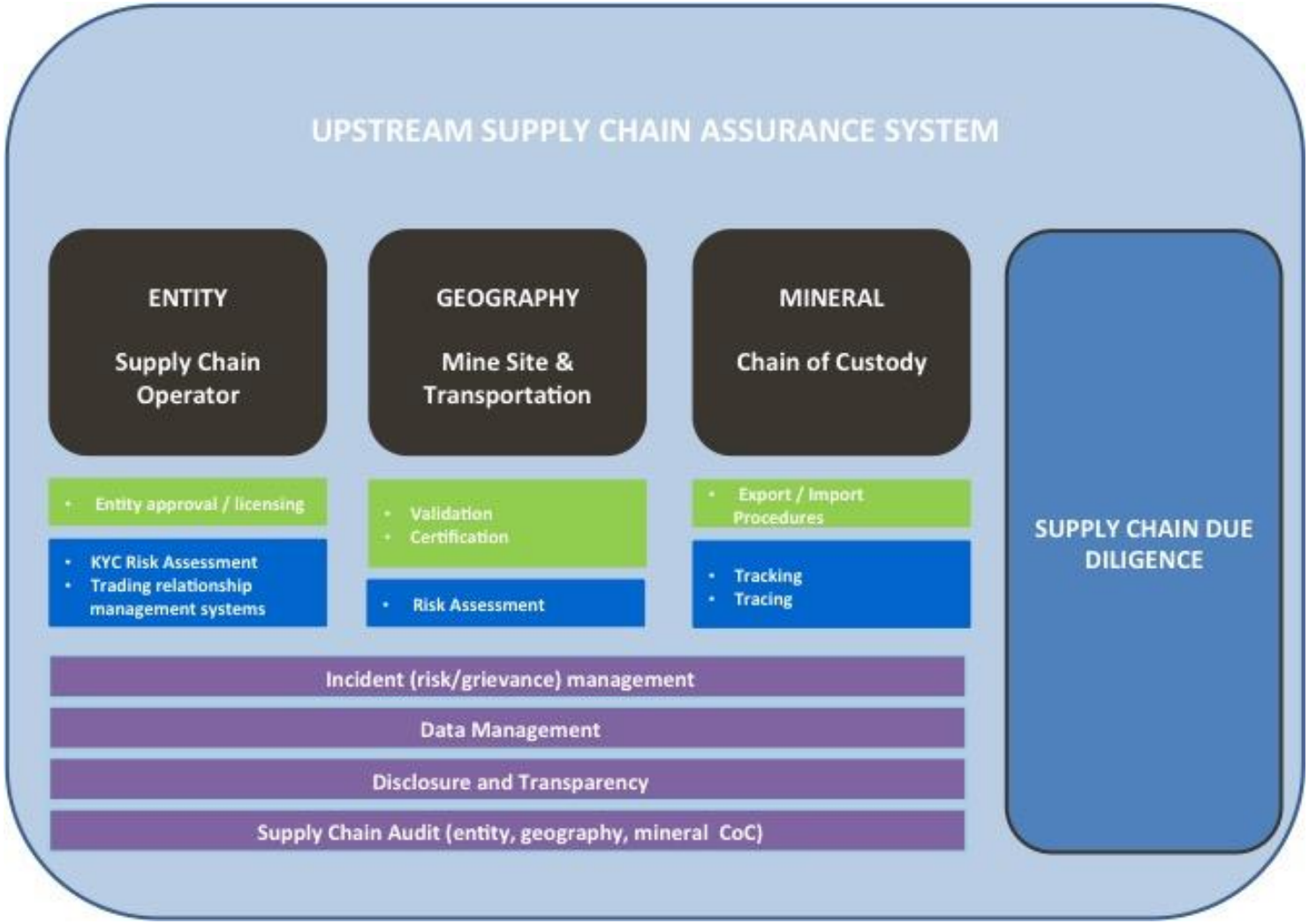
Ensuring businesses operate responsibly rests upon the design and implementation of procedures that dictate the terms under which a business can legally operate. These are captured in Congolese laws and regulations (see Chapter 3).[13]

This is complemented by downstream industry using standard 'Know Your Customer' (KYC) procedures, which provide a secondary check on the legal status and behaviour of an entity. KYC procedures are especially important in cases where a downstream company cannot rely upon the law being enforced universally, uniformly or at all. This can also incentivise upstream businesses to operate in accordance with law.

Buyers also exert control over suppliers through establishing terms and conditions in their trading contracts. All the conflict minerals certification and traceability systems reviewed herein involve measures for documenting the individuals and entities involved in a business, from beneficial owners to mineral handlers, as part of ensuring control over the mineral.

[13] See also Rothenberg and Radley 2014.

Figure 2: The Different Elements of the Conflict Minerals Supply Chain Assurance System in DRC



2.1.2. Geography Control: Determining if an Area is Conflict-Affected or High-Risk and if Risk Events Occur

A business can establish the risk of its sourcing practices by knowing the provenance of its minerals, and the particular risks associated with that point of origin and the places through which the mineral passes as it is transported into its custody. Controlling the geography of a mineral supply chain may include exerting sanctions, higher controls or greater due diligence over minerals originating from site A or passing through locality Y.

In the case of DRC this is done through the use of the mine site validation and certification by the joint assessment teams. This ensures Congolese minerals have access to the international market, through conforming to the suite of relevant norms and standards that apply in the region, making specific mention of the due diligence norms de l'ONU et de l'OCDE, to the standards of the ICGLR's RCM and BGR's CTC, to the fixed criteria of the CFSP and "la programme de tracabilité iTSCI."[14] Mine site validation is also required by the ICGLR's Regional Certification Mechanism. See Section 3.3.2.

2.1.3. Mineral Control:

2.1.3.1. Mineral Tracking and Traceability

Tracking and tracing are used to provide information about a material's 'chain of custody' that can be used by a customer as the basis for assuring origin and control of the material as it has moved from each owner, handler and geography to the next.

Tracking is following the material down the supply chain from origin to end-user. Tracking either deliberately ensures the *physical* segregation of material as it moves from one point of transformation to the next, or monitors the material's movement and documents it in records. The purpose of tracking is to a.) prevent theft or laundering of material into a supply chain [15], and b.) support traceability by the downstream users and their auditors. Tracking documents the real-time movement of material.

The importance of tracking the physical material is determined by the claim an entity wishes to make about the material it is selling. If the intention is to assure a buyer that the actual mineral (the specific molecules or atoms) in the product they are buying achieved a set of performance standards or did not violate a standard, then physical tracking is . Is the actual gold in your wedding ring from the place you claim it to be and does it achieve the standards you expect of that place?

If the concern is less about the actual mineral (the specific molecules or atoms) in the product but the

Tracing is following the material or its owners/handlers up the supply chain from end user to origin. Tracing attempts to map the historical movement of material, from origin to user by revealing each prior tier of the supply chain. Tracing therefore goes in the opposite direction to tracking. Tracing is done using documentary evidence only.

It is worth considering the dependability between these two aspects to a Chain of Custody system. Tracking can be done without traceability, but traceability cannot be done without some form of tracking. Secondly, tracking can be done using record-keeping only (without physical segregation) to be meaningful, but physical segregation has no meaning / utility to purchasers or downstream users without some form of record-keeping and passing information down the supply chain. (This is why one of the most important features of a conflict minerals system is the data it produces and how this

[14] Arrete Ministeriel No. 0058 (2012)

[15] The importance of tracking the physical material is determined by the claim an entity wishes to make about the material it is selling. If the intention is to assure a buyer that the *actual* mineral (the specific molecules or atoms) in the product they are buying achieved a set of performance standards or did not violate a standard, then physical tracking is essential. Is the actual gold in your wedding ring from the place you claim it to be and does it achieve the standards you expect of that place?
If the concern is less about the actual mineral (the specific molecules or atoms) in the product but the *benefit that has accrued to owners and/or handlers* of the mineral then physical tracking may not be necessary as mass balance calculations may be sufficient. See table X below.

data is managed.) One could differentiate in this way between ***a chain of responsibility***, where the entities along a supply chain are identified and their achievement of specified standards verified and one can make a claim about these entities only but not label the actual product handled, and ***a chain of material*** where a chain of responsibility is established *and* a claim on the *product* as well as the entities can be made. For example, the Responsible Jewellery Council system makes this distinction through its Code or Practices, by which *member entities* are certified, and its Chain of Custody Standard, by which these entities' control over their supply chains is certified.[16] The Code of Practices includes a requirement on Provenance Claims, such that an entity's claim about its mineral or practices can be audited, e.g. conflict-free gold, platinum originating from South Africa, etc.

The examples in Table 3 should help clarify this. This presents the four main models by which a wide range of chain-of-custody systems in operation across various industries and product types can be categorised: track-and-trace, bulk-commodity, mass-balance, and book-and-claim.

Table 3: Chain of Custody systems - the four models[17]

Track-and-trace *or* Identity Preservation**: traces product from source (producer, region or country), physically segregating and tracking it through supply chains. Allows for 100% certainty of 100% traceability back to origin. Example: Marine Stewardship Council (MSC) fish.** **Conflict Minerals example: iTSCI, Mettrak, Sercan, GeoTraceability.**
Bulk commodity or Product Segregation**: physically segregates certified from non-certified product to prevent mixing, but does not lead to a claim on origin. Example: GMO and non-GMO soybean.** **Conflict Minerals example: One can see the same thing happening with metal smelting/refining, where a smelter or refiner will have two operations on one site – one processing metal which meets certain market specifications and so can achieve a certain price (e.g. conformant with the LBMA's Responsible Sourcing Protocol), and a second processing metal which does not meet those market specifications. .**
Mass balance**: each company keeps track of the amount of certified product it buys and sells. The segregation is administrative, not physical. Example: Forest Stewardship Council (FSC) credit system for mixed sources of paper.** **Conflict Minerals Example: the new Fairtrade gold and Fairmined gold Standards allows for mass balancing at the point of the Refiner, though with 100% track-and-trace to that point. This is how all the smelter / refiner programmes for conflict minerals work also, i.e. the CFSP, LBMA, RJC, DMCC.**
Book-and-claim**: The trade in physical products is completely decoupled from the trade in certificates. Usually a central 'Issuing Body' is responsible for issuing and redeeming traded certificates. Example: renewable electricity.** **Conflict Minerals Example: Fairmined Gold has adopted a book and claim certificates model. This model is used where the buyer is less concerned that the actual gold comes from the specified place, but rather that the benefits of the purchase accrue or don't accrue to a certain place. E.g. where export can only be legally done through a Central Bank such as in Mongolia, at present.**

Tracking and traceability are used to support due diligence in two ways. Firstly, social and environmental risks are typically a product of an operator's behaviour or environment, so knowing who has handled the material and where is an integral part of risk assessment and risk management. Secondly, tracking and traceability provide evidence to a company or auditor that a claim being made about a mineral (e.g. country of origin, sustainability dimensions, conflict-free, etc.) is in fact true. The question for conflict minerals assurance is *what degree of tracking is actually necessary for a claim on a material or supply chain operator to be made and verified as true for the purposes of risk assessment, risk management and reporting as per the OECD Due Diligence Guidance, the Smelter or Refiner initiatives and the EC regulation?*

[16] For more information please see www.responsiblejewellery.org
[17] Adapted from: Sustainable Biomass Scheme, 2010, cited in RJC 2010. See also http://www.isealalliance.org/multimedia/learn-about-sustainability-standards (21.11.2014) and UN Global Compact 2014b

2.1.3.2. Export / Import Procedures

Export and import procedures provide points of control to check that each shipment of mineral is accompanied by all necessary paperwork, and that all this is in order, such that the customs official is assured that the shipment has been legally produced and handled.

Figure 3: the Kimberley Process Certification Scheme, the OECD Guidance and import / export controls

The Kimberley Process (KP) Certification Scheme (KPCS) is an import-export certification scheme intended to regulate the trade in conflict diamonds. The system prioritizes supply chain purity by **actively excluding geographic areas** deemed to carry risk of producing 'conflict diamonds'.[18]

States qualify for membership in the scheme by implementing a minimum level of standards. A *producer nation* must have adequate internal controls to ensure the legitimacy of diamond supply chains within its borders, and controls at the point of export. *Trading and manufacturing nations* must have adequate import controls to ensure diamond parcels only enter with satisfactory KP certificates. Participant nations only trade rough diamonds with one another. These diamonds are certified as 'conflict free'.[19]

Membership is open to all countries willing and able to implement requirements. Currently, there are 54 participants[20], representing 81 countries (the EU counts as one participant), and approximately 99.8% of the global rough diamond production.[21] The KP Chair rotates among participating countries.[22] Observer status[23] is granted to civil society organizations such as Partnership Africa-Canada, and industry representatives such as the World Diamond Council.[24]

Implementation of the KPCS is **monitored** through the regular exchange and analysis of data, as well as 'review visits' and annual reports. KP participants and observers meet twice a year, and working groups and committees meet on a regular basis.[25]

The KP is **distinct** in that it fundamentally works by *excluding* diamonds from countries or, more recently, sub-national areas where there is conflict. By contrast, the OECD DDG and the ICGLR RCM are designed to *include* minerals from conflict-affected and high-risk areas, by enabling trading to continue from conflict zones, provided certain conditions are met. The KP is more black and white and easier to implement – if a mineral is from one locality, it is fine; if it is from another, it is not: good diamond, bad diamond.

The KP has been **criticised** for its *narrow scope.* The definition of conflict diamond, "*rough diamonds used by rebel movements to finance wars against legitimate governments,*"[26] does not include human rights abuses nor violence perpetrated by state actors or private security firms. A KP-certified diamond could still be connected to serious abuses, violence-affected or high-risk situations along the diamond supply chain. Likewise, transactions could comply with the KP and yet still be illegal if the transaction involved an individual, entity, or organization that has been targeted by national or international sanctions for human rights abuses.[27]

The KP has been **criticised** for *lack of effectiveness*. Nations with significant artisanal diamond sectors often cannot raise enough revenue to cover the costs of governance and struggle to exert adequate controls over their alluvial artisanal diamond chains.[28] Field interviews with diamond traders since 2004 consistently reveal it is fairly

18 Global Witness, 2011

19 Kimberley Process 2015

20 As of March 2015, Venezuela has voluntarily suspended exports and imports or rough diamonds and Central African Republic has been temporarily suspended until further notice

21 States that have expressed their commitment to the KP but have not met the minimum requirements can participate as 'candidates', as of March 2015 candidates include: Burkina Faso; Chile; Kenya; Mauritania; Mozambique; Zambia

22 Kimberley Process; 2015

23 The term 'Observers' refers to Industry and Civil Society groups that play an active role in monitoring the effectiveness of the certification scheme and who provide technical and administrative expertise to the Secretariat, Working Groups, Applicants and Participants.

24 Kimberley Process 2015

25 Kimberley Process; 2015

26 http://www.kimberleyprocess.com/en

27 RJC 2013, p. 150

28 Van Bockstael et al., 2011.

easy for unscrupulous traders to fraudulently misrepresent diamond origin and launder illegally mined and smuggled material into legal supply chains.[29]

2.1.4. Other Elements that ensure System Reliability & Utility

2.1.4.1. Data Management

Supply chain due diligence rests on the creation, collection, organisation, and analysis of data, and passing that data in disaggregated, aggregated and/or analysed form downstream. Data management is thus one of the less visible but most important, challenging and costly aspects of a traceability and certification system. It is also one of the main points of differentiation between the different traceability systems which have developed their own software for managing data.

Different types of data are produced by a traceability or certification system:

- Supply chain statistics (volumes, values, dates of transactions, trading parties, locations, etc.)
- Incident reports and statistics (type of incident, dates of occurrence, management response, date of resolution, parties involved, etc.)
- Due diligence practices (risk assessments of trading partners (KYC, business practices, beneficial ownership, financial integrity, etc.), operating environment (political, economic, social, technological, legal, environmental risk), operating practices);
- Audit conclusions

The initiatives' data management policies and practices are analysed in detail in Annex C/D.

2.1.4.2. Disclosure and Transparency

Disclosure, or communications, policies determine what information gets shared with which organisations in what form and when. The outcome of disclosure is transparency, which is one of the core principles of the UN Guiding Principles for Business and Human Rights and the OECD Due Diligence Guidance for Minerals from Conflict-Affected and High-risk Areas (see chapter 3). Inadequate disclosure undermines the utility of the system to downstream buyers and may also affect levels of trust in the system's integrity, undermining its credibility.

Different entities have different information needs and expectations. For example:

- From business to buyer, auditor, government[30], *and vice versa*
- From business to certification initiative, *and vice versa*
- From business to public at large
- From certification initiative to buyer, auditor, government
- From certification initiative to public at large (market and stakeholders)
- From government to public at large

Disclosure is also governed by competition and anti-trust law, which affect what information points can be shared and with whom.

Some discussion on the transparency positions of the initiatives is presented in chapter 5. Detailed analysis is given in Annexes.

2.1.4.3. Audits (supply chain verification)

Independent third party verification is essential to ensuring the claims being made by a supply chain operator are true or that their actions are conformant with a Standard. They *may* be followed by certification where an independent body grants the supply chain operator with a certificate on the basis of the findings of the audit. Not all conflict minerals or responsible sourcing systems include a certification function.

29 Levin field research in Sierra Leone 2004, 2006, 2007; Van Bockstael et al. 2011.

30 In country of registration and country of operation; and different levels of government

Conflict minerals audits typically assure that supply chain operators are performing their due diligence in alignment with the OECD Due Diligence Guidance. While the OECD Guidance mandates for audits at the level of the refiner or smelter only, other initiatives may audit actors upstream in relation to a specific point in the trading chain (e.g. exporters for the Regional Certification Mechanism) or on specific issues (e.g. legality for an iTSCi entity audit). These upstream audits may be relied upon by the auditor of the smelter / refiner to save them carrying out additional actions. This helps by passing some audit costs up the supply chain and helps achieve economies of scale.

The ICGLR Regional Certification Mechanism requires exporters to be audited annually against the RCM standards. More detail on this is given in Chapter 2.3 and in Levin and Cook (2013) and Cook and Levin (2013).

The conflict minerals certification initiatives, iTSCi, BSP, and MineralCare respectively require 'evaluation', 'audit' and 'validation' of entities using their systems, but each approaches this differently. See chapter 6 for more detail.

Auditors should be accredited by a third party.

2.1.4.4. Grievance / Dispute Management

Certification requires judgement as to an entity's conformance with a standard or checklist by the auditor, and validation of that judgement through granting a certificate of or membership in an initiative. A business may dispute an audit conclusion or the decision by the certifier to deny / withdraw certification or membership. Auditees should be able to raise a dispute through established and published grievance mechanisms. Auditees must be aware of the existence of the grievance mechanism and it must be available, accessible, and consistent. There may be a range of channels through which an entity can raise a grievance, e.g. by voicing this directly with the secretariat of an initiative, its board, or an ombudsman, as examples. It is important that procedures for grievance management be clear to allow for due process, and there should be recourse to a third party for mediation as a last resort.

> Certification systems such as FLO, FSC, MSC (unlike the KPCS or EITI) build on independent third parties for auditing and verification, some of which are accredited themselves by independent third parties. Additionally, on-going monitoring, regular on-site inspections as well as grievance or dispute management are also carried out by independent third parties. (Stetter, A. 2013 and 2012)

There must also be mechanisms to enable initiative participants and third parties to report negative impacts they experience due to intentional or unintentional actions or neglect by the initiative or its users.

All traceability and certification initiatives must therefore have effective grievance mechanisms to have integrity and credibility. It also builds resilience into the system.

2.2. How to Ensure a Sustainable Conflict Minerals Assurance System

> A certification system's success depends on a) its effectiveness in terms of compliance and impact; b) its (perceived) legitimacy with regards to its procedures and standards, and c) its efficiency relating to flexible adaptation and financial sustainability. (Stetter, A. 2013 and 2012)

The sustainability of a conflict minerals assurance system depends upon it satisfying a range of stakeholders and negotiating the tension between these interests: for example, the state's desire to extract revenues from the sector; the nation's desire to achieve employment and income; business's necessity to extract profit (and compulsion, then, to minimise costs and enhance value); civil society's desire to prevent harm and capture benefit for present and future generations. An appropriate and resilient system will balance these divergent priorities, though it may service some more than others; it will also be dynamic, responding to the changing needs and priorities of users, regulators and stakeholders.

Here we explain the analytical lenses we have used to judge the sustainability and thus appropriateness of traceability and certification systems vis-à-vis "the realities of the Congolese context",[31] based upon a generalisation of these different interest groups. These are based upon prior analysis done by ELL for GIZ and the ICGLR on this point in 2010,[32] as well as the work of Stetter, A., 2013 (see callout box).

2.2.1. Sustainability

Ultimately, a sustainable conflict minerals initiative will add value for its users (i.e. individual businesses and business sectors) and regulators at various scales on an on-going basis, without disgruntling stakeholders (e.g. civil society, trading nations) to the point that they are moved to obstruct the system and, of course, ideally enfranchising them to support and enable it.

What, then, do these stakeholders need of a responsible sourcing certification system?

- **Congolese supply chain operators** need a system that is feasible (affordable, accessible, applicable to their scale and capacity), and which secures market confidence.
- **Their customers** need a system that ensures they capture a commercial opportunity whilst mitigating or eliminating certain supply chain risks. As with their sources, they need something feasible and applicable, but also credible and dependable. They must be able to trust that what the certification system claims to achieve (its goals) are indeed achieved within its stated scope and according to the norms that it expounds. They must be able to trust that the system will not disrupt supply unnecessarily.
- From the **State's** point of view, the system should improve sector management and performance by enhancing the government's ability to regulate and control it to the benefit of the nation and the state of DRC, now and in the future. At worst the system should not interfere with the government's ability to manage the sector. Ideally – and particularly for a system oriented at decoupling minerals from conflict dynamics and derived from the due diligence prerogative of the United Nations Guiding Principles on Business and Human Rights (see Section 4.2.1) – it should deliver broader outcomes based on the government of DRC's minerals strategy, and commitments to relevant international covenants (e.g. on labour rights, human rights, responsible business), in addition to what market users demand. Some systems will do this better than others.
- From the perspective of the **nation**, the system should deliver development outcomes (ideally aligned with those targeted in state policy). This may be through improved governance by the state, but also through other avenues such as job creation (e.g. by enabling mineral once more to legally flow), improved risk management (e.g. to prevent human rights violations and ensure the fulfilment of human rights), improved quality of life (e.g. by protecting and enhancement of cultural and environmental goods and services), and enhanced capacity of civil society to hold other powerful agents to account and push civic values prioritised for this culture[33].

Altogether, this means that the certification system must be *credible,* must *perform* and must be *perceived to perform*. It must be *efficacious, feasible,* and *scalable*, and people must be able to trust the claims it allows users to make. These are the lenses that we use in our analysis of the 'appropriateness' of the different traceability and certification systems presently or potentially in use in DRC.[34]

[31] Cited from TOR.
[32] Levin 2010, Stetter 2012 and 2013.
[33] Based on civil society priorities expressed in the literature and in international forums such as the OECD-UN-ICGLR 8th forum on responsible mineral supply chains, in DRC these might be the protection and emancipation of vulnerable groups, especially women and children; nurturing peace and stability and avoiding conflict and violence; democratization of governance structures; and so on.
[34] The ISEAL Credibility Principles and Codes of Good Practice also give Guidance regarding the sustainability of a conflict minerals initiative.ISEAL n.d.a;ISEAL n.d.b

2.2.2. Credibility

How to ensure credibility? The system must have a **vision** and **goals** that are relevant to the needs of users and stakeholders but also achievable. The **system framework** (norms, processes, elements, governance) must be oriented at delivering upon these goals and should do so in line with standard practice, i.e. it must have logical, rational, repeatable, defensible, and understandable systems. It must be appropriately **governed**, meaning the right people in the right roles with the right policies and practices for the tasks in hand. There must be in place an **accountability framework**, comprising policies and processes for effectively managing: conflicts of interest, user and stakeholder grievances (including whistle-blowing), disclosure (transparency), and efficacy, as well as disciplinary mechanisms proportionate to the extent of transgression(s) and related anticipated threat(s) to the system. These must extend to people and organisations involved in governance and implementation of the system, as well as users[35] who violate requirements.

> Certification systems such as the Global Reporting Initiative, ISO14, Forest Stewardship Council (FSC) draw on institutionalised and regular evaluation of their standard to achieve legitimacy, and also to adapt flexibly to change. This process is based on technical expertise and allows for input by management, members, but also other stakeholders. (Stetter, A. 2013 and 2012)

Key questions for judging credibility include:

- Is the system relevant: does the system have the right goals?
- Is it set up for success: does it have the right structures, processes, people, resources?
- Are successes and failures systematically and adequately judged and disclosed?
- Can the system be relied upon?
- Is the assurance the system provides defensible, repeatable, believable?
- Do we know what we need to know about the system to be able to trust it?
- Are there any conflicts of interest that may undermine credibility?

Credibility rests not just on system design, but also on performance and the perception of performance. This means that communications to relevant stakeholders on performance must be truthful, timely, targeted, and systematised. Communications and transparency are crucial to credibility, but are not the sum of credibility.

2.2.3. Performance

How to ensure performance? Performance is a factor of **efficacy** (effectiveness and efficiency) and **feasibility** (value for money, realism, universality).

Efficacy

An efficacious system is one that achieves its stated goals efficiently, bringing higher output for the lowest possible input. One measure of efficacy is value for money. Efficacy is made more possible where system norms are robust, concise and targeted, and where there is on-going monitoring and evaluation using meaningful criteria for measuring performance against system goals, outcomes, outputs, activities, and key performance indicators. There is a range of accepted industry systems for performance and impact monitoring and evaluation that certification systems could be using.[36] System efficacy is enhanced when the system is able to on-board and adjust to valid external and internal input on performance.

Key questions for judging efficacy include:

- Are system norms robust, concise, targeted?

[35] Users are those whose operations or sourcing practices are being assured.
[36] For example, the OECD DAC criteria (OECD n.d.a), the ISEAL Impacts Code (ISEAL n.d.c)

- Is there on-going monitoring and evaluation using meaningful criteria for measuring performance against system goals, outcomes, outputs, activities, and key performance indicators?
- Does the system adjust to valid external and internal input on performance?

Feasibility

Feasibility is achieving the desired impact with best use of available resources. A feasible system must be cost-effective, with achievable goals. It achieves its stated goals efficiently bringing higher value at the lowest possible cost to users. It is adapted to the risk environment, and to the capacities of users and implementers. It minimises negative impacts to stakeholders, and seeks to optimise positive ones (ultimately then minimising future resistance, risks and associated costs). It leverages opportunities for greater impact through joint or targeted efforts.

In order to achieve financial sustainability, certification systems such as the Marine Stewardship Council (MSC), FSC, Fairtrade International (previously Fairtrade Labelling Organisation (FLO)), GRI, ISO14 combine several financing mechanisms and are built on a diverse financial base. This includes donations, contributions, as well as marketing their standard and certificate, which can be particularly effective if the certificate is visible to consumers (and not just a business-to-business certificate. (Stetter, A. 2013 and 2012)

A system may be feasible and effective within the bounds of its scope, but if it is not scalable then its ultimate impact and performance is limited making it less relevant to stakeholders and to the DRC as a whole. It is well and good to benefit a few, to pilot something, to set a good example, but if this is not embedded in a bigger vision for systemic change then it may not represent good value for money.

Key questions for judging feasibility include:

- How achievable are the goals?
- Do the benefits outweigh the costs? What could be done differently to bring higher value at the lowest possible cost to users and stakeholders?
- Are sources for financing sustainable?
- Does it know and is it adapted to the risk environment?
- Does it know and is it adapted to the capacities of users and implementers?
- Does it work proactively to minimise negative impacts to stakeholders?
- Does it work proactively to achieve maximum positive impact?
- Does it leverage opportunities for greater impact through prioritisation and joint or targeted efforts
- Is it scalable?
- Do users judge it offer value for money?
- Who are its competition and does it offer unique value that makes it competitive?

3. The Congolese Conflict Minerals Assurance System

The composition of the Congolese conflict minerals assurance system is determined by three critical compliance frameworks: first, a suite of related international normative frameworks comprising the United Nations Guiding Principles for Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the OECD Due Diligence Guidance for Minerals from Conflict-Affected and High Risk Areas; second a regional framework for supply chain management in the form of the Regional Initiative against the Illegal Exploitation of Natural Resources; and third national legislation for governance of the artisanal mining and mineral supply chains in DRC. This chapter reviews how the national and regional compliance frameworks dictate what traceability and certification of conflict minerals in Congo should look like. It then considers the present situation of governance of the 3Ts and gold sectors in DRC. Consideration of international norms is given in chapter 4.

3.1. Regional: the ICGLR's Regional Initiative for Natural Resources

DRC is a Member State of the International Conference on the Great Lakes Region (ICGLR). The commitment to implement both the RINR and the RCM was signed by ICGLR heads of state at a special summit in Lusaka in December 2010. DRC incorporated the Regional Certification Mechanism into national law in 2012.

The RCM is one of the six tools of the Regional Initiative against the Illegal Exploitation of Natural Resources (RINR).[37] It aims to provide a regionally harmonized supply chain due diligence framework with standards and procedures based on the OECD Due Diligence Guidance and other relevant initiatives. This is intended to provide downstream purchasers with assurance that the RCM-certified minerals are conflict-free. The RCM focuses on all 3TG supply chain operators upstream of the export point, including large-scale mines, ASM, traders, processors and refiners/smelters. It is important to note that while the RCM ascribes primary responsibility for compliance to the exporter level, the standards apply to every stage in the upstream supply chain.

The RCM operates on both the national and regional levels. On a regional level it features regional data analysis of mineral flows, a third party audit system overseen by the ICGLR Audit Committee; an Independent Mineral Chain Auditor (IMCA); and a whistle-blowing mechanism. On the national level, it includes the inspection and classification of mine sites as green-, yellow-, or red- flagged for sourcing purposes (so-called 'mine site validation'); the implementation of Chain of Custody tracking/traceability management systems; mineral export certification; and data management and exchange.[38] The first independent exporter audits are scheduled for 2015: ICGLR third party auditors have now been accredited and the ICGLR announced its decision to carry out the first two audits in December 2014.[39] Member states are expected to respect the authority of the ICGLR auditors and act according to their findings, i.e. shutting down exporters or mine sites.

While the ICGLR Steering Committee sets the RCM framework, the ICGLR's twelve Member States are obliged to implement these standards and procedures.[40] The RCM is envisaged as an "umbrella" under which various initiatives may be implemented - thus creating space for national authorities to own and develop their own initiatives, as long as they are in accordance with RCM standards.

While the ICGLR RCM sets the standards for compliance and certification of exports, it is the member states that select the traceability systems, with the proviso that the nationally-administered ICGLR export certification must always be compliant with RCM standards regarding the supply chain. There is no requirement within the RCM standards that there be a single or multiple traceability systems ensuring compliance.

[37] Cf. ICGLR n.d.a for a discussion of the RINR, and the six tools.
[38] IGCLR 2011a
[39] Gérald Nayuburundi, Coordinator of the ICGLR Natural Resources Unit, Intervention at the 8th OECD UN DDG forum, Kinshasa, November, 2014. See also http://www.icglr.org/index.php/en/reports. Accessed 14.11.2014.
[40] ICGLR, 2011. In DRC, the RCM standards and procedures were formally included as national regulation in the DRC (ministerial regulation no. 57 Cab.Min/Mines/01/2012 of 29 February 2012). The certification of minerals to export has already started, and CEEC verifies whether they came from a green site and reconciles statistics.

See 3.3.5.1 for more detail on the import/export controls involved with the RCM.

3.2. The Legal Framework

3.2.1. The Mining Code

The mining sector in DRC is governed by the Mining Code of 2002 (law 007 of 11 July 2002), which sets out the overall institutional structure and responsibilities, as well as the Mining Regulations of 2003, which build on and clarify the Mining Code.[41] The Mining Code itself does not include provisions on conflict minerals, traceability or certification of minerals, but includes an article (Article 27 on Non-eligible persons), which states that members of the armed forces, police or security services (and other officials) are not allowed to be involved in ASM, although they can be investors in mining companies. [42]

DRC is currently in the process of revising its Mining Code. An initial draft of the new Mining Code was presented in September 2013, and since then a few amendments have been proposed.[43] The draft new Mining Code includes a definition of 'traceability'[44], as well as a new definition of 'certification': "Procedures and processes that aim to determine the nature, physical or chemical characteristics, legal and licit origin and provenance of mineral substances, and are conformant with national, regional and international norms, including both tracking and traceability of minerals along the whole supply chain."[45] It also states that the public 'expertise body' (currently CEEC) should also be responsible for the evaluation and certification of precious and semi-precious minerals, as well as mineral substances produced by ASM.[46]

3.2.2. Decrees 0057 and 0058

The government enacted provisions regarding traceability, due diligence, certification and export validation in February 2012 through two decrees[47] complementing the Mining Code.

Decree 0057 aims at implementing the requirements of the Regional Certification Mechanism (RCM) of the ICGLR in DRC and domesticates both the requirements of the ICGLR and the OECD Guidance into DRC law.[48] Article 5 requires the **inspection and validation of mine sites** at least once a year and in accordance with the norms and procedures of the ICGLR, whereas Article 6 requires that the **validation and certification of mine sites** be in conformance with the Certification Manual of the ICGLR. Article 7 states that the **traceability and certification process of minerals** have to be in conformance with the ICGLR Certification Manual and the OECD Guidance. Article 8 requires all supply chain actors to exercise **due diligence** in accordance with the recommendations of the OCED Guidance, and allows for a further definition of due diligence criteria by the Minister of Mines. According to Article 9, **third party audits** also need to be conducted in conformance with the norms and procedures of the ICGLR Certification Manual and Annex I and the supplements of the OECD Guidance. [49]

The decree also sets the terms for the **export certification process** under ICGLR. In order for an export certificate to be issued, each mineral 'lot' to be exported has to be traceable back to the mine of

[41] Rothenberg, D. and Radley, B. 2014
[42] Douma, N. and Weinberg, R. 2014
[43] Duncan and Allen 2014
[44] A mechanism to assure the tracking of the different stages and associated financial flows in the production chain from the mine site to export, through apprehension, transportation, commercialisation, treatment or transformation; « Mécanisme mis en place pour assurer le suivi des étapes de la filière de production minière et de flux financiers subséquents depuis le site d'extraction des produits miniers jusqu'à leur exportation en passant par leur détention, transport, commercialisation, traitement et/ou transformation. » See Duncan and Allen 2014.
[45] In French: «Ensemble de mécanismes, procédures et procédés visant à établir la nature, les caractéristiques physiques et/ou chimiques, l'origine et la provenance légale et licite des substances minérales, et ce, conformément aux normes nationales, régionales et internationales en la matière, prenant en compte à la fois le suivi et la traçabilité des substances minérales tout au long de la chaine d'approvisionnement». See Duncan and Allen 2014.
[46] Duncan and Allen 2014
[47] Decrees 0057/CAB.MIN/MINES/01/2012 and 0058/CAB.MIN/MINES/01/2012, both enacted on 29 February 2012
[48] See also Rothenberg, D. and Radley, B. 2014
[49] Decree No. 0057/CAB.MIN/MINES/01/2012

origin (which has to be green flagged, see below), and have complete chain of custody documentation. The decree further includes requirements regarding a national database of mineral samples.[50]

Decree 0058 sets out the legal framework and guidelines for the **procedures of mine site validations and certifications**. It defines the composition of the mixed validation teams (Article 4)[51] and sets out the validation criteria and indicators in terms of security and socio-economic situation at the mine site (Article 8).[52] Article 9 defines the three possible validation outcomes:

RED: Mine site cannot be validated and mining activities are suspended The social or security situation at the mine site is absolutely unsatisfactory, e.g. presence of minors under 15 years, pregnant women, uncontrolled security forces and armed groups at exploitation or commercialization sites.[53] The requirement regarding pregnant women goes beyond the ICGLR standards, as these prescribe no ban against pregnant women being involved in mineral exploitation.[54]
YELLOW: Mine site cannot be validated and mining activities are suspended The social and security situation at the mine site is partially satisfactory, and could improve if changes are implemented.[55] In the suspension of mining activities at yellow-flagged mine sites lies another significant discrepancy with the requirements of the ICGLR, as the later only require suspension of red flagged sites. [56]
GREEN: Mine site is considered 'clean' and can be validated The social and security situation is largely satisfactory, the mine site is under control of the authorities, there is no presence of armed groups or uncontrolled security forces, and no or only few minors or pregnant women engage in exploitation and commercialisation activities. [57]

The classification of the mine sites through the validation mission is approved by ministerial decree (Article 11). Lastly, the decree also requires third party audits by private or public entities involved in the implementation of the CTC, OECD Guidance and ICGLR standards. [58]

DRC has also produced two certification manuals based on the CTC Standards, one for gold and one for the 3Ts, which were incorporated into the legal framework through ministerial decree in 2011.[59]

3.3. Sector Governance – situational analysis

In terms of sectorial governance, it is important to acknowledge the undeniable progress that has been made in the last 3 years.[60]

From a somewhat slow start, the process of mine site qualification and validation, for 3T sites, has significantly accelerated, especially in 2013-2014.[61] Against considerable odds, the iTSCi system has achieved increasing coverage throughout eastern DRC. The accelerated process of qualification/validation has also somewhat eased another critical issue from 2013 – the chokepoint caused by a severe shortage of tagged minerals for iTSCi-accredited exporters, which resulted in their operation at a fraction of their processing and export capacity.[62]

[50] Decree No. 0057/CAB.MIN/MINES/01/2012
[51] According to Article 4, this includes the National Ministry of Mines, Provincial Ministry of Mines, MONUSCO, the Provincial Administration of Mines, Provincial Antenne of Saesscam, Provincial Mining Cadastre, Provincial Mining Police, BGR, ITRI/iTSCi, other international organisations, Mining Chamber, Civil Society.
[52] Decree No. 0058/CAB.MIN/MINES/01/2012
[53] Decree No. 0058/CAB.MIN/MINES/01/2012
[54] Levin, E. and Cook, R. 2013
[55] Decree No. 0058/CAB.MIN/MINES/01/2012
[56] Levin, E. and Cook, R. 2013
[57] Decree No. 0058/CAB.MIN/MINES/01/2012
[58] Decree No. 0058/CAB.MIN/MINES/01/2012
[59] Näher, U. 2012
[60] Interview with interviewee no. 16
[61] This perceived ponderousness of the mine site qualification/validation process was a significant cause for concern for many of the same stakeholders in 2013.
[62] Personal communication, Paul Stockman, WMC, August, 2013.

ICGLR RCM export certification has been adopted. 3TG mineral exports from DRC must now be accompanied with a valid ICGLR export certificate. In the case of the 3Ts, this has forced exporters not accredited with iTSCi to withdraw from the market, or to go through the process of iTSCi membership.

Most importantly, the progressive implementation of a traceability and due diligence system accepted by downstream stakeholders has opened up markets for DRC minerals which would otherwise have remained closed.

Despite these achievements, very significant challenges remain:

- While iTSCi has achieved much in covering the production, trade, transportation and export of 3Ts, there is currently no functional national traceability system for gold.[63]
- Continuing insecurity in a highly fluid and unstable environment is not confined merely to the intervention of armed groups, but also takes place at a local and intra-communal level, and between mine-site stakeholders, leading to the suspension of mining activities at certain sites.[64] Illegal levying of charges and fees for road access by both state and non-state actors is also common. Impunity and absence of the rule of law are major impediments to the transparent declaration to authorities of mineral production and trade, especially in the case of gold. There is also increasing concern that local community self-defence groups, or their patrons, are playing a role in exploitation of minerals at certain mine sites, even those already green-flagged.[65]
- Severe shortfalls in infrastructure, especially in transport and communication. The DRC's roads and other means of transport are notoriously deficient, thus making many mine sites remote and virtually inaccessible by land transport. This increases costs and significantly complicates the process of traceability from mine site to exporter.[66]
- The process of qualification and validation needs to be further accelerated, and expanded in its geographical scope. The majority of joint validation missions for the 3Ts have been focused on the provinces of Katanga and Maniema, which are the provinces less affected by the presence of armed groups in eastern DRC. Progress has been significantly slower in the Kivus, especially North Kivu. See Section XX, below.
- Lack of capacity of government agencies to monitor and oversee mine sites. See Section 3.3.1, below.

[63] CEEC is in the process of developing a traceability system for gold, which is intended as a national solution. This is discussed in detail in Section 7.
[64] Recent events at Bisie bear this out.
[65] E.g. Lemera. Cf. Douma, N. et Weinberg, R. 2014
[66] Cf. Douma, N. et Weinberg, R. 2014

3.3.1. State Services (SAESSCAM, CEEC, etc)

As can be seen in the figure, a significant number of government agencies are currently involved in the process of 3TG mineral traceability and certification, resulting in ICGLR export certification.

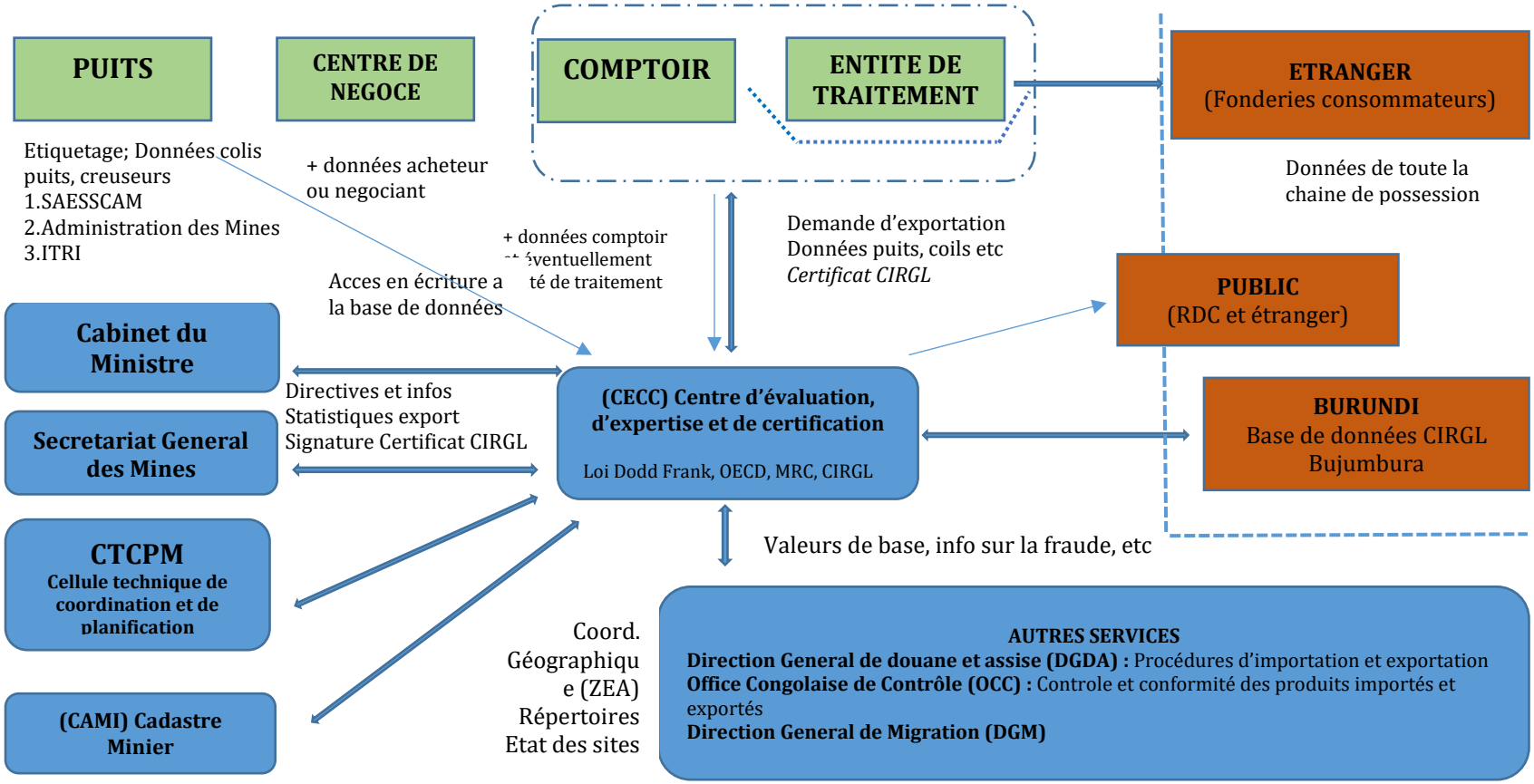


Figure 4: Institutional Framework for Certification

At the mine site, the *Service d'Assistance et d'Encadrement d'Artisanal et Small Scale Mining* (SAESSCAM) and the provincial *Division des Mines* are the two principal government actors responsible for supervision, tagging and oversight of mineral traceability.[67]

At the various *points de sorties*, the *Centre d'Evaluation, d'Expertise et de Certification* (CEEC) takes the lead role, in tandem with the *Division des Mines*, in traceability supervision and responsibility for issuance of the ICGLR export certificate. Other agencies involved include the *Direction Générale des Douanes et Accises* (DGDA), the *Cellule Technique de Coordination et de Planification Minière* (CTCPM), and the *Cadastre Minier* (CAMI).

Thus, the major government actors in the traceability and certification process are SAESSCAM, the *Division des Mines* and CEEC. A fundamental challenge facing these agencies is a lack of capacity and resources. Resource deficiencies undermine the work of these agencies – lack of personnel, lack of vehicles, lack of information technology (IT), lack of technical training. This is caused by the shortfall in funding for the agencies, and the fact that many of the personnel receive low remuneration, or in some cases experience severe delays in receiving payment (more than 6 months in some provinces) or even no remuneration at all.[68] Given the opportunities for mineral leakage and incentives for short-circuiting the traceability systems by unscrupulous operators, underpayment of government agents along the supply chain exacerbates the risk of corruption, which would in turn undermine both the integrity and credibility of the traceability and certification systems. This is a major concern that has led to some downstream operators looking for traceability systems that rely less upon government agents for implementation.[69]

SAESSCAM has as its original primary remit the provision of technical assistance and training to ASM miners. However, the agency's operation is effectively complicated by its dual role – namely, providing technical assistance, while at the same time being responsible for the collection of fiscal and parafiscal charges upstream, at the point of production and sale to *négociants*.[70] These levies are used both to fund the state services' presence and operations in the field, as well as more generally as fiscal revenue for decentralized government. This is especially relevant in the case of gold, where the relatively high levy of fees and taxes at the provincial level, as well as issues related to insecurity, disincentivises miners to declare their production.[71]

Moreover, in the case of 3Ts and the current iTSCi system, tagging and operationalization of the traceability process is largely in the hands of agents from SAESSCAM and the *Division des Mines*. While iTSCi personnel have a responsibility for supervision of the system, they do not have a permanent on-site presence. Indeed, in the context of the geographical spread of coverage areas, one challenge facing the iTSCi system is its being essentially under-staffed, with too few agents to ensure comprehensive monitoring.[72]

Given that SAESSCAM has a total of 1246 permanent, full-time employees across the whole country, there is a severe shortage of competent and trained agents on site. SAESSCAM agents at the mine site are most often paid significantly less than permanent, '*mécanisé*' employees. In fact the vast majority of state agents at mine sites (up to 90%) is not on the official institutional payroll, instead remunerated through *frais rénumeratoires* and taxes.[73] This low and often intermittent pay can demoralize agents in the field, runs the risk of incentivizing corruption, and increases the likelihood of mineral leakage.[74] It is compounded by a lack of technical capacity and qualified staff (partly due to a dysfunctional recruitment system), which complicates the operationalization of any traceability system, and contributing to the perception that the DRC context is not appropriate for any

[67] Other state services often present at mine sites include the *Direction générale des recettes administratives, judiciaires, domaniales et participations* (DGRDA) for the collection of fees and taxes, and *Police des Mines*.
[68] Interview with SAESSCAM, interview with expert academic.
[69] Interview with interviewee no. 7
[70] Blore, S. 2014
[71] See Section 7
[72] Douma, N. and Weinberg, R. 2014
[73] Douma, N. and Weinberg, R. 2014
[74] In the case of gold, the risks associated with under- and intermittently paid agents, and thus the exacerbated risk of corruption, are even more acute, serving as further disincentive for miners to declare their production at the mine site. See Section XX.

traceability system deploying electronic data entry. There is a need for up-skilling of agents from both SAESSCAM and the *Division des Mines*, as well as improvement in their employment and payment conditions to ensure incentives for malpractice are minimised.

3.3.2. Mine Site and Transportation route Validation and Certification in Practice

The validation and certification activities of the joint assessment teams are the main activity used to exert control over mine sites. Mine site validation is theoretically a two-step process, involving qualification – the determination that "*un site minier est capable de répondre aux exigencies specifies dans le Manuel du mecanisme de certification de la CIRGL*" – and verification – being the "*processus de verification sytématique qui apporte des preuves tangibles du niveau de conformité d'un site minier*". However, it is presently done through one site visit by a Joint Assessment Team.

The technical purpose of mine site validation is to establish those mine sites in a territory which may be subject to a third party audit per an international conflict minerals initiative.[75] Ultimately, the qualification and validation of mining sites involves the determination of the security and socio-economic situation at mining sites with a 25-30km radius of a Centre de Négoce or a point of sale, mapping the mine sites, and checking the depths of each pit, moving to qualify and validate based on these findings, and reporting to the Minister. Issues like child labour, the employment of pregnant women on the mining site, and operators' respect for their obligations linked to the preservation of the environment are also taken into account. [76]

The Status of DRC's Mine Site Validations is shown in Table 4. An overview table of mine sites visited by the ELL research team can be found in Annexes.

Table 4: Mine site validation statistics until 2014[77]

Province	***Qualifying sites***			***Unclassified***	***Total***
	Green	***Yellow***	***Red***		
Katanga	14	2	1	0	17
Maniema	43	0	0	0	43
Nord Kivu	17	4	9	0	30
Sud Kivu	17	10	6	2	35
Total	91	16	16	2	*125*
%	***72.8***	***12.8***	***12.8***	***1.6***	***98.4***

The widespread stakeholder criticism in 2013 of the slow progress of the joint validation missions has somewhat eased in 2014-15, with a general recognition that the pace has accelerated and that coverage has expanded, at least for the 3T's.[78]

However, a significant number of challenges remain regarding the joint validation process.

Need for better harmonisation between iTSCi and the joint validation missions.

- Given that DRC and ICGLR export certification requires the presence of supply chain traceability, mineral production needs both iTSCi coverage and green flag validation in order to be legally monetized. A criticism has been that validation missions have not always been

[75] "soit a l'initative du Ministre National ayant les Mines dans ses attributions, soit a l'initiative des organismes internationaux tells que l'ONU, l'OCDE, la CIRGL ou tout autre organisme public ou privé national ou international concerné et/ou impliqué dans la mise en oeuvre des standards CTC, OCDE et CIRGL."Arrete Ministeriel No. 0189/Cab.Min/Mines/01/2012 du 23 mars 2012 Portant Qualification et Validation Des Sites Miniers de Territories de Kabare, Mwenga et Walungu dans la Province du Sud-Kivu.
[76] Arrete Ministeriel No. 0058 (2012)
[77] Source: BGR
[78] Based upon interviews with mine site operators; iTSCi staff; civil society; and international development partners

aligned with the expansion of iTSCi traceability. This issue should in theory have become redundant over the course of 2014, following an agreement to increase coordination. [79]

More gestural then substantive.

- Some observers remark that there are too many people involved in the missions, which makes them cumbersome; the validation teams spend too short a time on the ground, which often at one to two hours makes their analysis far from substantive; the influx of mission members and intrusiveness of the operation makes it an exceptional and abnormal environment, thus distorting what should be the mission's perception of ideally the quotidian reality on the ground; there is no detailed report following on from the mission.[80] Other observers contend that state agencies delegate members lacking the appropriate skill-set.[81]

Lack of transparency regarding selection of sites for validation.

- There is uncertainty regarding the criteria deployed for selecting sites for validation. There is the suspicion among some stakeholders that individual or third party interests can influence the selection process.[82]

Lack of consistency and lack of clarity regarding operationalization of the process, as well as degree of confusion regarding the process among staff of state agencies.

- According to DRC regulations, which differ in spirit from the period of grace advised by the ICGLR RCM, yellow-flagged sites should be shut down. Yet, sometimes there is a lack of consistency – some yellow-flagged sites are shut, some not.[83]

Validation missions are supposed to be followed up by regular follow-up missions.

- These most often do not take place.[84] Revalidation missions can take place one, two or even three years after the initial validation mission. Given the highly fluid security environment in the DRC, this leads to original validation findings soon being rendered obsolescent. There is also a perceived issue in the delay that it can take for the validation team findings to be translated into a ministerial decree regarding the mine site status.[85]

Validation does not look closely enough at the transportation route.[86]

- Although understandable given the logistical challenges, transportation routes along the supply chain are key components for the ICGLR RCM.

iTSCi has decided that it cannot rely upon joint mission validations.

- Thus, costs are replicated for what are effectively iTSCi validation missions.[87]

Validation is a series of snapshots the subjectivity of which depends upon the identity of the persons who took the snapshot.

- The terms of the validation are applied slightly randomly. The planning is often not aligned with whether or not there's money to implement traceability. Validation is frequently not understood by people on ground and not enforced by provincial government.[88]

Given the high cost of the validation missions, are they sustainable?

- In the case of gold, BGR lists 746 mine sites in the DRC. As of September 2014, only 18 had been visited by validation missions.[89] Given the scale and scope of the work, with its

[79] Douma, N. and Weinberg, R. 2014
[80] Personal communication with XX
[81] Douma, N. et Weinberg, R. 2014
[82] Douma, N. et Weinberg, R. 2014
[83] Personal communication with XX
[84] Cuvelier, J. et al 2014
[85] Cuvelier, J. et al 2014
[86] Personal communication with XX
[87] Personal communication with XX
[88] Personal communication with XX
[89] Cuvelier, J. et al 2014

considerable logistical challenges, is the current composition and modality of the validation missions the most cost-effective and efficient means to achieve their stated goal? Is the current validation model, and especially the exigency of revalidation, viable even in the short to medium-term?

3.3.3. Centres de Négoce

In late 2009, the Congolese government launched STAREC (*Programme de Stabilisation et de Reconstruction des Zones sortant des conflits armés*), which aimed at increasing government authority over the sector. As part of this programme, 5 mineral trading centers (*Centres de Négoce*) were planned in Eastern DRC, in order to support legal and regulated trade. Four of these *centres de négoce* have been built, but none of them is currently operational.[90] The *centres de négoce* were conceived to service a mineral production catchment area covering a 25km radius.

Besides the overall aim of increasing government authority and oversight over the sale of minerals, another related objective was to provide a location, which would allow their trade without interference from armed groups. It was intended that government agents would able to monitor sales and levy the appropriate taxes and fees, while miners would be able to negotiate better prices for their production. However, the implementation of the *centre de négoce* programme has faced multiple challenges, and proved problematic. In some cases the physical location of the centre proved to be far from the mine site, which acted an incentive for *négociants* to trade from their homes.[91] Another issue was the clash between illegal artisanal mining and private concessions, with the perceived risk that the center would facilitate the sale of illegally mined minerals. In the case of Rubaya, where the *centre de négoce* was officially opened for business in April 2013, the concession holder MHI did not allow the use of the building housing the *centre de négoce* for this reason.

Moreover, a fundamental challenge facing the *centre de négoce* is that of insecurity. While the *centre de négoce* might offer traders and miners relative security on-site,[92] or in its immediate environs, there is no guarantee of similar security along transportation routes connecting the mine-site, center and the relevant export hub. In fact, the *centre de négoce* could arguably unintentionally increase security risks for stakeholders. This is especially relevant in the case of gold, as it would be reasonable to assume that any miner or trader entering or exiting the *centre de négoce* would be a potentially lucrative target for robbery, being in possession of either gold or currency, whether to buy gold or as payment for gold. In the case of gold and in the context of the eastern DRC's current security situation, the *centre de négoce/point de vente* could thus actually exacerbate the risk to supply chain actors, and consequently serve as a disincentive to the declaration of production.

A detailed (yet anecdotal) analysis of taxes (both fiscal and parafiscal) paid at the mine sites visited during this research can be found in Annex F. We have analysed taxation at both gold and 3T mine sites in Sud Kivu, Maniema, Orientale and Katanga, disaggregated by a) the actors paying tax, and the state agents or other actors receiving tax.

3.3.4. Mineral Tracking and Traceability

With regards chain of custody systems for due diligence of supply chains from conflict-affected and high-risk areas, the OECD Guidance (see below) prescribes what needs to be done, but not how you should do it. In other words, it does not prescribe what *type* of chain of custody system is used, just that there should be one, as the Guidance is supposed to flexible and applicable to different contexts and supply chains.[93]

At present, the only tracking and traceability system operational for the 3Ts is the iTSCi system. There are at least four other systems seeking to compete with this – GeoTraceability (owned by PWC),

[90] Rothenberg, D. and Radley, B. 2014
[91] Arguably the most serious disincentive for stakeholders against use of the *centre de négoce* or *point de vente*, besides the issue of insecurity, is the relatively high level of fiscal and parafiscal charges exacted at the provincial level by SAESSCAM agents. See Section 7, below.
[92] In fact, in the context of the climate of relative impunity and degraded rule of rule, the security of the *centre de négoce* itself is not assured. Personal communication with President of Nzabira trading center.
93 Interview with interviewee no. 13, 02.10.2014

MetTrak, Mineralcare, and SERCAM. During the course of the research, GeoTraceability achieved a Memorandum of Understanding with the Government of DRC which allows it to operate in DRC. With regard to ASM gold traceability, both GeoTraceability and MineralCare have expressed an interest in participating in pilot traceability projects. In addition, CEEC is presently developing its own traceability system for gold called Initiative de Traçabilité de l'Or d'exploitation Artisanale (ITOA). Other gold initiatives include Alimasi ya sawa/Just Gold – already piloted in Orientale Province, as well as ARM's gold traceability secure bagging system, 'Ecert'[94] (see Chapter 6). The CBRMT project and BGR will also each be separately setting up a number of pilot programmes deploying various traceability models. [95]

A summary overview of the suite of traceability / tracking systems on offer for the 3TG can be found in Annex F where we analyse these systems in more detail.

In order to operate a traceability system in DRC, it is necessary to have an MoU with the Ministry of Mines. This is not required by law, but has become expected by stakeholders. iTSCi (via ITRI as signatory) had the exclusive right to operate a traceability system for the 3Ts from 2012[96] until GeoTraceability's MoU was signed in December 2014, so opening up the market to competition for traceability services.[97]

Getting a copy of the MOUs has proven challenging as both parties need to agree to disclosing to a third party.[98] Since transparency is a major factor in initiative credibility and market confidence, it would be advisable for the GDRC to make a condition of signing an MOU a commitment by both parties to publishing the signed MOU on their respective websites within 2 months of contract signature.

3.3.4.1. Export / Import Procedures

There are four distinct sets of procedures relevant to international trade of minerals involving the DRC. The procedures are those that are applicable during: 1.) the *import* of the mineral *into* the DRC; 2.) the *import* of the DRC mineral *into* a different country; 3.) the *export* of the mineral *out of* the DRC. 1&2 or 2&3 might appear to be simultaneous, and in some cases, there would be a smooth and instantaneous transaction. However, as discussed below, distinct processes always govern the importing country and exporting country on the same trade.

1.) **Controls & Procedures for *importing* gold and the 3Ts *into* the DRC**

The import of gold or the 3Ts *into* the DRC represents a significantly smaller threat to the integrity of the minerals supply chains, especially into the East of the country. The DRC's import procedures as well as those of trading partners exporting into the DRC should be considered to gain a better understanding of regional compatibility and cooperation. However, these processes are not of immediate importance to this report and so have not been explored for this study.

2.) Controls & Procedures for *importing* 3TG *from* the DRC

A country importing materials from the DRC will have controls and procedures in place to govern their role in the trade. At present, controls governing importation *from* the DRC into other countries are inadequate. This is especially the case for countries known to be smuggling destinations for Congolese minerals, and in particular for gold.[99] Notably, the UN Group of Experts reported in 2015 that "*there was virtually no progress in addressing gold smuggling in 2014 in the Democratic Republic of the*

[94] ARM, 2014 and 2015. Alliane for Responsible Mining2015 New traceability and certification management solution for the Fairmined system. Press release. 25.03.2015. At: http://minasresponsables.org/en/more-news/699-improve-conditions-eng. 27.03.2015.
[95] Cf. Blore, S. 2014
[96] Government of DRC and ITRI 2012
[97] Gerald Beaulieu, pers comm. to Estelle Levin, 21.11.2014.
[98] Kay Nimmo, pers. Comm. to Estelle Levin, [DATE]; Gerald Beaulieud, pers.comm. to Estelle Levin, 21.11.2014.
[99] UN Group of Experts on the DRC; 2015. *Final Report of the Group of Experts on the Democratic Republic of the Congo.* UN Security Council. 19 January 2015 http://reliefweb.int/sites/reliefweb.int/files/resources/N1466372%20%281%29.pdf [accessed 22 March 2015]

Congo and Uganda, and scant evidence of interest in traceability and due diligence by … the Government of the United Arab Emirates." [100]

Getting major importing countries, like Burundi, Rwanda, Uganda, and the UAE, to make greater efforts to support DRC manage smuggling will require diplomacy on the part of DRC and their trading or aid partners. Efforts could include building an understanding amongst customs officials of what a legal shipment looks like, key signs that a shipment is illegal or not fully legal, what documentation is required, tips for spotting fraud, key strategies of smugglers, and procedures to follow (including how and when to inform and engage DRC customs) when issues arise. Overall, the goal should be consistent treatment and capture of minerals that are either illegally exported, or exported without adequate paperwork or appropriate procedures.[101] Another, critical goal should be to avoid creating red tape and opportunities for legal shipments to be delayed.

There is significant opportunity for improved regional understanding, alignment, and cooperation of standards. Ideally, countries within the ICGLR who have adopted the same standards into law will be better placed for enhanced cooperation. It is from this position that Blore recommends concrete opportunities to enhance regional cooperation on import/export procedures for gold: [102]

- **Regional Mines & Customs Workshop**: CBRMT, in conjunction with the ICGLR and its technical partners (GIZ, PAC, BGR), should sponsor workshops of government officials directly involved in the processing of exports or imports of gold. Countries would include the DRC, Uganda, South Sudan, Rwanda, Burundi, Tanzania and Kenya.
- **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.

3.) Controls & Procedures for *exporting* 3TG out of the DRC

The point of export from the DRC is a critical point in the supply chain. The primary form of export control in DRC is through the domestication of the ICGLR Regional Certification Mechanism (RCM) into Congolese Law (Decree 0057). The RCM's export certification process was designed under the advisement of Kimberley Process certification experts at Partnership for Africa Canada (PAC).[103] The result is similarities between the two systems, as well as key differences. The Kimberley Process is an export/import initiative prioritizing an irreproachable supply chain: entire geographical regions will be proactively excluded from sourcing for the sake of a pure supply chain (*see Figure 3 in chapter 2 for further discussion of the KP*). Meanwhile, the RCM aims to encourage the possibility of production and export from all geographical regions by ensuring that due diligence has been conducted and any irregularities or issues can be addressed, reactively. While the RCM will at times exclude geographies, these are extremely focused – down to the mine level.

In theory, each mine in the DRC is evaluated, audited, and flagged – green, yellow, or red –by certified auditors on an annual basis. Likewise, supply chain actors and exporters are audited for compliance. At the point of export, ICGLR certificates are only issued for minerals that a.) Originate from green/validated mines; b.) Have been subjected to traceability measures; and c.) Actors all along the supply chain have implemented due diligence. As Decree 0057 establishes, "*certificates will only be issued if a batch ready for export has all necessary chain of custody documentation, and can viably be tracked back to the validated mine site minerals originated from.*"[104] The first certificates were issued in the DRC (Katanga) and Rwanda in respectively July and November 2013. In South Kivu, the certificates came into use in April 2014.

[100] UN Group of Experts on the DRC; 2015. *Final Report of the Group of Experts on the Democratic Republic of the Congo.* UN Security Council. 19 January 2015 http://reliefweb.int/sites/reliefweb.int/files/resources/N1466372%20%281%29.pdf [accessed 22 March 2015]
[101] Blore, 2014.
[102] Blore, 2014.
[103] 140821 CEEC Kinshasa.
[104] Decree 0057, article 14, p.11.

As noted above, the RCM is distinct from the Kimberly Process in that it is designed to be nimble enough to react to non-compliance in a constructive way. While in some cases a mine, or a small geographical region, will be red-flagged, under the RCM an entity (the exporter) should usually be marked for non-compliance. In the case of major non-compliance by an exporter, and thus the issuance of a red flag, Member States are obliged to cease issuing export certificates to the respective export entity for a period of six months, and until such time afterwards that a follow-up audit by a third party auditor removes the red flag status. Moreover, the Member State must also ensure that the red-flagged entity does not stockpile minerals during the period of red flag de-certification for subsequent export following the lifting of the red flag. In the case of a yellow flag, the exporter is essentially on probation, with notice served that if a follow-up audit within the next six months does not change the status to full compliance the exporter will be designated as red flagged, so a case of major non-compliance.[105] Green flag compliant status, according to ICGLR standards, has a duration of one year (in line with the anticipated frequency of RCM audits). If any entity subject to inspections/audits with a 12 month frequency fails to submit to an inspection/audit within that time period, it will be un-certified, and listed as red-flagged.

This is the process in theory; in practice, a number of challenges impede a fully functional RCM in DRC. The following concerns are based on research conducted in 2014 by Weinberg and Douma. They are exemplary of issues with the certificate process; where possible, we have included recommendations on how to address these challenges:

Differing interpretations of how to complete the certificate: This includes the type of mineral, as well as the site or origin of the minerals being certified, which leads to different practices. For example, the Table of Origin on the certificate provides multiple lines for detail on the origin, therefore, some stakeholders were of the opinion that an export batch can be composed of different origins, so long they all respect IGGLR requirements. These issues will be well known amongst exporters and state agents; gathering feedback from these key stakeholders and incorporating it into further guidance or revisions of certificate forms would be beneficial.

Limited number of state agents from CEEC (the issuing authority) issuing ICGLR certificates, creating backlog, delays, and deteriorating buy-in of the system. The system needs greater investment in training, capacity, staffing, and support.

Unclear definition of 'batch': Confusion was created by the lack of clear definitions in Decree 0057. For example, certificates are issued *per* individual batch originating from *one* specific location. If an exporter requires minerals of a certain quality that can only be achieved through sourcing from different sites, they will often mix these minerals in processing phase prior to export. The client will have all their supportive documentation in order, and all their minerals in their mixed batch will originate from green flagged mines. Nevertheless, if the mix draws from more than one site, the client will need to have a certificate issued for each individual 'batch' from each and every mine. Addressing definitional issues such as these will decrease redundant paperwork, decreases costs (each certificate requires a separate fee of $350) and prevent delays in exports.

Temporary co-existence / phase out of the old certificat d'origine: The implementation of the ICGLR certificate in October 2013 proved to be a relatively abrupt transition from the previous system of certificats d'origine. Provincial state authorities requested the Central government to allow a period where both the ICGLR certificates and the *Certificat d'Origine* could both be effective. The DRC government rejected this request. In the case of 3Ts, given that a phase in period has not been deemed beneficial, robust support and incentives should be given to provincial authorities to aid in the transition, education, and implementation of the new system. In the case of gold, this study will recommend that – as an immediate and temporary measure - there should be a phase-in and progressive implementation of the ICGLR RCM export certificate, which also allows for the continued issuance of *certificats d'origine* in certain appropriate cases.

[105] From 1st October, with the implementation of the ICGLR RCM in the DRC, the situation in DRC will diverge from the scheme as originally envisaged by the ICGLR. Currently, the DRC considers both red flagged and yellow flagged entities as suspended from export. This anomaly could be an example of a situation, which behooves further examination by the IMCA.

Compatibility with other initiatives: While the RCM includes a traceability condition for mineral export; it does not identify any particular initiative. In practice, however, this means that sacks of minerals bound for RCM certification have to carry iTSCi tags, as no other system is operational. If, at a later date, other systems were approved and accepted by downstream actors, then presumably, they too would be eligible for ICGLR certification. The confusion this is likely to cause down the road could be avoided by the provision of further clarification on traceability initiatives.

Circulation of untagged materials: Many actors report that circulation of untagged materials has increased since RCM certification launched. There is considerable uncertainty over whether or how the provincial governments will respond to this, including a possible ban on the circulation of untagged minerals. Opinions are mixed over whether this is the best way to combat fraud and smuggling. Opponents fear that an embargo will disproportionally affect artisanal miners and their communities, citing the negative consequences of the 2010-2011 mineral ban decreed by President Kabila. Meanwhile, proponents argue that steps need to be taken in order to sanction those engaged in illicit activities and build credibility in the DRC's ability to effectively regulate the artisanal minerals sector. As such, the stringent requirements of the system, compounded by a potential ban to prevent fraud, would create more costs, which would ultimately be borne by artisanal miners. An alternative would be to strengthen due diligence of fraud and smuggling through community-based mechanisms of oversight and accountability, as is already being done successfully by the Comités Locales de Suivi, for example, and through improving NGO monitoring of fraud. The Independent Mineral Chain Auditor of the ICGLR will also have a role to combat this once it is operational.

3.4. ASM Formalisation

Although strictly speaking outside the terms of reference for this study, the issue of ASM formalisation / legalisation is critical for successful implementation of traceability and certification systems in the DRC.[106] It is also a core concern for the implementation of the OECD Guidance, which bears the risk of further marginalising artisanal mining from responsible supply chains if mechanisms are not put in place to enable their formalisation and legitimisation. The OECD attempts to address through Appendix 1 of the Gold Supplement of the OECD Guidance, its ASM Hub, and advocating to industry to create avenues to market for responsible ASM minerals.[107] Formalisation is also a major policy issue for all ASM stakeholders, on a global scale.

If one understands formalization as the "embodiment of artisanal mining in a legal framework that is governed by the state"[108], the various national and regional interventions linked to mineral traceability and certification over the preceding four years have all contributed to a formalization process through increased integration of ASM activities into the framework of national and provincial mining governance. Indeed, the initial presidential ban, which underlined the urgent need to address the sector, cited the level of "informality" in mineral exploitation.[109] The current iTSCi traceability system, as well as the various pilot projects which have been focused on gold, national initiatives, CTC and the ICGLR RCM have all attempted, with greater and lesser degrees of success, to enhance the state's capacity to monitor and regulate mining activities. As discussed in Section 5.1.2. the iTSCi system has enabled a number of positive transformations linked to mining governance – amongst which, the collation of statistics, the presence of many more government agents at mine sites, multi-stakeholder and multi-scalar mechanisms for accountability (e.g. through the *comités de pilotage*), and tracked and traceable supply chains.

While the operationalization of traceability has undoubtedly contributed towards formalization, progress has been patchy, and undermined in part by the continuing existence of various systemic issues.

A key aspect of formalisation is the creation of mining cooperatives, as well as being mandated under DRC law. The creation of miner cooperatives is often cited, both in the Congolese context and much

[106] This was was underlined by stakeholder input at the PROMINES workshop, in Kinshasa, on 11 December, 2014, at which the first draft of this report was presented.
[107] OECD 2013; Gillard and Neiuwenkamp 2015.
[108] IPIS, 2013; IPIS, 2012
[109] IPIS, 2012; Geenen, S, 2012

more widely beyond the DRC's borders, as a prerequisite for ASM formalisation. Artisanal mining is often opportunistic, characterised by the migration and individualism of miners. Given that miners exist at the lowest rung of the value chain, the formation of cooperatives should allow miners to attain economies of relative scale, improving their leverage when negotiating with négociants or exporters, as well as government agents. Cooperatives should also enable a more efficient conduit for technical assistance from development partners, as well as more equitable distribution of revenue and better working conditions. However, in the context of the DRC, and indeed elsewhere, well-intentioned theory often does not translate into universally beneficent praxis. As has been observed elsewhere, cooperatives in the DRC "have often been instrumentalized by local strongmen seeking to gather a group of loyal supporters around them who respect their authority and who are prepared to defend their business interests in and around the mines."[110] This can effectively perpetuate a top-down, hierarchical or "PdG" market structure in which well-connected and entrenched local elites accrue rents from mining activities. In certain cases, the cooperative's tithe on the miners' production is over-onerous, serving as a disincentive to the declaration of production (especially with gold).

While this is not always the case, it runs parallel to another issue, whereby the upper echelons of the mining cooperative develop a close working relationship and virtual dependency upon pre-financing by the mining company or exporter, which may not always be perceived as being in the best interests of the miners.[111] This is in part due to the relatively fledgling nature of the ongoing formalization process and current market conditions. In some provinces and areas the last few years have seen market dominance and near monopolization by certain influential companies, for example, either through a temporary dearth of other entities with a right to export or due to greater liquidity access to capital allowing widespread pre-financing.[112] Such market dominance tends to be unhealthy for upstream stakeholders, as the dominant entity can take advantage of it being the ultimate price-setter. A clientilistic relationship between the cooperative and trader/exporter runs the risk of undermining one aspect of the cooperative's raison d'être, namely an improvement in the miners' negotiating position. However, it is hoped that, as more entities receive accreditation from iTSCi or any other eventual traceability system, bringing in the benefits of increased competition, such control of the market will diminish.

Another aspect to the formalization / traceability discussion is the need to understand traceability as a means to an end, namely the maintaining of access to downstream markets for minerals and improved oversight of the sector, rather than the end itself, which should be the general development of the sector:

Indeed, a number of key issues impact on the overall viability of ASM activities, and hence the success or otherwise of whatever traceability system. These include undercapitalization, access to credit, the need for knowledge transfer and technical assistance, the need for improved mineral productivity and recoverability, opportunities for semi-mechanisation, generating entrepreneurialism and business approaches amongst ASM, creating capacity to identify and address operational risks and risks ASM pose to third parties. These are all areas, which could and should be tackled *in tandem with* the processes of traceability and formalization, as all would contribute to the consolidation of the sectorial prospects and stability. One private sector stakeholder observed that the spreading and deepening of production enhances security, and completes the virtuous circle.[113]

A crucial component to the process of formalization is the role of state agents. As discussed above, in Section 3.3.1, and below in Chapter 7, there is an acute tension between SAESSCAM's statutory role as providers of technical assistance and the enabling engineers of formalization and the role it plays on the ground, as collectors of the various and often over-onerous fiscal and parafiscal levies. This inevitably sets up a conflictual relationship with miners, who might be excused for viewing the various government agencies as more predatory than enabling, and runs the risk of effectively handicapping the agency's outreach role as a primary agent of formalization.[114] Especially in the context of gold,

[110] Cuvelier, J. et al 2014
[111] IPIS, 2012
[112] Cuvelier, J. et al 2014
[113] Interview ith Olivier M. Mudekezera, 08.09.14
[114] Blore, S. 2014

issues such as over-onerous taxation and the imposition of a plethora of fees need to be addressed if formalization is to be successful. Issues linked to permits and land tenure are equally critical. Partly due to the paucity of Zone d'Exploitation Artisanale (ZEA), ASM miners tend to dig on land the concession for which has already been granted to a private company. This can in turn provoke conflict between the various stakeholders, and makes the position of ASM miners highly insecure. Such a context does not contribute to formalization.[115] The issue of mining title for ASM miners needs to be reviewed and adapted where appropriate.

While it is understandable that authorities are wary of privileging ASM over larger-scale, potential industrial or semi-industrial projects, the ASM sector employs up to two million miners, and indirectly supports millions more. Indeed, artisanal mining of gold produces 4 - 8 times as much as the industrial sector.[116] Of course in the latter case, one needs to add the qualification that industrial mining of gold brings in many multiples of revenue to state coffers as compared to ASM gold production, the formal direct fiscal receipts from which are negligible, since most ASM gold is undeclared.[117] Yet, therein lies a potential synergy between traceability and formalization. Traceability essentially ushers in the key component of formalization – government monitoring and declaration of production at the mine site. Thus, especially in the case of gold, if ASM miners can be persuaded, rather than coerced, into accepting traceability as part of a package of measures which will increase their income, reduce an unrealistic fiscal and/or parafiscal burden, improve their working conditions, provide better security of tenure at the mine site, and potentially address other issues they face, it is much more likely that both traceability and formalization will gain widespread traction.

[115] For an in-depth discussion of a range of proposed measures to enable and incentivize incentivise formalization in the ASM gold sector, cf. ARM. Many of these measures, such as those focused on cooperatives, are equally relevant to the 3T sector.
[116] Blore, S. 2014
[117] Cf. ICGLR n.d.a pour une discussion de la RINR, et les six outils.

4. International Demands on a Congolese Conflict Minerals Supply Chain Assurance System

4.1. International Norms

There is a range of international compliance frameworks that determine how traceability and certification should or could work in DRC. The compliance frameworks that give direction to conflict minerals supply chain management are a sub-set of a broader suite of normative frameworks that reflect a sourcing paradigm that emphasises high business performance, resource efficiency, and social and environmental risk mitigation. Issues as diverse as anti money-laundering, bribery, corruption, forced labour and human trafficking, carbon emissions, water management, and pollution are all being tackled – in part - by mechanisms for improved supply chain due diligence by business.[118] This is to the benefit of business and society, but also an inevitable outcome of a neoliberal (deregulating) context and transfer of accountability mechanisms from the court to the marketplace.

Table 5: The Function of Supply Chain Due Diligence for Different Sectors of Society

Regulators	Business	Civil Society
Supply chain due diligence has emerged as a critical tool in incentivising responsible business practices within their own jurisdictions but also in other sovereign territories with which they have trading relations.	Supply chain due diligence provides assurance of responsible business practices and a means for mitigating risk upstream, so protecting the brand, satisfying compliance obligations, and potentially also creating new market advantage and cost savings. Brands may use this to tell 'good news' stories for stakeholders.	Coupled with transparency (i.e. reporting, disclosure) obligations and incentives, supply chain due diligence is critical for ensuring the accountability of business actors in a neoliberal context; penalties are increasingly exacted by commercial partners, the market and impacted stakeholders (e.g. insurers, investors, customers, labour, communities) rather than in the courts.

This paradigmatic shift towards market-based accountability is here to stay, making supply chain due diligence a permanent feature of responsible business practice, and transparency a core aspect. It is within this broader international reality that DRC must compete with other sources that may better satisfy the supply chain due diligence, transparency, and assurance demands of the market.

4.2. International Responsible Sourcing Frameworks

A number of normative frameworks set terms by which downstream entities will do business with suppliers. In the context of decoupling minerals, and specifically the 3TG, from conflict and human rights abuses in DRC the principal texts are the United Nations Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the OECD Due Diligence Guidance for Minerals from Conflict-affected and High-risk Areas. Here we provide a rapid summary of key features to set the context of market demands on DRC.

4.2.1. UN Guiding Principles on Business and Human Rights (UNGPs)

The UN Guiding Principles on Business and Human Rights (UNGPs) were adopted in 2011.[119] The UNGPs are not legally binding under international law, but they set out the international community's expectations on governments' and businesses' practices in respectively protecting and respecting human rights and remedying abuses.[120] The UNGPs are designed to be universally applicable to all

[118] See for example REACH in Europe (European Commission n.d.) or the Carbon Disclosure Project in the UK (Carbon Disclosure Project, n.d.)
[119] UN Working Group on Business and Human Rights 2013
[120] Greene, A. 2014.

states and all business enterprises, regardless of size, sector, location, ownership and structure. They are based on the 'Protect, Respect, Remedy' Framework and set the following requirements:[121]:

- States have existing obligations to protect, respect and fulfil human rights under international law. This includes the duty to protect individuals from human rights abuses by third parties such as private businesses.
- Business enterprises are required to comply with all applicable laws and have a corporate responsibility to respect human rights.
- Human rights violations need to be remedied, and victims need to have access to effective and appropriate judicial and non-judicial remedies.

Due diligence, as required by the more specific OECD Due Diligence Guidance (OECD Guidance) (see below), is also a core element of the UNGPs and its requirements for businesses to respect human rights.[122] The UNGPs expect businesses to follow a similar due diligence process as set out in the OECD Guidance.

What does this mean for DRC? *Any legal framework developed to enable supply chain due diligence must do this in the context of not only enabling business to happen in a way that is commercially viable, but to ensure the fulfilment of human rights and prevent their violation.*

4.2.2. OECD Guidelines for Multinational Enterprises (OECD GME)

The OECD Guidelines for Multinational Enterprises (OECD GME) are a set of "*non-binding principles and standards for responsible business conduct*" that OECD governments recommend multinational enterprises operating in or from their territories adhere to.[123] Even though the Guidelines are voluntary for companies, they "*clarify the shared expectations for business conduct of the governments adhering to them and provide a point of reference for enterprises and for other stakeholders*." [124] Observance of the guidelines *by enterprises* is voluntary and not legally enforceable, but *countries* adhering to them make a binding commitment to implement them.[125]

The 2011 version of the GME provide guidance regarding companies' obligations towards responsible supply chain management and risk-based due diligence. The GME also include a chapter on human rights due diligence, referring to the UNGPs. They recommend a broader enterprise risk management system that includes "assessing actual and potential human rights impacts, integrating and acting upon the findings, tracking responses as well as communicating how impacts are addressed." [126] A wide range of social, economic, and environmental issues are in scope.

Other guidance includes the expectation that companies "*identify, prevent and mitigate actual and potential adverse impacts caused by their own operations, but also by those to which they are directly linked owing to a business relationship*" [127] and account for how these impacts are addressed.[128] They support *"continuation of the relationship with a supplier throughout the course of risk mitigation efforts; temporary suspension of the relationship while pursuing ongoing risk mitigation; or, as a last resort, disengagement with the supplier either after failed attempts at mitigation, or where the enterprise deems mitigation not feasible, or because of the severity of the adverse impact. The enterprise should also take into account potential social and economic adverse impacts related to the*

[121] United Nations 2011
[122] Ruggie, J.G. 2008
[123] OECD 2011c
[124] OECD 2011c
[125] Adhering countries are: Argentina, Greece, Norway, Australia, Hungary, Peru, Austria, Iceland, Poland, Belgium, Ireland, Portugal, Brazil, Israel, Romania, Canada, Italy, Slovak Republic, Chile, Japan, Slovenia, Colombia, Korea, Spain, Czech Republic, Latvia, Sweden, Denmark, Lithuania, Switzerland, Egypt, Luxembourg, Tunisia, Estonia, Mexico, Turkey, Finland, Morocco, United Kingdom, France, Netherlands, United States, Germany, New Zealand. See http://mneguidelines.oecd.org/ncps/ (30.11.2014)
[126] OECD 2011c, p. 34.
[127] OECD 2011c, p. 20.
[128] OECD 2011c, p. 21.

decision to disengage."[129] This is fundamental guidance on how businesses dealing with issues in their conflict minerals supply chains should make decisions on sourcing or stopping sourcing from suppliers in DRC.

What does this mean for DRC? Businesses from adhering countries investing in, sourcing from, or operating in DRC are expected to observe the guidelines, e.g. concession holders, mining companies, investors in mining companies.[130] They should therefore do supply chain due diligence on a broader suite of issues than the risks identified in the OECD Due Diligence Guidance (see below). This means any supply chain management system the GDRC puts in place to support conformance with the OECD DDG should provide flexibility for other issues to be addressed through supply chain due diligence.

4.2.3. OECD Due Diligence Guidance

The OECD Due Diligence Guidance for Minerals from Conflict-Affected and High Risk Areas (OECD Guidance) is intended to support the implementation of the UNGPs and OECD Guidelines' prerogative for due diligence, specifically for mineral supply chains. In scope are *all* minerals supply chains from *all* geographies experiencing or at risk of conflict or human rights violations.

The Guidance contains non-binding recommendations that set out expectations for upstream and downstream companies which source minerals or metals from conflict-affected or high risk areas *"to respect human rights and avoid contributing to conflict through their mineral or metal purchasing decisions and practices"*[131] and "*to cultivate transparent, conflict-free supply chains and sustainable corporate engagement in the minerals sector*".[132]

The OECD Guidance has been endorsed by 34 OECD countries plus Brazil, Argentina, Peru, Lithuania, Latvia, Morocco and Romania, the (then) eleven member states of the ICGLR, and the UN Security Council in two Resolutions on the DRC.[133] Adhering countries are expected to promote its observance by companies operating in or from their territories and sourcing minerals from conflict-affected and high-risk areas.[134] The Guidance therefore remains voluntary for most countries and companies.[135] However, some countries have domesticated it into law (e.g. DRC, Rwanda, Burundi),[136] recommend it to support legal compliance (USA, Canada)[137] or are in the process of encapsulating it in law somehow (EU).[138] See Annex G.

The Guidance is also the core normative document giving structure to the Regional Certification Mechanism of the International Conference of the Great Lakes Region's (ICGLR), [139] has been made mandatory in certain other situations, for example where buyers are obliging suppliers to conform with it for specified minerals [140] or where membership in an organisation depends upon conformance.[141]

The OECD Guidance provides targeted recommendations for upstream and downstream segments, and large and small entities for conducting due diligence in mineral supply chains, and has developed

[129] OECD 2011c, p. 27, article 22.
[130] Some companies operating in the DRC are based in non-adherent countries, e.g. MSC is based in Malaysia and its subsidiaries in other non-adherent countries, and MMR is held almost 100% by MSC.
[131] OECD 2013, p. 52.
[132] OECD 2013, p. 52.
[133] UN Security Council 2010 and UN Security Council 2011
[134] OECD 2011b. In addition, Brazil, Malaysia and the 12 countries of the Great Lakes Region actively participated in the OECD-ICGLR joint consultation.
[135] OECD 2013, p.15.
[136] OECD 2014. "Annual Report on the OECD Guidelines for Multinational Enterprises 2014.
[137] SEC 2012. Final Ruling Pursuant Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. http://www.sec.gov/rules/final/2012/34-67716.pdf 21 March 2014 [accessed 20 March 2015]
[138] OECD 2014"Proposed EU Responsible Trading Strategy for Minerals from Conflict Zones." http://mneguidelines.oecd.org/proposed-eu-responsible-trading-strategy-for-minerals-from-conflict-zones.htm 21[accessed 20 March 2015]
[139] ICGLR 2011a
[140] Such as through the Signet Responsible Sourcing Protocol for gold and the 3Ts. Signet is now developing such a Protocol for diamonds. Olden, P. 2014
[141] Such as the London Bullion Market Association.

specific Guidance for supply chains of gold and the 3Ts.[142] It delineates a five step due diligence process that expects the following (summarised) actions from companies with regard to their sourcing practices[143]:

1. Establish strong company management systems, including the development and implementation of a conflict minerals policy and chain of custody systems amongst other things
2. Identify and assess risks in the supply chain relating to conflict financing, business practices, and the most serious human rights abuses
3. Conduct risk management; design and implement a strategy to respond to identified risks
4. Smelters and refiners and a sample of their suppliers must be audited by an independent third party; suppliers must deliver necessary information to the entity being audited and be open to audit
5. Report and publicly disclose supply chain due diligence activities annually

The starting point for implementation of the OECD Guidance is the design and institutionalisation of a conflict minerals policy. A model policy is provided as Annex II of the Guidance (see Figure 4). This sets out the human rights and business risks that businesses are expected to address through the establishment of due diligence systems per the Guidance. ***This means that any conflict minerals system operational in DRC should support due diligence of these human rights and business risks at a minimum.***

Figure 5 Risks covered in the Model Supply Chain Policy

1. The worst human rights abuses
   - *i)* any forms of torture, cruel, inhuman and degrading treatment;
   - *ii)* any forms of forced or compulsory labour,
   - *iii)* the worst forms of child labour;
   - *iv)* other gross human rights violations and abuses such as widespread sexual violence;
   - *v)* war crimes or other serious violations of international humanitarian law, crimes against humanity or genocide.
2. Any direct or indirect support to non-state armed groups through the extraction, transport, trade, handling or export of minerals.
3. Direct or indirect support to public or private security forces
4. Bribery and fraudulent misrepresentation of the origin of minerals
5. Money laundering
6. Payment of taxes, fees and royalties due to governments

Other human rights or CSR risks may be particularly prevalent in certain places and cultures not yet covered by the policy, or may be especially important to a downstream entity's corporate values or CSR commitments and yet not covered by the policy. Companies are expected to adapt the Annex II *model* policy to their risk environment and that of their suppliers. This is a crucial point to be considered for future-proofing any certification system the DRC seeks to operationalize, in order to satisfy the market's ***and civil society's*** desire to manage a broader suite of issues using supply chain due diligence, as per the UN Guiding Principles or Guidelines for Multinational Enterprises. ***Can that certification system be adapted to gradually enable due diligence of these other risks?***

The Guidance largely offers *processes* for ensuring that adequate due diligence systems are in place; it gives less Guidance on *structures* for enabling due diligence. In other words, the Guidance says what to do, but not how to do it. It has been largely left to business and the certification initiatives seeking to support them to interpret what structures are necessary to ensure feasible implementation of the Guidance. ***This means that flexibility in approaches is expected, including for prescribing how to do the different elements of a traceability or certification system. This also applies to whatever system the DRC sets up – it should enable diversity of approaches, to suit the diversity of businesses operating along mineral supply chains in DRC.***

[142] The OECD Guidance Supplement for tin, tantalum and tungsten has been available since the end of 2010; the supplement for gold was approved in May 2012.
[143] OECD 2013

4.3. Relevant laws and regulations in Consumer Nations

A detailed discussion of the DFA and other consumer nation legislation, such as proposed EU legislation, can be found in Annexes.

The **United States of America's Dodd-Frank Wall Street Reform and Consumer Protection Act** was signed into federal law by the President on 21st July, 2010. As part of a general section on disclosures (Section XV), section 1502 of the Act requires US issuers (companies listed on the stock exchange and offering certain types of securities) to disclose their use of columbite-tantalite (coltan), cassiterite, wolframite or gold or their derivatives that originated in the Democratic Republic of Congo or one of the nine adjoining countries. In-scope are products the issuer manufactures or contracts to manufacture.[144]

On 19th February 2013, the **European Union** released a report promoting development through responsible business practices, including the role of extractive industries in developing countries.[145] Shortly after, on March 5th the European Union released its Draft Proposal for a **Regulation on Conflict Minerals** and a Joint Communication, 'Responsible sourcing of minerals originating in conflict-affected and high-risk areas: Towards an integrated EU approach,' which sets out accompanying measures that are crucial to ensuring that the Regulation achieves its goal.

The EU has proposed a voluntary, self-certification due diligence system for EU importers of 'conflict minerals' that is quite distinct from the US Dodd-Frank Act. Companies can choose to sign up to this as "responsible importers" of tin, tantalum, tungsten, their ores, and gold, and must abide by the recommendations of the OECD Guidance to be in compliance.[146] The EU intends to annually publish a list of EU and global 'responsible smelters and refiners' "to increase public accountability …., enhance supply chain transparency and facilitate responsible mineral sourcing."[147]

See Annex for a comparison of the Dodd-Frank Act and the proposed EU Regulation and consideration of what implications are for DRC of the EU deliberations on the four topics of contention.

In **Canada**, the New Democratic Party has been attempting to introduce legislation with regards to conflict minerals. The proposed 'Conflict Minerals Act' builds on the OECD Guidance and would require Canadian companies to exercise due diligence with regards to mining and trading of gold, tin, tantalum and tungsten from the Great Lakes Region, in order to ensure that no (public or private) armed group or entity engaged in illegal activities or serious human rights abuses benefits from of these minerals. However, the bill failed in a vote in Parliament on the 24th of September 2014, and will have to be read a second time.[148]

The **Australian Government** has issued 'due diligence guidelines for the responsible supply chain of minerals from red flag locations to mitigate the risk of providing direct or indirect support for conflict in the eastern part of the Democratic Republic of the Congo', based on the OECD Guidance.[149]

In the **UK**, NGOs have campaigned for the government to introduce legislation similar to the DFA for British Companies.[150] The Government of the UK has so far referred to its existing relevant legislation and its support of the international community in working on the issues of conflict minerals (such as supporting he development, adoption and implementation of the OECD Guidance).[151]

[144] US Congress, 2010. The US Department of State reserves the right to add any other mineral to the list, where the US Secretary of State determines that it or its derivatives is financing conflict in the DRC or an adjoining country and provides one year notice to issuers of the addition.US Congress 2010, Sec. 1502, (e) 4.
[145] European Commission 2014a, European Commission 2014b, European Parliament 2014.
[146] On
[147] European Commission 2014c
[148] OpenParliment.ca, n.d.; Marlow, I. 2013
[149] Government of Australia, n.d.
[150] Tearfund 2014
[151] Government of the UK, n.d.

4.4. The Market - Risks Raised by Civil Society, Academia, and Donors

Civil society, academia, and donors have attempted to broaden the set of concerns considered in the DRC conflict minerals debate. With so much effort being placed onto how the minerals sector and conflict regimes intersect, stakeholders are questioning whether this concentration of resources is impeding advances in minerals sector governance generally outside of the conflict domain, and in conflict prevention generally outside of the minerals domain. Would greater gains in peace and stability be achieved by redirecting some of the resources targeted at 'conflict minerals' into either 'conflict' or 'minerals' instead?

These concerns, introduced below along with concrete steps for addressing them, include expectations of supply chain management, the prevention of conflict and human rights risks at a systemic level, and mineral sector development.

4.4.1. Supply Chain Management Progress and Expectations

A Silver Bullet Significant achievements in supply chain management are sometimes undercut by frustration that they are not translating into an immediate reduction or cessation of violent conflict in DRC. Stakeholders are questioning if the focus on traceability and supply chain management is really translating into the stability gains that are so desirous. An important message is the fact that improved supply chain management may be valid in its own right for its economic, development or general stability gains even if it does not *directly* reduce conflict. On the other hand, stakeholders are asking that efforts put into supply chain management can be complemented by focused efforts to improve minerals sector governance generally, something which PROMINES is obviously focusing on through its other projects.

Experts who hold a nuanced view understand that the relationship between minerals and conflict is complicated and may be able to provide constructive support for managing the expectations of stakeholders who see supply chain management is *the* priority for addressing Congo's conflict. The premise that, *while minerals can perpetuate conflict, they are not necessarily its root cause*,[152] was supported by an Open Letter by NGOs and academics, which cited UN internal assessments that find only 8% of violent conflicts in DRC are linked to mineral resources. Meanwhile, the implementation of traceability and due diligence in the mining sector has correlated with armed groups moving from minerals to other commodities and economic sectors to finance their activities.[153]

Ownership of the Problem; Ownership of the Solution Civil society in the DRC expects downstream companies to actively participate in the traceability and certification initiatives and processes.[154] This is not, however, always the practice. Many downstream companies see the initiatives as a tick-box exercise where they sign up to a particular scheme and then expect due diligence to be delivered to them.[155] Industry assumes they cannot do due diligence or trade legally unless an 'off-the-shelf' assurance system is in place.[156] In other cases, companies use traceability and due diligence as a green washing exercise; receiving headlines for ethical sourcing, while they are only taking into consideration a sub-set of risks and producing no "real solutions" on the ground.[157] There is space here to invite businesses to engage more directly with the initiatives and pro-actively put in place due diligence measures.[158] A company might work with local organisations such as Save Act Mine, which is working to build the capacity of local businesses to implement the DDG.[159]

4.4.2. Prevention of conflict and human rights risks at a systemic level

Leadership ahead of Market Demands There is increasing unity across Congolese stakeholder groups on the need to address certain sector-wide issues, such as demilitarization of mining sites.[160]

[152] Pole Institute 2014; Geenen, S. and Radley, B. 2014
[153] Pole Institute 2014
[154] Interview with interviewee no. 5
[155] Interview with interviewee no. 5
[156] Interview with interviewee no. 13
[157] Interview with interviewee no. 30
[158] Interview with interviewee no. 13
[159] Interview with interviewee no. 47
[160] Interview with interviewee no. 10

Observers have noted a decreased presence of armed groups in some mine sites.[161] For example, 99% of legally imported tin exports from Rwanda and DRC to major buying nations are now conflict-free.[162] However, academics point out that other risks have been less prominently discussed or addressed. Most pressingly, human rights violations and violence by the hand of government officers (including police, FARDC, administration officers), who today are responsible for the largest part of human rights violations.[163] This is a significant risk to progress that must be addressed under the leadership of the DRC government.

The OECD Guidance does not cover risks with regards to labour rights (apart from the worst violations such as forced labour and the worst forms of child labour), socio-economic rights and the environment; it does not incentivise the *fulfilment* of human rights but rather prevents abuses of human rights. Other major responsible sourcing frameworks do, such as the OECD Guidelines for MNEs and the UN Guiding Principles (see above). Downstream buyers interviewed for this and other projects have told the authors their intentions to start incorporating these issues into their supply chain due diligence in the future.[164] There is therefore an opportunity for leadership in this area ahead of market demand.

4.4.3. Progress and expectations on Mineral Sector Development

Supporting Local Development Academia and civil society argue that *rather than dis-incentivising conflict minerals, there is a need to incentive clean trade*.[165] Academics point out that the daily risks of mine workers have to date received less international attention than egregious human rights abuses (as set in Annex II of the OECD Guidance).[166] Examples of these daily risks include (but are not limited to) health and safety dangers, the underpayment of mineworkers, and theft of wages (and minerals).[167] Efforts to make mining safer, sustainable, and productive can complement efforts to diversify rural economies and develop alternative livelihood opportunities, and draw on the expertise of business and civil society.

There is a need for government leadership on developing structures and institutions that incentivise miners to mine and trade in accordance with the law and government policies.[168] The benefits of formalisation can be abstract, whereas targeted assistance for artisanal miners can be efficacious.[169] Such assistance could consist of: improving miners' geological knowledge; ensuring access to adequate safety equipment (boots, torches, helmets); supporting procurement of small machines; ensuring access to financial credits or loans for individual miners or cooperatives; or introducing clean technologies that optimise yield, enhance incomes, and mitigate OSH and environmental risks.[170]

4.5. The market – downstream users of Congolese conflict minerals

4.5.1. General Market Drivers and Expectations

Though supply chain assurance is possible without the use of a certification or traceability initiative, industry often prefers to use a conflict minerals traceability and/or certification service provider to cover certain activities for which they are responsible. There is a range of reasons:

- Certification systems (or 'joint initiatives' as per the OECD Due Diligence Guidance[171]) enable economies of scale and so the spreading of costs across a range of operators.

[161] Interview with interviewee no. 11
[162] ITRI 2014a
[163] Interview with interviewee no. 11; Geenen, S. and Radley, B. 2014
[164] Interview with a refiner
[165] Interview with interviewee no. 9
[166] Radley, B. And Rothenberg, D. 2014
[167] Radley, B. And Rothenberg, D. 2014
[168] Interview with interviewee no. 12
[169] Interview with interviewee no. 12
[170] Interview with interviewee no. 12; Geenen, S. and Radley, B. 2014
[171] OECD 2013, p. 19, 35

- It makes conformance with the OECD Guidance and Congolese law easier since the initiatives deeply understand what needs to be done, making them attractive to businesses for whom risk-based supply chain due diligence is new.
- It provides downstream companies with greater confidence buying minerals from supply chains covered by an upstream **conflict minerals initiative**,[172] as it provides a second level of control over and above what government is responsible for (e.g. mine site validation).
- There is access to advice since the initiatives generally provide a community of users, even if informally, and a third party to turn to for help with capacity building, communications, incident management and more.

So what is a downstream actor looking for in a conflict minerals initiative? They must be able to rely upon the data being generated; they want transparency so they may know origin, the chain of responsibility, the issues that have arisen, and what's been done about it as the basis of risk management and reporting; they want to be able to report as 'conflict-free' for the purposes of Dodd-Frank compliance; they must be able to rely upon the assurance made by the initiative; and of course they are concerned with cost. They also see the issues of conflict minerals as part of a broader set of issues in their responsible sourcing strategy, and will seek efficiency and compatibility for managing either different risks along the supply of one material *or* the same risk along the supply chains of different materials.

Downstream companies must be able to rely upon the **data** they are getting to meet their conflict minerals reporting obligations per Dodd-Frank (compliance driver), to achieve their preferred designation (typically 'conflict-free'), and to communicate to stakeholders on this issue (brand management / market driver). They are very concerned then with data *quality* (accuracy and completeness), *availability* (when they get it and through what medium, i.e. transparency and disclosure), and *manageability* (how it is presented, compatibility across different supply chains, appropriateness of aggregated statistics, ability to be manipulated to support various analytical needs, simplicity).[173] This includes data on traceability and due diligence procedures, and data and reporting on irregularities and incidents in the systems found through the due diligence conducted.[174]

Industry is also asking for as much **transparency** as possible.[175] There is, however, work to be done to improve communication between downstream supply chain tiers on the kind of data buyers need.[176] For example, a global brand expressed concerns about a lack of consistency in metrics for assessing the reliability of traceability-generated data, inconsistent data collection and management or loss of data on the way from an upstream initiative down the supply chain to the smelter / refiner, which might not be sufficient for an audit (e.g. under CFS).[177] However, CFSI, LBMA and RJC do not include requirements on data quality and availability in their normative documents, instead stating the data points needed.

With regards to data manageability, downstream industry has expressed a belief that it is simpler and ultimately cheaper if suppliers are using the same conflict minerals initiative / system principally since it makes data management easier.[178] However, there are potential technical solutions to streamline different types of data delivery and management, such as the SERCAM middleware solution (see below, Section 5.2.3).[179] Related to this, some sections of the downstream industry (particularly in the 3Ts) expressed the desire for increased **competition** between upstream conflict mineral initiatives more generally, perceiving market dominance by iTSCi as a problem.[180] Other downstream representatives from jewellery and ICT were not in favour of multiple systems, for fear of undermining the viability of iTSCi, which may undermine international markets for Congolese

[172] Interview with interviewee no. 13
[173] Interview with global brand
[174] E.g. Interview with interviewee no. 8,
[175] Interview with interviewee no. 8
[176] Interview with interviewee no. 13
[177] Interview with interviewee no. 1
[178] Interview with interviewee no. 13; Ruby Weinberg (CBRMT), Interview with interviewee no. 40; Ruby Weinberg (CBRMT), Interview with interviewee no. 43
[179] Sercam, n.d.b ; Interview with interviewee no. 28
[180] Interview with interviewee no. 3; Ruby Weinberg (CBRMT), interview with interviewee no. 39.

minerals.[181] These commentators are in favour of improving iTSCi and "not throwing the baby out with the bathwater".[182]

Very importantly, many downstream buyers also need to know if material coming from DRC can be **designated as conflict-free or not** per DFA reporting requirements. And they must be able to **rely upon any assurance** of a supplier's due diligence measures. Companies with US reporting obligations must carry out an Independent Private Sector Audit (IPSA) if they are reporting as conflict-free AND may be or are sourcing from the DRC and bordering countries. These IPSAs were voluntary until November 2014 for larger companies, and are still voluntary for smaller companies until November 2016.[183] In this case the IPSAs done for the reporting period of 2013 did not assess if risk events occurred but rather assessed "*the design of the company's due diligence procedures and whether the company performed the procedures as designed*."[184] This mimics what the CFSP essentially audits for supply chains coming from 'level 3' countries (i.e. DRC).[185] This slightly lessens the expectation for upstream companies to have *no* risk incidents in their supply chains whatsoever, with focus being on the *quality* of their due diligence procedures rather than the *outcome* of these procedures.

Additionally, downstream companies are concerned that the **cost** of upstream due diligence not be passed to them since they already endure additional costs for sourcing from the DRC and neighbouring countries due to the enhanced due diligence, reporting, and potentially audit requirements associated with the DFA and proposed EU regulations.[186] The EC may yet include incentives for investment in enhanced upstream due diligence by European businesses if it makes its Regulation voluntary and seeks to reward importers sourcing from conflict-affected and high-risk areas (i.e. DRC and the Great Lakes Region) – creating quite the opposite incentive structure to the DFA.

Lastly, and per our commentary on the OECD Guidelines and UNGPs, downstream actors are increasingly seeking to do **due diligence on a broader set of issues** than those captured in the OECD Guidance and the conflict minerals initiatives designed to aid its implementation. In the words of the one of the world's biggest refiners, "*In my opinion, it's an error [for conflict minerals initiatives] to not include environment and human rights. … We are one of the major suppliers to the western jewellery industry and they of course point to these aspects as well. … Talking with our clients from bullion banks, they too are looking more and more towards the topics of environmental protection and human rights*."[187] Until the GDRC starts to address these issues systemically and/or responsible sourcing initiatives that address them are applied in DRC, a range of major brands will continue to avoid DRC and seek other sources, especially for gold. [188]

What does this mean for DRC?

On data reliability, DRC could aggregate and publish data, statistics and reports of relevance to downstream buyers of 'conflict minerals' on its website (www.mines-rdc.cd). This could act as a portal of data gathered from each of the initiatives that can be made public. This and more sensitive data could also then be passed to the IMCA and database of the RCM in aggregated and disaggregated form. DRC could include data disclosure requirements in the MoUs they have with initiatives, including requesting certain data points, and types of data to enable standardisation of data to ensure comparability and meaningful aggregation. This act would also support improved communications and thus transparency, to aid downstream businesses.

Regarding introducing competition into the domain of tracking and traceability, DRC has already moved from a one-system to multi-system sector, having signed an MoU with GeoTraceability in

[181] For example, Interview with interviewee no. 6, and interviewee no. 1.
[182] Interview with interviewee no. 1, , Ruby Weinberg (CBRMT), Interview with interviewee no. 40.
[183] Usvyatsky, O. 2014
[184] Usvyatsky, O. 2014
[185] CFSI, n.d.a, Annex C.
[186] See http://www.payson.tulane.edu/news/new-study-gauges-corporate-resources-mobilized-comply-conflict-mineral-disclosure-law for summary of costs of DFA: "Issuers each invested an average of $545,962 worth of time and effort to comply with the law"
[187] Interview with refiner
[188] Interview with refiner

December 2014. The process for applying to operate as a traceability system in DRC should be published on www.mines-rdc.cd to enable other initiatives to do this efficaciously (in the interest of ultimately reducing upfront costs and the price that industry will have to pay for implementation).

In order for companies to be able to rely upon assurance systems operational in DRC, DRC must insist that any initiative with which it signs a Memorandum of Understanding has undergone an OECD DDG conformance check by a knowledgeable and credible independent body to ensure that, once operational, the initiative will be judged as adequate by the market. Letters of support are, of course, helpful but a conformance check has more weight. GDRC must also seek to understand the added value this initiative will bring to Congolese stakeholders *and* the market in order to ensure it is creating meaningful competition that will actually address existing gaps or needs of stakeholders. This is crucial since economies of scale are a big factor in feasibility and cost effectiveness of iTSCi, and introducing competition that does *not* add value by comparison could ultimately be less beneficial for stakeholders.

Of course downstream businesses are concerned about the cost of implementation of initiatives, but also wish to ensure that the cost of an added due diligence burden upon the market's insistence is fairly distributed in the upstream segment and that the most vulnerable in the supply chains (the miners and their families) do not bear unreasonable costs. As part of its consideration as to allowing new initiatives to operate in DRC, GDRC could also demand that these initiatives present information on their business model including how they will be financed (start-up capital and ongoing income), and how profits or excess income will be distributed to ensure costs are reasonable and fairly distributed. Donors may wish to work with GDRC to elaborate on how this can be done appropriately.

Lastly, DRC has an advantage compared to other countries in helping downstream companies that are seeking to conform with the UNGPs and OECD Guidelines do so. This is because the basic systems that have been built for enabling supply chain due diligence on conflict minerals for the risks in Annex II provide a working system for expanding into management of other issues of concern to the market and to the Congolese people. Congo can incentivise and enable existing systems to build risk assurance of broader issues into their systems in order to service this market demand. If Congo does this, it should communicate it to the market as part of a broader vision for enabling sustainable mining in DRC.

4.5.2. 3T Sector Market Drivers and Expectations

There are different market environments for the different minerals (tin, tantalum, tungsten) sourced from DRC. DRC's attractiveness as a source country for each of these also determines the extent to which the downstream industry is ready to engage in and support traceability and certification in DRC.

DRC presently represents less than 5% of global tin production[189] and is likely to increase in significance, particularly as key deposits are industrialised, e.g. Walikale. DRC's geological potential for tin reserves is good: in late 2014 Alphamin announced promising results of their prospecting in Bisie.[190] This makes DRC of large strategic importance to the international tin sector in the medium-to-long term and provides a business case for tin sector operators to improve the sustainability performance – and thus accessibility and credibility of DRC's tin supply chains.

DRC presently represents 12% of global tantalum production[191] and is said to have important reserves, however Central Africa as a region only hosts an estimated 9% share of the world's tantalum resources (behind South America, Australia, China and South East Asia, Middle East and Russia).[192] DRC and Central Africa became an increasingly important source of tantalum in 2008-2009, when production in Australia and Canada declined,[193] and DRC as a source has helped stabilise tantalum prices internationally since it has historically served as a 'spot market': An influencing factor on how

[189] Bruce Curling, personal communication, 02.12.2014. According to USGS Statistics from 2012 DRC represents less than 2% of global tin production (USGS 2012)
[190] ITRI 2014a
[191] USGS 2012
[192] Polinares 2012; Burt, R.2011
[193] Polinares 2012

and why tantalum buyers are keen to source from DRC is that, unlike tin traders, tantalum traders are not able to forward plan using the London Metal Exchange to introduce price certainty into their trading.[194] This commercial incentive must be qualified with a compliance imperative: tantalum will only take advantage of this opportunity so long as there are no violations such as breaching sanctions or a violation under the DFA, [195]

DRC presently represents less than an estimated 3% of global tungsten production, [196] and is of small importance in terms of reserves (the largest deposits are found in China, followed by Canada, Kazakhstan, Russia, and the U.S.).[197] Given the abundance – and relative simplicity – of alternative sources through which demand can be met, DRC is of low importance to the tungsten market.[198] Tungsten buyers thus need a strong incentive to build sourcing relations with producers in DRC.

4.5.2.1. The Conflict-Free Sourcing Initiative

At the level of the smelter, the audit of preference for the 3Ts is the Conflict-Free Smelter Program (CFSP). There is presently no other conflict minerals audit system oriented at 3Ts smelters besides iTSCi's processes that dovetail directly with, and complement, the CFSP as well as meeting all OECD requirements. For this reason, the requirements of the CFSP are a crucial determinant of what is expected of DRC businesses if they wish to deliver into 'responsible' markets.[199]The Conflict-Free Sourcing Initiative (CFSI) provides a suite of resources for companies addressing conflict minerals issues. Amongst its tools is a third party audit of a smelter's procurement and processing activities, called the Conflict-Free Smelter Programme (CFSP), a voluntary program that "determines if smelters and refiners have sourced conflict-free minerals."[200]

The CFSP is applicable to tin, tantalum, tungsten and gold smelters/refiners globally. As of November 17th 2014, 120 smelters or refiners had been audited as compliant. This is more than double the numbers audited as of August 2013 showing a significant increase in coverage and thus influence in the past year.[201]

Table 6 : The number of active and compliant CFSP smelters and refiners

#	Indicator	Ta	Au	W	Sn	Total
1	Number of smelters/refiners currently active in CFSP[202]	44	62	15	48	**168**
2	Number of smelters/refiners compliant	39	52	7	22	**120**

The CFSP aims primarily at assuring the smelters' and refiners' ability to report as conflict-free and in compliance with the Dodd Frank Act.[203] CFSP relies on upstream in-region chain of custody and traceability systems. It compels smelters/refiners to source from producers, traders and places where such traceability/chain of custody programs are implemented and which can provide chain of custody back / traceability to the mine *as well as* prove the management of risks in line with the OECD Guidance.[204] In order to attain the CFSP audit outcome of 'conflict-free', a smelter is expected to provide "sufficient evidence to demonstrate management commitment to conflict-free sourcing, existence and implementation of processes and systems to support conflict-free sourcing, ability to account for all inputs and outputs during the audit period, existence and implementation of processes and systems to demonstrate the appropriate level of sourcing traceability and origin determination. "[205] Consequently, CFSP was largely designed to fit efficaciously with iTSCi to enable

[194] Burt, R.2011
[195] Interview with interviewee no. 3
[196] Seddon, M. 2013
[197] USGS 2014
[198] For example Ruby Weinberg (CBRMT), interview with interviewee no. 44
[199] Interview with interviewee no. 4
[200] Electronic Industry Citizenship Coalition Inc; Global e-Sustainability Initiative 2012
[201] Levin and Cook, 2013 based on Bob Leet and Michael Rohwer, pers. Comm with Levin, 30th August 2013.
[202] The number of active smelters/refiners (item 1) is the sum of compliant smelters/refiners plus smelters/refiners active in the CFSP. Per http://www.conflictfreesourcing.org/program-indicators/ 19.11.2014.
[203] Levin, E. and Cook, R. 2013
[204] Levin, E. and Cook, R. 2013
[205] CFSI, n.d.a.

an integrated assured supply chain from mine to smelter.[206] The CFSI recently endorsed the Better Sourcing Program as meeting the requirements of the CFSP audit protocols in late 2013.[207]

The CFSP classifies DRC as a 'level 3' country[208], which means the due diligence expectations on the smelter is higher if DRC is an origin for material. Smelters/refiners must provide specific additional documentation for 'level 3' material (which thus translates into the documentation an upstream company must provide). They must show conformance with the OECD Guidance for themselves and their sources either by individually having their sources assessed against the OECD Guidance by an independent third party **OR** by using an assessed-conformant scheme, such as iTSCi or BSP, to do this for them.[209]

4.5.3. Gold Sector Market Drivers and Expectations

DRC currently plays a rather minimal function in the international gold sector. It does not feature among the largest gold producing countries (its production amounts to less than 1% of world production)[210], nor on the list of countries with the largest gold reserves.[211] Larger companies currently producing gold in DRC are Banro, Randgold and Anglogold Ashanti, and Kilo Goldmines, and an estimated 10 tons per annum are produced by artisanal and small-scale miners. [212]

While presently there is no upstream certification and traceability system for gold operational in DRC, "audits of gold refiner due diligence now cover approximately 85-90% of the gold market" internationally.[213] A range of possible responsible sourcing schemes exist for gold refiners, designed either entirely or partially to enable sourcing of minerals from conflict-affected and high-risk places, such as DRC: the Conflict-Free Smelter Program (see above), the LBMA Responsible Gold Guidance, the RJC Code of Practices and Chain of Custody Standard (see section 4.6.1), the Dubai Multi-Commodities Commission Responsible Sourcing Protocol, and the Signet Responsible Sourcing Protocol.[214] The requirements of these schemes can be taken as an indication of what the downstream gold industry expects potential upstream traceability and certification initiatives to deliver.

The *London Bullion Market Association (LBMA)* is an international trade association representing the gold and silver bullion market, with membership comprising the majority of "gold-holding central banks, private sector investors, mining companies, producers, refiners and fabricators."[215] The LBMA requires all refiners to comply with the Responsible Gold Guidance (RGG) as part of their qualification to be on the 'Good Delivery List'. The 'Good Delivery List' "is regarded as the only globally accepted accreditation for the bullion market, ensuring that the wholesale bullion bars traded in the market meet standards and quality required by Good Delivery."[216] Even though the RGG is based on the OECD Guidance its requirements go beyond and encompass requirements regarding anti-money laundering, combatting terrorist financing, as well as Know Your Customer management systems and regulations.[217] Currently, 73 gold refiners are 'Good Delivery'. The LBMA is an enormously influential market player for gold, clearing between $20m billion to $25 billion worth of gold per month in 2014;[218] any Congolese gold producer or trader seeking to market to the world's major refineries will need to deliver chain of custody and due diligence information to them, per the RGG.

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[206] Levin, E. and Cook, R. 2013; Bob Leet and Michael Rohwer, pers. Comm with Levin, 30th August 2013. See also Roesen and Levin, 2011.
[207] CFSI 2013
[208] "The Democratic Republic of the Congo (DRC) and its nine adjoining countries as outlined in Section 1502 of the Dodd Frank Act. These include Angola, Burundi, Central African Republic, DRC, Republic of the Congo, Rwanda, South Sudan, Tanzania, Uganda, and Zambia. These are also commonly referred to as "covered countries" in the Dodd Frank Act Section 1502." In CFSI, n.d.a..
[209] Roesen and Levin, 2011. See also CFSI n.d.a
[210] Dranginis, H. 2014
[211] USGS 2014b
[212] Dranginis, H. 2014; USGS 2014b
[213] LBMA and RJC n.d.a
[214] Apart from the SRSP, these initiatives are described in some detail in Levin and Cook 2013.
[215] LBMA n.d.a
[216] LBMA n.d.b
[217] Levin and Cook 2013
[218] Volumes were up to double this amount in more recent years. LBMA n.d.c

The *Dubai Multi Commodities Centre (DMCC)* is an initiative by the Government of Dubai tasked with developing Dubai into a global trading hub for commodities. The volume of gold traded through Dubai has grown from $6 billion in 2003 to $75 billion in 2013, with nearly 40% of the world's physical gold trade passing through Dubai in 2013.[219] Dubai is one of the most important trading points for Congolese gold, and has come under a lot of heat from NGOs to improve its regulations and procedures for preventing the laundering of conflict gold into legitimate supply chains.[220] DMCC's Practical Guidance for Market Participants in the Gold and Precious Metals Industry (DMCC Guidance) is mandatory for all DMCC member refineries on its 'Dubai Good Delivery' list. The DMCC Guidance aims at setting standards for due diligence when sourcing gold from conflict-affected and high-risk areas. It builds largely on the recommendations of the OECD Guidance, but also includes requirements on Know Your Customer and Anti-Money Laundering procedures.[221] Three of Dubai's refiners are on the Dubai Good Delivery List, along with twelve others, including major brands like Rand Refinery, Pamp, Argor-Heraus, Metalor.[222] Two refiners are Market Deliverable Brands, Fujairah Gold FZE and Kaloti gold, meaning that they conform with the DMCC Guidance for Market Participants.[223]

In the first filings under section 1502 of the DFA, 301 out of 1313 filings reported as 'DRC conflict-free'.[224] Of these 301, 300 were able to determine their 'DRC conflict-free' status based on their Reasonable Country of Origin Investigation alone. Only four companies of the 1313 used an Independent Private Sector Audit to verify their findings – Signet Jewelers, Kemet Corp, Intel, and Royal Philips.[225] Of these, Signet reported its gold as DRC Conflict-Free, Philips' gold is not from DRC or the adjoining countries; Intel did not specify countries of origin for gold and Kemet does not deal in gold.[226] In other words, only Signet, the world's largest jewellery company, could source from DRC *and* claim to be DRC Conflict-Free. This is significant. Signet Jewelers has achieved this by sourcing its Congolese gold only from large-scale mines through Randgold Refinery, which is an LGD and DGD refinery based in South Africa.[227] Randgold sources gold mined by ASM and LSM all over Africa (as well as scrap gold), segregating its gold into these two streams allowing the LSM gold to be LBMA Good Delivery (so audited against the LBMA RGG, which has conflict free due diligence requirements). Signet's influence extends beyond this direct relationship with Randgold due to its creation of the *Signet Responsible Sourcing Protocols* (SRSP), which outline "practical procedures" to "reasonably ensure any gold, tin, tantalum, or tungsten … in products supplied to Signet are recognized as conflict-free."[228] The SRSP was effective as company policy from 1st January 2013, and "requires all suppliers to certify and independently verify that supplies to Signet are compliant with the SRSP."[229] Signet's annual pro formal sales are $6 billion, and was recently announced as a "top jeweler supporting conflict-free gold trade" by the Enough Project.[230]

Despite these schemes, downstream (jewellery) companies find it difficult to persuade their gold suppliers to seek certification through a sector-specific system like the RJC or World Gold Council's Conflict-Free Gold Standard, as the suppliers often see more costs than benefits most particularly due to additional audits.[231] Nonetheless, the number of entities certified under these schemes is growing.

[219] AlArabiya 2014
[220] Global Witness 2014b, Bowers, S. 2014, PAC 2014
[221] Levin and Cook 2013
[222] Active DGD Gold* List, at http://www.dmcc.ae/gold-responsible-sourcing-precious-metals (26.11.2014)
[223] Active MDB Gold* Members, at http://www.dmcc.ae/gold-responsible-sourcing-precious-metals (26.11.2014), and AlArabiya 2014
[224] This number is lower than expected, because uncertainty over the 'not DRC conflict-free' designation meant that many companies potentially sourcing from DRC would have chosen an 'undeterminable' designation and so have not been obliged to carry out further due diligence on their supply chains. The 'undeterminable' designation is a transition designation designed to buy issuers more time to get their supply chain management systems in place for effective supply chain due diligence.
[225] Usvyatsky 2014.
[226] Signet Jewelers 2014; Kemet 2014; Intel 2014; Royal Philips 2014.
[227] Interview with interviewee no. 6
[228] Signet Jewellers, n.d.a
[229] Signet Jewellers, n.d.a
[230] Enough Project 2014
[231] Interview with interviewee no. 6,; Interview with interviewee no. 45

Downstream companies also expect traceability and certification systems to be harmonised and cross-recognised in order to keep certification as cost-effective as possible to incentivise participation. [232] Harmonisation of upstream conflict minerals systems is expected to improve once all aspects of the RCM become operational *and* fully functional, as other initiatives may be able to abandon or substitute certain components for those being done under the RCM.

4.6. Using Voluntary Compliance Frameworks that Support Industry Actors to Mine and/or Source Responsibly in DRC

There is a range of voluntary standards that could be used to exert controls and manage risk better in DRC's minerals sector. Implementation of any of these would support conformance with the OECD Guidance and all go over and above the risks covered in Annex II; all but IRMA include a chain of custody /traceability mechanism. The GDRC could promote their use by ASM organisations, mining companies and/or traders operating in DRC, and communicate this prominently to trading partners, businesses in DRC and their stakeholders in order to start to address some of the additional issues that are a concern to the market. This section considers in what ways each of these systems could be useful in this regard.

4.6.1. RJC's Code of Practice and Chain or Custody Standards (gold, diamond, platinum)

The RJC is a London-based not-for-profit standards setting and certification organization. The RJC was established in 2005 to reinforce consumer confidence in the jewellery industry by advancing responsible business practices throughout the supply chain. Membership is open to organizations in any sector of the jewellery industry supply chain (from mine to jewellery retailer) on a voluntary basis. Members commit to adherence to the RJC Code of Practices (CoP) in their own business operations and are required to undergo audits on a periodic basis by external auditors accredited by RJC to verify conformance with the CoP. The Council launched a voluntary Chain of Custody (CoC) Standard in March 2012. The CoP can apply to entities dealing with diamond, gold or platinum group metals, but the CoC is for gold and platinum group metals only (platinum, palladium, and rhodium). The RJC recognizes comparable standards from other initiatives; for example, for gold refiner due diligence audits compliance with the DMCC, CFSP, and LBMA standards satisfies certain requirements of the CoP and CoC,[233] and the RJC recognizes the Fairtrade and Fairmined standards as Recognised Responsible Mining Standards for artisanal and small-scale producers.[234]

The RJC Code of Practices includes a broad suite of provisions for managing risk and optimising development in the following areas:

- general provisions (legal compliance, policy and implementation, reporting, financial accounts);
- responsible supply chains and human rights (business partners, human rights, sourcing from artisanal and small-scale mining, community development, bribery and facilitation payments, money laundering and finance of terrorism, security, provenance claims);
- labour rights (general employment terms, working hours, remuneration, discipline and grievance procedures, child labour, forced labour, freedom of association and collective bargaining, non-discrimination);
- health, safety and environment (health & safety, environmental management, hazardous substances, wastes and emissions, use of natural resources);
- diamond, gold and platinum group metal products (product disclosure, and others not relevant to gold);

[232] Interview with interviewee no. 6,

233 Responsible Jewellery Council, n.d.c

234 http://www.responsiblejewellery.com/recognised-responsible-mining-standards/ Accessed 21 May 2014. Responsible Jewellery Council, n.d.d Responsible Jewellery Council, n.d.d

- responsible mining (EITI, community engagement, indigenous peoples and free prior informed consent, impact assessment, artisanal and small-scale mining, resettlement, emergency response, biodiversity, tailings and waste rock, cyanide, mercury, mine rehabilitation and closure).

The RJC Chain of Custody standard includes provision on chain-of-custody management, systems to confirm eligibility of material, and issuing chain-of-custody documentation.

For Congolese gold mining and trading companies, membership in the RJC and voluntary conformance with the CoC would mean not only that they were operating in conformance with the OECD DDG, but that they are also addressing the other risks that the market and other stakeholders see as being inadequately addressed in conflict minerals due diligence presently (see above). The Government of DRC could provide incentives to mining companies and gold traders that seek to be RJC certified.

The RJC also goes over and above any other standard in terms of the requirements it places on refiners.[235] Some of the world's biggest refiners are RJC members: PAMP SA, Argor-Heraeus SA, Johnson Matthey & Brandenberger, Metalor Technologies SA, Rand Refinery (Pty) Ltd, and more.[236] Valcambi is also CoC certified.[237] Some RJC refiners have a history of sourcing in DRC (e.g. Argor-Heraeus) or have supported responsible sourcing initiatives recently (e.g. PAMP). Promoting the use of the RJC to industrial mines and traders operating in DRC could build the confidence of these refiners to source once again from DRC.

One large caveat is that the RJC is not directly applicable to artisanal and small-scale mining organisations. Instead, it has a process for recognising other responsible mining standards which allows ASM organisations certified against these to supply gold to RJC members and still have their mineral conform to the RJC CoC. This is relevant where there is a possibility of gold ASM being legalized by selling gold they mine on an LSM concession to the LSM. If RJC members are an interesting target market for any gold supply chain initiative operating in DRC, it may be prudent for this initiative to seek recognition by the RJC in order to build that bridge for responsible sourcing to RJC certified traders and refiners.

4.6.2. The IRMA Standard currently in development (all minerals)

The Initiative for Responsible Mining Assurance was founded in 2006 by a coalition of trade unions, mineral and metal purchasing businesses, NGOs, affected communities, mining companies. The Standard is focused on improving social and environmental performance in the sector including labour, indigenous people and cultural heritage, and human rights, conflict response, pollution control and site closure. Its requirements are more far-reaching in certain cases than those of the Responsible Jewellery Council vis-à-vis impacts on local communities. It includes a set of requirements on mining and conflict-affected or high-risk areas to enable mines to operate in such areas. The IRMA standard was put out for public consultation in July 2014. IRMA is more multi-stakeholder in approach and practice than the RJC, whose multi-stakeholder arm is its standards committee. This has led to IRMA taking far longer to negotiate and develop its requirements. However, IRMA has announced it expects to begin certifying mine sites in 2016 and is looking for candidate mines at present.

IRMA has a chapter on conflict-affected and high-risk areas which sets requirements to mining companies operating in such a context. IRMA is considering developing a chapter on how large-scale mining companies should deal with artisanal and small-scale miner stakeholders.

Like the RJC, IRMA is oriented at corporate larger, professionalised mining entities and so is not applicable to ASM organisations. However, the IRMA standard could be used as a *tool* by concession-

[235] Levin and Cook, 2013.
[236] http://www.responsiblejewellery.com/members/?cat=diamond-gold-andor-platinum-group-metals-producer, accessed 23.03.2015
[237] http://www.responsiblejewellery.com/members/chain-of-custody-certified-entities/, accessed 23.03.2015.

holders, like MMR or Shamika, who wish to know what good practice would involve and seek to implement what is a.) material and b.) feasible.

4.6.3. The World Gold Council's Responsible Gold Guidance

The World Gold Council (WGC) is a gold industry association and market development organisation. Its goal is to provide industry leadership and stimulate demand for gold by working within the investment, jewellery and technology sectors, as well as engaging with governments. The Council's 20 members include the world's leading gold mining companies.[238]

The World Gold Council's Responsible Gold Conflict-Free Gold Standard was designed to act as an 'Industry Programme' as defined by the OECD Supplement on Gold, to '*support and advance the recommendations of the OECD Due Diligence Guidance.'*[239] The Conflict-Free Gold Standard intends "to provide a common approach by which gold producers can assess and provide assurance that their gold has been extracted in a manner that does not cause, support or benefit unlawful armed conflict or contribute to serious human rights abuses or breaches of international humanitarian law."[240] The Standard can be used on a voluntary basis by WGC members or other gold producers.

The final standard was published in 2012, following extensive consultation and two pilot case studies, in Mexico and Ghana. The first year of implementation, 2013, was followed by the first public disclosures on conformance and external assurance in 2014. The World Gold Council does not act as a certifying body; instead, members who apply the Standard are expected to report publicly on conformance and annually disclose their reports on the company's website. Like the OECD DDG, the Guidance is not intended to exclude output from conflict areas, but to ensure that mining is not funding armed groups.[241]

The CFGS states it is applicable to ASM but in practice its application would not be possible by small producers, since the standard works on the premise that a mining entity can produce its own conflict minerals report, on which an auditor provides an assurance statement. It is therefore more suitable for corporate entities familiar with financial reporting and financial auditing. Where it may come in useful for DRC's ASM sector is that it provides scope for enabling Conflict Free Gold Mines to source from ASM through Part D, "Externally Sourced Gold". Should the Government of DRC therefore wish to incentivise large-scale gold mining companies to source from ASM operating on their concession as an avenue for creating a formal route to market for ASM, then incentivising them to implement the WGC standard could provide a framework for mandating this.

4.6.4. The Fairmined Standard for Gold and Associated Precious Metals (ASM gold and associated by-products)

The Fairmined Standard for Gold was developed by the Alliance for Responsible Mining (ARM) to create opportunities for artisanal and small-scale miners and their communities. The Standard explicitly excludes medium and large-scale industrial mining. ARM's Application Committee determines if an applicant ASMO qualifies for Fairmined certification taking into consideration national legislation and productivity. The ASMO is responsible for implementing the high standards of the certification as relates to environmental, social, labour concerns.[242] The Standard also outlines requirements and market models for market actors (Fairmined Operators) who can source the materials mined by the Fairmined ASMOs.[243] A central facet of the Fairmined model is that the ASM

[238] World Gold Council, n.d.a

[239] World Gold Council; 2015. "Gold and Conflict." Gold Facts. http://www.goldfacts.org/en/gold_and_conflict/ .[accessed 22 March 2015]

[240] World Gold Council 2012

[241] Heyman, Terry. World Gold Council Conflict-Free Gold Standard. LBMA Conference, Rome. 1 October 2013 http://www.lbma.org.uk/assets/Speeches/SC_3_Heymann.pdf [accessed 22 March 2015]

[242] ARM 2014.

[243] ARM 2015. Fairmined Standard. *Our Work*. http://www.communitymining.org/en/fairmined-standard [Accessed 22 March 2015]

Organisations get a fair price *and* a premium for social investment. The Fairmined Minimum Price is set at 95% of London fix, and the Fairmined premium is fixed at $4,000 per kg of gold.[244]

Any entity along the supply chain, including refiners, traders, manufacturers and casters, can become an authorized Fairmined Operator.[245] In addition to meeting certain standards, the authorised operators help the ASM organisations access the market and add value to their gold by transforming it into alloys, wire, sheer and casting grain for jewellers. Only Fairmined Licensees can trade in Fairmined Gold or make claims about its use. Licensees will comply with the requirements outlined in the Fairmined Standard, the Mark Manual, and the License Agreement to ensure credibility.[246]

Fairmined's business model incorporates partnerships with private sector organisations from the jewellery, electronics, and finance. These partnerships can be expressed in different ways and include corporations who volunteer or offer pro bono support, as well as those that purchase Fairmined gold.[247] Fairmined's flagship partner is Chopard, a Swiss manufacturer of watches and jewellery. In addition to financially supporting mining cooperatives in Colombia and Bolivia, Chopard sources Fairmined gold for use in their products. Chopard, as a globally recognised luxury brand, also contributes prestige and positive PR to the brand, for example Cate Blanchett has worn earrings made from Fairmined gold to the Golden Globes.[248]

1,270 individuals are employed through four certified mines in Peru, Colombia, and Mongolia.[249] ARM is also working to certify other ASM Organisations in these countries, as well as in Senegal, Burkina Faso, and Ecuador The Alliance for Responsible Mining carries a wealth of expertise in how to organise and formalise ASM, including through a route to certification. Related to this, ARM has recently provided consulting services on ASM in DRC, providing ARM with the understanding necessary to consider operating in DRC.[250] It is possible for such support to come from donors, a buyer, or a foundation. A precedent exists in Mongolia for a development cooperation programme to enable the certification of an ASM Organisation over time. There, Tsakhan Tsakhir, who had been operating informally, was supported to become Fairmined certified (which they achieved in early 2015) by the Swiss Development and Cooperation's Sustainable Artisanal Mining (SAM) Project. SAM works closely with the Ministry of Mines and in particular its ASM unit – MRAM – to support the legalisation and formalisation of ASM. Lessons from this experience could be explored to consider how the Government of DRC, with the appropriate financial support, could work with ASM Organisations in DRC to enable them to become Fairmined certified.

4.6.5. The Fairtrade Standard for Gold and Associated Precious Metals (ASM gold and associated by-products)

Fairtrade is an internationally recognized certification scheme for small-scale producers of agricultural commodities and precious metals. The model connects producers, buyers, and consumers by offering a traceable and audited chain of custody for responsibly produced raw materials, as well as third party assurances and a consumer certification mark. The Fairtrade Standard works with artisanal and small-scale miners organised into established community-based organisations – it will not work in rush mining contexts. The ASM are audited against over 170 performance and management-systems standards that include:

- General requirements (certification, members are ASM, ASM organisation responsibilities, relationship with the local and indigenous communities),
- Trade (traceability, product composition, sourcing and market information, buying from certified producers, use of the Fairtrade trademark)

[244] ARM 2014, Requirements 5.2.1 and 5.2.5
[245] Fairmined 2015a.
[246] Fairmined 2015a.
[247] ARM 2015a.
[248] ARM 2015b.
[249] Fairmined 2015b.
[250] Barreto, Laura. 2014. Presentation to plenary, Tuesday 4th November 2014 at 8th ICGLR-UN-OECD GOE Forum on Responsible Mineral Supply Chains at Kinshasa, DRC.

- Production (management of production practices, environmental protection, labour conditions)
- Business and Development (development potential, democracy, participation and transparency, non-discrimination, pre-finance)

As with Fairmined, the Fairtrade ASMOs are guaranteed a minimum price (also 95% of London fix) and a Fairtrade premium for the gold they sell to a Fairtrade certified trader at a value of $2,000/kg.[251] Fairtrade offers a range of supply chain models: the classical licensee system (full traceability from mine to market); the Gold Sourcing Program Volume model (full traceability from mine to refiner; mass balance at refiner); and the goldsmith registration scheme (to enable small jewellers to use only small volumes of Fairtrade gold).

Currently, two mines in Peru are certified as Fairtrade Standard supplying around 600kg gold per annum, with an additional Peruvian mine expected to be certified in April 2015. Meanwhile, nine mines are being piloted in Kenya, Tanzania, and Uganda with certifications expected in summer 2015. Fairtrade gold products are sold in a range of markets, including Australia, Belgium, Canada, Denmark, Hong Kong, the Netherlands, the United Kingdom, and soon Austria, Germany, Italy and the USA.[252] Supply chain operators, such as traders, refiners, jewellery manufacturers, that are audited against the Fairtrade Standard work in a wider range of countries.

Fairtrade International is committed to demonstrating that ASM operating in conflict-affected and high-risk areas can not only conform with the OECD Guidance and national law, but can go well beyond this in terms of responsible mining.[253] In 2014 they went through a conformance check against the OECD Guidance, and revised their Standard to ensure ASM organisations, and all operators downstream of them would be able to demonstrate conformance with the OECD Guidance as part of their Fairtrade certification audit.[254]

At a recent webinar, Fairtrade announced their willingness to operate in DRC, inviting any Congolese ASM gold organisation that is interested in becoming Fairtrade certified to use their standard and apply for certification.[255] In reality, what would need to happen is an ASM Organisation would need to work with a 'Local Support Organisation', who would build their capacity to come to compliance with the Fairtrade standard. This 'LSO' could be a trading partner (e.g. concession-holder or exporter), a local NGO, an international NGO, or even a consulting firm. It is conceivable for Fairtrade Africa to provide support to this LSO and Congolese ASMOs, but funding would need to be found for this also. It may be possible to find funding through an initiative such as Solutions for Hope, the Public Private Alliance for Responsible Minerals Trade, a Donor Programme seeking to pilot new programmes in DRC (e.g. USAID through CBRMT), or philanthropic foundations. Fairtrade Africa has used a grant from Comic Relief, worth nearly £500,000, to bring 9 ASMOs to compliance with the Fairtrade Standard across three countries in three years. It is now working on developing a 'Centre of Excellence' in one of these countries to enable the Fairtrade miners to share best practices in risk management and development optimisation with other ASM in their region, and to enable further capacity building of the Fairtrade miners as part of their ongoing improvement.

4.6.6. Incentivising Existing Initiatives to Work on 3Ts

All of the standards in the above section are for gold mining and sourcing. Only the IRMA standard is applicable to the 3Ts. There are three options for getting the 3Ts to start to address the broader human rights and environmental priorities of the market.

1. *CTC should scale up and work with more mines in DRC.*

[251] Fairtrade International 2013.
[252] Gonzaga Mungai, pers. Comm. to Estelle Levin 27.03.2015.
[253] Levin, Estelle and Amy Ross; 2015. "An Overview of the Fairtrade Standard for Gold and Precious Metals". SRZ Webinar. 19 February 2015
[254] ELL led this work for Fairtrade.
[255] Levin, Estelle and Amy Ross; 2015. "An Overview of the Fairtrade Standard for Gold and Precious Metals". SRZ Webinar. 19 February 2015

2. *iTSCi could expand issue coverage beyond what is in the OECD DDG Annex II to include other human rights and environmental issues per 4.5. iTSCi would likely seek financial support to do this.*
3. *Other initiatives that already cover all minerals could be piloted in DRC for the 3Ts, e.g. the Better Sourcing Program, IRMA*
4. *Other initiatives that presently do not have 3Ts in scope could be incentivised to adapt their systems to the 3Ts sector.* The most likely candidates are the Development Diamond Initiative, Fairtrade and Fairmined. DDI is already operational in DRC implementing a PROMINES project to register and formalise ASM gold miners, amongst other diamond-related projects, DDI operates its 'Development Diamonds' Project in Sierra Leone; its standard is not publicly available for analysis, however. Fairtrade and ARM are open to working in new minerals. They would likely seek to build on existing systems, e.g. iTSCi, noting that for tin they would more or less have to. In general, the necessary conditions would be that the market would see value in this and would be willing to work with these new systems; there would need to be producer organisations – and other supply chain operators - able and willing to participate; there must be an enabling operating environment, which is where the role of GDRC is paramount; and funding would, of course, be essential.

5. 3T Initiatives that are operational and seeking to be operational in DRC

This chapter considers the sustainability performance and suitability for the DRC context of four certification and due diligence programmes, of which three have a proprietorial traceability scheme. These initiatives are assessed using the sustainability criteria outlined in Chapter 2.2: credibility, efficacy, feasibility. Besides the RCM, there have been only two certification initiatives operational in DRC since 2010: iTSCi and Certified Trading Chains. The Better Sourcing Program and MineralCare are untested in this context.

Three traceability tools are also considered: GeoTraceability, MetTrak and Sercan. Of these, the first two have been piloted briefly in DRC.

The Key Elements of these initiatives and their Transparency and Disclosure Policies and procedures are assessed and explained in greater detail in Annexes C, D and K respectively.

5.1. Due Diligence and/or Certification Programmes incorporating Traceability

All the existing and potential certification systems for the 3Ts offer traceability as part of their broader certification solution; three offer a proprietorial traceability solution (e.g. iTSCi, MineralCare and CTC's Analytical Fingerprint Technology); CTC and BSP allow for traceability to be provided by multiple providers.

5.1.1. BGR's Certified Trading Chains

Summary Overview

Certified Trading Chains (CTC) is the Congolese "national certification scheme"[256] currently being rolled out in Katanga, Maniema, as well as North and South Kivu.[257] It was adapted to the DRC context and harmonised with national labour and mining laws.[258] It was first incorporated into law in the Certification Manuals of 2011.[259] At the same time, it was a key text for the mining standards of the Regional Certification Mechanism. In 2012 it was then partially reincorporated into DRC law, via arrêtes 0057 and 0058 which were designed to domesticate the RCM and appear to supersede the 2011 certification manuals.[260]

CTC focuses on mining companies and sites although it certifies the supply chain from mine to export.[261] It thus complements the RCM's third party exporter audit to produce a completely assured supply chain for simple chains involving mine and exporter. It is designed to foster traceability, transparency, and ethical production standards in the artisanal and small-scale mining sector.[262] The CTC also is a Standard, and therefore a tool, with which mining companies can measure themselves and the government can regulate supply chain due diligence and encourage improvements and formalisation in the artisanal mining sector.[263]

Whereas other conflict minerals initiatives are singularly concerned with chain of custody and risk management of the most serious human rights abuses and benefits to illegal armed groups, CTC additionally considers labour and working conditions, the behaviour of security forces, community consultation and development, and environmental protection. The Better Sourcing Program (BSP), the latest initiative to emerge, has taken inspiration from this for its own concept (see below). The CTC's scope therefore matches up better with downstream buyers' broader expectations for sourcing responsibly in line with the normative frameworks described in chapter four.

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[256] BGR 2015. Le systeme de certification national congolais: le CTC. Flyer for distribution. 16 March 2015
[257] Sterbik, Nathalie 2014. "Complément d'informations au manuel de certification CTC de la filière artisanale stannifère de la RDC" Auditor's Guidelines.
[258] Code du Travail, du Code Minier et du Reglement Minier. (BGR 2015)
[259] Government of RDC 2011a and 2011b.
[260] The 3Ts certification manual says, "The same as with every normative document, this reference document is under evolution and, when a regional certification document is developed and recognised by the council of CIRGL, that document will prevail all documents used on national level. In that event, the holders of a CTC certificate will have 12 months to adapt to the regional standard and to achieve validation under that standard." Government of DRC, 2011b, p. 8.
[261] BGR 2015. Le systeme de certification national congolais: le CTC. Flyer for distribution. 16 March 2015
[262] BGR 2013. "Mineral Certification at the BGR." BGR. *http://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Home/CTC_node_en.html* [accessed 22 March 2015]
[263] BGR 2011a, p.2.

A national accreditation agency, the Commission de Certification (COCERTI), which is led and hosted by the Ministry of Mines, certifies a mine site based on two connected third party audits (baseline and compliance). Thus, CTC is a mining standard primarily, to be operationalized by national authorities, but provides additional assurance to a buyer who wishes to source responsibly from Congolese mines. CTC certification of a mine site remains valid for three years.

Compatibility

CTC was developed by the German Federal Institute for Geosciences and Natural Resources[264] (BGR) in the mid-2000s and adapted for the DRC context in 2009. The chronology is significant: CTC was designed in advance of the OECD Guidance and took official form in DRC while the OECD Guidance was still in draft. The CTC pre-dates many of the other initiatives and therefore harmonisation has been a continuous process, though it is a clear goal.

In the early stages BGR was developing its own traceability system slightly differently from that of iTSCi. [265] Today, mining entities can use any traceability scheme that meets the CTC's requirements and standards. So far all CTC certified mine sites for the 3Ts have used iTSCi. MHI in Rubaya did a brief pilot of GeoTraceability under CTC and Metrak was piloted in Nyabibwe.[266] For gold, BGR is due to pilot the GeoTraceability/BSP traceability and due diligence system. [267]

The primary components of the CTC – standards on traceability and transparency – are fully harmonised with the RCM and with the OECD Guidance. As noted above, the CTC was developed alongside the OECD Guidance. Meanwhile, the RCM is not only grounded on the OECD Guidance, but includes the Certified Trading Chains (CTC) standards though requiring only a minority to be mandatory. [268] All of the CTC standards on the environment and community development, and some of the standards on working conditions and formality/transparency have been classified as "Progress Criteria" by ICGLR and hence will simply be monitored, rather than enforced.[269] Eventually, the RCM may provide member states with a framework that includes all of these standards. In this case all mineral supply chains across the Great Lakes Region for the 3TG would need to conform with all of these CTC standards if they are to receive the ICGLR export certificate.[270] This is not the case at the moment and in practice even the CTC seems to accept these further standards as aspirational rather than necessary for certification.

The Certification Process

The certification process can be illustrated by the certification of Mayi Baridi, Katanga Province.[271] Mining Mineral Resources (MMR) owns the Mayi Baridi mining site located within the mining authorisation PE-12606. At the Mayi Baridi concession, MMR provides the legal umbrella, advice, technical equipment, and a secure market for a group of artisanal miners who are organised into a cooperative. MMR and the Cooperative (CDMC) reportedly have a close relationship governed by an MoU and enjoy strong communication and cooperation.[272] According to the baseline audit, MMR voluntarily took part in the certification process not because of they thought it would increase their minerals' potential selling price at market; they were already getting prices comparable to the formal world market. Instead their reasons for participation were:

- To build confidence amongst their international clients. "*The motivation of MMR to take part in the audit procedure has its reason in the long period of war and the suspension of mining operations in the Congo. MMR wants to proof that there is no involvement of their mining operation with conflict or armed groups."*
- CTC certification will make them compliant with their legal obligations
- The mine had been experiencing frequent audits, each at the request of a different client. They therefore expected the CTC audit to make further client-specific audits redundant.

[264] Bundesanstalt für Geowissenschaften und Rohstoffe
[265] Levin 2010, Uwe Näher, Email to Markus Wagner, 19th August 2010.
[266] Barume, Bali 2014. "AW: Clarifications on CTC." *Email communication with Estelle Levin.* 1 December 2014.
[267] Barume, Bali 2014. "AW: Clarifications on CTC." *Email communication with Estelle Levin.* 1 December 2014.
[268] Barume, Bali 2014. "AW: Clarifications on CTC." *Email communication with Estelle Levin.* 1 December 2014.
[269] ICGLR 2011b.
[270] Red and yellow flag indicators include, for example, instances of child labour, traceability, the Analytical Fingerprint method, tax conformity, payment transparency (for LSM sites) and some CSR standards.
[271] Priester, Michael 2012. "Mayi Baridi Mine, Tanganyika, Katanga by MMR Baseline Audit Report." Baseline Audits of Mining Companies in Democratic Republic of the Congo to the CTC-Standard Set. Germany. April 2012
[272] Alvarez, Yves Bertran; 2013. "Audit de certification de la mine de Mayi Baridi en RDC (MMR). Compliance Audits of Mining Companies in Democratic Republic of the Congo to the CTC Standard Set. April 2013

- While the previous client-initiated audits focused on some elements of the CTC standard, MMR was interested in certifying the full CTC span of production, trade, and responsible mining and trading practice.
- MMR's experience with audits has established them to be useful learning processes, capable of initiating upgrades in internal processes and providing new knowledge for the company[273]

A third-party auditor conducted a baseline audit against the CTC standards of MMR and their concession in January 2012. The findings were shared with MMR, published online, and they were given one year to improve. A different third-party auditor conducted a compliance audit in January 2013 taking into consideration gains made since the baseline. In both cases, the auditor assessed the mining area against twenty-one CTC certification standards on mineral origin and traceability, mining conditions (including health and safety) and supply chain due diligence elements based on the OECD Guidance.[274] While the certification audit noted some areas for improvement, it ultimately concluded, "*The mining site of Mayi Baridi should be certified in order to inspire other enterprises and mining sites to adopt a similar approach."*

The audit was shared with MMR, posted online and submitted to COCERTI. COCERTI then makes a ruling on certification. It is not clear from publicly available documents how this certification is made, if other factors are considered beyond the audits, or how and when the certification rulings are communicated to the public or the company. It also does not appear that the auditor has the final say. In the case of another certification process – MHI's mining operation in Bibatama – the compliance auditor concluded, "*Based on the audit results, RCS Global recommends that the sites of MHI Mining operations in Bibatama, Territory of Masisi, in the Province of North Kivu, Democratic Republic of the Congo, not be certified to be in compliance with the CTC Standards."* [275] Nevertheless, according to BGR, Bibatama was certified.[276] COCERTI and BGR were consulted for further clarification on the processes,[277] but had not responded by time of publication. [278]

Implementation

The CTC (also active in Rwanda) is managed and implemented by governments with which BGR, initially, has a technical cooperation agreement. In the DRC this is a national, twelve-year programme. It is currently in the second phase (2013-2015) and is envisaged to run until 2021, conditional upon results-based targets. The current phase is extending the CTC in Eastern Congo and aims to certify 20% of the mine sites accounting for 60% of production of the 3Ts and gold by the end of 2015.[279]

BGR's role remains significant. BGR states it continues to do capacity building in government institutions (*including CAMi, CEEC, Division des Mines, and SAESSCAM)*, engagement with industry (*including Federation des Entreprisese du Congo and industrial and semi-industrial mines interested in encouraging best practice in DRC mining),* and engagement with civil society.[280] BGR also reports that it is supporting artisanal miners to formalise, legalize, and improve mining practice.[281] The ways and means of this support is less obvious. A primary criticism of the programme is the lack of ongoing support to mines and miners between the baseline and certification audit. This not only makes certification difficult, it is a missed opportunity. As one expert observed, "*The project supports the*

[273] Priester, Michael 2012. "Mayi Baridi Mine, Tanganyika, Katanga by MMR Baseline Audit Report." Baseline Audits of Mining Companies in Democratic Republic of the Congo to the CTC-Standard Set. Germany. April 2012
[274] BGR, 2011a, p.1.
[275] Teschner, Ben 2014. CTC Standards Certification Audit of MHI Mining and the COOPERAMA Cooperative's Coltan Mines at Bibatama, North Kivu Province, DRC. http://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Downloads/compliance_rapport_bibatama_en.html?nn=3138858 [accessed 22 March 2015]
[276] BGR 2015. "Certification of Artisanal 3T and Gold Mines in the Eastern Democratic Republic of the Congo on behalf of the CTC (Certified Trading Chain) Certification Scheme" Map prepared by BGR based on source information provided by BGR. April 2015
[277] in December 2014 and March 2015.
[278] Teschner, Ben 2014. CTC Standards Certification Audit of MHI Mining and the COOPERAMA Cooperative's Coltan Mines at Bibatama, North Kivu Province, DRC. http://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Downloads/compliance_rapport_bibatama_en.html?nn=3138858 [accessed 22 March 2015]
[279] BGR 2014."Implementing a Certification System for Mineral Resources in DRC." *Fact sheet produced by BGR on the CTC in DRC.* January 2014.
[280] BGR 2013. "Mineral Certification at the BGR." BGR. *http://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Home/CTC_node_en.html* [accessed 22 March 2015]
[281] BGR 2013. "Mineral Certification at the BGR." BGR. *http://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Home/CTC_node_en.html* [accessed 22 March 2015]

candidate sites, but in a scattered manner, without a strategic/holistic or inclusive approach."[282] *"There needs to be much more contact and support between the audits. The mines are left to work out the issues on their own. There is an opportunity here to help with the journey and meanwhile provide technical, geological, and mining best practice training and support."* [283]

Analytical Fingerprint (AFP)

The Analytical Fingerprint (AFP) is one method available to monitor the CTC, or indeed other traceability initiatives.[284] The technology, developed by BGR, crosschecks the origin of coltan, tin, and tungsten ore concentrates with known samples stored in an AFP reference database (father sample) by comparing their mineralogical and geochemical composition.[285] The technology allows verification of minerals without relying on any traceability information (e.g. tagging).[286]

The AFP is being integrated into the ICGLR's RCM,[287] with a database of samples already underway, sample preparation and storage facilities in Bujumbura, Kigali and Bukavu being completed, an AFP Management Unit directly installed at the ICGLR secretariat in Bujumbura, as well as plans for a regional laboratory.

The AFP is not considered as a traceability initiative with potential universal application for the purposes of this analysis. The deployment of AFP is costly, with a current cost of approximately 1000 euros for analysis of one mineral sample and 1700 euros for mixed mineral sample (e.g. cassiterite-coltan). It is therefore not financially feasible for extensive supply chain testing. It is envisioned that AFP may be most often used in investigations carried out by the Independent Mineral Chain Auditor (IMCA), who will be focused on the most egregious cases of RCM transgressions and more systemic issues.[288] The AFP may also play an important deterrent role, "*discouraging illegitimate actors in the first place, thus further increasing the credibility of the integrated mineral traceability schemes being applied as standard traceability tools (e.g. iTSCi tagging).*"[289]

Performance Analysis

Analysis Appropriateness for DRC: Credibility

Is the system relevant: does the system have the right goals?	Whereas other conflict minerals initiatives are singularly concerned with chain of custody and risk management of the most serious human rights abuses and benefits to illegal armed groups, CTC additionally considers labour and working conditions, the behaviour of security forces, community consultation and development, and environmental protection. Its scope could, in theory, match up better with downstream buyers' broader expectations for sourcing responsibly in line with the normative frameworks described in chapter 4.
Is it set up for success: does it have the right structures, processes, people, resources?	While the goals are good – to design a clear standard, which artisanal mines should live up to – they are aspirational. The standard does not reflect the reality of most artisanal mining at the moment, nor the capacity of the government to enforce the system, but what the sector *ought* to be and a framework for the government to enforce. However, the standard is designed to enable and reward progress within the framework of certification, which is a very positive thing. For a short period, participation was mandatory per the certification manuals. As of 29.02.2012 participation became voluntary. There therefore needs to be a strong incentive for businesses to seek to use CTC. Whilst the standard presents arguments as to the benefits that will accrue to a company through

[282] Yves Bertran, CTC auditor, pers comm to Estelle Levin, 27 March 2015.
[283] Interview with Yves Bertran, CTC auditor. Estelle Levin. 24 March 2015
[284] BGR has also been working with the ICGLR to implement the AFP as part of the RINR.
[285] BGR 2013. "Terms & Definitions." *Mineral Certification in Central Africa.* Flier for distribution.
[286] BGR 2013
[287] Sterbik, Nathalie 2014. "Complément d'informations au manuel de certification CTC de la filière artisanale stannifère de la RDC" Auditor's Guidelines.

[288] Interview with Arthémie Ngikumana, Coordinator of the BGR/ICGLR Analytical Fingerprint Management Unit (AMU), 15.09.14
[289] BGR 2013, p. 30

	certification, it is not clear if these benefits actually materialise or not. Furthermore, downstream buyers and other industry observers have noted to the authors their confusion as to what CTC actually does, and what value it brings to them and to its auditees. CTC could achieve more if it could communicate these things better, perhaps using examples of what changes have occurred as an outcome of their interventions. It is also building capacity in the government to govern the artisanal mining sector by giving them a framework, tools, and approach to govern it. Finally, the system has a component wherein mines are directly worked with to improve them to the standard's level. A major cause for concern is the inadequacy of support to mines that are failing or are assessed to likely fail after their baseline audit. [290] Additionally, BGR is investing massive time, financial, and expertise resources – how they are phasing over these responsibilities to the DRC government is not clear.
Are successes and failures systematically and adequately judged and disclosed?	BGR carries out its own quarterly and annual evaluations of its programme, "Implementation of a Certification System for Mineral Resources in the Democratic Republic of the Congo." It is not clear if these feed into improvements of CTC in DRC by the Congolese counterparts involved in its governance. Since these reports are internal, it is not possible for external parties to judge them. We could not access them, for example. Greater public disclosure regarding the programme and external analysis of the programme itself would be useful. We are aware that the BGR programme is due for formal evaluation in the near future and believe this could do much to address some issues we have identified, including for example, building feedback loops for adaptation and improvement into the system and proposing ways in which CTC could communicate better to stakeholders what value it brings.
Can the system be relied upon?	The roll-out has been slow and it can still only be seen as in its initial stages. The few audits available show that in between baseline and final assessment the mines did make improvements and in some cases facilitated formalisation of its artisanal miners. Further transparency on the certification process – for example who and under what circumstances can an auditor's recommendation be overturned – are necessary to build confidence in the system. The audits are accompanied by a multi-stakeholder team. [291] [292].This may be for the purpose of capacity-building and transition of responsibility to local stakeholders in time. Whilst the auditor technically retains independence during this process, it is very unlikely s/he will be able to access the same quality of information that s/he would otherwise get if it were a smaller team, more able to investigate and find answers on the tricky issues. The audits are also often done with too little time for conclusions to be drawn on all elements of the Standard. In short, the audit process needs to be improved.
Is the assurance the system provides defensible, repeatable, believable?	Unclear. The theory is good and the roll-out appears to be going smoothly. But more information needs to be provided on the processes, frameworks, and accountability of the system. This information should be made publicly available, in particular to allow Congolese stakeholders (including communities local to CTC mines) to understand it and to allow the market to judge its credibility and utility.
Do we know what we need to	No.

[290] Yves Bertran, CTC auditor, pers comm to Estelle Levin, 27 March 2015.
[291] BGR 2015. Le systeme de certification national congolais: le CTC. Flyer for distribution. 16 March 2015.
[292] The auditor will be accompanied by a delegation composed of representatives from the Minister of Mines, BGR, and Civil Society. For example, in the Mayi Baridi baseline audit, the auditor was accompanied, during the audit, by several observers and representatives of the following key stakeholders in the mining sector in DRC: The Mining Ministry/Kinshasa; The Division of Mines; SAESSCAM; The BGR support project, MONUSCO, and ITSCI. (Priester, Michael 2012)

know about the system to be able to trust it?	
Are there any conflicts of interest that may undermine credibility?	Thus far BGR has hired independent, international third-party auditors. However if this responsibility transitions to government officials, it is not clear what structures will be put in place to avoid conflict of interest. Likewise, because it is unclear who makes the final decision to certify and how this is done, there are no assurances against conflict of interest in this process. In addition, the certifier has been known to accompany the audits, which would not be considered good practice under other established multi-stakeholder schemes by any means as there must be separation between certifier and auditor, (and, incidentally standard-setter).

Analysis Appropriateness for DRC: Efficacy

Are system norms robust, concise, targeted?	Yes. Not only are they compatible with the OECD Guidance and the RCM, they add further, robust standards that are nuanced to the ASM sector in the DRC and are derived from a range of international standards. The standards went through an international consultation process when they were first drafted (e.g. Levin co-facilitated such workshops in Brazil and Germany in 2008) before they were adapted to the particular situations of Rwanda and DRC. It is important, however, that the Standard is updated in response to the changing situation in DRC and evolving landscape of certification schemes and the market's needs generally.
Is there on-going monitoring and evaluation using meaningful criteria for measuring performance against system goals, outcomes, outputs, activities, and key performance indicators?	As a German co-operation programme, German evaluation standards apply. This requires that the programme be periodically evaluated by a third party. The midterm review (an evaluation called a PFK that every BGR project is required to do) will meet OECD/DAC criteria (effectiveness, efficiency, sustainability, relevance) plus BMZ criteria concerning coherence, complementarity and coordination. Likewise, as a BGR project there should be an impact monitoring system in place based on BGR internal guidelines.[293] These requirements are based on an understanding of standard BGR practices rather than published accounts or materials. Whether any deviations or changes from this standard practice have been undertaken is unknown. It is further unclear whether these evaluations and monitoring will be applied to the CTC as a whole, or be limited to BGR's support role.
Does the system adjust to valid external and internal input on performance?	Unclear.

Analysis Appropriateness for DRC: Feasibility

How achievable are the goals?	BGR has stated its goal is to certify 20% of the mine sites accounting for 60% of production of the 3Ts and gold by the end of 2015.[294] This seems ambitious, particularly for gold. However, more achievable may be the initiative's goal to *foster traceability, transparency, and ethical production standards in the artisanal and small-scale mining sector*.[295] Likewise, the goal of simply having any standard against which mines can judge themselves and the government can point them towards appears to already have been achieved.

[293] Roesen, Gisa 2015. *Email communication with Estelle Levin.* 26 March 2015
[294] BGR 2014."Implementing a Certification System for Mineral Resources in DRC." *Fact sheet produced by BGR on the CTC in DRC.* January 2014.
[295] BGR 2013. "Mineral Certification at the BGR." BGR. http://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Home/CTC_node_en.html [accessed 22 March 2015]

Do the benefits outweigh the costs? What could be done differently to bring higher value at the lowest possible cost to users and stakeholders?	It is unclear how much money BGR has invested in this scheme but equally difficult to calculate the benefits.[296] The expansion and sustainability of the scheme beyond BGR investment will rely heavily on political will of the Congolese government and industry buy-in. On the other hand, the CTC has been a pioneering and motivating initiative against which many others have been developed; and it has already served as a crucial template for informing the development of the RCM. If the RCM is fully implemented, and perhaps even expanded to include the full CTC standards, then the CTC's impact would be substantial independent of the scheme's lifespan.
Are sources for financing sustainable?	The system appears to rely heavily on external funding and support from the German government. BGR has, and continues to invest heavily in the system. The system is essentially a government regulation and oversight mechanism and will not produce direct revenue. Though good governance and formalisation of the ASM sector can have financial benefits (such as increased tax revenues and industry confidence in buying Congolese minerals), there doesn't appear to be a mechanism for these benefits to be reaped directly back to fund the CTC. This may be something to be planned into the project in a later phase. Whether or not the CTC becomes an unfunded mandate will therefore depend on DRC government buy-in and political will to spend on the program. It is not entirely clear what BGR has been doing to phase out their funding, technical support, and expertise in favour of Congolese funding, technical support and expertise.
Does it know and is it adapted to the risk environment?	Yes.
Does it know and is it adapted to the capacities of users and implementers?	This is unclear. Since 2012 the initiative has been voluntary and it is likely that only large, progressive companies that are confident in their own capacity have put themselves forward to be audited. A major concern is the 'middle' phase, between audits, as there does not appear to be enough support available to the mines to come to compliance.[297] What capacity BGR is building within the DRC government to run the scheme, including audits and certification, is unclear.
Does it work proactively to minimise negative impacts to stakeholders?	This is unclear. However, a cautionary example arises from the audit of Bibatama.[298] In the certification audit the mining company was down-marked for failure to extend adequate health and safety resources to all of the artisanal miners in the cooperative it had established an MOU with. However, it appears that the mining company only established the MoU as a result of recommendations in the baseline audit – they were trying to take steps toward formalisation.
Does it work proactively to achieve maximum positive impact?	More can be done here. There is a clear opportunity to incentivise participation through technical and geological training for the mines and the miners. Likewise, more could be done to promote the system with downstream companies, building demand and confidence in CTC certification.
Does it leverage opportunities for greater impact through prioritisation and joint or targeted efforts	A strength of the CTC is its compatibility. For example, mining companies can use any traceability initiative they like, iTSCi or otherwise. In addition it has been instrumental in piloting alternative systems, e.g. MetTrak and GeoTraceability in 2012 and soon BSP in 2015.
Is it scalable?	The project is currently in its initial stages of expansion in DRC. The most obvious constraints are financial and capacity within the DRC government. However, if the vision is to pass ownership over to the GDRC such that it becomes a core part of mineral sector governance and obligations of mining companies operating in

[296] We could not find project documents in the public domain that establish this, and the documents which BGR was able to share with us in March 2015 did not include this information.
[297] Interview with interviewee.
[298] Teschner, Ben 2014. CTC Standards Certification Audit of MHI Mining and the COOPERAMA Cooperative's Coltan Mines at Bibatama, North Kivu Province, DRC.
http://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Downloads/compliance_rapport_bibatama_en.html?nn=3138858 [accessed 22 March 2015]

	DRC, then scalability – and impact – is possible, provided the state's capacity to implement it is adequately developed as part of that handover.
Do users judge it offer value for money?	It is likely too early to tell. The initiative is just rolling out and only three or four mines have been certified. Further reflection from participants, as well as companies that declined to participate initially, will be invaluable in the coming years. The compliance auditor provided this insight into MMR's participation and expectations of the value: "The motivation of MMR to take part in the audit procedure has its reason in the long period of war and the suspension of mining operations in the Congo. MMR wants to proof that there is no involvement of their mining operation with conflict or armed groups. While the previous audits were initiated by clients or focusing on specific elements of the CTC standard, MMR expects from the CTC certification, besides being compliant with its legal obligation, to focus on all important elements of the production and trade chain, with respect to responsible mining and trading practice. MMR expects to create higher confidence of the international clients in its compliance with the standards. MMR expects that the CTC audit makes redundant further client-specific audits. Finally, it has experienced that each audit is a learning process, upgrades internal processes and provides new knowledge for the company. An additional surplus on the buying price on the market for the minerals is not the motivation of the company, as they already realize prices comparable to the formal world market and based on the LME quotations." [299]
Who are its competition and does it offer unique value that makes it competitive?	CTC will allow the mines to use any traceability scheme that will meet its standards. So far, the mines are using iTSCi. What is unclear is whether iTSCi (or other initiatives) can develop enough confidence in CTC to allow a mine to be audited exclusively by CTC, or whether iTSCi will insist upon continuing to do its own audits. For gold, CTC's competitors would be Fairtrade, Fairmined, the RJC, and BSP, if any of these become operational in DRC as responsible mining standards. It also has unique value in essentially incubating and helping start up new initiatives in DRC.

5.1.2. iTSCi

Summary Overview

iTSCi[300] is a joint initiative between ITRI (acting as the iTSCi secretariat) in cooperation with the Tantalum-Niobium International Study Centre (T.I.C.) and countries in the Great Lakes region (Burundi, DRC, Rwanda). It is a not-for-profit multi-stakeholder initiative developed by ITRI, the international tin association that has as its members around 60% of the tin sector.[301] The Programme also has an MOU with the ICGLR in the same way as with the governments of DRC, Rwanda, and Burundi.[302] It assists upstream companies of all scales and at all supply chain tiers from mine to smelter comply with the five steps of the OECD Guidance. By expanding due diligence to include criminal networks, and sanctioned individuals and entities, it also ensures conformance with the recommendations of the DRC United Nations Group of Experts.[303] iTSCi covers tin, tantalum and tungsten ores (mineral concentrates), but *not gold.*

[299] Priester, Michael 2012. "Mayi Baridi Mine, Tanganyika, Katanga by MMR Baseline Audit Report." Baseline Audits of Mining Companies in Democratic Republic of the Congo to the CTC-Standard Set. Germany. April 2012
[300] Much of the uncited information in this report is based on text provided by Kay Nimmo, ITRI, on 29th October 2013.
[301] Interview with Kay Nimmo, 22.8.2014.
[302] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.
[303] UN ITU, 2012.

iTSCI's objectives are to[304]:

- Provide a joint industry programme from mine to smelter, meeting international requirements (OECD, UN)
- Provide information for end user smelter audit (CFSP)
- Allow relevant US and multi-national companies to report on due diligence, required by US law (SEC)
- Promote continued access to international markets for 3T mineral sector in the central African region

iTSCi works through the operationalisation of three components:

(1) **Tracking System**: Chain of custody tagging and monitoring of mineral origin done in cooperation with SAESSCAM, Division des Mines and CEEC.

(2) **Risk assessment and managemen**t: on the ground assessment and monitoring of mine sites and transportation routes to identify and manage conflict-related risks, including human rights abuses. This includes a continuous incident reporting mechanism in place with local-regional structures to follow up on reported incidents as well as the facilitation of local stakeholder meetings and discussion and follow-up of mitigation.

(3) **Audit**: Desk-based independent third party audit of all operators seeking to join iTSCi, evaluation of the broader operating environment (macro-level situation) done at the provincial level, and site audits of companies against the OECD guidance and chain of custody implementation.[305]

iTSCi is implemented by a range of partners:

- ITRI hosts the iTSCi secretariat which is responsible for all administrative tasks relating to membership applications and documentation, contracting and legal management, collation and management of funds, translation of documentation, explanation of due diligence and requirements to members, and so on. The Secretariat also performs data entry into the database and analysis, provides information required by smelters for their separate audits, and acts as a third party to hold confidential commercial information.[306]
- The iTSCi governance committee comprises iTSCi and TIC.[307] The Governance Committee members, supported by Pact in the local context, may also lobby on behalf of its members to tackle obstacles to trade, for example due to a lack of understanding of government agents in one trading country of the export procedures, norms and paperwork requirements that are particular to DRC or at the provincial level, or through lack of understanding of the requirements of the CFSP audits at smelters.[308]
- DRC in-country implementation is managed by the international capacity building NGO, Pact. Pact trains and assists Government agents involved in implementation, trains up local NGO partners, ARDERI and BEPAT, who work as iTSCi field agents, and plays an important role in on the ground monitoring and facilitation.
- SAESSCAM, Division of Mines and CEEC agents are responsible for performing tagging and data recording at the mine, *négociant* and *entité de traitement*. They retain their own copy of the logbooks.[309] Pact's iTSCi agents are responsible for ensuring that the Government agents record data fully and accurately, training and retraining, explaining the reasons for the system, and collecting and returning the iTSCi copy of the logbooks to iTSCi locally, who then forward to ITRI in the UK, for inputting into the iTSCi database.[310]

[304] iTSCi 2014. iTSCi: leading minerals traceability and due diligence in Central Africa, presented at 13th CFSI Symposium, Brussels, 17th March 2014.
[305] UN ITU, 2012. Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.
[306] Kay Nimmo, ITRI, pers comm to Estelle Levin, 29th October 2013.
[307] The tungsten association and others have been approached a number of times to join but have declined to do so. Kay Nimmo, ITRI, pers comm to Estelle Levin, 29th October 2013.
[308] Interview with Kay Nimmo
[309] Kay Nimmo, pers comm to Estelle Levin 1st November 2014.
[310] As this involves inputting from a hard copy, there is an inevitable time lag, and always the risk of typographical human error. However, real time inputting into the database through tablets/PDA's is currently being trialed in the field. This would eliminate time lag; and, in tandem with continuing hard copy cross-checking, at least reduce the risk of human error.

- PACT's iTSCi agents:
  - carry out regular spot-checks on mine-sites and exporters, the transport routes used, and continuously supervise the tagging system's integrity.[311]
  - perform mine baseline studies
  - maintain master mine lists of active sites
  - Assess and report changes in activity and production levels reported locally
  - assist local companies in understanding iTSCi's due diligence requirements such as producing conflict minerals policies and due diligence plans,
  - liaise with stakeholders and facilitate stakeholder meetings.[312]
- Synergy Global took over from Channel Research as iTSCi's independent auditor in May 2014.[313] On application to the Programme, iTSCi member companies undergo a pre-audit – essentially KYC procedures - in order to establish ownership, potential conflict links, history of trading and possible risk level. iTSCi members are also subject to a regular third party on-site audit according to a checklist which encompasses the recommendations of the OECD Guidance and the requirements of the iTSCi chain of custody procedure, as well as the level of considered risk. Audits occur in DRC and other GLR countries, as well as internationally. An audit advisor with experience in a variety of audit types, and specifically in timber due diligence auditing provides input to ensure audit standards are appropriate for purpose.[314]

Performance Analysis

iTSCi is designed to be a universal system. Since it began in 2010, volumes of minerals to pass through iTSCi have increased per Table 7.

Table 7 iTSCi and officially reported cassiterite imports and exports 2010 - H1 2014 (tonnes)

Official reported exports	**2010**	**2011**	**2012**	**2013**	**H1 2014**
DRC	13415	8943	8104	8182	3478
Rwanda	3874	6952	4637	4895	3110
Combined	17289	15895	12741	13077	6588
iTSCi export tonnages					
DRC	300	2960	4069	5208	3304
Rwanda	0	5679	4517	4828	3188
Combined	0	8639	8586	10036	6492
iTSCi share of reported exports					
DRC	2%	33%	50%	64%	95%
Rwanda	0%	82%	97%	99%	102%
Combined	2%	54%	67%	77%	99%
Official reported imports from Central Africa					
Total leading exporters	20110	14944	13628	12138	6590
iTSCi exports versus identified imports	1%	58%	63%	83%	99%

Notes:

1. Leading exporters are Malaysia, China, Thailand, Russia and India

2. Coverage of imports may be incomplete, particularly for 2014

3. Data represents direct comparison of time periods, trading timing differences between export and import have not been accounted for

[311] Information based on field work by Rupert Cook, August 2013.

[312] These meetings occur on both an ad hoc / on-demand basis as well as through the formalized structures of multi-stakeholder committees at provincial and local levels. Karen Hayes, Pact, pers comm, 28th November 2014.

[313] https://www.itri.co.uk/index.php?option=com_mtree&task=att_download&link_id=55093&cf_id=_24. 26.11.2014.

[314] Kay Nimmo, ITRI, pers comm to Estelle Levin and Rupert Cook 10th September 2013.

Official reported exports	2010	2011	2012	2013	H1 2014

4. iTSCi figures for 2011 do not represent an entire year as the majority of activity was post April 2011

5. Burundi will be included at year end 2014 as exports restart

By mid-2014, according to ITRI's international trade statistics it was demonstrated that around 99% of Central African cassiterite and 95% of Congolese cassiterite imported into the most important buying nations was covered by iTSCi. [315] ITRI estimates similar figures for tantalite. [316] By November, 2014, approximately 1,000 mine sites and at least 80,000 miners were part of iTSCi across the region. [317] In DRC, figures were around 35,000 miners in 265 sub-sectors with 318 active sites.[318] This demonstrates commendable and important progress in the formalisation of DRC's 3Ts sector and gradual legalisation of 3Ts exports. On the other hand, the 6,500 tonnes of cassiterite coming out of DRC and Rwanda in the first half of 2014 represents around half the bi-annual tonnage exported in 2008; there remains significant potential.[319]

From the perspective of a major downstream brand iTSCi holds a lot of value: it has established a broad knowledge base, has human resources on the ground and established relationships with Congolese government agencies, and a broad scope that surpasses that of other initiatives.[320] Pact noted the following positive transformations in mineral sector governance through the efforts of iTSCi and its partner institutions, including the Government of DRC: there are now statistics, many more government agents at mine sites, multi-stakeholder and multi-scalar mechanisms for accountability (e.g. through the *comités de pilotage*), and tracked and traceable supply chains. Mine sites have been sanitised of armed groups and military, production levels are known, and supply chain actors are ready to be part of the system. [321]

In spite of this progress, there is a range of criticisms that are levelled against iTSCi by observers and participants in the initiative. Some of these may or may not have supporting evidence but, as outlined in 1.4 *perception* of a situation is as important as the *actual* situation vis-à-vis's stakeholders' trust in system integrity and credibility.

Analysis Appropriateness for DRC: Credibility

iTSCi's credibility is undermined by stakeholders' preoccupation with the following perceived issues: its dependence on government agents to implement its track/trace system; its use of paper-form tracking systems; its susceptibility to fraud and leakage of minerals in some situations; its scope being only on the human rights and business practice issues in the OECD Guidance's Model Supply Chain Policy; its 'reliance' upon donor funding; its ownership and administration by ITRI, the international tin association. iTSCi's scalability is not questioned – it is a scalable system – so much as the slow pace with which it sets up at government-validated mine sites. We deal with each of these in turn.

iTSCi is dependent on SAESSCAM and Division de Mines agents to implement the tracking / tracing system upstream, and upon CEEC and Division des Mines agents at the *comptoir* / exporter stage. These agents have limited capacity, are under-qualified in many cases, and there are issues with their terms of employment and how, when and if they are paid. Downstream businesses also raised questions about the quality and reliability of iTSCi data, the adequacy of training staff who manage data, and the completeness and sufficiency of iTSCi data. [322]

Whether or not these allegations are factually correct – and iTSCi strongly disputes many of them[323] - the point is that some observers and market actors are not reassured. The dependence on government agents for managing the chain of custody aspect of iTSCI was repeatedly raised as a concern. iTSCi's decision to operate its traceability system this way, however, rests on a longer term vision – shared with development agency, Pact, and the

[315] https://www.itri.co.uk/index.php?option=com_mtree&task=att_download&link_id=55233&cf_id=24. Interview with Kay Nimmo, 22.08.2014
[316] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.
[317] Kay Nimmo, presentation to UN-ICGLR-OECD 8th Conflict Minerals Forum, 4th November 2014
[318] iTSCi 2014.
[319] Kay Nimmo, presentation to UN-ICGLR-OECD 8th Conflict Minerals Forum, 4th November 2014
[320] Interview with interviewee no. 1
[321] Interview with Karen Hayes, 17. and 18.09.2014
[322] Interview with interviewee no. 1
[323] Indeed, much depends upon the relativity of perspective. For example, while some critics contend that the current market structure benefits well-established elites more than the artisanal elites, the countervailing argument would be that the miners generate more income for themselves with the current system rather than they would without.

Government of DRC to build the capacity of DRC government to better exert controls over its mineral sector with a view to handing the traceability system over to the government and ultimately improving sector governance as a sustainable foundation for responsible mining and sourcing. Without the involvement of government agents, the transformative potential of iTSCi would be lessened.

The second point of critique relates to iTSCi's reliance upon a paper-form tracking system. This is perceived by stakeholders to be more susceptible to error and delays than an electronic tracking system. iTSCi insists that the simplicity and familiarity of paper and pen is the most locally appropriate level of technology, and most especially for the more remote, rural areas. It has also been particularly advantageous for enabling rapid scale up to new locations. [324] Having physical copies of data also offers an opportunity for verification, allowing a level of accountability that can disincentivise fraudulent behaviour by corrupt individuals. Having moved to the second phase of piloting such a digitised tracking / tracing system recently in Rwanda, iTSCi has found that speed of communicating data is the main benefit, but this must be offset against higher cost and less accessible records. [325] iTSCi now intends to pilot the digitised system in more accessible sites in DRC where more challenges in electricity and network supply will be present. [326] There are concerns that a transition to a digital system may create disruptions as infrastructure is procured, agents are trained in the new technologies, and the new system is scaled up however this is to be managed in a systematic stepwise process to minimise risk. [327] Establishing a digitised system takes more than handsets, electricity, and some form of data transmission device (e.g. radio frequency, GPS); iTSCi has needed time to identify and invest in an appropriate and reliable software platform. There will also be costs for government if they wish their own records to be digitised, since the DRC government offices that would receive the data lack connectivity.[328] Getting this infrastructure in place, however, is an important step forward in building the capacity of SAESSCAM – and potentially other agencies in the Division de Mines - to manage and transmit data, and should allow for improved access to information by stakeholders in the provinces. The same necessity applies for proper completion of the ICGLR certificate, and indeed for any digitised traceability system.

Fraud (e.g. adding more mineral to tagged bags) and infiltration of untagged minerals do occur, and most particularly across international borders with Congolese minerals allegedly being laundered into neighbouring countries' supply chains.[329] This may be partly for commercial reasons where tagged mineral moves before tracking begins from one iTSCi mine to another where it can achieve a better price. [330]

The other factor is the re-use of iTSCi tags and weakness of controls allowing theft of tags. [331] iTSCi knows the issues with its tags, and has designed the system to address these, noting that where tags are re-used or used in the wrong place, the system picks it up and the shipment is flagged creating an incident that is then reported downstream and triggers a management response. iTSCi also sees an ongoing scaling up of iTSCi to more sites, and especially those in the vicinity or within a commercially feasible distance of existing iTSCi sites, would do much to disincentivise smuggling and fraud. Of course fraud and smuggling must be minimised, but is their elimination a realistic and practical goal for a system that is also under pressure to reduce costs as much as possible and deliver more than a chain of custody system? An international certification expert with no relation to iTSCi consulted for this project, stated "*You have to [recognize] that fraud does happen [in supply chain certification systems generally]. If the US tax collection system was thrown out of the window because there's fraud in it, then US society would collapse. … The question is how much of a safeguard do you have so the people who are defrauding have a higher chance of being caught? And [you need] sanctions, including market ones*."[332] Indeed, market sanctions have been applied through suspension by iTSCi of some companies due exactly to the issue of fraud.[333]

[324] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.
[325] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.
[326] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.
[327] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.
[328] Interview with Karen Hayes, 17. and 18.09.2014. Kay Nimmo, 2014 presentation 4.11.2014.
[329] Pers. comm. With confidential witnesses. Cf. UNGoE. This is a highly sensitive issue, with conflicting perspectives from different stakeholders. While some stakeholders in the DRC allege that illegal cross border smuggling of 3T minerals continues apace, stakeholders in neighboring Rwanda contend that such traffic has been drastically reduced. Its sensitivity is due to the fact that it could undermine downstream confidence in the credibility of the current traceability and certification system, to the obvious detriment of the 3T sector in both the DRC and Rwanda.
[330] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.
[331] Interview with interviewee no. 11
[332] Interview with interviewee no. 2
[333] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014.

Moreover, while fraud definitely, and probably inevitably with any such system, will exist, there are two important factors to bear in mind. Firstly, the system is itself not failing if it has built-in alerts, which flag up the anomaly and transgression. The problem is when fraud becomes widespread and operates with impunity. This segues into the second important factor: while iTSCi/ITRI or any other traceability system, whether in DRC or neighbouring Rwanda or Burundi, can take some degree of a policing role, the ultimate authority and responsibility for dealing with fraud (both preventative and *post facto*), which is after all transgressive of national laws, rests with government. This strengthens the case for government to at least have a role in verifying the integrity of traceability systems, monitoring their performance, and helping manage their weaknesses.

ITRI's and T.I.C.'s prominent role as the Governance committee and ITRI as secretariat has also led some stakeholders to speculate that iTSCi is used to advance the interests of ITRI and T.I.C. members. This suspicion is bolstered by the fact that there is only one ITRI member presently buying iTSCi tin from Congo, MSC. Prior to 2009 there were only two tin buyers and by the end of 2014, Thaisarco will be returning to source from DRC, according to iTSCi.[334] However, there are multiple TIC members buying tantalum, according to iTSCi.[335]

Pointing to iTSCi's status as a multi-stakeholder initiative, ITRI denies that their role works against Congolese upstream industry interests, rather claiming that no other ITRI members (comprising about 60% of the world's tin producers and smelters) have buying relationships in Africa since most get their feed from local mines. Consequently, the majority of ITRI members have no interest in supporting iTSCi from a competition perspective as supply of conflict free tin from Africa would compete with sales from lower risk regions.[336] There are other strategic reasons why tin sector companies may wish to support iTSCi. ITRI members across the board have a long-term interest in protecting market share for tin generally: supporting an upstream conflict minerals initiative and proving the viability of responsible sourcing from the Great Lakes Region is a crucial credibility issue for the tin sector and a necessary step to reassure companies to not substitute tin in their products. The ultimate objective, for ITRI, "is to remove tin from the list of conflict free minerals, something that is well on track to being achieved."[337]

Furthermore, iTSCi questions these criticisms as follows: "Of course the OECD Guidance recommends that companies work their trade association to undertake a number of activities in relation to due diligence, and also recommends a joint industry mechanism structure to enhance effectiveness. iTSCi responds exactly to the recommendations of the OECD, has proven itself to be an effective system, and questions what interests now find those multi stakeholder recommendations not appropriate." [338]

Coming back to the issue of market distortion, stakeholders alleged that iTSCi buyers appear to impose their prices on the miners.[339] However, as discussed in section 4.3.1, this market dynamic is something of a truism: in the ASM context globally, ASM miners are almost always price-takers as opposed to price-setters, their position almost inevitably less transitive than those stakeholders further downstream in the supply chain. Essentially, is it reasonable that iTSCi be held responsible for its indirect contribution to the continuation of what are arguably more systemic issues beyond the remit of a traceability and certification system? Indeed, would changing the iTSCi model make any difference to these systemic deficiencies, given the lack of implementation of the existing regulatory framework, the lack of capacity, the lack of resources, the relative fragility of state authority in certain areas, a culture of impunity, and the lack of donor support.

Per the issue of conflict minerals regimes creating new opportunities for exploitation of labour, the lack of attention to other human rights issues beyond those of the DDG's model supply chain policy is thus a serious and repeated concern of academics, international NGOs and Congolese civil society, as we saw in chapter 4. iTSCi's vision has always been to broaden its scope to include these issues, through its 'phase 3 plan', but to date it has rather focused on devoting resources to field operations (and within those to bringing new mines into the system given the huge pressure exerted by stakeholders on this point) than to addressing the broader set of issues prevalent at iTSCi mines. Pact in particular is aware of these serious issues and keen to take action on them, but notes the reluctance of donors and downstream actors to support such work to date. In 2014, however, as part of Phase 3 iTSCi has secured funds from The Dutch Ministry of Foreign Affairs, from the GE Foundation, Boeing and

[334] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[335] Kay Nimmo, pers. Comm. to Estelle Levin, 03.12.2014.
[336] Interview with Kay Nimmo, 22.08.2014.
[337] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[338] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[339] Cuvelier, J. et al 2014

Microsoft to start activities on child labour and from Qualcomm on occupational health and safety. There are, of course, many mines where these issues need addressed, and many more issues to tackle also, but it is a sign of progress that iTSCi is beginning to move into phase 3 at certain sites.

Indeed, iTSCi's ground presence at 265 sub-sectors with 318 active sites in these mines in DRC, involving around 35,000 miners,[340] and relationships with a diversity of stakeholders provides a form of social infrastructure and a substantial foundation for addressing other aspects of minerals governance and human rights risks in the 3Ts sector. The necessity of using tags can be used as a lever to compel supply chain operators to begin to manage other risks also based on Congolese law and the progress requirements of the RCM and potentially also CTC, so furthering the formalisation of the sector. [341] If iTSCi can reassure the market and donors of its serious intent to address these other responsible mining issues, they may be more inclined to provide financial support to leverage this opportunity for higher impact. In this way, iTSCi could be used as an entry point for not just enabling *responsible sourcing* to the satisfaction of the market but for enabling *responsible mining* to the satisfaction of civil society, academia and donors. It is imperative that this be done under the auspices of the fulfilment of the UN Guiding Principles on Business and Human Rights, and as part of a broader minerals sector strategy that seeks to formalise, legitimise, and professionalise ASM entities as businesses, to emancipate and empower artisanal and small-scale miners and their stakeholders as citizens, and to support larger mining entities fulfil their responsibilities to respect human rights and contribute to national development. The crafting of DRC's ASM policy under PROMINES AMI 27 may prove an opportunity to advance this.

Somewhat related to the need to expand scope to address the broader issues of concern is iTSCi's alleged reliance upon donor funding, creating the perception amongst stakeholders that iTSCi is not sustainable. However, iTSCi is presently operating without donor funding for existing sites.[342] iTSCi explains that, once a supply chain is part of the system, the levy generates enough capital to cover ongoing costs across the sector.[343] In reality, low production sites could not be commercially viable members of iTSCi without the surplus income generated from the levy at more productive sites. iTSCi states this as an important reason to maintain one system across the country (see conclusion).[344]

iTSCi also clarifies that it is the set-up costs for establishing iTSCi at a new site that requires donor funding.[345] This is particularly so in areas that have been subject to downstream embargo for so long, where cash is not readily available, and where high risks discourage possible industry investors becoming involved. iTSCi also states that "until very recently conditions imposed by external factors did not make it possible to implement in high risk areas recalling that the pilot started in South Kivu but was halted as a result of the passing of Dodd Frank, the DRC mining suspension and the coming of the CFSP audit deadline expectation."[346] A return to South and then North Kivu was only politically possible due to the peace agreement between the M23 and the DRC government in North Kivu and the support of the Netherlands Ministry of Foreign Affairs DMFA in South Kivu. This provided iTSCi the opportunity to demonstrate conflict free supply chains in the high-risk Kivus, which opened the door for implementing iTSCI in an increasing number of locations in these provinces. Doing so earlier was not possible since there was no investment, and no downstream buyers prepared to face the risk. This was also partly resolved by the publication of the SEC Rule, which at last provided some certainty to buyers which allowed the DMFA-supported project to go ahead. The region still faces a lack of engagement from the downstream tungsten industry which limits certain possibilities. [347]

In 2014, due to lack of donor support for funding system expansion, local businesses organised their own capital. Similarly, Maniema, Burundi, and North Kivu were also set up with financial support from local businesses knowing that is the route to a return to business. [348] This demonstrates that there is local innovation to tackle the commercial barriers to getting mineral flowing and enough commercial opportunity *and* available local capital for joint risk-sharing by industry actors. However, this is extremely risky to all involved, including ITRI who is ultimately responsible for financial management of the system and payment of contractors even if income from the

[340] iTSCi 2014 iTSCi Overview: November.
[341] Interview with Karen Hayes, 17. and 18.09.2014
[342] Kay Nimmo, pers. Comm. to Estelle Levin, 01.08.2014.
[343] We did not access iTSCi's accounts and so could not make an independent judgement on actual costs.
[344] Interview with Karen Hayes, 17. and 18.09.2014.
[345] Interview with Kay Nimmo, 22.08.2014.
[346] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[347] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[348] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014

participants is not sufficient. All new mining projects face high risks due to uncertainty over production, added to this are increased risks from a sector based on ASM, the lack of any concrete information on mine locations or possible production levels – and security and other situational risks While there are positive incidences of available local capital, these opportunities have a very limited lifetime, and there are nevertheless other sites in those very high risk locations which up till now have not been able to source funding for set up costs, underlining the more systemic issues of the ASM sector's undercapitalization and lack of access to credit, challenges shared to greater and lesser degrees by other countries in the region. This means that liquidity remains a vital barrier to scaling iTSCi.

While effective donor action is awaited, iTSCi is compelled to take on costs that would normally be funded by development and aid agencies, such as capacity building and training of governments, industry, and civil society. iTSCi argues that, "no similar project (such as CTC) has any funding from industry; criticism of a need for a small contribution to start up is highly unfair and unjustified."[349]

Another criticism is the perceived delays in iTSCI's approval process and membership audits for exporters and mine-sites. Some prominent private sector operators complained that despite funding the set up process it could take up to six months to receive iTSCi approval after the membership audits. Such delays may demotivate private investors from investing locally sourced capital in iTSCI set up costs. It is possible, however, that these relate to the change of iTSCi auditor at the start of 2014, which led to a backlog of audits. It is also frequently the case that applicant companies initially provide inadequate information and due diligence plans or policies, which leads to a protracted period of toing and froing to achieve what is necessary. [350] iTSCi also claims that "In the Kivus many actors who are not yet approved are those that have continued to trade in minerals without clear traceability or adequate due diligence and a certain level of caution is therefore considered appropriate by iTSCi in order to maintain consistent standards." [351]

By far one of the biggest criticisms of iTSCi is its cost. iTSCi members pay a joining fee and an annual membership fee ($5000 for downstream companies and associations; $1,500 for upstream companies, including exporter). The iTSCi levy is paid by full members. In theory, as more mines enter iTSCi, and a greater proportion of DRC's minerals is covered by the system, this levy could drop further as economies of scale intensify. It is also iTSCi's intention for the levy to fall as Pact's role diminishes over time, in response to increasingly capacitated government agencies who are more able to independently run the iTSCi chain of custody system, [352] and more effective and coordinated donor actions.[353]

Despite this, iTSCi implementing partners insist they operate on a 'shoe-string budget' and that they are severely constrained by this, being unable to invest in other system aspects that may be desirable at this moment in time (see communications, below). Some costs are extremely visible to members and stakeholders: the audits, the traceability supervision and capacity-building role of Pact, the production and communication of incident reports, building and managing the database, participation in policy events and so on. There are less visible costs, however, that add value for iTSCi members. For example, iTSCi takes on risk and must maintain an operational reserve. Cash flow is unpredictable for the programme and for its members, and various allowances may be made to encourage a wide participation in the system: tolerating payment delays by cash-strapped members hoping to get up and running, and resolving disputes among different parties, for example. [354] iTSCi also addresses commercial risks on behalf of members, e.g. lobbying at the national level if a member faces unreasonable difficulties, so helping them reduce any costs associated with delays in shipments.

Whereas iTSCi makes the case to business on the value of membership vis-à-vis conflict minerals compliance,[355] it may do better by clarifying the other commercial value it offers. It would also do well to open its books up to independent financial evaluation by a third party, to confirm for members – and concerned stakeholders – the value for money it really offers, on the one hand, whilst also considering financial strategy, including funding streams for different parts of iTSCi and taking a judgement on the initiative's financial sustainability. This financial evaluation should be part of a broader cost-benefit analysis to assess iTSCi performance generally. This evaluation would need to also consider how iTSCi could raise the money to implement whatever might be the evaluation's

[349] Kay Nimmo, pers. Comm. to Estelle Levin, 27.11.2014.
[350] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[351] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[352] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[353] Kay Nimmo, pers. Comm. to Estellle Levin, 01.12.2014.
[354] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[355] iTSCi 2012a.

recommendations. iTSCi, however, is sceptical that such an evaluation would bring any value to stakeholders, stating, "it's obvious there is no third party that has any concept or experience of costs for such an operation."[356]

The final threat to iTSCi's credibility relates to transparency and communications. iTSCi's information management and information release policy details iTSCi's approach to data ownership, collection, and release (see Annexes), essentially setting out what goes to whom and when. iTSCi intentionally has different time-frames for releasing information to members and to the public, in order to enhance value to members and prevent free-riders and competitors from using their IP noting that the system has to be paid for somehow. [357] Criticism rests partly on iTSCi's unwillingness to respond to data requests from third parties, especially for projects seeking to evaluate iTSCi without engaging iTSCi appropriately: iTSCi may not be informed of the study, or have room to design its design or provide feedback or opportunity to comment on findings, and their consent may not be sought yet they are expected to participate.[358] iTSCi, however, claims to be overwhelmed by the sheer frequency and amount of time meaningful engagement would take,[359] the number of studies that have the same repetitive and overlapping scope, and the lack of preparation of the researchers. [360] Others criticise iTSCi for not sharing data in accordance with the data policy of the RCM; but iTSCi points to the MOU that exists between iTSCi and the ICGLR which recognises that total transparency is not acceptable to business.[361] On the other hand, iTSCi releases more information than is required by the OECD Guidance, including publishing all incident reports, production data, other field reports besides due diligence, updates on development outcomes associated with the initiative, and so on. [362] The data policies of iTSCi have also been presented at OECD meetings, including specific sessions on this subject.

Another transparency concern is the infrequency with which incident reports in particular are published. iTSCi's information release policy clearly sets out terms of who gets what and when.[363] According to Pact, "*Anything that impacts on conflict minerals is immediately signalled to the entire SC, but do you really need to know every time a SAESSCAM agent fills in a log-book wrongly?*" [364] It is also essential that any implicated iTSCi member be given the opportunity to respond to an allegation, and this takes time – up to two months. iTSCi is also seeking to protect itself and stakeholders from risk and liabilities due to the sensitivity of data and the potential for circulation of misinformation. In this context, it is right for a conflict minerals initiative to be prudent about what is reported, how and when, placing emphasis on quality (i.e. certainty) rather than quantity (i.e. immediacy) of data. It is also right to expect things to be reported as soon as possible, however, since transparency is a fundamental pillar for ensuring credibility.

There are other things that iTSCi could do to get more information available and accessible to the right audiences as soon as possible. iTSCi does not have its own website, and a lot of iTSCi information is hosted in a document database on the ITRI website, the usability of which is extremely awkward. It is time-consuming and often unproductive to look for an iTSCi document that one knows is in the public domain, but is not clearly catalogued or searchable on the website. So the first thing would be to invest in a user-friendly website, focused on transparency of information. (This might also diminish the amount of data or information requests that iTSCi receives.) Stakeholders' ideas included publishing minutes of meetings, showing what kinds of challenges and incidents have happened and how they have been addressed locally, and starting a discussion on tolerance levels for fraud and inaccurate data in the system.[365] Stakeholders also want to see published data disaggregated as much as possible and more mine production data.[366] However, publishing disaggregated and mine production data could put businesses or communities at risk of being targeted by criminal elements and, according to iTSCi, will not be acceptable to the businesses within the system. [367]

Ultimately, the downstream buyers using iTSCi minerals in their products have communications as a central determinant of whether or not and how they will source from DRC: remember that it is the threat of brand

[356] Kay Nimmo, pers. Comm. to Estelle Levin, 01.12.2014.
[357] Interview with Kay Nimmo, 22.08.2014
[358] Levin and Cook, 2013; Douma, N. and Weinbegr, R. 2014; Kay Nimmo, pers. Comm. to Estelle Levin, 01.12.2014.
[359] iTSCi receives requests to engage with one or two studies a week. Kay Nimmo, pers. Comm. to Estelle Levin, 01.12.2014
[360] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[361] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[362] Interview with Kay Nimmo, 22.08.2014
[363] iTSCi 2013a.
[364] Interview with Karen Hayes, 17. and 18.09.2014
[365] Interview with Karen Hayes, 17. and 18.09.2014; interview with interviewee no. 1, 28.08.2014.
[366] Interview with interviewee no. 1
[367] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014

damage through association with conflict minerals from DRC that is the incentivising lever of Dodd-Frank. It is an error of judgement for iTSCi to not give communications greater attention, and invest appropriately in this. A major electronics brand stated their willingness to help iTSCi communicate better, including through exploring how downstream industry could help finance this aspect. [368] iTSCi, however, is concerned about misuse of information and green-washing that a focus on communications could inspire: "iTSCi expresses reluctance in publishing information that is then used against the process; for example information on incidents and risk mitigation can be published to show the process in operation, but third parties have then used them to demonstrate how the system does not work. There is also frustration with downstream industry communications that have in the past over hyped links to the ongoing iTSCi work when those companies have limited or no interaction and have provided no contributions to the costs." [369]

Analysis Appropriateness for DRC: Credibility

Is the system relevant: does the system have the right goals?	iTSCI aims "*to improve traceability, due diligence practices and assurance of formal and responsible mineral supply chains from the Great Lakes Region."* This is relevant. However this is not a visionary, but rather a practical focusing on the *means*, not the *end.* It is not clear what the ultimate impact of improving traceability, due diligence and assurance of supply chains is intended to achieve. To assess impact from a mineral sector and socio-economic development point of view, we need to know these things are supposed to change, and this needs to be explicitly stated. iTSCi is gradually including coverage of additional human rights goals into its scope, but could push harder in this respect. One of the major barriers, however, is access to financial support for doing this.
Is it set up for success: does it have the right structures, processes, people, resources?	iTSCi has put great effort into having in place the right structures, processes, people and resources. Its internal documents that explain governance were not publicly available to confirm this. Nonetheless, we have ascertained that iTSCi has 2 major gaps. The first is communications and PR. iTSCi does not have transparency as a core principle in how it operates. It does not welcome scrutiny, and does not have the time to deal with enquiries from third parties. It does not take into account the importance of communications and PR to downstream brands, and would benefit from building this into the value-add it offers stakeholders. (If it did, then there would be *less* cause for initiatives like Solutions for Hope and the BSP which are seeking to bridge this gap.) The second is that it could be using its advisory board more effectively to enhance credibility and performance, and be involved in strategic decision making, performance evaluation, and act as ambassadors for the organisation.
Are successes and failures systematically and adequately judged and disclosed?	iTSCi has robust systems for systematically and adequately judging the successes and failures of its members. Nevertheless, stakeholders are sceptical that iTSCi is adequately disclosing risk events and data types (e.g. not soon enough, not thoroughly enough). This could partly be addressed through improving the management of data generated by its traceability and incident tracking system in the interests of improving timeliness; by identifying information types where it could be more transparent; and working harder with the Government of DRC and the ICGLR to enable transfer of data to these stakeholders in a way that is more convenient and usable by them. iTSCi appears to have internal evaluation procedures that enables evaluation of

[368] Interview with interviewee no. 1
[369] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014

	system performance, to allow problems to be identified and addressed. However, iTSCi could do a better job of inviting and enabling systematic evaluation of its own performance, so that it might be better accountable to stakeholders. A lack of *fully permitted and enabled* third party evaluation is presently a key impediment to iTSCi credibility and potentially ultimately performance since it affects trust amongst stakeholders and disincentivises investments in iTSCi by third parties.
Can the system be relied upon?	The system can be relied upon to identify risk events, and instigate processes for mitigating these, but it cannot be relied upon to prevent risk events from happening *at all* (though its existence can lower likelihood of occurrence). This is in line with what the OECD Guidance expects of a due diligence system.
Is the assurance the system provides defensible, repeatable, believable?	iTSCi's assurance systems are not publicly available (e.g. iTSCi Guidance document, audit methodology and checklist, iTSCi governance structure).[370] iTSCi auditors are supported by an "audit advisor with experience in a variety of audit types, specifically in timber due diligence auditing provides input to ensure audit standards are appropriate for purpose." Whilst it is clear iTSCi has put a lot of thought and investment into creating a robust system, without access to such governance documents it is not possible to ascertain if the assurance system is defensible, repeatable or believable.
Do we know what we need to know about the system to be able to trust it?	No. Stakeholders are looking for greater information on value-for-money, performance, and other credibility risks, as above. An independent evaluation, *enabled by iTSCi*, is essential.
Are there any conflicts of interest that may undermine credibility?	Some stakeholders are uncomfortable with the fact that the iTSCi Secretariat is led by ITRI. The fact that only one ITRI member currently buys tin from the DRC consolidates the perception that iTSCi is contributing to market monopolisation to the potential advantage of an ITRI member. This leads to allegations of conflict of interest.

Analysis Appropriateness for DRC: Efficacy

Are system norms robust, concise, targeted?	Yes.
Is there on-going monitoring and evaluation using meaningful criteria for measuring performance against system goals, outcomes, outputs, activities, and key performance indicators?	No. iTSCi needs a Theory of Change and Monitoring and Evaluation System. This is as much about ensuring credibility as it is about ensuring performance.
Does the system adjust to valid external and internal input on performance?	To some extent, it does. For example, iTSCi is trialling a digital tracking system in line with market desires for improved data management (who want data faster, and with less room for error). However, iTSCi partners operate in a highly specialised system which can be challenging for stakeholders to understand and judge. There is a propensity for iTSCi to do its own thing, regardless of criticism because it believes third parties simply do not understand.

Analysis Appropriateness for DRC: Feasibility

How achievable are the goals?	iTSCi's goal (see above) is achievable.
Do the benefits outweigh the	Without iTSCi there would be no or at least a very small amount of legal

[370] See also Levin and Cook (2013)

How achievable are the goals?	iTSCi's goal (see above) is achievable.
costs? What could be done differently to bring higher value at the lowest possible cost to users and stakeholders?	mineral flowing from DRC. In this sense, iTSCi's benefits outweigh the costs because it has brought business back to many economically bereft regions in DRC. In addition, iTSCi is achieving economies of scale as it grows. iTSCi appears to respond to competition and has lowered prices as a result. People would have greater faith in the financial value of iTSCi if a financial evaluation could be done. This would only be useful if the evaluator had intimate understanding of the business environment in DRC, the commercial terms and cultures of procurement by mineral smelters, and the ability to handle information confidentially whilst reporting on the right information points that would a.) reassure stakeholders and b.) reveal practical opportunities for introducing efficiencies. Such a financial evaluation should be a priority for any downstream user that depends upon iTSCi, for its members, for the GDRC, and for iTSCi itself.
Are sources for financing sustainable?	In start-up phase, iTSCi was largely funded by donors. As iTSCi's own resilience has grown, and that of its members, both iTSCi and some members have taken financial risk on starting up in new geographies in order to cope with the fact that start-up capital has not been available from other sources. This is a sign of increasing financial sustainability. However, when iTSCi is funded by donors it can scale up more quickly and widely, and it can increase scope more quickly in terms of issues its due diligence system can monitor, report on and help mitigate therefore. However, donors are reluctant to fund iTSCi as they see this as a sign it is not sustainable. This is a pity, as it does hold it back from having bigger better impacts sooner, and achieving sustainability sooner.
Does it know and is it adapted to the risk environment?	Yes. iTSCi is extremely familiar with the risk environment in DRC, and well adapted to it. iTSCi is not so well adapted to the risk the market may pose, if the concerns of vociferous downstream buyers and stakeholders are not taken seriously and addressed. iTSCi may need support from downstream and upstream actors who understand its value to manage this risk.
Does it know and is it adapted to the capacities of users and implementers?	Yes.
Does it work proactively to achieve maximum positive impact?	As a development NGO, achieving maximum positive impact is an imperative for iTSCi implementing partner, Pact. However, iTSCi is constrained from achieving maximum positive impact by limits to its financial and human resources. iTSCi offers a fantastic platform for achieving bigger development gains in DRC's mineral sector, and this opportunity is not being capitalised upon enough by either GDRC or other stakeholders. Credibility concerns and the desire for enabling competition to iTSCi take the wind out of iTSCi's sails in this respect. On the other hand, if the market were to put greater value into achieving maximum positive impact (in a development and good governance sense) in DRC's mineral sector through conflict minerals initiatives, this would provide iTSCi with a business case for pushing harder in this regard and prioritising it.

How achievable are the goals?	iTSCi's goal (see above) is achievable.
Does it leverage opportunities for greater impact through prioritisation and joint or targeted efforts	iTSCi has effective and worthwhile partnerships with local partners on the ground. iTSCi could do more in this regard, especially if it were to open itself up to work with a range of traceability solutions, for example, and collaborate more willingly with other development partners.
Is it scalable?	In terms of scaling up, iTSCi is repeatedly criticised by a range of interlocutors for moving too slowly to start up the system at green validated mine sites. People also question the fact that iTSCi is operational at some sites that have not been validated as green by the government. However, iTSCi is operating at around twice the number of sites that have been validated, including large numbers in Katanga and Maniema.[371] This underlines the need for better harmonisation between the iTSCi and joint validation missions (see Section XX) but also reflects iTSCi's longer operational history (since 2011) than the validation process, which only began to really take pace this year. As of November 4th, iTSCi claimed that 98% of DRC's 91 validated sites are now covered by iTSCi.[372] [373] The impediments to iTSCi getting to scale are a.) ongoing insecurity at sites, b.) issues around concession ownership and company agreements, or c) lack of cash flow availability for setting up in new sites.[374] Another reason can be the lack of a downstream buyer or a local exporter ready to accept ore from a validated mine site and through that finance the tagging system.[375] With regards iTSCi operating at unvalidated sites, on the one hand there is a lack of coordinated planning between USAID, and iTSCi, which has been the only traceability system available for the 3Ts to date. On the other hand, the government validation missions have also classified sites where iTSCi has been operating as yellow or red on the basis of pregnant women working there or the depth of pits. In this context, "as neither of these issues are directly related to 'conflict minerals' and are not in violation of OECD guidance, and due to the fact that no directive was issued by the Government to suspend or close the mines and their tagging agents remained at site with instructions to continue working, the system continued to operate."[376]
Do users judge it offer value for money?	Upstream actors are most interested in achieving credible traceability / certification at the lowest possible price point, while avoiding market instability. Most see competition, or at least complementarity, through the introduction of other initiatives as a potential opportunity for lower fees and better value for money. As one downstream brand put it, "I've put in $5,000 or $6,000 and now I'm a member or associate member. That's a pretty good deal from our perspective." S/he went on to say, "I think most companies are right now just reaping the benefits and they haven't had to put too much into this game. … if governments suddenly stepped away, there's no way that most companies could afford the numbers they're talking about." In this sense iTSCi offers value for money to downstream actors.
Who are its competition and does	iTSCi's competition includes all of the initiatives mentioned below, in theory.

[371] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014. "The unvalidated iTSCI sites are of course monitored and subject to all appropriate controls and minerals continue to be exported form those sites with the approval of authorities."
[372] Kay Nimmo, presentation to UN-ICGLR-OECD 8th Conflict Minerals Forum, 4th November 2014
[373] Site validation figures given to Alain Chishugi by ITRI in Bukavu, 27.11.2014.
[374] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014. Interview with Karen Hayes, 17. and 18.09.2014
[375] Interview with Vincent Songe of iTSCi/Pact DRC (by Alain) –
[376] Karen Hayes, pers. comm. to Estelle Levin, 28.11.2014.

How achievable are the goals?	iTSCi's goal (see above) is achievable.
it offer unique value that makes it competitive?	In practice, competitors can only gain ground against iTSCi in the following areas: • tin sector where buyers are not ITRI members • tantalum sector (greatest opportunity, and especially at smaller sites since the larger sites are largely operational with iTSCi already) • tungsten sector (though DRC is extremely insignificant for tungsten production)

There is a cross-section of different opinions on iTSCi. Some stakeholders are quick to lament iTSCi's shortcomings, and certain are even more absolutely decided in their distaste for the initiative particularly those that feel constrained by the lack of a functioning alternative or would seek to benefit from exploiting this frustration.

> *"I've been talking to the alternatives for the last 3-4 years and all I hear is talking; nothing has happened. And frankly, that has been hurting people locally and I think rather than let these people eat their budget they should better try to scale up an existing programme like iTSCi. Because without iTSCi, nobody would work over there. And still it is expensive, it costs money, they need budgets, people, it's too slow. There's not money enough to do it. But the others have failed so far and not done anything except criticise iTSCi."*[377]

Yet, others are keen to build on its strengths and avoid compromising all iTSCi *has* achieved by focusing only on its limitations. There is recognition that critics' expectations of what is achievable in DRC may be unrealistic, thus unreasonable,[378] and actually an impediment to progress. No conflict minerals initiative can be failsafe in a context like DRC, especially not at this moment in time when minerals have only been flowing for 3 years since the presidential ban and market incentives are deeply skewed against in-region sourcing due to Dodd-Frank. Nor has any other system achieved anywhere close to the same level of success in terms of getting minerals to market and setting foundations for good governance. The debate that stakeholders must have is one on what issues are happening, which are tolerable, and which are not, so that iTSCi can achieve greater efficacy by focusing its resources on delivering what the market and Congolese stakeholders really require. We hope the analysis above contributes to advancing this debate.

5.1.3. Better Sourcing Program

Overview / summary

The Better Sourcing Program (BSP) is a private sector initiative that was founded on 20 September 2013. [379] BSP intends to work globally and could apply to any mineral. It is seeking to pilot its programme with either gold, tantalite, wolframite or cassiterite in DRC[380], building on an ongoing pilot with a tantalum producer in Congo-Brazzaville. [381] The BSP is not yet operational in DRC but has been working hard to enter the market in DRC, in partnership with Geotraceability as partner traceability service-provider, and has been in discussion with exporters, international buyers and smelters to this effect. [382] BSP intends to target operators that are not currently given access to mineral volumes in the iTSCi system[383].

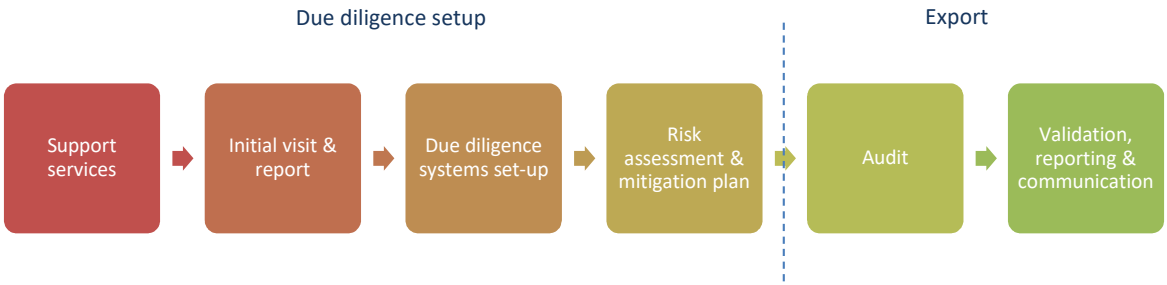
The BSP is "designed to encourage a global, comprehensive and transparent approach to conflict-free and responsible mineral sourcing." [384] It offers a due diligence assurance and conflict free export validation solution for supply chains from artisanal, small-scale and semi-mechanised mines.[385].[386] BSP intends to support upstream

[377] Upstream business purchasing from DRC, interviewed by Ruby Weinberg for the CBRMT report, 12.9.2014.
[378] Interview with interviewee no. 1; interview with interviewee no. 5.
[379] Companieshouse.gov.uk
[380] Tungsten buyers are not interested in sourcing from DRC; the major tin buyers are ITRI members. BSP is in discussions with some Chinese smelters that are not ITRI members, and not CFS audited. It is most likely BSP will pilot with tantalite or cassiterite in DRC. Interview with Benjamin Clair, 07.10.2014, and Ruby Weinberg, interview with Benjamin Clair, 22.09.2014.
[381] Interview with Benjamin Clair, 07.10.2014
[382] Tungsten buyers are not interested in sourcing from DRC; the major tin buyers are ITRI members. BSP is in discussions with some Chinese smelters that are not ITRI members, and not CFS audited. Interview with Benjamin Clair, 07.10.2014, and Ruby Weinberg, interview with Benjamin Clair, 22.09.2014.
[383] Interview with Benjamin Clair, 07.10.2014
[384] Better Sourcing Mailshot, 08.04.2014.
[385] BSP is seeking to work with mines producing 10-15 tons per month. Ruby Weinberg, interview with Benjamin Clair, 22.09.2014.
[386] Benjamin Clair, pers. comm. to Estelle Levin 29.11.2014.

supply chain actors conform with the five steps of the OECD Guidance, the ICGLR's RCM, and the CFSP at a minimum. [387]

BSP has spotted two issues with the existing system: one is aligning upstream conflict minerals supply chain management with the communications and CSR needs of downstream buyers, and in particular end-users; and the second is increasing enfranchisement of mines and traders that are presently outside of 'responsible supply chains'. Consequently, BSP wishes "to strike a balance between the requirements for responsible sourcing of minerals and metals with due regard to the social, environmental and economic environment and the business realities faced by companies operating in conflict-affected and high-risk areas."[388] Its business proposition to downstream is to provide better understanding of the challenges associated with DRC mining while stimulating engagement by progressively introducing transparency, accountability and communications along the supply chain. To upstream, it seeks to maximise exports by enhancing their attractiveness to buyers with responsible sourcing and due diligence expectations. [389]

The BSP will work through the operationalization of six components, themselves designed to operationalise the OECD Guidance, that happen chronologically:



The BSP will work through partnerships, coordinated, monitored and communicated upon by BSP[390]:

- Primary sponsor (exporter, cooperative, buyer, downstream company or donor) will fund set-up
- Upstream businesses (exporter or cooperative) will commission the BSP and pay the levy (either directly or via the international buyer).[391]
- A traceability system provider, such as Geotraceability, will provide the traceability technology and system
- A Local Implementation Partner, a local civil society organisation, will be present at all points in the upstream supply chain and will monitor the implementation of the traceability system, lead local-level consultation and grievance mechanisms, and report incidents and security issues, being responsible for conducting the first actions towards mitigating them.
- Any required Advisory Services provider, to support the identification, assessment and mitigation of risks in the supply chain
- An independent third party Auditor

The organisations that will fulfil the roles of Local Implementation Partner, Advisory Services Provider, or Auditor, are dependent on project location and specific circumstances. Third party auditors can be selected from already approved auditors under other schemes such as the RJC and ICGLR. It is also considering establishing an Advisory Board. [392]

The BSP offering is intentionally differentiated from iTSCi in a number of ways, including:

[387] Better Sourcing Mailshot, 08.04.2014.
[388] Better Sourcing Program 2014 (Standard: http://bsp-assurance.com/wp-content/uploads/2014/04/better-sourcing-standard-consultation-draft-3.0.pdf)
[389] Benjamin Clair, pers. comm. to Ruby Weinberg, 22.09.2014.
[390] Douma, N. and Weinberg, R. 2014; Better Sourcing Programme 2014; Interview with Benjamin Clair, 08.10.2014
[391] Better Sourcing Programme 2014b http://bsp-assurance.com/wp-content/uploads/2014/04/better-sourcing-standard-consultation-draft-3.0.pdf [standard]
[392] Interview with Benjamin Clair, 08.10.2014

1. ***It places great emphasis on addressing downstream needs and concerns, so "bridging the communications gap" and prioritising corporate social responsibility (CSR) in its goals and approach***.[393] [394] It focuses on supporting upstream operators in their communication to the market and concerted engagement with downstream players to facilitate building long-term business relationships between downstream brands and upstream businesses operating in conflict-affected and high-risk areas.
2. ***It involves the use of a two-part Standard,*** and a suite of normative documents that will underpin Better Sourcing Program implementation. The Standard includes a set of ***minimum criteria*** on conflict-free minerals, absence of serious human rights violations, traceability, and legality, which will have to be fulfilled in order for exports to be validated. It will also include ***progress criteria*****,** on issues such as working conditions, child labour, security and human rights, bribery, transparency and reporting, community engagement and development, ASM operations, management of natural resources and dangerous substances, environmental impact, and business partners.[395] The first part incorporates minimum standards that are mandatory, the second part has performance criteria and is intended to be applied flexibly with the assurance decision ultimately resting on companies' ability to demonstrate progressive improvement *towards* the Standard's requirements.[396] The BSP is thus not limited to conflict-free compliance and looks to help upstream operators anticipate further on responsible mining and sourcing expectations. It assures that a supply chain is conflict free *and* shows progressive improvement on progress criteria, which conditions ongoing BSP validation and use of the Better Sourcing Label.[397] On this basis, a supply chain can be supported by the Better Sourcing Program and exporting (i.e. it is conflict-free and, in the DRC, ICGLR-certified) but not be validated for using the label (i.e. not demonstrating sufficient progress against the progress criteria)
3. ***It provides companies that are part of the BSP solution with management systems advice*** to enhance their ability to carry out their own due diligence and internalise the OECD Due Diligence Guidance;
4. ***It does not provide its own tracking/traceability system,*** but rather works with partner service providers to ensure their system is appropriately implemented and meets regulatory and compliance requirements. These systems could include simply a risk based system in low-risk areas.[398] The BSP sees value in determining the traceability system to use based on the mine operator or exporter decision, and supply chain conditions. It remains to be seen if BSP will indeed work with multiple schemes, since they are working most closely with GeoTraceability in DRC at this moment. The BSP will actively support government agents to implement the traceability scheme; the Local Implementation Partner, who is tasked with monitoring the operationalization of the traceability system, will accompany the traceability process and progressively transition the monitoring function to government agents to further build downstream confidence.
5. ***It will make all traceability data and information related to due diligence available to the international buyer prior to export.***[399] The benefit to business is that if there is an issue with the data, the shipment can be halted before the cost of moving the mineral internationally is incurred. This makes the flawed shipment the exporter's physical problem compelling him/her to address the flag sooner so s/he can get the mineral out of the warehouse and out of the way. It allows buyers to procure minerals in full confidence. In the words of BSP's Managing Director, "by ensuring that the traceability data is available to buyers prior to export, you can embed additional measures to ensure that tags that have been sold or attached to a bag at a suspicious place are actually flagged. … An exporter that is not recorded in the database as associated with the mine site of origin won't be able to produce the traceability report that is provided to CEEC, Division des Mines and the international buyer (corresponding to the tag). As part of the tracking system it's about reaffirming that a compliant shipment is not one with a tag, but with a tag and traceability / due diligence information attached to it. We think there's room through that system to conceal or identify or support the progressive identification of upstream negligence or indeed intentional misuse."[400]
6. ***It places great emphasis on the importance of transparency*** (aiming to avoid negative publicity associated with poorly communicated challenges further denounced by third party observers) and

[393] Interview with Benjamin Clair, 08.10.2014
[394] Better Sourcing Programme 2014
[395] Better Sourcing 2014b. http://bsp-assurance.com/wp-content/uploads/2014/04/better-sourcing-standard-consultation-draft-3.0.pdf [standard]
[396] http://bsp-assurance.com/wp-content/uploads/2014/04/better-sourcing-standard-consultation-draft-3.0.pdf [standard]
[397] Douma, N. and Weinberg, R. 2014
[398] Harrison Mitchell, pers. Comm. to Estelle Levin, 03.12.2014.
[399] Ruby Weinberg interview with Benjamin Clair, 22.09.2014.
[400] Interview with Benjamin Clair, 07.10.2014, amended by Benjamin Clair, 29.11.2014.

accountability. "By increasing transparency you naturally increase accountability, and expose anyone who wants to cheat with the system a little more."[401] BSP finds it problematic that iTSCi protects information on the mine of origin. BSP intends to disclose originating mines to smelters on the basis that a trader's value in the supply chain should not be derived only from the relationships with the mine, but by other commercial functions s/he brings like pre-financing, risk taking, quality controls.[402] Presumably all parties would have to agree to such transparency requirements, while avoiding breaching any competition laws. This is part of BSP's strategy to help rationalise supply chains partly because "All the value captured by opaque traders is value that can be used towards proper implementation of DD systems and improvement of supply chain conditions. "[403]

7. **It seeks to compete on price**. BSP will provide the shipment, risk assessment and audit information to the purchaser and smelter free of charge. This is in contrast to ITSCI, which requires smelters to join the program even when the smelter has purchased tagged material from a registered ITSCI member.[404] More generally, BSP estimates that it can be competitive with iTSCi and hopes to reduce the price by creating efficiencies through working with GeoTraceability and other organisations on the ground (e.g. for monitoring), and reducing costs for upstream businesses in other ways. [405] BSP was not willing to share its pricing structure since it needs to be confirmed through actual project involvement, but did set out that the cost may vary for each site, based on the system recommendations that will come out of the baseline assessment stage. "Each supply chain involves different levels of risk and in turn different systems and costs."[406] The BSP expects systems set-up costs to fall over time as each new risk assessment can leverage lessons from other ones. [407] Inevitably buyers will be keen to set up at the most 'value for money' sites. According to BSP Director Harrison Mitchell, "pricing will all become clearer after a year of operation in the DRC."[408]

Analysis Appropriateness for DRC: Credibility

Is the system relevant: does the system have the right goals?	The BSP is "designed to encourage a global, comprehensive and transparent approach to conflict-free and responsible mineral sourcing." [409] Like iTSCi, then, it focuses on delivering the *means* not the *ends* of responsible sourcing. Unlike the other initiatives, the BSP highlights the broader set of social and environmental risks as being more central to their offering; this aligns well with the demands of civil society, academia and downstream businesses. The intent of this expanded scope is partly to go "beyond conflict minerals, to the other issues that deeply affect ASM."[410] This is laudable and, indeed, imperative in the DRC context. In addition, the BSP has identified value propositions that are likely to appeal to certain downstream and upstream businesses: the emphasis on communications, supply chain transparency, building broader CSR issues into supply chain due diligence, management systems advice, flexibility in traceability system choice, releasing data to buyers before export. However, the BSP needs to be tested before its implications and real value to Congolese business, their market, their regulators, and stakeholders can be fully understood. Now the GeoTraceability MoU is signed, the BSP will possibly be piloted using donor funding from USAID (through CBRMT) and BGR.[411] A lot of crucial aspects of the programme will only be defined through implementation, and so there is not much clarity how these will play out (e.g. incident reporting and

[401] Interview with Benjamin Clair, 7.10.2014.
[402] Ruby Weinberg interview with Benjamin Clair, 22.09.2014.
[403] Interview with Benjamin Clair, 7.10.2014, amended by Benjamin Clair, 29.11.2014.
[404] Harrison Mitchell, pers. Comm. to Estelle Levin, 03.12.2014.
[405] Interview with Benjamin Clair, 08.10.2014
[406] Benjamin Clair, pers. comm. to Ruby Weinberg, n.d.
[407] Ruby Weinberg interview with Benjamin Clair, 22.09.2014.
[408] Pers. Comm. Harrison Mitchell, 01.12.14
[409] Better Sourcing Mailshot, 08.04.2014.
[410] Harrison Mitchell, pers. comm. to Estelle Levin, 03.12.2014.
[411] Catherine Picard, pers. comm to Estelle Levin 04.11.2014; Bali Barume, pers. Comm. to Estelle Levin, 02.12.2014.

	disclosure, the audit protocol.) This is not a failing of the BSP, but rather a fact of its relative 'youth' compared to the other initiatives.
Is it set up for success: does it have the right structures, processes, people, resources? Are successes and failures systematically and adequately judged and disclosed? Can the system be relied upon?	BSP is still very much under development, which is an opportunity and a constraint. On the one hand, it can be fairly easily modified and defined flexibly depending on where and how it will be implemented; it also seeks to respond to specific supply chain realities by building flexibility into its approach generally. [412] On the other hand, its concept is not yet proven since the pilot in Congo-Brazzaville remains to be evaluated, and its nascence means that some critical components on which credibility and utility hinge remain in draft form or still to be implemented. For example, the Standard was still under development at the time of research. The other documents were in development and were to be finalised once the Standard is more advanced, further sites have been BSP certified, and the ICGLR finalises its audit protocol for the RCM. [413] In this situation, it is not yet possible to say if the system can be relied upon. It must be piloted. Further thinking is necessary on certain components. The BSP Standard has been developed a by a consulting firm and will be revised further by BSP staff. There is currently no independent standard-setting body or multi-stakeholder dimension to decision-making or oversight of standard development, although BSP directors have stated that they wish the standard to be overseen by the same governing body that will oversee the BSP itself.[414] This will be necessary as the initiative matures. The draft standard has not yet undergone extensive consultation with a spectrum of stakeholders in DRC, on whom it will have the greatest impact. This is absolutely imperative before it is finalised for it to have any credibility, but also as a risk management exercise for the initiative itself. Again, this is likely due to the nascence of the initiative, and the costliness of such a consultation process, but it is something the BSP and its funders should seriously consider if it becomes operationalized in any country. Indeed, the pilot programme provides an opportunity for this, to a certain extent. Secondly, the BSP Standard builds heavily on a range of existing standards, but on the RJC Code of Practices in particular, but this is not entirely logical. The RJC CoP is designed for use by industrial-scale mining companies and downstream companies for accrediting individual entities for RJC membership; BSP is targeted at artisanal, small-scale and semi-mechanised operations. RJC expressly has MoU's with ASM-focused standard-setting organisations like DDI and ARM, and cross-recognises those standards, entirely because the CoP is not designed to be applicable to artisanal or small-scale mining entities. It is understandable to wish to build upon the RJC standard – whose development is overseen by a multi-stakeholder committee and compliant with ISEAL standard-setting requirements – but inspiration may have been more usefully taken from other standards designed expressly for ASM situations, such as Fairtrade, Fairmined, DDI's Development Diamonds, CTC if it is indeed operations with primarily ASM organisations that are in target for the BSP. The RJC's Chain of Custody Standard could also prove an interesting resource for drawing inspiration for the Better Sourcing Standard. Upon assessing the other standards, the developers concluded that none was a perfect fit for the Congolese context or their vision for a standard that was strict enough, but not be a barrier to entry.[415]
Is the assurance the system provides defensible, repeatable,	This is not yet clear, since the audit protocol is not yet developed.

[412] Interview with Benjamin Clair, 08.10.2014
[413] Interview with Benjamin Clair, 08.10.2014
[414] Harrison Mitchell, pers. Comm. To Estelle Levin, 03.12.2014
[415] Harrison Mitchell, pers. comm. to Estelle Levin, 03.12.2014.

believable?	
Do we know what we need to know about the system to be able to trust it?	The system needs to be further developed and then piloted to make this judgement. The Better Sourcing Program is one of four programs that have been endorsed as a complementary program by the Conflict Free Sourcing Initiative.[416] The CFSI issued a support letter to the BSP in November 2013 stating that "an effective implementation of the BSP will, in principle, meet the requirements set out in the CFSI's Conflict-Free Smelter Program (CFSP) audit protocols." [417] This does not indicate, however, that an independent assessment of its OECD Guidance Conformance has been done. This would be advisable.
Are there any conflicts of interest that may undermine credibility?	The programme is co-owned and managed by the same directors of RCS Global, a consulting firm specialising in conflict minerals due diligence and assurance amongst other things, as well as Benjamin Clair, a previous employee of RCS. The directors are aware of potential conflict of interests, and have made efforts to address any that might arise. [418] For example, they state strongly that RCS Global will *not* be an auditor for the BSP and clearly disclose this information to all relevant stakeholders.[419] Additionally, the Standard was drafted in collaboration with RCS Global. [420] RCS Global has given a definitive undertaking that it "will under no circumstance audit a BSP supply chain or company."[421] The BSP anticipates that when it gains greater traction, there will be more resources and appetite to institutionalise BSP further, including institutionalising a greater separation between the two organisations.[422]

Analysis Appropriateness for DRC: Efficacy

Are system norms robust, concise, targeted?	Norms are adequately robust, concise and targeted to allow for piloting, but may need adjusting to have deliver impact and value for users and the system's wider beneficiaries.
Is there on-going monitoring and evaluation using meaningful criteria for measuring performance against system goals, outcomes, outputs, activities, and key performance indicators?	As a system that seeks to achieve social impact to enable brands to deliver on CSR commitments over and above their regulatory compliance obligations, it is essential that the BSP's performance can be evaluated, and for this there needs to be a theory of change and accompanying log-frame. The BSP had not conceived of a theory of change at the time of research. An explicit commitment to develop the BSP in line with ISEAL requirements would do much to support this, even if the fit is not perfect.
Does the system adjust to valid external and internal input on performance?	They system is not yet operational in DRC so this could not be judged.

[416] http://www.conflictfreesourcing.org/resources-and-training/complimentary-programs/
[417] http://bsp-assurance.com/wp-content/uploads/2013/11/CFSI_BSPsupportletter_5Nov2013.pdf
[418] Interview with Benjamin Clair, 08.10.2014.
[419] Harrison Mitchell, pers. Comm. to Estelle Levin, 02.12.2014.
[420] Interview with Benjamin Clair, 08.10.2014
[421] Pers. Comm. Harrison Mitchell, RCS/BSP, 01.12.14
[422] Interview with Benjamin Clair, 08.10.2014.

Analysis Appropriateness for DRC: Feasibility

How achievable are the goals?	The BSP's goals are achievable.
Do the benefits outweigh the costs? What could be done differently to bring higher value at the lowest possible cost to users and stakeholders?	This cannot be known until it is piloted.
Are sources for financing sustainable?	Access to finance for start-up is anticipated to be a challenge. Buyers may be reluctant to pre-finance the due diligence systems' set-up because, by definition, the supply chain may not be ultimately validated for export.[423] Therefore, in order to get started, the BSP will work with business or donors willing to take that risk, as well as a credibility figure who is willing to be associated with the project.[424] Overall financial sustainability cannot be judged as this was not shared with the authors (see above). However, the BSP is a business so its financial sustainability will rest upon its ability to compete and be profitable.
Does it know and is it adapted to the risk environment?	The BSP's Managing Director is very familiar with operating in DRC.
Does it know and is it adapted to the capacities of users and implementers?	The BSP's users will be exporters. Feasibility on this cannot be known until it is piloted.
Does it work proactively to achieve maximum positive impact?	The standards go fairly far in this regard, but could be more ambitious in this respect. Affiliations with other responsible mining standards (e.g. IRMA, Fairtrade, Fairmined, CTC) would allow BSP to focus on its function as a sourcing standard and work with this existing aspirational standards (see below).
Does it leverage opportunities for greater impact through prioritisation and joint or targeted efforts	Yes; partnerships with traceability service-providers; implementation through other partner organisations; standard attempts to build upon existing standards.
Is it scalable?	BSP considers itself as a scalable Solutions for Hope, with the primary difference being a standardised expectation of downstream buyers at the mine.[425] It is market driven and thus if it is competitive, it will be scalable but may not be universally applicable.
Do users judge it offer value for money?	This cannot yet be judged.
Who are its competition and does it offer unique value that makes it competitive?	BSP will compete with iTSCi (3Ts) and Mineralcare (3TG)

[423] Ruby Weinberg interview with Benjamin Clair, 22.09.2014.
[424] Interview with Benjamin Clair, 08.10.2014
[425] Ruby Weinberg, interview with Benjamin Clair, 22.09.2014.

Next Steps

In order to ride the opportunity for piloting that presently exists, the BSP might temporarily abandon the development of a unique standard and instead build upon the CTC standard in DRC, which has already gone through a rigorous consultation and development process and has legal recognition, as the basis for issuing the Better Sourcing label. GeoTraceability could then be the traceability provider, and BSP would provide the overall framework, risk assessment, due diligence, capacity building and monitoring services to support the exporter to be OECD Guidance and RCM compliant. While the BSP remains in development and there is market acceptance that it is new, it would be resource efficient to leverage CTC's existing credibility and support, in order to prove the concept, and then potentially move to developing a BSP specific standard that builds upon the pilot experience. BSP did build their standard on some areas of CTC, but decided against it for the entire standard, opting for the progressive improvement model due to the fact that they judged that the CTC provisions set the standard too high for ASM, such as the requirement for an ESIA, and did not provide a standard that was sufficiently auditable[426] It occurs to us, however, that if BSP is ultimately a *sourcing* standard, then it should not need to develop its own standard where others exist, but could work *alongside* other existing ASM mining standards, like CTC, to add value to these, e.g. by assisting with the downstream engagement piece, with independent monitoring, with capacity building. This would move BSP in a different direction, but may ultimately service the certification sector more effectively in DRC, not least by avoiding duplication of elements where this may not add value.

Ultimately the BSP is a good idea but it needs further support to pin down its design and gain traction in order to achieve the credibility necessary to have proper market acceptance. This requires piloting it in DRC, and evaluating it meaningfully. This evaluation should be independent, and done on behalf of funders, the GDRC, the ICGLR, and key market initiatives that would need to depend upon it. It should include an OECD Guidance Conformance Check, and assess what value the BSP will truly bring to different stakeholders, its potential to drive social change, its potential to gain market traction and help enfranchise more mine sites, and the risk of disruption to the overall gains already made in DRC's certification system. This should be done with due acknowledgement of how its competitors perform in these regards also. Without a field test to review, this comparative analysis is not able to give definitive judgement on its suitability for the Congolese context as a credible contender to iTSCi.

5.1.4. MineralCare

Overview / summary

MineralCare is an ICT-based credential system and platform that validates the actors, the product and the transactions in a given supply chain from extraction to the end user. The credential assures that the person is who s/he says s/he is, and that s/he operates in conformance with the Mineralcare guidelines. These guidelines include requirements from the OECD Due Diligence Guidance, applicable domestic and regional law, special conditions imposed by downstream certification initiatives (e.g. LBMA, DMCC, CFSP), available criminal lists or other blacklists, etc. [427]

MineralCare is based on an earlier system called DiamCare developed to manage diamond supply chains from Angola, and assure that these were compliant with the requirements of the Kimberley Process Certification Scheme.[428] MineralCare now offers specifically adapted platforms for diamonds, gold, and the 3Ts.[429]

Paul Motmans, owner of MineralCare describes his system as follows: "Once a member, credential-holders can trade/process/handle the minerals between each other knowing they are working in a secured environment. Our CoCCare platform is capable to analyze the transactions and to raise flags in case of suspicious situations. Through our composite report the receiver of a production [shipment] is also capable to ascertain the credibility of the product without the sender needing to reveal his source. This way we can guarantee complete commercial privacy and still be able to validate the source."[430]

The system works as follows: In a first step, supply chain actors in a given area (such as companies, individual diggers, traders, exporters, transporters, security personnel at mine sites, etc) are registered in an online

[426] Interview with Benjamin Clair, 08.10.2014; Harrison Mitchell, pers. comm. to Estelle Levin, 03.12.2014.
[427] Interview with Paul Motmans and Hilde van Laere, 4.11.2014. Paul Motmans, email to Estelle Levin, 27.11.2014.
[428] MineralCare, n.d.a.
[429] MineralCare 2013
[430] Paul Motmans, email to Estelle Levin, 27.11.2014.

registration platform through a smartphone and/or web browser. The registration process could potentially be done at the same time as the licensing of these actors by the government. The information an applicant has to submit varies depending on his/her position in the supply chain, and whether it is an individual or a company. A trader for example has to provide his personal details, including a copy of his ID or passport, a photo, a signature and voice recognition. Each applicant has to provide a guarantor who can confirm their identity; this can for example be the Ministry of Mines that has provided a license to the company or individual. The registration of miners (particularly ASM) can be incentivised by making registration a condition to access of certain social benefits provided through a local partner, such as for example giving points for registration and transactions made through the system that can then be used for health care facilities, school meals, training, and so on.

After gathering this information, MineralCare validates the credibility of the individual (a so-called credential holder), the company s/he is working for, as well as the procedures the company is using to be compliant with the MineralCare guidelines. This validation and due diligence process is conducted by a Luxembourg-based company called IDetect which specialises also in financial due diligence. Once the process is complete, the company and the individual users operating on its behalf are each issued a credential that allows the company and the individuals to be identified as part of the MineralCare supply chain. As part of on-going monitoring, MineralCare then conducts ongoing due diligence on each credential holder.[431]

The credentials are classified on a colour-scale: [432]

Blue	•Full credibility, for members who comply with all guidelines and companies where MineralCare has installed its software management system;
Green	•Actors whose company has been checked and validated (meaning the beneficial owners and the management of the company are not on a black list);
Yellow	•Individual actors who are compliant, but do not operate under a company (e.g. ASM miners);
Orange	•Actors whose credentials could not be renewed by MineralCare due to missing crucial information;
Red	•The specific actor is no longer compliant with the international guidelines.

The individualised credentials for diggers are saved on a radio frequency (RF) coded wristband distributed to each individual actor. These wristbands can be traced if antennas are installed at the mine site. Other actors use a smartphone application credential, which gives tremendous advantages like tracking GPS and Chain of Custody transactions. Whenever a transaction of the mineral takes place, the seller and buyer have to identify themselves. The information on their wristbands is transmitted to a Control Unit, which can be attached to a smartphone. Credential holders exchange details through a cloud-based application. The use of the wristband for a transaction can be linked to an incentive scheme that would allow diggers to gain points which they and their families could then use in social benefit programmes. [433] For these programmes, MineralCare intends to partner with local governmental initiatives and local civil society organisations. [434]

[431] Motmans, P. 2014
[432] Motmans, P. 2014
[433] MineralCare, n.d.a.
[434] Motmans, P. 2014. For example, in Angola MineralCare partners with Doctors without Borders. Interview with Paul Motmans and Hilde van Laere, 4.11.2014.

In order to additionally validate a product and the transactions in the supply chain, MineralCare provides a Chain of Custody platform, which gives the possibility to upload invoices, tag/seal numbers, etc. [435]. All credential holders are required to register every transaction and associated document and data in the CoC platform. If the bagging and tagging is done by a credential holder using his/her own system, s/he must insert his/her tag numbers into the CoC platform. In case no bagging and tagging system is in place, MC is able to provide their own tamperproof sacs with 'NFC' tags.[436]

To validate the compliance and credibility of a given product in the supply chain, MineralCare uses a Chain of Custody credibility ranking: an 11-stage code from M5 (complete traceability according to domestic laws, OECD DGG and working with the MC supply chain management system) to C5 (conflict minerals). This code provides transparency and assurance for the product without revealing privacy or commercial information of suppliers. For physical traceability, MC introduces 'SelectaDNA' in producing countries. SelectaDNA is an adhesive containing information such as a unique customer code that can be viewed under a microscope.[437] Each trader in the credential system receives their own 'DNA'-adhesive, with which they mark the minerals they trade.

MineralCare software collects, manages and stores all information regarding the credentials of actors, products and transactions in the supply chain, and can be used to generate reports and statistics on a specific area, a specific supply chain tier (e.g. traders), etc. The application allows an end-user to trace the full chain of custody, providing information and classification on the credentials of the actors, products and transactions in the supply chain, without revealing the identity of the individuals or commercial information. [438]

In order to implement and operationalise the system in a country or area, MineralCare usually conducts the following steps[439]:

1. A feasibility study to determine the needs, possibilities and costs of an installation
2. Installation and customization: The MineralCare platform is installed and fine-tuned to the needs of the government
3. Registration and issuance of credentials
4. Pilot projects to register artisanal and small-scale miners in a specific mining area
5. Review of results with stakeholder and further customisation of the system

Analysis of Potential in DRC

Mineralcare is licensed to the government and in the ideal scenario (for MineralCare) depends upon government to implement it and to assign the necessary human, logistics and administrative resources to keep MineralCare up and running. Supply chain businesses use the system to make decisions as to with whom they'll do business based on the credentials (and associated due diligence information) of potential trading partners, and to append the tracking device to mineral shipments. Due diligence on the supply chain operators is done on the request of the government as part of licence issuance. iDetect validates and 'certifies' the business assigning them their credential.

The Mineralcare system would be most effective if it is made obligatory by the State as a core feature of DRC's traceability and due diligence governance landscape. The more businesses that use it, the more 'locked down,' formalised and legitimised the minerals sector will be. However, it is unclear how the system can be enforced successfully in weak states without additional support to the State, even over and above the presence of the MineralCare assistant. Donor funding would be necessary for at least the first year or two of operation.[440]

If this scenario is not an option, MineralCare could still be enforced through market pressure (e.g. credentialed Dubai Good Delivery buyers insist exporters only take material from traders/miners/companies in DRC with MineralCare credentials) or could gain scale by being licensed to a specific initiative, like iTSCi, BSP, Fairtrade or

[435] Motmans, P. 2014
[436] Paul Motmans, pers. comm. to Estelle Levin, 24.11.2014. See http://electronics.howstuffworks.com/difference-between-rfid-and-nfc.htm for an explanation of the difference between Radio Frequency ID tags and NFC tags.
[437] This technology reflects MineralCare's roots in diamond chain of custody work, but could be a beneficial feature for gold trading where high value goods can be moved in small packages.
[438] Motmans, P. 2014
[439] Motmans, P. 2014
[440] Paul Motmans, pers. Comm. to Estelle Levin, 01.12.2014.

Fairmined, for them to use for their supply chain due diligence and tracking needs. The certification initiatives oriented at downstream brands would benefit from the advantage of being able to follow production to the end-user, and the story-telling this enables all along the supply chain (in both directions!)

MineralCare also needs to be implemented in partnership with an initiative, NGO, or consultancy that would do sectoral risk assessment and ongoing monitoring of its use; in particular at the points where operators are granted licences by the government and on the use of the SelectaDNA tracking device. MineralCare also uses robotic 'behind-the-scene' assessment of all transactions, User Geo-location management and GEO fencing, and audits of software users to protect system integrity.[441] The IMCA, or a third party commissioned by the GDRC (as primary user) could also periodically evaluate system integrity. MineralCare would withdraw the licence if the integrity of the platform were at risk.[442]

MineralCare has GPS/GSM systems for tracking shipments in real time so enabling monitoring of disturbance to a shipment. Transportation (and security) companies are also credentialed and this, combined with the GPS/GSM tracking and toll assessment of trades built into the system allows for issues of mineral theft or laundering to be flagged. There is no solution for managing the risk of illegal payments along transportation routes, but this is a common feature of all the traceability initiatives that do not include ongoing risk assessments of the transportation route or operating environment as part of their offering. Whilst in transit, the mineral is the responsibility of the company doing the transportation. If an issue arises, it is the responsibility of the receiving party to take action per its own conflict minerals management policy which, in theory, should cover risk management options for different scenarios of disruption to transportation.

Analysis Appropriateness for DRC: Credibility

Is the system relevant: does the system have the right goals?	"MineralCare is a proprietary tool to control and secure all aspects of collecting, managing, storing and reporting of data, and providing companies, auditors and regulators with all the necessary means to meet consumer expectations as well as regulatory requirements related to conflict minerals, AML & CTF." MineralCare provides the end in its goal: it seeks to meet regulatory requirements and market expectations. In this way it has the right goals.
Is it set up for success: does it have the right structures, processes, people, resources?	MineralCare has prior experience operating in difficult contexts, e.g. conflict diamonds in Angola. It works with a team of partners and experts around the world, including Luxembourg-based company iDetect (http://www.idetect-soft.eu). It has numerous structures to manage different parts of the system, e.g. AdminPanel, CarePanel, ClientPanel, IDCare (their KYC platform), CoCCare (their Chain of Custody platform), E2ECare (their consumer platform), inventory tracking, SelectaDNA These platforms focus on gathering the right data in the right way, and processing it to then present it thorough the right interfaces to the right users so they can get what they need from the system with confidence. Whilst MineralCare is technically sophisticated in design, it is easy to use for supply chain operators and those doing due diligence on them.
Are successes and failures systematically and adequately judged and disclosed?	This cannot be ascertained since the system is not yet operational in DRC.
Can the system be relied upon?	The system is theoretically robust. An independent OECD Guidance Conformance Check is necessary. Additional due diligence may be necessary, e.g. on certain risks associated with transporting minerals.
Is the assurance the system provides defensible, repeatable,	MineralCare offers different levels of assurance on an operator's credential. We could not ascertain what procedures MineralCare has in place for doing

[441] Paul Motmans, pers. comm. to Estelle Levin, 02.12.2014.
[442] Paul Motmans, pers. Comm. to Estelle Levin, 01.12.2014

believable?	the validation of credentials or its ongoing due diligence of each credential holder. However, it carries out review services in accordance with the non-financial standard ISAE 3000 that safeguards the adequate implementation of international guidelines.
Do we know what we need to know about the system to be able to trust it?	MineralCare was not able to provide evidence of an independent evaluation of their system (noting also that it has not yet been piloted for the 3TG). Regarding its earlier prototype, DiamCare, a range of important experts and organisations have provided endorsements. Global Witness said of the system in 2008, "Global Witness fully supports the system as being the only system that it has independently reviewed to date that has effectively controlled the rough diamond supply chain from the point of extraction to the point of first export. The fact that it was able to achieve this in Angola, under tremendously harsh conditions, adds testimony to the credibility of its uniqueness and effectiveness."[443] Belgium's Commissioner of Police and head of the diamond squad, Agim de Brucyker, said in 2013, "In search for alternative systems that were already developed in the market, the Group [of Experts for Ivory Coast from 2005-2008] examined DiamCare and noted that this program could improve the registration of all actors involved in rough diamond production, the location and run of mines, the sales registration and the export registration. The fact that MineralCare is born out of the experience of DiamCare, I strongly believe that it is an efficient and important tool for countries with artisanal mining production." [444] Other recommendations shared with the authors include from Bernhard Esau as Kimberley Process Chair, in relation to its potential for management of diamonds in Zimbabwe, and Christine Gordon, former UN monitor of diamond systems in Angola at the time of Diamcare's implementation in 2000 to 2002.[445] MineralCare needs to be piloted so we may know how it can work.
Are there any conflicts of interest that may undermine credibility?	The authors are not aware of any but have not carried out full due diligence on all aspects of MineralCare. The state should do this as part of the MoU process, if it were to sign one with MineralCare.

Analysis Appropriateness for DRC: Efficacy

Are system norms robust, concise, targeted?	Yes.
Is there on-going monitoring and evaluation using meaningful criteria for measuring performance against system goals, outcomes, outputs, activities, and key performance indicators?	We could not find evidence of MineralCare having a formal system for monitoring and evaluating its own performance.
Does the system adjust to valid external and internal input on performance?	MineralCare seeks to tailor its system to supply chain realities through the following process: feasibility study, installation and customisation, issuing credentials, a pilot project with miners, and a review of performance to enable further customisation.[446]

Analysis Appropriateness for DRC: Feasibility

How achievable are the goals?	They are achievable.

[443] Global Witness, 2008.
[444] De Bruyker, 2013.
[445] Gordon, 2003; Bernhard Esau, 2009.
[446] MineralCare 2014.

Do the benefits outweigh the costs? What could be done differently to bring higher value at the lowest possible cost to users and stakeholders?	The concept is solid as there are benefits for all stakeholders, but until the project is tested one cannot ascertain if benefits will outweigh costs. One weakness in the MineralCare system is its reliance upon the delivery of social programmes to diggers as a key incentive to have them participate properly in reporting their minerals into the system. This may not be possible universally, and may restrict MineralCare's applicability to larger mines and thus its scalability also. Greater thought needs to be put into this aspect to ensure this missing link does not undermine its ability to succeed in DRC. A pilot of the system could reveal alternative means of incentivising diggers to participate.
Are sources for financing sustainable?	According to MineralCare, conducting due diligence on and issuing credentials for individual supply chain actors costs around 150 USD per individual actor per year. For diggers and security personnel guarding the mine site, wristbands and a family credential is at cost, being around $10 per band. These can be renewed every year or half year, at the government's discretion, but experience has shown that semi-annually is best where diggers are highly mobile, as they are in DRC.[447] Companies who have blue credentials, and thus have installed the IDCare software management platform, pay 600 USD per month, but this covers the cost of doing due diligence on the credentials of all relevant employees. For governments, the cost depends on the duration of the contract. For example, a 3 year license costs $300,000 a year + $150,000 for a Full Maintenance contract; a five-year license costs $250,000 a year and $125,000 for an Omnium contract; a seven-year license costs $200,000 a year + $100,000 for am Omnium contract. Mineralcare also offers an in-country assistant at a cost or around $240,000 a year (contingent upon the country). MineralCare's assistant oversees the operation of the platform and trains government employees, who then train industry in how to use the system. S/he also communicates with MineralCare's management service and development people in the US, EU and UAE.[448] The credential holders will have a help-desk to assist them when all other recourses have failed. Regular seminars will also keep members updated.[449] These costs may appear prohibitive in the DRC context. Initial funding for the system by a donor would allow it to get up and running, and as it rolls out and enfranchises increasing members of the industry, revenues to the State would theoretically increase too until such a point as they would cover the system's ongoing costs.
Does it know and is it adapted to the risk environment?	MineralCare has put some thought into this, but needs to get more familiar with the Congolese context. It is building relationships with important stakeholders in DRC. It also needs to bring someone into its team that already has credibility with Congolese and international stakeholders to aid with adaptation to the risk environment. Misjudgement on the feasibility of using social benefits to miners as a universal incentive for system participation is an example of where this understanding of the Congolese reality is lacking. For example, should government be the ultimate licensee of the MineralCare system, transparency of data will rest on the government's willingness and capacity to share data with ICGLR and the public. Our experience of seeking data for this project suggests that this would be a deficiency in the programme, meaning that additional channels for data disclosure would be necessary to fulfil the transparency imperative of the Due Diligence Guidance as fully as other initiatives are seeking to do. MineralCare intends to accomplish this

[447] Paul Motmans, pers. Comm. to Estelle Levin, 01.12.2014.
[448] Paul Motmans, pers. Comm. to Estelle Levin, 01.12.2014
[449] Paul Motmans, Pers. comm. to Estelle Levin, 02.12.2014.

	through the establishment of rules on information sharing by the steering committee; MineralCare would ensure all participants in the system follow these in detail.[450]
Does it know and is it adapted to the capacities of users and implementers?	MineralCare does not yet have experience of operating in DRC. Only piloting the system will reveal if it is suitably adapted.
Does it work proactively to achieve maximum positive impact?	An opportunity assessment of system implementation is necessary to plan for this and demonstrate proactivity. However, MineralCare's idea to tie participation in the scheme to the delivery of social benefits demonstrates its desire to achieve maximum positive impact.
Does it leverage opportunities for greater impact through prioritisation and joint or targeted efforts	MineralCare needs to build deeper relationships with other initiatives to be able to crack into this terrain. It could do more to pursue joint efforts. In terms of targeted efforts, MineralCare has an MoU with the Governor of Orientale Province to pilot its scheme there.[451]
Is it scalable?	Yes. It can be implemented at the national level.
Do users judge it offer value for money?	Users could not be consulted but it is our opinion that if the pilot proves this works, it can offer value for money.
Who are its competition and does it offer unique value that makes it competitive?	MineralCare is a total certification (through its credentials) solution, akin to iTSCi and BSP (both of which are nearly universal in what they do, but not quite!) It would work well if done in combination with a social and environmental standard, like CTC, and partner to offer broader risk assessment, in which case it would offer a more complete package. Mineralcare distinguishes itself from the competition in a range of ways: First, MineralCare can enter the market from a range of angles (see below) but the ideal situation for getting to scale quickly is to license the system to the government, which owns and implements it as part of its governance tools for regulating and monitoring their mineral sector.[452] It is therefore a tool for mineral sector governance more broadly, enabling collection, measurement and analysis of mineral sector data, and improved sector management. It also allows governments (and Congolese businesses) to know to the geography of their minerals' downstream supply chains, which may aid with national marketing efforts and diplomacy. Second, MineralCare is a Customer Relations Management platform, validating the credibility of users, products and transactions in the supply chain through a chain of custody and know-your-customer (KYC) information.[453] It offers product (mineral) tracking and traceability as an added benefit of this broader chain of responsibility and due diligence system, which are its central features. Third, by embedding due diligence as part of the condition for mineral traceability, and given the system's roots in financial due diligence methodologies, it could enable more systematic due diligence of financial-related risks (notwithstanding confidentiality constraints).[454] This would aid the GDRC and IMCA manage financial crime related to individual supply chains, and mineral sectors at the national and regional levels (if it were applied across other countries). This would be particularly (but not uniquely) advantageous for gold, whose trade is very much tied to the financial needs regional traders and

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[452] Motmans, P. 2014. Paul Motmans, pers. Comm. To Estelle Levin, 2.12.2014.

[453] Motmans, P. 2014

[454] One tool is the necessity for data on transactions to include information on the means of payment, e.g. cash, bank transfers, 3rd party payments, etc. Red flags can be raised and transactions analysed.

	potentially international criminals. Fourth, the Mineralcare vision is a software-supported supply chain experience that will enable retailers to tell the story of their supply chain to consumers, detailing the geography and individuals involved in the trading chain, and any other aspects deemed essential or attractive from a marketing or compliance point of view. It has downstream's communications needs in mind, therefore. Fifth, MineralCare has a service agreement with the Dubai Multi Commodities Centre (DMCC) for Dubai Good Delivery for Gold; as of 2015, all Dubai Good Delivery refineries will have to have a MineralCare credential in order to comply with DGD requirements.[455] Sixth, MineralCare brings extra value to users; for example, the credential system can be used to access finance as certain banks will rely upon it for their financial due diligence needs and to lower insurance costs.[456] The RFID wristband worn by miners can be used for financial transactions also, which may help address issues of cash liquidity in remote areas provided local businesses are able to also accept payment by RFID.[457]

5.2. Traceability Schemes

There are three traceability initiatives applicable to the 3Ts that have been seeking to enter the market in DRC. Only one is operational in DRC at present; MetTrak has been piloted in the past; SERCAM is seeking to work in DRC.

Greater detail on the key elements of these traceability systems can be found in Annexes

5.2.1. GeoTraceability

Overview / summary

GeoTraceability is a UK-based subsidiary of Price Waterhouse Coopers (PwC), offering traceability, data collection and data management solutions mainly for the agricultural, but also the mining sector.[458] The GeoTraceability tool helps companies collect and manage the information they need in order to comply with traceability requirements and standards.[459] While its focus is on private companies, collaboration with government and other stakeholders is planned.[460]

GeoTraceability provides the technology for traceability based on tagging of minerals with barcodes and tracking them along the supply chain using a technology combination of mobile phones, GPS and GIS.[461] Tagging and bagging of minerals can start either at the level of the mine site or at the pit or tunnel, depending on the configuration of the mine site and the prior risk assessment conducted by the due diligence operator (e.g. the company's own or contracted risk assessor, or a partner such as the Better Sourcing Program).[462]

The GeoTraceability system starts from the position of adding value to the client through traceability and transparency beyond simply getting minerals moving. A prior supply chain analysis, costing $10,000-25,000,[463] informs how the bagging, tagging and tracking of minerals should be configured at each supply chain tier and which technology solution might be most suitable. This is done mainly to rationalise implementation costs and ensure maximal control, but its findings may lead to a simplification and securitisation of the supply chain also,

[455] Interview with Paul Motmans and Hilde van Laere, 4.11.2014. We were not able to verify this with the DMCC.
[456] Interview with Paul Motmans and Hilde van Laere, 4.11.2014.
[457] Motmans, email to Levin 25.03.2015.
[458] GeoTraceability 2013
[459] Interview with Gérald Beaulieu, 7. and 17. 10.2014
[460] Interview with Gérald Beaulieu, 7. and 17. 10.2014
[461] Douma, N. and Weinberg, R. 2014
[462] Interview with Gérald Beaulieu, 7. and 17. 10.2014
[463] GeoTraceability's cost structure is customized to each mine site. Gérald Beaulieu, interview with Ruby Weinberg (CBRMT), 19.08.2014.

which can bring other commercial gains to the client.[464] According to GeoTraceability, there may be low cost solutions for low production sites, but there are also supply chains where using the technology is not cost effective simply due to its complexity.[465] For due diligence, incident reporting and incident mitigation, GeoTraceability will rely on a due diligence partner on the ground. The due diligence partner will also be responsible for grievance and whistleblowing mechanisms.

After the weighing, bagging and tagging of minerals, data on the mineral flow is collected at key points along the supply chain, defined through a prior risk assessment. This includes scanning the bags before and after transport in order to detect discrepancies in weight and tampering with tags. The data is fed into an online platform, which is owned and managed by the exporter, who is responsible for engaging with his upstream suppliers in the system (the system can be adapted for use by cooperatives or other stakeholders upstream of the exporter). The exporter also manages access and data sharing internally and externally, but GeoTraceability ensures data privacy and confidentiality and defines which data points can be made accessible to whom (e.g. smelters only have access to data on the batch it bought) based on the exporter's specifications. The exporter can then grant access and use of specific data to other types of users, such as a partner initiative (BSP), a government agency, or a downstream client (smelter).[466] According to GeoTraceability, the system would allow a smelter to get access to information on a purchased batch of mineral prior to export, including official documentation, traceability reports and information regarding inspection and incident reports from the mine site.[467]

GeoTraceability distinguishes itself from competitors based upon its simplicity (it can be operational within a month after the supply chain analysis), its adaptability to different mine site infrastructures and environments, and its emphasis on transparency as part of its offering, along with traceability.[468] GeoTraceability also emphasises that it is a business-to-business solution, and does not take financing from governments or donors; it is a for-profit entity.[469]

GeoTraceability's web-platform enables different clients to access and share their data quickly, easily, and in a timely manner. For example, governments can "download the data and populate almost automatically their database."[470] Smelters can access all shipment data prior to export, something Geotraceability and BSP see as especially advantageous.[471] The benefit to business is that if there is an issue with the data, the shipment can be halted before the cost of moving the mineral internationally is incurred. This makes the flawed shipment the exporter's physical problem compelling him/her to address the flag sooner so s/he can get the mineral out of the warehouse and out of the way. It allows buyers to procure minerals in full confidence.

In the words of BSP's Managing Director, "by ensuring that the traceability data is available to buyers prior to export, you can embed additional measures to ensure that tags that have been sold or attached to a bag at a suspicious place are actually flagged. (…) An exporter that is not recorded in the database as associated with the mine site of origin won't be able to produce the traceability report that is provided to CEEC, Division des Mines and the international buyer (corresponding to the tag). As part of the tracking system it's about reaffirming that a compliant shipment is not one with a tag, but with a tag and traceability / due diligence information attached to it. We think there's room through that system to conceal or identify or support the progressive identification of upstream negligence or indeed intentional misuse."[472]

GeoTraceability currently focuses on the tantalum sector, but has also been in contact with the tungsten industry. Apparently GeoTraceability is also in contact with a tin smelter that may be interested in implementing the system.[473] In 2013, the GeoTraceability technology was tested in the 3Ts sector, with one pilot project on cassiterite in Uganda (Zarnack Holdings), and one on tantalum in Rubaya, North Kivu (MHI, now SMB).[474] According to GeoTraceability, the results of the pilot with MHI were quite satisfactory and ready to be rolled out, but in the

[464] Interview with Gérald Beaulieu, 7. and 17. 10.2014
[465] Interview with Gerald Beaulieu, 17.10.2014
[466] GeoTraceability 2014; Interview with Gerald Beaulieu, 7. and 17. 10.2014
[467] Interview with Gérald Beaulieu, 7. and 17. 10.2014
[468] Interview with Gérald Beaulieu, 17.10.2014
[469] Gerard Beaulieu, interview with Ruby Weinberg, 19.08.2014.
[470] Gérald Beaulieu, interview with Ruby Weinberg, 19.08.2014.
[471] Interview with Gérald Beaulieu, 7. and 17. 10.2014
[472] Interview with Benjamin Clair, 07.10.2014, amended by Benjamin Clair, 29.11.2014.
[473] Interview with Gérald Beaulieu, 7. and 17. 10.2014
[474] Douma, N. and Weinberg, R. 2014; Interview with Gérald Beaulieu, 7. and 17. 10.2014

end MHI decided to use the iTSCi system as GeoTraceability did not have an MoU with the government of DRC. [475] The MoU between GeoTraceability and the government was signed in December.

Analysis of Potential in DRC

The GeoTraceability tool is not a complete solution, but offers a sound traceability option for introducing transparency into supply chains and vesting control of data with the client company, i.e. the exporter. GeoTraceability is likely to be implemented either by larger entities that are able to take care of their due diligence and capacity building needs themselves or through service providers, or by working through a programme such as BSP or iTSCi. GeoTraceability does not have a relationship with iTSCi but would be willing to work with them, if iTSCi chose to open up its traceability offering to diverse solutions. GeoTraceability already has a partnership agreement with BSP and, if the MOU is signed, will pilot with BSP.

The GeoTraceability system is very well established in the agricultural arena, and has "Technology eprouvé dans le secteur minier" avec une "large experience dans d'autres pays difficile (Sierra Leone, Liberia, Nigeria)"[476] It has enabled tracing of over 150,000 tonnes of four agricultural commodities (hazelnut, cotton, coffee, cocoa) and the 3Ts across 11 countries, having engaged over 130,000 producers.[477] GeoTraceability decided to enter the 3Ts market in the Great Lakes Region, having been approached by industry. GeoTraceability piloted its model with MHI's coltan mine in Bibatama (Rubaya), North Kivu between November to December 2013 (implementation between May 2013 and December 2013), and in a tin mine in Uganda from May 2013 to December 2013. An assessment of MHI's due diligence, published in December 2013, concluded that, regarding the MHI supply chain from Bibatama using Geotraceability, "based on our research and the testimonies of a wide range of informants, we have concluded that this supply chain does not finance conflict."[478]

GeoTraceability would be willing to collaborate with iTSCi and other initiatives. They propose that the traceability initiatives sit together to establish what points of harmonisation are necessary to support downstream users handling upstream supply chains that depend on different systems. For example, one solution would be to determine the common features of a traceability report, so that all systems ultimately produce the same core data points that are essential to downstream. These data points will be determined by the CFS, OECD Guidance and ICGLR's RCM. The methodology for delivering that common report could remain confidential and a point of competition between systems.[479]

5.2.2. MetTrak

Overview / summary

MetTrak is a South African company that has been specialising in digitised tracking of goods, vehicles and animals since 1980, and has expanded the use of its system to other industries, including minerals.[480] MetTrak is a software solution that allows real time tracking and tracing of minerals from the all scales of mine to the end consumer and can be integrated into database management systems. [481] MetTrak has not been implemented in DRC to date, but was tested and is operational at Rutengo, a semi-industrialised cassiterite mine in Rwanda, since October 2011. [482] It could work in any of the 3TG, as well as precious stones,[483] but is concentrating on developing its offering for gold at present. [484]

The MetTrak system is based on the following pillars:

Personnel registration

[475] Interview with Gérald Beaulieu, 7. and 17. 10.2014
[476] Gérald Beaulieu, interview with Ruby Weinberg, 19.08.2014.
[477] Gérald Beaulieu, email to Levin, 20.03.2015.
[478] "An assessment of Mwangachuchu Hizi International (MHI)s implementation of OECD responsible supply chain due diligence, and the conflict status of mineral supply chains from MHI's mining concession", Gregory Mthembu-Salter with Dr Thomas Salter, published at http://solutions-network.org/site-sfhtantalum/files/2014/03/MHI-summary-Dec-19-edits.pdf
[479] Interview with Gérald Beaulieu, 17.10.2014
[480] Blore, S. 2012. Interview with Albert Mentjes, 17.10.2014.
[481] Blore, S. 2012
[482] Blore, S. 2012
[483] Interview with MetTrak, 08.09.2014 (by Ruby)
[484] Interview with Albert Mentjes, 17.10.2014

All stakeholders handling the minerals in the supply chain are registered and provided with an ID card that includes a radio frequency (RF) bar code. Registration and the production of ID cards are conducted on site. Employees' personal data and their role and function are registered in a database, and together with a photograph put on the ID card. The ID cards are assigned to employee functions and segments in the supply chain, so that they may not be used outside of them. [485]

Registration stations:

Minerals are registered at the end of the tunnels at each individual pit of the mining concession. The registration stations are portable and consist of a computer linked to an RF reader and an electronic scale. [486] The system allows registration only when the RF reader registers the presence of the ID of a mine security officer and the ID of a tagging officer, who can be a government agent or a MetTrak officer. The miners' IDs are registered in the system and cross-checked, then their minerals are weighed. The system automatically stores all this information, including date, time and mine site, and prints a receipt for the miner. [487] According to an assessment commissioned by PAC, these receipts were key to the acceptance of the system by the miners at Rutengo. [488] The system monitors individual output and flags if their output exceeds a certain amount. Once the tagging officer has collected around 50kg, the individual bags are collected in a larger bag and sealed with an RF 'mine' tag registered by the system. The MetTrak system automatically raises a flag if RF tags are registered in a mine or chain where they were not assigned to. The response to this can be flexibly programmed into the system, e.g. blocking the use of that specific tag, or alerting authorities, etc. [489] The registration unit transmits all data via cell or satellite phone connection to a MetTrak server off-site and potentially a database onsite, a government-owned database, or the ICGLR database. [490] In this way, no paper work is involved. [491]

Transport

Similar to the mineral registration, transport from the mine site to the processing centre can only take place if the registration unit registers the presence of a driver ID and the ID of the mine security officer. All sealed bags loaded in the truck are registered by the unit, as is the RF tag of the transport vehicle itself. [492] As an option, RF readers could be placed along the route to register the vehicle's itinerary. [493] The system raises red flags if the truck takes much longer to arrive at the processing centre than expected. [494] At the processing centre all bags are registered and re-weighed, and the system raises a flag for large discrepancies with the weight at the mine site. All information collected is continuously uploaded to the MetTrak server. [495]

Processing

After processing, the upgraded mineral is collected in 1000kg parcels, which are sealed again and tagged with a new FR 'negociant' tag. The system registers the new tag, and associates the previous tags of the used 50kg bags of processed ore with it. [496] One of the biggest challenges according to MetTrak is the risk of tampering with minerals at the processing plant. However, if the system is set to measure purity grade, it would raise a flag if after processing there would be an obvious inconsistency in purity grade. [497]

Export

The procedure up to the point of export is similar to the procedure for transport to the processing centre: The system registers the transportation vehicle's RF tag, the tags of the bags loaded on the truck, and the IDs of the transporter and security officer. At the exporter's facilities the truck is registered again, and the 1000kg parcels are checked in. [498]

[485] Blore, S. 2012
[486] Blore, S. 2012; Interview with Albert Mentjes, 17.10.2014
[487] Blore, S. 2012
[488] Blore, S. 2012
[489] Blore, S. 2012
[490] Blore, S. 2012
[491] Interview with Albert Mentjes, 17.10.2014
[492] Blore, S. 2012
[493] Blore, S. 2012
[494] Interview with MetTrak, 08.09.2014 (by Ruby)
[495] Blore, S. 2012
[496] Blore, S. 2012
[497] Interview with MetTrak, 08.09.2014 (by Ruby)
[498] Blore, S. 2012

MetTrak differentiates itself from the competitor traceability systems as follows: [499]

- It is an African business for African businesses;
- It has a long history of tracking, tracing and supportive services for red meat productions coming from DRC and the Great Lakes Region to the satisfaction of EU standards;
- It is more than a traceability system with additional data and supply chain management services built into its offering (e.g. to ensure process efficiency and performance);
- Its implementation would be done through local franchises, not NGOs These businesses would pay a one-off fee to undergo intensive training in South Africa, and MetTrak retains a shareholding to ensure they have a stake in credibility and performance;
- There is no cost to government for MetTrak to be operationalized in-country;
- metTrak is confident that they are, "miles and streaks ahead" of its competitors in terms of data accuracy, cost-effectiveness, and presentation

Unlike iTSCi, but as with all the other traceability offerings scoped herein, MetTrak's system would be implemented for profit as a business.[500] In order to implement the system in a country, MetTrak would establish a franchise company, in which it would hold a share, which would get the license for the software and whose employees would be trained in the system by MetTrak. That company could then sell the equipment and its services to any level of the supply chain in country.[501] In DRC, this implementing partner could be BSP, Pact (for gold), PAC or another third party, for example (and if these initiatives would agree to this), or one of their existing franchises for their Beeftek tracking system[502]

MetTrak does not claim the ownership of the data collected through its system, and thus the data would be owned by the companies who use and engage with the system, who could then use, aggregate and analyse it as they wish. Similarly, some of the raw data (excluding for example financial data) could also be made available for use by government agencies.[503] MetTrak could support the government with a software package that would analyse the data to serve their needs, or simply provide the database in raw form (though the lowest level of data would not be editable).[504]

The costs of the MetTrak system consist of one-off hardware costs for set-up, and operational costs paid through an annual charge. MetTrak sells its hardware to the users of the system and trains them in operating it. The cost of one recording unit at the pit or tunnel, including solar panels, reader and toll printer, reusable tags is estimated between US$8,000 and US$10,000.[505] A recording unit at the processing site costs an estimated USD 20,000. [506] Initial estimates by MetTrak in 2012 determined the operating costs of providing traceability services at between US$135 and US$150 per tonne of ore. [507] The idea is to levy these traceability charges at the level of exporters, who would then pass the costs up the supply chain. [508] These operational costs include data transfer and handsets (cell phones). Of the operational costs, US$5 per tonne would be designated to a community development fund for the community at the mine site. [509] Details on how this would be managed remain to be determined. The additional cost of incidentals (e.g. training, new technology) would be determined by the franchise. [510]

In 2012, an assessment by PAC estimated that Rutongo mines was paying $500 per tonne for the traceability services, and an additional levy of $200 per tonne to the Rwandan government to cover for the government staff required to operate the system, but this levy also included some costs not directly related with the MetTrak systems, such as risk assessments and incident reporting. [511] MetTrak needs to be used by a company that can

[499] Interview with Albert Mentjes, 17.10.2014
[500] Interview with Albert Mentjes, 17.10.2014
[501] Interview with MetTrak, 08.09.2014 (by Ruby); Interview with Albert Mentjes, 17.10.2014
[502] Interview with Albert Mentjes, 17.10.2014
[503] MetTrak 2012; Interview with Albert Mentjes, 17.10.2014
[504] MetTrak 2012; Interview with Albert Mentjes, 17.10.2014
[505] Interview with Albert Mentjes, 17.10.2014. In 2012, the cost for one recording unit was estimated at between 5,000 USD to 10,000 USD including training and installation (MetTrak 2012)
[506] Interview with Albert Mentjes, 17.10.2014
[507] MetTrak 2012
[508] MetTrak 2012; Blore, S. 2012
[509] MetTrak 2012
[510] Interview with Albert Mentjes, 17.10.2014
[511] Blore, S. 2012

manage its own risk assessments, incident management, and reporting, or has consultants that can support them with this. Audits would need to be done through the ICGLR RCM.

In 2012 MetTrak conducted a scoping visit to the Kalimbi concession near Nyabibwe in South Kivu, DRC, in order to investigate the technical requirements for installing the MetTrak system at site. [512] It was deemed that installing the MetTrak system would be technically feasible. [513]

Currently MetTrak does not have an MoU with the Government of DRC to implement the system in the minerals sector, but claims to have one with the Government of Burundi and has authority from the Government of Rwanda. [514] According to MetTrak, the cost of set up in terms of money and time, political agendas, and attempts by government to exact other benefits from the system have been barriers in DRC.[515] MetTrak is still keen to operate its system in DRC, but is concentrating on expanding its agricultural traceability offering in Kolwezi where its users will be supplying food to the mines. This may help prove concept to potential clients by seeing it work for another sector. [516]

Analysis of Potential in DRC

MetTrak is ready to be run in DRC, and only needs a business that is interested and an MOU with GDRC to make this possible. [517] It is proven, through its implementation in Rwanda, [518] and offers extra value to businesses and governments. [519] It is not a complete conflict minerals due diligence solution, but argues that none of the competitor systems are either.[520] For example, while the system raises red flags for inconsistencies such as differences in bag weight, ID cards or RF seals appearing outside of their assigned supply chain level, inconsistencies in transport time, etc, it does not define how such incidents are dealt with and who they are communicated to. Also, the system cannot prevent theft of minerals from the supply chain, does not come with an oversight mechanism, e.g. community-based monitors, and misusing or counterfeiting ID cards or RF tagged seals may be a risk.[521] Users must be aware of these gaps vis-à-vis OECD Guidance, RCM and CFSP compliance, and thus take additional measures to manage those issues within their control. MetTrak's franchisee may need to engage third parties to provide necessary oversight and checks, e.g. the IMCA, and the CLS and CPS, in order to protect the credibility of their system

On the other hand, MetTrak is more than a conflict minerals solution, bringing other commercial value to supply chain operators and the minerals sector more broadly (e.g. through its franchise business model and the community development fund.) [522]

While the data collected through the MetTrak system could be made available to governments and thus support the government's ability to regulate the sector and collect tax revenue, MetTrak's experience is that some government agents actually do not seem to be in favour of the system, since government agencies would not be implementing the system but rather monitoring it, potentially reducing opportunities for personal benefit. [523] If the data collected through the MetTrak system were to be provided for use by government and or ICGLR databases as well as potentially downstream parties, this would greatly increase transparency and contribute to the integrity and legitimacy of traceability and certification efforts in the Great Lakes Region[524]

Real time data collection and transmission through the MetTrak system can help exporters comply with ICGLR requirements, as they are able to verify the origin of all material in one MetTrak shipment even before the

[512] MetTrak 2012
[513] MetTrak 2012
[514] Interview with Albert Mentjes, 17.10.2014. ELL did not have sight of the agreements with the Burundian or Rwandan governments.
[515] Interview with Albert Mentjes, 17.10.2014 and interview with MetTrak, 08.09.2014 (by Ruby).
[516] Interview with Albert Mentjes, 17.10.2014
[517] Interview with Albert Mentjes, 17.10.2014
[518] Blore, S. 2012
[519] Interview with Albert Mentjes, 17.10.2014
[520] Interview with Albert Mentjes, 17.10.2014
[521] Blore, S. 2012
[522] Interview with Albert Mentjes, 17.10.2014
[523] Interview with Albert Mentjes, 17.10.2014
[524] Blore, S. 2012

material enters their facilities. The data provided through MetTrak can also be used by exporters to generate reports and prove the Chain of Custody as required by ICGLR.[525]

MetTrak would fulfil the ICGLR's requirements on data collection and sharing, however, the ICGLR's or government databases would need to be technically compatible with the MetTrak data format[526] This is something that Sercam's middleware technology could possibly assist with (see below).

The system depends on power sources for the registration units, which may be difficult to provide in a setting like eastern DRC. [527] However, according to MetTrak, all equipment is solar powered. [528] Furthermore, Internet connectivity is not a constraint, since MetTrak has written a piece of software called 'Bex' that can manage this.[529]

MetTrak previously had a business relationship with TinCo, which allegedly created concerns amongst some industry stakeholders of a conflict of interest. According to MetTrak, all ties with TinCo have now been cut.[530]

5.2.3. SERCAM

Overview / summary

SERCAM is a solution from IBES AG, a Germany-based enterprise offering supply chain security solutions for various applications.[531] SERCAM is a special technological solution to support certified raw material flow for mining, which includes tagging and tracking minerals in the upstream supply chain from the mine to the refiner. It consists of advanced hardware components for remote monitoring of mineral transports, mobile handhelds for semi-automated process documentation and a powerful central web application for administration and reporting.[532]

At the mine site, casks of minerals are sealed with a special one-way radio frequency identification (RFID) tag, which contains information on the cask, the mine, the date, the ID of the staff responsible for the sealing and so on. At the first collection point, RFID seals of each cask are checked and if they are verified, new information such as check in and check out dates at the collection point, the weight of the minerals, and the employee ID are added to the RFID seal and transmitted to the online database. If the seal cannot be identified, the cask is rejected and subject to further investigation. The verified casks are then transported to a larger interim storage facility with special transport vehicles outfitted with a SERCAM GPS/GSM tracking device and a SERCAM RFID reader, which ensures that during transport the location and itinerary of the vehicle can be tracked live and stored in the database. At the larger interim storage facility, the seals of the casks are again verified, and if correct, the casks are re-packaged into larger casks under the supervision of certified staff. The large casks receive a new RFID seal with a new ID and information that is again transmitted to the database. The large casks are then loaded into containers for transport to the refiner/processor. The container can also be outfitted with a SERCAM GPS/GSM tracking device and an RFID-reader, so that the transport itinerary is documented. [533]

With regards to data management, SERCAM's system is very flexible and can accommodate different customers. Any stakeholder in the system can be set as the owner of the data, including multiple stakeholders. The owners of the data are then able to license access to a third party. [534] This means that, technically, all data collected through SERCAM's traceability system can be disclosed to any stakeholder. The approach and policies for disclosure have to be defined when implementing the system, potentially in conjunction with a partner.

The system can also be programmed flexibly to identify incidents, e.g. to raise flags if seals are broken, missing or have the wrong ID, and to reject the respective bags or casks of minerals. Escalation hierarchies can be built into the system, but incident management procedures are not predefined by SERCAM and have to be defined at implementation.

[525] Blore, S. 2012
[526] Blore, S. 2012
[527] Blore, S. 2012
[528] Interview with MetTrak, 08.09.2014 (by Ruby)
[529] Interview with Albert Mentjes, 17.10.2014
[530] Interview with Albert Mentjes, 17.10.2014
[531] SERCAM, n.d.a
[532] SERCAM, n.d.b
[533] SERCAM, n.d.b
[534] Interview with interviewee no 28, 30.10.2014

One of SERCAM's specialities is its data integration features, which allow the system to operate as 'middleware'. This means that it can be configured to integrate data and information from other systems (e.g. unify different traceability systems or government information management systems into one). This can be a very useful feature for exporters, particularly in cases where s/he exports minerals from a variety of upstream traceability/certification systems. In DRC, this could provide an opportunity for a situation where multiple traceability systems exist up until the entité de traitement, where SERCAM would then install a SERCAM RFID reader and writer that can manage the diversity and homogenise the systems into one for the downstream supply chain. [535]

A second speciality of SERCAM, according to Jens Schwendel, is its "advanced built-in security of all hardware and software components, in order to avoid any tampering issues. E.g. the solution uses unique RFID seals that provide physical security as well as special encryption and data access technology. This is necessary to ensure the authenticity, integrity and irrevocability of all data stored on the tags. Apart from that, all data collected in the field is only communicated through secure transport protocols and credibility of transmitted data is checked immediately on server side through flexible heuristics."[536]

According to SERCAM, the system is suitable for all scales of mining, including artisanal and small-scale mines. While SERCAM sees its strength largely in tracking coltan and tin, they are currently working with a customer to implement the SERCAM system for gold supply chains in Ghana.[537] SERCAM has not implemented the system in DRC to date, but is in close contact with companies who would want to do so and is currently looking for partners that would take on certification and due diligence on site.[538] This could be either a governmental certification agency, something similar to what iTSCi has established, or an independent organization such as an association of buyers and sellers. [539] While the detailed costs of SERCAM's system remain unclear, IBES is "very confident that a comprehensive solution based on SERCAM results in lower implementation and usage costs than digital traceability solutions from other parties".[540]

Analysis of Potential in DRC

The SERCAM system provides special technology and data management for traceability, but the exact aspects of how it would be implemented in DRC remain to be worked out.[541] The main open issues and disadvantages relate to organizational implementation:

- As with GeoTraceability, MetTrak and MineralCare, SERCAM's online database is updated live and can be accessed by anyone who is allowed access and has an internet connection. This would increase transparency, but requires an organizational infrastructure to handle authorizations for data access.
- The tracking of the transportation vehicle along its itinerary has the advantage of preventing smuggling. However, the system is not necessarily able to register illegal payments that are made at roadblocks or along the route, as the seals of the casks would not be damaged and the itinerary would not show irregularities under all circumstances. Extra due diligence measures would be necessary to bridge this gap.
- In order for the system to work, the staff handling the RFID seals and handheld devices must have appropriate technical knowledge and capacities. It is not clear how SERCAM will carry out capacity building or finance this, or how they will accredit the staff and what the accreditation criteria would entail.
- It is unclear how the rejected casks will be dealt with and how such incidents will be managed and communicated.

[535] Interview with Martin Tippmann, 30.10.2014
[536] Jens Schwendel, pers. comm. to Estelle Levin, 02.12.2014.
[537] Interview with Martin Tippmann, 30.10.2014
[538] Interview with Martin Tippmann, 30.10.2014
[539] Interview with Martin Tippmann, 30.10.2014
[540] Interview with Martin Tippmann, 30.10.2014. Jens Schwendel, pers. comm. to Estelle Levin, 02.12.2014.
[541] Jens Schwendel, pers. comm. to Estelle Levin, 02.12.2014.

Besides this, it is not resolved so far who in the supply chain bears the costs of the RFID seals, RFID readers and writers, and transport vehicles outfitted with a SERCAM GPS/GSM tracking device, as well as the costs of capacity building and certification of staff.

The most interesting aspects of SERCAM are that it offers a tested solution for tracking gold in Ghana, that it has middleware capability for standardising data reports from different traceability systems for use by downstream, and that it comes with a high level of digitalization and in-built security.

5.3. Comparative Analysis

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
CTC	Ultimate value to the market and to mining companies is not apparent. Ultimate sustainability in DRC IS not apparent because not phase out plan give that this is a bilateral cooperation project.	High and is integrated into legal framework and national mining governance. Not enough information in the public domain on key elements of their system	This could be greatly improved.	It is a resource-intensive programme. Not clear if it can achieve scalable goals affordably under the current model (e.g. multi-stakeholder audits done by northern auditors) Value for money needs to be ascertained if there was a cost benefit analysis.	
iTSCi	It is adding value, especially for downstream brands (knowledge base, people on the ground, established relationships with Congolese agencies, broad scope) but could add even more value if it were willing to consider these downstream players' communications, transparency, and CSR priorities. It is adding value in ways that stakeholders and members do not realise; this needs to be better communicated. It is not adequately enfranchising stakeholders, especially those downstream and some upstream. It needs to move phase 3 to expand scope from enabling responsible sourcing to enabling	Yes. Good norms, policies, procedures. Credibility is undermined by stakeholders' preoccupation with a range of perceived issues: its dependence on government agents to implement its track/trace system; its use of paper-form tracking systems; its susceptibility to fraud and leakage of minerals in some situations; its scope being only on the human rights and business practice issues in the OECD Guidance's Model Supply Chain Policy; its 'reliance' upon donor funding; its ownership and administration by ITRI. Stakeholders don't understand	It is effective – see Table 3 on volumes of minerals, numbers of miners in system. As a system it picks up issues, including with how it as a system is operating, and addresses them. But there is room for expansion to new parts of DRC. It is helping improve governance generally in DRC. Its use of government agents to fulfil functions is a huge strength (builds capacity and ownership) and weakness (perceived issues with reliability of data, corruption risks and events). Can't definitely judge efficiency as a cost-benefit analysis could not be done. The timeliness of incident	iTSCi has an MoU with the Government of DRC. iTSCi has proven to be feasible. iTSCi's benefits outweigh the costs because it has brought millions of dollars' worth of business back to many economically bereft regions in DRC. There is a perception that iTSCi is *dependent* upon donor funding. According to iTSCi, this is not the case. Donor funding enables iTSCi to scale up faster by providing the start-up capital for new sites. However, iTSCi and its members also invest in 'start up' at new mine sites. Once iTSCi is operational, the levy generates enough capital to	iTSCi should publish all normative documents on its website. It needs to improve **communications** generally, including on: how it adds values for members; how it adds values for other members; the roles and responsibilities of all implementing partners; its vision for expanding scope to include other issues, including practical steps on how it is going to achieve this. Other scope for improvement in communications includes: improving the management of data generated by its traceability and incident tracking system in the interests of improving timeliness; by identifying

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
	responsible mining generally. iTSCi's ground presence at 265 sub-sectors with 318 active sites in these mines in DRC, involving around 35,000 miners, [542] and relationships with a diversity of stakeholders provides a form of social infrastructure and a substantial foundation for addressing other aspects of minerals governance and human rights risks in the 3Ts sector. It has the big advantage of the being the incumbent, it has enormous institutional memory and has been through and addressed most teething problems. It demonstrates local innovation in tackling the commercial barriers to getting mineral flowing and enough commercial opportunity *and* available local capital for joint risk-sharing by industry actors. Donor reluctance to invest in start-up of itSCi in new areas, to enable iTSCi to do more to build the capacity of local actors (government, CSOs) to take over elements of the system better and sooner, and to expand	that iTSCi is not there to eliminate risks, but to ensure good mitigation, per the OECD Guidance. Stakeholders do not understand that the fact that these risks occur, are picked up and managed (including through local and provincial level multi-stakeholder for a) is a positive sign that iTSCi is working. Stakeholders do not understand that responsibility for iTSCi's success does not just sit with its secretariat but all the institutions who have a role in implementation and oversight, e.g. government DRC, international and local civil society, ITRI, etc. Credibiility is negatively affected by how and what iTSCi communicates. iTSCi is often unwilling to respond to data requests from third parties, especially for projects seeking to evaluate iTSCi without engaging iTSCi appropriately. [543] iTSCi, claims to be overwhelmed by the sheer frequency and amount	reporting is a concern to some stakeholders. iTSCi's prudence is merited given the sensitivity and implications of releasing certain data, which makes fact-checking and the right of response essential. Greater efficiency could be achieved through: • Alignment with the joint validation missions, e.g. making these more meaningful as risk assessment exercises • Improving data collection technologies. • Increasing the role of local CSOs • Attracting donor funding for the capacity building of government agents. iTSCi needs a Theory of Change and Monitoring and Evaluation System to prove it is delivering on its goals.	cover ongoing costs across the sector, according to iTSCi. These claims need to be evaluated as part of the cost-benefit analysis. Liquidity remains a vital barrier to scaling iTSCi as quickly as stakeholders would like.	information types where it could be more transparent; and working harder with the Government of DRC and the ICGLR to enable transfer of data to these stakeholders in a way that is more convenient and usable by them. iTSCi would build credibility and sustainability by supporting and fully enabling a third-party evaluation of iTSCi. iTSCi members, the Government of DRC and any donors funding iTSCi are best placed to call for this. They would probably need to call for it as a group, otherwise iTSCi could argue for partial evaluation only. A performance evaluation would include opening up iTSCi's books to independent financial evaluation, to confirm for members – and concerned stakeholders – the value for money it really offers, on the one hand, whilst also considering financial strategy, including funding streams for different parts of iTSCi and taking a judgement on the initiative's financial sustainability. This

[542] iTSCi 2014 iTSCi Overview: November.
[543] Levin and Cook, 2013; Douma, N. and Weinbegr, R. 2014; Kay Nimmo, pers. Comm. to Estelle Levin, 01.12.2014.

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
	iTSCi's scope is an impediment to achieving sustainability of the system. iTSCi's sustainability may be more assured if it were more willing to introduce diversity into certain elements, e.g. working with different traceability service-providers for its traceability element.	of time meaningful engagement would take,[544] the number of studies that have the same repetitive and overlapping scope, and the lack of preparation of the researchers.[545] iTSCi releases more information than is required by the OECD Guidance, including publishing all incident reports, production data, other field reports besides due diligence, updates on development outcomes associated with the initiative, and so on. [546]			financial evaluation should be part of a broader cost-benefit analysis to assess iTSCi performance generally. This evaluation would need to also consider how iTSCi could raise the money to implement whatever might be the evaluation's recommendations. The evaluator must have intimate understanding of the business environment in DRC, the commercial terms and cultures of procurement by mineral smelters, and the ability to handle information confidentially whilst reporting on the right information points that would a.) reassure stakeholders and b.) reveal practical opportunities for introducing efficiencies. Improved communications and PR, and greater transparency are essential to credibility and longer-terms sustainability. The iTSCi website is not at all user-friendly; improving it with a focus on transparency and availability of information should be a priority. Government DRC could do more to proactively communicate to

[544] iTSCi receives requests to engage with one or two studies a week. Kay Nimmo, pers. Comm. to Estelle Levin, 01.12.2014
[545] Kay Nimmo, pers. comm. to Estelle Levin, 27.11.2014
[546] Interview with Kay Nimmo, 22.08.2014

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
					international stakeholders on its role in ITSCi, challenges, and what it's doing to improve them. The government of DRC needs to ensure its agents are adequately resourced and incentivised to perform their roles efficaciously and with integrity. iTSCi could be using its advisory board more effectively to enhance credibility and performance, and be involved in strategic decision making, performance evaluation, and act as ambassadors for the organisation.
BSP	BSP is not yet tested in DRC. The BSP has identified value propositions that are likely to appeal to certain downstream and upstream businesses: the emphasis on communications, supply chain transparency, building broader CSR issues into supply chain due diligence, management systems advice, flexibility in traceability system choice, releasing data to buyers before export. It has a broad range of sustainability issues in scope, beyond what is required by the OECD Guidance. It is a business, so financial sustainability is crucial to its operation. It is therefore also	Cannot definitively judge credibility until it is tested and developed more fully. For example, some normative documents do not yet exist, e.g. audit protocol. The standard needs work, being built on other standards that are not fit for purpose for the target beneficiaries. The standard also needs proper consultation with Congolese stakeholders. This could be included in the pilot but adequate consultation for any Congolese situation would require something fairly extensive. Governance needs to be improved. There is not	Norms are adequately robust, concise and targeted to allow for piloting, but may need adjusting to have deliver impact and value for users and the system's wider beneficiaries. BSP needs a Theory of Change and Monitoring and Evaluation System to prove it is delivering on its goals.	BSP does not have an MoU with the Government of DRC itself; it is mentioned in Geotraceability's MoU with the Government of DRC, which provides an entry point for piloting. Goals appear to be realistic and achievable Access to finance for start-up is anticipated to be a challenge. Overall value for money cannot be judged since financial costings were not shared with the authors. Scalable – not possible to be universal, but could reach scale if proves to be sustainable if it can get economies of scale. Inevitably probably better	BSP should look to ISEAL for inspiration on how to achieve satisfactory levels of integrity and independence, even if the fit is not perfect. BSP should focus on building a sourcing standard, and leave responsible mining to existing initiatives which already incorporate progress-based requirements (e.g. CTC, Fairtrade, Fairmined). If BSP is to be piloted in DRC, it must be meaningfully evaluated and in a standard way to allow comparison with other initiatives. Do an OECD Conformance Check.

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
	driven by a profit motive (it is not a social enterprise).	adequate separation between certain parts of the governance structure. Potential conflicts of interest with the other business interests of the directors, which may discourage some industry players for using the system, trusting it, or collaborating with it. Has credibility with some downstream stakeholders. No third-party OECD Conformance check yet.		suited to larger scale ASM operations.	
MineralCare	Not yet tested in DRC. MineralCare will add value in a range of ways: its agreement with the Dubai MultiCommodities Center; its MoU with the Governor of Orientale which provides a basis for piloting; its foundation upon financial due diligence. MineralCare could offer a universal solution for DRC's gold sector, not just for responsible sourcing but as a governance tool overall. MineralCare offers a technology-based solution that is more advanced than any other of the 'certification initiatives' in this chapter. It combines the IT savvy of the traceability offerings with the due diligence and assurance offerings of the systems analysed herein. In this way it is	Concept is sound. No third-party OECD Guidance Conformance check yet. MineralCare's credibility with upstream stakeholders could be improved by having an existing credibility figure promote the initiative to Congolese stakeholders. The Governor of Orientale may also be able to support interest amongst upstream stakeholders. Evidence of credibility could be gained further from consulting the government of Angola, where its diamond solution, DiamCare, has been tested. MineralCare has been endorsed by prestigious members of the conflict diamonds community.	The MineralCare solution is comprehensive and seemingly robust. It has the right goals. MineralCare needs a Theory of Change and Monitoring and Evaluation System to prove it is delivering on its goals. MineralCare lacks a solution for managing the risk of illegal payments along transportation routes, except to place onus on the receiver of goods to do additional due diligence on this issue.	MineralCare does not have an MoU with the Government of DRC; it has an MOU with the provincial government of Orientale. It is not clear if it needs the national level MoU in addition. Feasibility depends on which model is to be implemented: a universal model (building it into national level sector governance) or market-driven model (building it up supply chains through market demand). MineralCare's costs appear to be supportable by the different supply chain stakeholders. If the universal system were pursued, initial funding for the system by a donor would allow it to get up and running, and as it rolls out and enfranchises	If MineralCare is to be piloted in DRC, it must be meaningfully evaluated and in a standard way to allow comparison with other initiatives. Do an OECD Conformance Check. Consider alternative means for incentivising ASM to participate in the programme, e.g. tie the distribution of the RFID wristband with the delivery of the carte d'orpailleur, penalise/reward ASM that do not use the wrist-band by denying/fulfilling certain privileges. MineralCare must identify another initiative, NGO or consultancy that can do the sectoral risk assessment and ongoing monitoring of its use. MineralCare needs to build deeper relationships with other

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*	Scope for Improvement
	unique. It is a business, so financial sustainability is crucial to its operation. It is therefore also driven by a profit motive (it is not a social enterprise).			increasing members of the industry, revenues to the State would theoretically increase too until such a point as they would cover the system's ongoing costs. MineralCare needs to deepen its understanding of the DRC context to be able to compete with other options. MineralCare's system rests upon incentivising artisanal miners to participate in the programme through achieving social benefits as a reward. This has worked in other contexts but feasibility in DRC may be problematic. MineralCare's solution is technology intensive. This will be very reassuring to the market, on one hand. On the other, it can be off-putting to observers who judge that Congolese stakeholders do not have the wherewithal to cope with such technology-heavy solutions. We find this judgement problematic; the technology should be trialled before a decision is made on its feasibility based on it being technology intensive. Whilst MineralCare is technically sophisticated in design, it is easy to use for supply chain operators and those doing due	initiatives to be able to get going in DRC. It could do more to pursue joint efforts.

Initiative	**Sustainability** *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	**Credibility** *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	**Efficacy** *Effective and efficient*	**Feasibility** *Achieving goals with best use of available resources (value for money, realism, universality)*	**Scope for Improvement**
				diligence on them. Because of this reliance on advanced technology, it may not be appropriate for every site in DRC at this moment in time, but could provide a desirable destination for those presently outside its feasibility.	

6. Ongoing initiatives in DRC: Gold

6.1. Introduction

The fundamental difference in any discussion of traceability and/or certification systems for gold in the DRC is that, unlike the 3T mineral sub-sector, there is currently no operational gold traceability and/or certification system in the country. While there has been widely acknowledged and objectively impressive progress in the traceability and certification of 3Ts, as well as in preventing armed groups from profiting from 3T exploitation,[547] virtually all of the eastern DRC's gold production is traded illegally, undeclared, and thus potentially to the benefit of armed groups, whether at the mine site, or along transportation routes.[548] It's currently estimated that as much as 97% of the DRC's ASM gold is undeclared.[549] Besides being fundamentally non-compliant with the ICGLR RCM, and OECD Guidance, this represents a significant loss to the state in terms of potential fiscal receipts.

Moreover, another key differential is the fungibility of gold, as well as its high value. Unlike the 3Ts, untreated gold can be easily smuggled across borders, secreted upon an individual's person. Unlike the 3Ts, and despite sharing their designation as conflict minerals, smuggled DRC gold can be easily traded beyond the country's borders, whether in neighbouring countries or further afield.[550] Downstream stakeholders have significantly less leeway for insisting upon conflict-free gold once it has entered the supply chain at a major trading center such as Dubai, for example. Indeed, unlike the 3Ts, gold's provenance cannot be determined through deployment of such scientific techniques as AFP, which currently only has the capacity to screen 3T minerals.[551] The continuing attractiveness of illicitly mined and exported gold is borne out by evidence indicating that many ASM miners have migrated from the 3T sector to gold production.[552]

Moreover the combination of gold as a high value mineral and chronic insecurity in eastern DRC makes the challenge of gold traceability and certification much more difficult to resolve. As discussed earlier, in Section 2.2.3.2, the liquidity inherent to gold, as well as its role as a financial instrument, make it a prime target for the unscrupulous and criminal, whether in armed groups or simply as banditry. This in turn undermines such initiatives as the *centre de negoce*, since the centre's well-publicized centralization of the gold trade significantly increases the threat to the gold stakeholders, both miners and traders. Moreover, the issue of security along the transportation route becomes even more critical in the case of gold. While mine site and *comptoir* may conceivably be relatively secure environments,[553] one fundamental disincentive to declaration at the mine site is the risk of ambush or robbery, or just punitive illegal taxation, along the transportation route.

Industrially mined gold in the DRC poses few of the above problems, with potential insecurity along transportation routes being bypassed through the use of helicopters and fixed wing aircraft, as well as extensive on-site security. Such supply chains seem to rigorously accord in full compliance with ICGLR RCM standards.[554] Industrially mined gold has seen an impressive increase in production over recent years, with promising projects (such as Banro's Twangiza and Namoya sites, as well as Randgold's Kibali project which is estimated to be the largest undeveloped gold mine in Africa with 13-14 million ounces of reserves) coming on stream which have brought in significant foreign direct investment,[555] as well as significant receipts for the state through direct and especially indirect taxation.[556] Yet, the industrial sub-sector still produces considerably less in terms of both volumes and value of production than that of ASM.[557] While taxes, at the provincial level, remain high for gold, actual state receipts are extremely low due to the ASM activities around gold existing almost exclusively in the illicit, shadow economy. A functioning and widely applied traceability and certification system - with its monitoring of gold production and trade, as well as its concomitant integration of the sub-sector into the framework of mining governance, would

[547] Global Witness, 2013
[548] Ibid; IPIS, 2012; Blore, S. 2014; Enough Project. 2013
[549] Blore, S. 2015
[550] UNGoE, 2014
[551] Interview with Arthémie Ndikumana, BGR/ICGLR, 15.09.14
[552] IPIS. 2013
[553] This is far from always the case. Cf. Section 2.2.3.2 re: Nzabira. Security risks at and/or within close environs of the mine site were also encountered during the course of research at Misisi in South Kivu. Also, cf. Cuvelier, J. et al 2014
[554] For example the Banro supply chain from Twangiza site to CEEC Kinshasa, helicopter and fixed wing, accompanied by Rupert Cook, August 2013
[555] KPMG, 2014
[556] Ibid.
[557] Blore, S. 2014

undoubtedly increase fiscal and parafiscal receipts for the state,[558] at both national and provincial levels, as well as going some way towards depriving armed groups and other illegal actors of rents from the control of gold mine sites or transportation routes.

6.2. Pilot Projects – past, present and future

While no national system for gold traceability currently exists,[559] the potential for gold traceability and certification in the DRC does not exist in a vacuum. There have been and there are currently in development a number of promising pilot projects.[560]

- *Alimasi ya sawa*/Just Gold, otherwise known as the Trading House model developed by Partnership Africa Canada (PAC) – pilot project in Orientale Province, currently discontinued
- CEEC Gold Traceability and Certification Initiative – in development, envisaged as a model upscalable nationally, security bag with sequential serial numbering (see figure in section 6.2.1, below, for flow diagram illustrating the mechanics of this initiative).
- Gold traceability system proposed by ARM – involving "a secure pocketable transparent security bag with features of tamper evident seals and sequential serial numbering", in conjunction with RFID tagging.[561] This is at a more gestational stage of development than the already tested PAC pilot project, or the CEEC initiative
- BGR/CTC, Geotraceability/BSP, and other traceability schemes for gold – pilot project planned for 2015 in Maniema[562]
- MineralCare – gold traceability system, set for trialling in Orientale Province in 2015

In addition, the ongoing CBRMT project has the goal of establishing a number of pilots potentially deploying a range of different traceability models.[563] These might also include, among different options, the reiteration of a finessed PAC model, the Fairtrade model (already trialled in South America and East Africa) or Fairmined model (already trialed in West Africa, Mongolia and South America), the Artisanal Gold Council model (AGC), already trialed in Burkina Faso, as well as two further approaches mooted, the 'Contingent ZEA' and the 'Concession holder – Cooperative' models.

In terms of evaluating which might be the most appropriate traceability and/or certification system for the particular DRC context, one is confronted with the same but even more amplified challenge as with the 3Ts. With gold, there has been such limited piloting of traceability in the country, that it is extremely difficult to compare and contrast the positives and negatives for each respective system.

With the PAC system, the only one of the above that has been trialled in-country, there is a recognition that while the project demonstrated an array of strong points, with good traceability and relative compliance between the mine site and the first layer of petits négociants, a key lesson learnt was that there needed to be better traceability at later négociant stages in the supply chain, as well as commercial incentives for stakeholders to stay in the system.[564] Without overly anticipating the results of the CBRMT pilot projects, this lesson learnt from the PAC pilot in Orientale might suggest potential synergies with and between both the CEEC initiative and the proposed ARM system, both of which involve the deployment of security bags with tamper evident seals and sequential serial numbering, with ARM also using RFID tagging – though it should be noted that ARM's deployment of RFID may well make its proposed system more expensive, a particularly important point given the low margins for gold. Moreover, while none of the traceability systems have more than a very ballpark estimate of their implementation costs, ITOA has committed to a concrete of $1 or $2 cost for the sequentially numbered security bags, depending upon the bag's size and stage of deployment in the supply chain.[565] Again, as with the 3Ts, the pilot projects' field

[558] Blore, S. 2014. Cf. IPIS, 2011
[559] Though of course, gold is subject to the ICGLR RCM. So all gold exports from the DRC are required to be in full compliance with the RCM standards for issuance of export certification. It should be stressed that these standards require traceability from point of production at the mine site along the transportation route, via the négociant(s), to the point of export. Thus declaration at the *comptoir* stage in the supply chain, without appropriate traceability from the mine site along the transportation route, should not be sufficient to receive export certification.
[560] Cf. Blore, S, 2014, for overview of systems below (save CEEC & BGR/CTC)
[561] ARM, 2014
[562] Pers. Comm. with Dr. Bali Barume, BGR, 01.12.14
[563] Blore, S. 2014
[564] Interview with Shawn Blore, 09.09.14
[565] Personal communication with Freddy Muamba Kanyinku. CEEC, 20.02.15

evaluation of the traceability systems will be invaluable tools in identifying the points of convergence and complementarity between the different traceability systems. In that context, the lack of current traceability system incumbency may allow a better framing of the dynamic and potential opportunities between the systems - more in terms of cooperation, and less through the lens of competition.

6.2.1. CEEC ITOA

One point reiterated by almost all interlocutors regarding any traceability system for gold was the need to introduce the traceability process as close as possible to the point of production. While maintaining a physical traceability presence at the pit itself may be logistically unfeasible,[566] the further away from the mine site of the point of entry into the traceability system makes it more and more likely that a good proportion of the gold will be diverted, as for example seems to be the case at the Matete cooperative site in Maniema (see section 7.3, below). At the latter, miners are meant to declare their gold to the cooperative, which of course stands to earn a considerable share of that production. As a result of the high tax rates and fees due to both SAESSCAM and the cooperative, many cooperative members do not declare their production and instead sell to negociants further afield.[567] As shall be discussed later, it is important for any traceability system to be part of a holistic approach, which offers inducements and incentives to miners so that they declare their production, carrots as well as sticks. In the case of the CEEC Gold Traceability and Certification Initiative, ITOA, the entry point would be the security bag with the sequential serial numbering. This would be deployed at the earliest possible stages in the supply chain probably including a SAESSCAM and/or Administration des Mines agent(s) at the mine site.[568] With the CEEC model, there are a number of possibilities. The negociant can go to the mine site to buy gold; when he leaves the mine site he must carry the gold in the security bag with serial number. The miner can sell at a comptoir; but he must carry it there in the security bag with serial number. The cooperative can buy gold from the miner; but it too must be taken in the security bag with serial number. The key is that the gold can only leave the mine site in the security bag with its serial number.[569] The sequentially numbered security bag accompanies the gold all the way through to export.

[566] ARM. 2014
[567] Or closer to home - miners told researchers for this study that almost every family in the villages in the vicinity of the mine site possessed weighing scale for gold. Trade in gold plays a crucial role in the local economy.
[568] Interview with Thierry Sikumbili Boliki, CEEC. 10.09.14
[569] Interview with Freddy Muamba Kanyinku. CEEC, 18.09.14

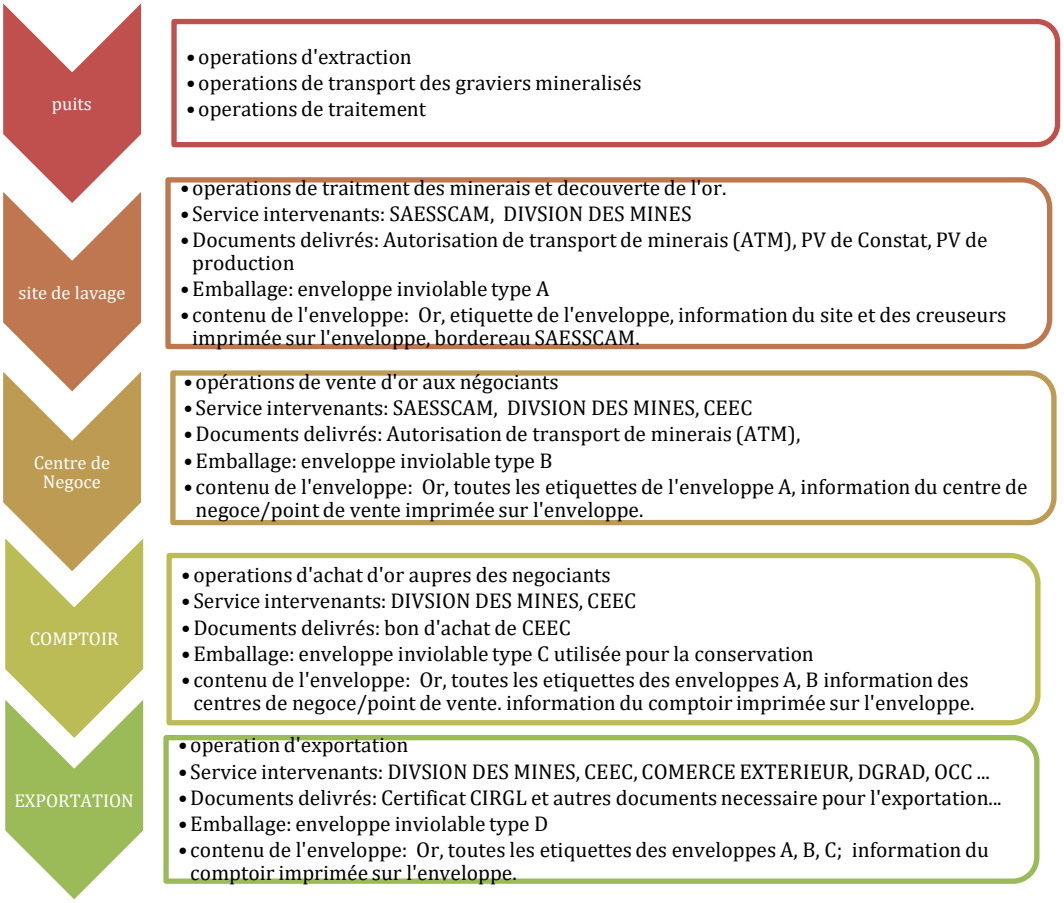

Figure 6: Flow diagram illustrating the CEEC Gold Traceability Initiative

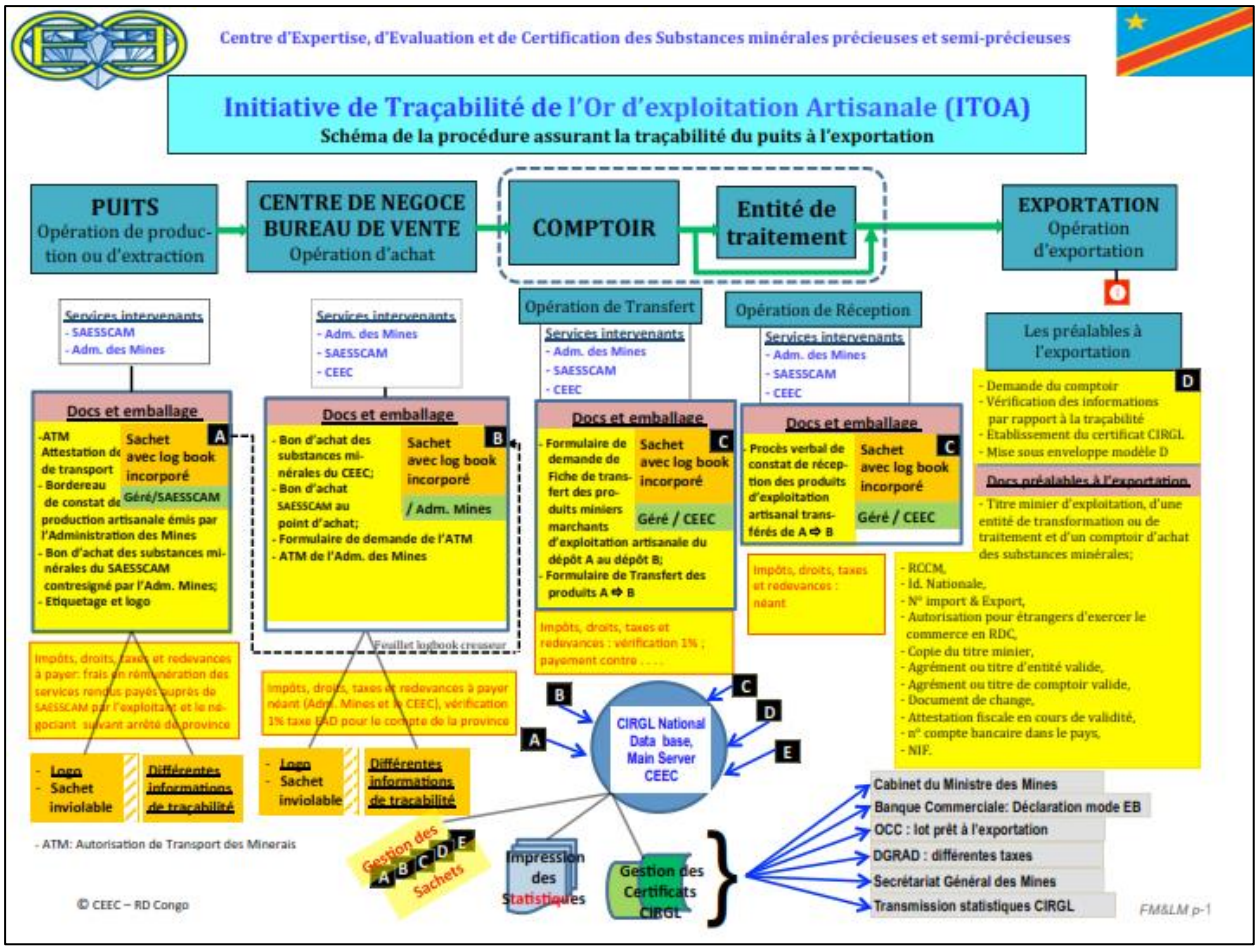

Figure 7 CEE ITOA schema

One of the principal aims of this study, and more broadly in terms of the implementation of a traceability system(s) for gold, is that the selected system(s) be as efficient and cost-effective as possible, making use of the DRC government's existing human and financial resources. In that context, the CEEC ITOA traceability system has much to recommend it. Its implementation would make use of existing government resources, as well as building capacity in the relevant agencies – CEEC, SASSCAM, and Administration des Mines. It would be "a Congolese solution for a Congolese problem".

On the other hand, like almost all the other systems, save PAC's Just Gold, CEEC ITOA has not yet been trialled and publicly evaluated. It needs to be field-tested, especially with regard to its data management. CEEC has developed its own proprietary software system for managing the industrial production of gold, logiciel de certification des minerais désignés (LCMD). While this has apparently up till now presented no problems in terms of functionality,[570] it would inevitably need to be field-tested in the context of ASM gold traceability, which will involve the management of much more numerous, geographically dispersed and increasingly aggregated datasets. Also, it remains to be seen how the CEEC ITOA will ensure aspects of the due diligence required by both the ICGLR RCM and the OECD Guidance, especially in terms of the transportation route. But again, this underlines the potential for complementarity and synergy between the respective traceability systems, whether PAC and ITOA, ITOA and MineralCare, or ITOA and BSP. It may be that, given the relatively low margins in the gold supply chain, some of these combinations, although technically effective, will prove financially unsustainable. Again, it requires their field-testing at the pilot project stage to establish to what extent they might be financially sustainable.

[570] CEEC ITOA presentation by Freddy Muamba Kanyinku, CBRMT workshop, Kinshasa, 18 February, 2015

6.3. Matete: A Case Study

Matete, also known by the name for the locality, Muzizi (pop. Around 2000),[571] is the name of a mine site (actually six sites, with a total surface area of 6km2) operated by the COMICA cooperative in the province of Maniema. It exists as the result of the relocation of ASM gold miners from the Banro Namoya site, which with Twangiza are the main operational gold production sites for the company. The exact delimitation of the Matete ASM site remains to be finalized. Indeed, the site seems to be within a protected area, the Domaine de Chasse Luama-Kivu, though mining is not prohibited in a hunting reserve according to DRC law.[572] It sits about 25km from the Banro concession. The miners come from every region of the country, ranging in age from 18-70. The site has been validated green, while the cooperatives statutes were drawn up with the technical assistance of SAESSCAM, Division des Mines, and IOM. Banro works closely with the cooperative management, and has also provided significant material support to the cooperative, though the latter contends that more is needed and that the current level of support is less than was originally promised.

As of June 2014, there were 820 members of the cooperative. All miners have to be members of the cooperative. 12 negociants are currently cooperative members (August, 2104). The division of earnings is relatively normative,[573] with miners receiving 50% of all production, while the sponsoring cooperative member takes the other 50%, net of deductions for fiscal and parafiscal charges.

According to the cooperative management and government agents on site, since the creation of the cooperative in 2013 tax receipts for the state have significantly increased, allegedly doubling. According to all stakeholders interviewed over a period of four days at and around the site, there is no problem with insecurity in the immediate region.

Given that the mines and the cooperative are at the earliest stages of development, it's difficult to assess production levels; and the cooperative management were not able to provide accurate figures, beyond anecdotal assurances that production was increasing and plentiful.

Matete has much going in its favour – the support of Banro, with its potential for both knowledge transfer and material capacity building; a relatively secure environment, with no armed groups in the vicinity; an enthusiastic management cohort at the cooperative, though as observed elsewhere cooperative governance and transparency probably needs to be improved.[574] In fact, Matete has been shortlisted as the site for a traceability pilot project – both by CBRMT and ARM. There are also plans to develop a centre de negoce.[575]

At the Matete site, there are a large number of government agents. The police des mines are represented by four agents, as well as a commandant. SAESSCAM has four agents, plus a chef de poste. The Division des Mines also has four personnel, and a chef d'antenne. There are in addition two agents of the DGRMA. That totals 17 government agents who depend upon the *frais renumeratoires*. SAESSCAM exacts an 11% levy of production, to be divided among the agencies. This payment to SAESSCAM is made in gold, and then converted into cash. In addition to those taxes, the cooperative takes a further 14% of production. On top of that, there is a redevance coutumier, at 2%.[576] So, 27% of production goes in payments to the government agencies, the cooperative and the traditional authorities at the point of production. This of course excludes other fixed fees, such as the provincial carte de creuser ($15, annually), cooperative membership, and so on. While the cooperative management stressed the penalties for non-declaration of gold by miners (punitive fines, and expulsion from the cooperative), most miners and negociants freely admitted that they did not declare most of their production, due to the high level of fees levied. Instead they went a discreet distance from the site and the Muzizi locality, where they would then transact undisturbed by the authorities, whether cooperative or government.

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[571] The information for this case study is drawn from a field visit to Matete, 08.08.14 – 11.08.14, facilitated by Banro, three focus group interviews with cooperative management, interviews with representatives of the government agencies in Matete, interviews with individuals miners and negociants, as well as several interviews in August and September with Banro management.
[572] Nor, in terms of international standards, is ASM activity necessarily prohibited in IUCN Categories 5 & 6. Cook, R and Healy, T. 2012
[573] For detailed and in-depth exegesis of the gold supply chain, cf. Blore, S. 2014; and ARM, 2014.
[574] ARM. 2014
[575] This may be a case where the issue of insecurity does not impact negatively on the centre de negoce. However, in terms of the centre de negoce as a pilot program with scalability, it remains to be seen how representative a centre de negoce in the environs of Matete would be of general conditions in gold-producing areas of eastern DRC, given the degree of security in the area.
[576] Payment of the redvance coutumier or levies due to the chefferie need to be examined by the authorities. These payments are not specified in the mining code and are far from uniform. Thus they could arguably be described as illegal payments and so not in compliance with the ICGLR RCM. Given how widespread they are, it is very important that some form of formal and legal accommodation be made for them.

It is certainly conceivable that tax receipts for the state from Matete have doubled since the formation of the cooperative, especially since the starting point was so negligible, effectively at zero. However, as shall be explored below, the exorbitant level of 27% at the point of production, exacerbated by the fact that the miner will probably only be taking home less than 50% of the net after the deduction for the various taxes and fees, means that ASM miners are currently being disincentivised from declaring their production due to over-onerous fiscal and parafiscal fees.

6.4. The potential for partnerships between ASM and LSM

As the Matete case study illustrates, there are tensions between artisanal and large-scale mining ventures, between the often-migrant miners who are legally proscribed by DRC mining law from mining on the vast concessions granted to industrial mining companies, such as Banro, and, as described elsewhere, suffer from widespread insecurity of land tenure. In the case of Matete, Banro seems to have been more successful than is often the case (or indeed at its other sites where there is potential for conflict with ASM miners) in its relocation of the miners from the Namoya site. In the field, the sense was that despite the constant demands from the cooperative for further support, the two sides remained in relatively close communication and, at least at the company and cooperative management level, had a good working relationship.

There has probably been a certain degree of wastage in terms of the transfer of resources from Banro to the cooperative.[577] In fact, one of the criticisms from senior members of the cooperative was that Banro had provided insufficient technical capacity-building to the cooperative, besides their complaint that they needed more material support. Given that Banro had donated (as of September, 2014) approximately $250,000 of equipment,[578] a certain proportion of which was already rumoured to have been sold on by the cooperative, it may well be that knowledge transfer would be the most sustainable support for such a cooperative, combined with carefully targeted and monitored material donations.

Inevitably, when such large-scale mining operators collide with the world of ASM, where almost everything is in short or non-existent supply, there will be the clash of miners' expectations coming up against the company's commercial calculations. One suggestion often repeated by a wide range of stakeholders (ASM miners, government agents, and civil society) was that Banro (and presumably other industrial gold mining operations) could and should transform the ASM gold supply chain in areas near its operations through serving as a *comptoir* for ASM produced gold.[579] Given that so many of the ASM gold sites in South Kivu are in or very close to the Banro concession, this would certainly have a far-reaching effect. The rationale is that a Banro *comptoir* could integrate the ASM produced gold into its own secure supply chain, so eliminating the issue of transportation route and *centre de negoce* insecurity. The Banro *comptoir* would also be purchasing the gold at a far less distant remove from the mine site than, for example, a Bukavu-based exporter, who could be purchasing through a chain of négociants. thus shortening and streamlining the supply chain, which in previous pilot gold traceability projects (e..g. PAC) has tended to be the stage at which traceability broke down. Another presumed benefit would be the removal of a number of margin-taking supply chain tiers, which should increase the potential price paid to miners.[580] Most importantly, the ASM gold would be integrated into the Banro supply chain, with all its attendant transparency, strict compliance with OECD Guidance and ICGLR RCM, as well as close supervision by government agents. In that context, the challenge for a traceability system would be the link between the pit/mine site and the point at which Banro were to purchase the gold. This abbreviated segment of the supply chain would be much easier to monitor and supervise.

Although such an arrangement might appear a neat and potentially efficacious solution, there are numerous potential pitfalls. The creation of such a system would almost inevitably lead to significant migration influx of other ASM gold miners, as the model would offer miners and small négociants much better security as well as a trusted and reliable buyer. As it is, Banro already has issues with ASM activities illegally taking place within its concessions.[581] Inward migration of more miners on account of a Banro *comptoir* would probably only exacerbate the problem. For the company, the greatest risk would be contamination of its supply chain by illicit gold, which

[577] Interview with JP (Koos) Nel, Banro. 08.09.14
[578] Interview with Banro, 11.08.14 & 08.09.14
[579] Blore, S. 2014. Banro acting as the buying agent for either all or a proportion of the ASM site's production is aired as a possibility in two the study's pilot project models, with Matete being cited as a particularly appropriate site for such an arrangement.
[580] And perhaps provide miners with a fairer price. Alleged weighting of the scales by the négociants in their own favour is a perennial issue, not just in the DRC but almost everywhere where ASM gold is traded.
[581] Regardless of the company's volition, this is proscribed by DRC law.

could transpire not to be conflict-free, or even merely turn out to have leaked from other sites, perhaps non-validated or problematic in some other way. Even though Banro could segregate the ASM gold from the industrially-mined gold all the way to the refinery in South Africa, any suggestion that non-conflict-free gold had infiltrated into its supply chain could do serious damage to the company's reputation. As a publicly traded company, the reputational risk would be compounded by a potentially negative impact on the share price, were the *comptoir* model to founder in this way. Indeed, there is deep-seated reluctance within the company about even publicly considering this as an option in the current context.[582] But the most fundamental questions might be – should an industrial gold producer be in the business of buying ASM gold, in the DRC context? Given the government of the DRC's interest in attracting inward investment for industrial mining, and the widespread belief among interlocutors for this study that industrialization of the mining sector should be a key priority, what message would a requirement to that effect send to potential investors? These reservations should not rule it out as a possibility, especially in the medium term. It may be that the successful implementation of a gold traceability system could obviate the risk of leakage. It's also possible that Banro might be willing to participate in a more limited pilot project, as per some of the proposals in the CBRMT report, to test the waters as a first step. After all, that is probably the best way for both the proponents and opponents of the 'LSM-ASM *comptoir*' model to prove their respective perspectives as to its viability or not.

Moreover, as is clear from the case of Matete, there is great potential for knowledge transfer and capacity building between companies like Banro and ASM gold cooperatives. It is certainly in the interests of the industrial gold producer to maintain constructive relations with ASM miners in its vicinity, in order to limit encroachment on its concession, as well as part of its efforts to maintain the social license to operate. More broadly, a stable and licit ASM gold sub-sector will contribute to the consolidation of security and thus potentially open up new areas for exploration and exploitation the by large-scale company.

One other area where Banro could potentially contribute to the formalisation of ASM activities is through the ceding of possible sites to miner cooperatives from within its concession. This might involve the granting of rights to ASM miners to work on the concession[583] (as part of some form of paying formula), though currently that would be impermissible according to DRC law. Alternatively, given the vast expanse of the concession and the likelihood that many of the sites suitable for ASM would be unsuitable and commercially uninteresting for industrial exploitation, sites could be identified which might be suitable to transfer on a permanent basis to ASM gold cooperatives.

6.5. The over-onerous fiscal and parafiscal burden

As the above Matete case study indicates, even when government agencies attempt to enforce declaration at the point of production, if the ASM miners are resistant to paying the stipulated fiscal and parafiscal fees, a way will almost always be found to avoid such levies.[584] From our own research for this study and from a range of other studies,[585] it becomes apparent that the high levies exacted in the case of Matete are far from unique. Miners take-home income is often a mere 37.5% of their production.[586]

As discussed in Section 2.2.3.1, the dual role of SAESSCAM agents as providers of outreach and technical assistance, while at the same time being the collection agency for such elevated fiscal and parafiscal fees from the miners, creates an elemental tension between the agency's two current functions. There are cogent arguments elsewhere advocating an end to this uneasy and counter-productive dual role arrangement.[587]

However, the fundamental issue is the very high level of taxes and fees. At the national level, taxes (collectible by CEEC) have been deliberately rationalized, with the export taxes for ASM produced gold currently set at 2%, as opposed to a level of *frais remuneratoires* at the provincial level of usually between 10 and 11%.[588] Numerous interlocutors, from government, civil society and the private sector, for this study expressed the opinion that fiscal

[582] Interviews with Koos (JP) Nel, & Dan Bansah, Banro. 11.08.14. Though at the same time, there is an awareness that this is an increasingly mooted expectation among stakeholders.
[583] This echoes two models proposed in the CBRMT study – the variation on the 'Contingent ZEA' and the 'Concession holder – Cooperative' models. Cf. Blore, S. 2014
[584] Cf. Blore, S. 2014; Cook, R and Healy, T. 2012
[585] ARM. 2014; Blore, S. 2014
[586] Blore, S. 2014
[587] Blore, S. 2014
[588] The ARM 2014 study also argues convincingly for a further lowering of the export levies deducted at national level, though there is little leeway for much reduction if all current agencies are to continue as financially interested stakeholders, as per the advice of CEEC below.

streamlining and rationalization were urgently needed to address the issue of excessively elevated taxation at the provincial level.[589] Indeed, another issue is that there is little consistency between the respective fiscal and parafiscal charges set at provincial level. For example, the total tax load (production and sales) can vary from 8% in Orientale to 16.25% in Maniema.[590]

Province	Tax (national level)	Tax (provincial)	Tax vente (négociant)
Orientale	2%	5-20%	1%
Nord Kivu	2%	10%	1%
South Kivu	2%	10%	1%
Maniema	2%	11%	3.25%

Figure 8: Taxes for gold, at national and provincial levels

If over-onerous fiscal and parafiscal levies make it punitive for miners to declare their production, pilot projects for traceability and certification of gold will remain exactly that – pilot projects, unsustainable over the longer-term and impossible to scale up to a national level, as miners will simply refuse to declare their production.[591]

Indeed, if one looks at the DRC's overall tax burden in relation its neighbours, there is a clear discrepancy: while the DRC's national level export tax is broadly competitive with its neighbours, the high levies imposed at the provincial level make the total tax load punitive.

Country	Tax
Burundi	2%
DRC	2% **+ 6-21% [in frais remuneratoires & taxe vente]**
Kenya	5%
Rwanda	6%
South Sudan	5%
Tanzania	4%
Uganda	3% [1% for imported gold]

Figure 9: Regional tax rates for gold exports

It is understandable that provincial governments, and mining agencies, which benefit from the frais remuneratoires, may be wary of slashing their provincially levied tax rates. However, it is important that there be a program of sensitization among those responsible for provincial mining governance to underline the advantages of fiscal and parafiscal rationalization to a level which is widely perceived as reasonable for and by the miners. This is not to suggest that stakeholder government agencies should be entirely cut out from the frais remuneratoires. Indeed, it was stressed that it is important to ensure that all agencies continue to have an interest in the traceability and certification of gold.[592] Rather, the rate of the levy should be reduced so that the sum total of receipts can be increased, as with more equitable rates miners would be less disincentivised against declaring their production, and would also be more willingly integrated into the mining governance framework, which of course is the predicate for formalization. This study will recommend that the provincial taxation for ASM gold be set at 2%. At the same time, it is advisable to eliminate the 1% négociant tax. As is examined elsewhere,[593] the négociants dealing with gold are highly mobile and accustomed to evading taxation through illicit supply chains, all the way to export. Thus, the 1% négociant tax effectively makes it less likely that the 2% tax will be paid at export – as the 1% levy incentivizes négociants to channel their gold into clandestine smuggling networks. With the elimination of the négociant tax, and the reduction of the provincial charges to 2%, the overall tax burden would amount to 4%, including the 2% export tax. This is relatively competitive in the regional context, broadly in line with DRC's neighbours.

Moreover, a less oppositional dynamic between SAESSCAM agents and the miners, combined with an injection of greater resources and institutional capacity building, would allow the agency to return to its originally designated

[589] Interview with Freddy Muamba Kanyinku. CEEC, 18.09.14. Other interlocutors who identified this as a key issue included Pole Institute, Enough, FEC, various CEEC personnel, besides miners and négociants themselves.
[590] Blore, S. 2014
[591] Given the ease with which gold can be hidden on and in the body, besides its fungibility, combined with the logistical impossibility of maintaining surveillance at every pit, coerced declaration seems highly unlikely to succeed.
[592] Interview with Freddy Muamba Kanyinku. CEEC, 18.09.14
[593] Blore, S. 2015

competences – technical assistance and outreach. This in turn, as part of a process of embedding formalization in the ASM gold sub-sector, could lead to such benefits as increased productivity and recoverability, which correspondingly would result in a virtuous circle of win-win benefits – increased productivity for miners, so higher take-home income, and thus greater incentive to declare production; as well as increased levels of declared production, and higher receipts for the state, at both the provincial and national level. That at least is the theory.

6.6. Formalisation and ASM gold land title

As discussed above, in section 3.3.2, formalisation of the ASM sector is a key aspect both potentially contributing to and benefiting from the implementation of mineral traceability systems. Due to the dearth of validated sites, and the almost complete non-declaration of ASM produced gold, the ASM gold sub-sector is essentially informal. Thus a crucial component to ASM gold traceability and certification will be formalisation, bringing the sub-sector under the supervision of the regulatory agencies. As underlined elsewhere, significant challenges remain – such as over-onerous provincial taxation and parafiscal charges, cooperatives which effectively disenfranchise their miner members, irregularly and lowly paid government agents.

However, a key impediment to both the process of formalisation and the implementation of traceability and certification is the lack of opportunity for ASM miners, in the form of cooperatives, to acquire title to land. The ZEA (Zone d'Exploitation Artisanale) is the sole mechanism in the DRC which allows artisanal mining. It is a complicated process, requiring proposal by the provincial governor and provincial mining minister, and then approval through an arrêté by the national Minister of Mines. Moreover, it does not grant exclusive rights to a title-holder. Any miner who has been registered is entitled to work the ZEA. This means that there is no security of tenure or exclusivity of title for the cooperative. As a result, there is a disincentive for the cooperative / title holder to invest in the development of the mine site's activities. Correspondingly, there is little incentive to focus on due diligence.

The challenges posed by the modalities of the ZEA to formalisation is compounded by the sheer shortage of sites allocated to ASM gold production. Fewer than 20 gold ZEA's have been granted, representing a miniscule fraction (less than 3%) of the total number of DRC gold sites. The lack of sites available for legal ASM production may well prove to be an impediment to the implementation of pilot programmes for gold traceability, as well as undermining process of ASM formalisation. Thus, as a priority, there needs to be a mechanism for the granting of exclusive title, renewable for a set period, ideally at a decentralised level, such as the provincial Division des Mines.

6.7. Gold as a financial instrument

A significant complicating factor in any discussion of gold traceability is the role it plays in the broader DRC economy. Gold is not merely a commodity, or mineral resource. It is a financial instrument. In certain circumstances, the acquisition of gold and the opportunity to trade and export the mineral has a considerable value beyond that of the mineral itself. As elsewhere,[594] gold effectively serves as a means to launder cash beyond the purview of the government. Gold would be purchased in the DRC and then illegally exported out of the country, whence it is subsequently converted into other currencies, such as US dollars, whether in neighbouring countries such as Burundi and Uganda, or further afield, as for example in Dubai. The illegal exporter would then either bank the proceeds in an offshore account, or reinvest them through the purchase and importation of goods, which could then be sold on in the DRC, with the tax-evading cycle replaying itself ad infinitum, at considerable cost to the DRC's tax receipts.

Although there has in the past been criticism of the role Dubai plays in the assimilation of illegally exported DRC gold into the global gold supply chain,[595] there have been recent indications that at least some entities in the Emirate are taking a more discriminating line with DRC-sourced gold, with at least one South Kivu based trader being prevented from depositing the significant US dollar proceeds of a gold sale to a Dubai refinery in his Dubai-based bank account, due to his non-possession of any traceability certification.[596] However, it remains to be seen whether with this was an uncoordinated intervention by an isolated financial institution; or a sign of a stricter policy implementation by the Emirate; or, indeed, merely the naiveté of the DRC trader/exporter who omitted to disguise the origin of his gold.

[594] This closely parallels the situation in Madagascar where gold's in-country price is often higher than the international spot price, due to its attractiveness as a means to illicitly export funds outside the country. Cf. Cook, R and Healy, T, 2012.
[595] Cf.PAC, 2014
[596] Interview with Muganza Beya, Banque Centrale du Congo, 19.09.14

6.8. The multifaceted approach to ensuring traceability

This case of the trader confounded in Dubai illustrates one way in which both governments and the private sector, within and without the DRC, can act to limit the flow of illegal DRC-sourced gold. The transitioning from pilot project to a scaling up of gold traceability across the whole country is critical, as required by both DRC regulations and the ICGLR RCM, besides its benefits in terms of starving armed groups of funds, so consolidating security, as well as promoting formalization in the ASM gold sub-sector. Yet, at the same time, the challenge – for all the reasons adumbrated above – is colossal, especially in the context of gold's indubitable economic importance to major economic operators in the DRC – this must be self-evident as 8-16 tons of ASM produced gold are trafficked annually out of the DRC. Given such powerful economic interests, it remains to be seen whether there is the capacity to implement a traceability and certification system, which would threaten the continuation of the existing arrangement. Thus, perhaps most effective would be a multiply faceted approach, deploying the mechanics of a gold traceability and certification system, in tandem with rationalization of the fiscal and parafiscal levies for gold, at the provincial level, as well as enlisting the support of international actors beyond the DRC. These, as the above case of the trader in Dubai foregrounds, could include international financial institutions, with a special focus on sensitizing banks and regulatory authorities in known destination markets for DRC gold, such as the UAE.[597] Other interested parties would be foreign governments and customs authorities, policing entities tasked with the elimination of money laundering, as well as other security agencies attempting to monitor the illicit transfer of funds which could be diverted so as to fund terrorism.

This form of triangulated approach benefits from the application of both pressure and inducements at different stages in the supply chain. Miners and négociants are incentivized to integrate within the mining governance framework and declare their gold, through the reduction in rates of tax and fees. Formalisation, technical assistance and such benefits as increased productivity and recoverability, better labour conditions, genuine cooperative structures as opposed to rent generation by well-connected elites, would also act as further incentives. Meanwhile, as a number of government agents suggested in research for this study,[598] there could be enhanced sensitization of customs and other border agents to prevent illegal egress with smuggled gold, with further development of incentives for the border agents. As suggested above, potential downstream markets for illegally exported DRC gold could be made increasingly inhospitable to the trade in DRC gold, at least in part through concentrating on financial institutions.

6.9. ICGLR RCM export certification vs. CEEC certificat d'origine

The ICGLR RCM export certificate was adopted by an arrêté ministeriel as the replacement for the pre-existing CEEC certificate d'origine, in July 2013. The relatively abrupt transition has created a number of challenges. Firstly, there are very few validated ASM gold mine sites. The ICGLR RCM requires validation of the mine site for issuance of the export certificate (though notably the site need only be inspected and approved by a government agent within the past year, so not necessarily the current joint validation mission). 18 sites have been inspected, with only six approved. Secondly, there is currently no functioning system of traceability for ASM gold production and export. Thus, the more than 200kg of ASM gold which received the DRC's ICGLR RCM export certificates in 2014 could not strictly speaking have been compliant with RCM standards, seeing as there was no traceability system between mine site and export certification. This could threaten the integrity and reputation of the ICGLR RCM, which after all exists for and depends upon the confidence of downstream consumers.

It is possible that the DRC government could consider a more phased in approach to implementation of the ICGLR RCM export certificate, while retaining the CEEC certificate d'origine for certain mine sites / provinces. For example, the current regulatory regime requires the RCM export certificate, with its relatively more rigorous stipulations for CoC due diligence, for provinces such as Bas Congo, Kasai and Equateur, which unlike eastern DRC are not affected by conflict. As an immediate and temporary measure, these sites could be best suited to export certification through the certificat d'origine as opposed to the ICGLR RCM export certificate, which would in turn merely reflect the situation on the ground and preserve the reputational integrity of the ICGLR export certificate.

[597] National law proscribes the transit across the DRC's borders with more than $10,000. For sums above, the banking system must be used. Interview with Muganza Beya, Banque Centrale du Congo, 19.09.14
[598] Interview with Georges Ngumbi Ngamibaya, & Henri Faizai Auni, CENAREF. 18.09.14

6.10. Central Bank / State-sponsored gold-buying

At the workshop held in Kinshasa on December 13th, some consideration was given to the option of bank buying schemes as a solution to supply chain management for DRC. However, we believe there to be considerable challenges with such a system as the following demonstrates.

State-sponsored Gold Buying Programs

In the 1960s onwards, state-sponsored mineral buying programs have been used as one means to organize artisanal and small-scale mining activities. For gold, the practice grew in importance in the 1990s with the purpose to boost domestic gold reserves, and by consequence, hard currency. Depending on the international price of gold and the macro-economic climate in-country, interest (and success) by government in such programs vacillates. Buying programs range from simply providing the Central Bank or Reserve with a monopoly on gold buying and export to decentralizing state agents with the legal authority and financial resources to buy from artisanal or small-scale mine sites to contracting a third-party to buy on behalf of the government who, in exchange, provide certain financial and technical services to artisanal or small-scale miners. In all models, critical is the ability of the state to establish itself as the dominant buyer in the domestic gold market.

Though over 10 states have trialed such buying programs, most have failed principally due to the following factors:

- **Insufficient liquidity** held the state to purchase gold from artisanal or small-scale miners on a timely basis
- **Inability of government to compete with prices** offered by non-licensed traders and buyers (which can exceed the international market price)
- **Constraints in broader mineral governance** such as inadequate monitoring of mining activities by government or low rates of formalization of ASM activities in the first place

Bearing in mind these factors, in order to succeed a state may consider the following:

- **Create incentives to sell** to the state by coupling buying with technical or financial services rendered to artisanal or small-scale miners
- **Reduce or eliminate fees** collected by the state when buying and processing gold
- **Establish revenue-sharing arrangements** with local government and civil society, thereby motivating others in the local mining communities to promote and encourage the sale of gold to the state[1]

Initiative	Sustainability *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	Credibility *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	Efficacy *Effective and efficient*	Feasibility *Achieving goals with best use of available resources (value for money, realism, universality)*
ITOA	Currently appears to be potentially lowest cost program. Building on and consolidating existing human resource capacity, so avoiding duplication of existing resources. Ownership belongs to CEEC, so DRC government. Increased likelihood of buy-in from state agencies at national and provincial levels.	As a government agency, responsible for export certification, CEEC's vision for ITOA is backed up with deep experience of the supply chain. Depends upon SAESSCAM and Division des Mines agents at the mine site / initial negociant stages. These could be a weak link due to lack of capacity and poor conditions of pay. Miners also need to be incentivised to declare production to government agents.	Implementation involves already existing software – currently successfully deployed for LSM gold. Pilot projects will ascertain whether the software can handle the different data collation and management demands involved in ASM gold traceability.	Takes advantage of already existing institutional infrastructure. Scalable program, not technology-intensive – so suitable for diverse mine site environments. Could be piloted in tandem with PAC's Just Gold. The latter has proven success in incentivising miners to declare production at the mine site / cooperative level. CEEC's sequentially numbered secure envelopes and data management solution could provide better traceability through the CoC to grand négociant / exporter level.
PAC / Just Gold	Involves knowledge/skills transfers for miners – leading to improved productivity. Driver for formalisation. As non-profit NGO, committed to transfer ownership to DRC stakeholders, so potentially attractive to DRC government.	Proven track record in Orientale. Successful pilot project up to the grand négociant level - where traceability of gold broke down in the original pilot. This is where it needs reinforcement of traceability.	Yes, efficient and effective	Could be piloted in tandem with CEEC ITOA. PAC has proven, successful track record at mine site / interface between miner and négociant. ITOA's secure envelope system would reinforce CoC traceability all the way through to grand négociant and export. PAC has deep experience of the DRC ASM gold context. Just Gold builds upon this. Scalable program, not technology-intensive – so suitable for diverse mine site environments.
ARM	Not yet tested in DRC. Remains to be seen whether the RFID secure envelopes are sustainable in terms of cost. More technologically complicated	Has a clearly defined and appropriate vision, as well as goals. Concept is sound. Has wide market acceptance as a responsible mining and supply chain	Remains to be seen. Needs piloting in the DRC context	ARM does not have an MoU with the Government of DRC. Costing is as yet unclear for key components such as sealable RFID envelopes

Initiative	**Sustainability** *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	**Credibility** *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	**Efficacy** *Effective and efficient*	**Feasibility** *Achieving goals with best use of available resources (value for money, realism, universality)*
	than the similar ITOA program. It remains to be seen whether this technology will be appropriate in the DRC context. As non-profit NGO, committed to transfer ownership to DRC stakeholders, so potentially attractive to DRC government	solution.		ARM needs to deepen its understanding of the DRC context to be able to compete with other options. Scalable program, suitable for diverse mine site environments.
MineralCare	Not yet tested in DRC. MineralCare will add value in a range of ways: its agreement with the Dubai MultiCommodities Center; its MoU with the Governor of Orientale which provides a basis for piloting; its foundation upon financial due diligence. MineralCare could offer a universal solution for DRC's gold sector, not just for responsible sourcing but as a governance tool overall. MineralCare offers a technology-based solution that is more advanced than any other of the 'certification initiatives' in this chapter. It combines the IT savvy of the traceability offerings with the due diligence and assurance offerings of the systems analysed herein. In this way it is unique. It is a business, so financial sustainability is crucial to its operation. It is therefore also driven by a profit motive (it is not a social enterprise).	Concept is sound. MineralCare's credibility with upstream stakeholders could be improved by having an existing credibility figure promote the initiative to Congolese stakeholders. The Governor of Orientale may also be able to support interest amongst upstream stakeholders. Evidence of credibility could be gained further from consulting the government of Angola, where its diamond solution, DiamCare, has been tested. MineralCare has been endorsed by prestigious members of the conflict diamonds community.	Remains to be seen. Needs piloting in the DRC context. MineralCare lacks a solution for managing the risk of illegal payments along transportation routes, except to place onus on the receiver of goods to do additional due diligence on this issue.	MineralCare does not have an MoU with the Government of DRC; it has an MOU with the provincial government of Orientale. It is not clear if it needs the national level MoU in addition. Access to finance for piloting is anticipated to be a challenge. Feasibility depends on which model is to be implemented: a universal model (building it into national level sector governance) or market-driven model (building it up supply chains through market demand). MineralCare needs to deepen its understanding of the DRC context to be able to compete with other options. MineralCare's system rests upon incentivising artisanal miners to participate in the programme through achieving social benefits as a reward. This has worked in other contexts but feasibility in DRC may be problematic. Because of this reliance on advanced technology, it may not be appropriate for every site in DRC at

Initiative	**Sustainability** *Adding value not grievances for stakeholders, enfranchising them to support and enable it*	**Credibility** *Clear, appropriate vision & goals; system framework oriented towards delivering goals; effective accountability*	**Efficacy** *Effective and efficient*	**Feasibility** *Achieving goals with best use of available resources (value for money, realism, universality)*
				this moment in time, but could provide a desirable destination for those presently outside its feasibility. Inevitably probably better suited to larger scale ASM operations.
Geotraceability / BSP	BSP is not yet tested in DRC. The BSP has identified value propositions that are likely to appeal to certain downstream and upstream businesses: the emphasis on communications, supply chain transparency, building broader CSR issues into supply chain due diligence, management systems advice, flexibility in traceability system choice, releasing data to buyers before export. It has a broad range of sustainability issues in scope, beyond what is required by the OECD Guidance. It is a business, so financial sustainability is crucial to its operation. It is therefore also driven by a profit motive (it is not a social enterprise).	Concept is sound. Cannot definitively judge credibility until it is tested and developed more fully. For example, some normative documents do not yet exist, e.g. audit protocol. The standard needs work, being built on other standards that are not fit for purpose for the target beneficiaries. The standard also needs proper consultation with Congolese stakeholders. This could be included in the pilot but adequate consultation for any Congolese situation would require something fairly extensive. Governance needs to be improved. There is not adequate separation between certain parts of the governance structure. Has credibility with some downstream stakeholders.	Remains to be seen. Needs piloting in the DRC context.	BSP does not have an MoU with the Government of DRC itself; it is mentioned in Geotraceability's MoU with the Government of DRC, which provides an entry point for piloting. Goals appear to be realistic and achievable Access to finance for start-up is anticipated to be a challenge. Because of this reliance on advanced technology, it may not be appropriate for every site in DRC at this moment in time, but could provide a desirable destination for those presently outside its feasibility. Inevitably probably better suited to larger scale ASM operations.

7. Conclusions and Recommendations

The purpose of this assignment is to compare the systems of certification and traceability in place in DRC and in the world, with a view to proposing a system that is appropriate to the needs of the country, coherent with the procedures of the ICGLR's regional certification mechanism, and responsive to international requirements. Ultimately, the study should propose a traceability system that responds to the realities of the Congolese context and the expectations of the Congolese government in terms of efficacy and cost, whilst being in conformance with the demands of the ICGLR and the final consumers of relevant minerals.

Traceability is but one feature of a certification initiative and not the only aspect upon which feasibility, efficacy, credibility, and thus sustainability rest. In addition, an emphasis on traceability as the tool for formalizing gold supply chains may entirely miss the mark; it is essential to widen the lens and come back to the original goal: to break the link between minerals and conflict. If one widened the lens even further, one might rather consider the goal to be to build a viable and developmental mineral sector that attracts responsible buyers for the long-term by investing in systems for certification and good governance that assure the market of DRC's status as a responsible source. We have assumed this is, indeed, the higher goal, and it is with this in mind that we draw our conclusions and make these recommendations.

> In terms of implementing traceability and certification system(s), there are significant points of divergence between the 3Ts and gold, such as gold's fungibility, the likelihood of its access to markets regardless of certification. The most significant difference is that there is an incumbent, pre-existing system for the 3Ts, namely iTSCi, with several years of successful operation, while for gold there is no current operational traceability system such that the implementation context is something of a tabula rasa. This, we have accordingly differentiated between general conclusions and recommendations, and those specifically appropriate for the gold or 3T contexts.
>
> Comparative, evaluatory tables which assess the respective, potential strengths and weaknesses of the each system are included in Ch.5 and Ch.6, for 3Ts and gold respectively.

7.1. Conclusions

7.1.1. *General Conclusions*

1. **Demands of ICGLR and final consumers** There already exist a suite of normative documents that dictate what form the DRC national assurance system for conflict minerals should take. Together these documents set terms and conditions that determine what responsible sourcing from DRC necessitates. These include:
    - Congolese Law,
    - the requirements of the ICGLR's Regional Certification Mechanism,
    - national law in other jurisdictions that incentivize buyers of Congolese minerals to engage at all, with particular segments of the Congolese sector and/or in particular ways, (e.g. Dodd-Frank Act, pending EU Regulations)
    - Compliance Frameworks required by membership organisations, industry associations, or certification initiatives on mineral buyers (e.g. LBMA, RJC, CFSP)
    - the CSR commitments end-users make generally (e.g. UN Global Compact), and
    - international policy frameworks such as the OECD Guidance, OECD Guidelines, and UN Guiding Principles for Business and Human Rights.

    A key feature of all of these is having in place the right management systems to know, understand, and adequately manage risks that arise, and in particular the worst human rights and business practice risks at a minimum. Some of these normative documents also require due diligence on other rights, such as environmental performance, labour rights, and more.

Key principles that direct what responsible sourcing means are transparency, traceability, flexibility, accountability. These are the principles that should direct the form of the DRC certification mechanism.

~~2.~~ **Great progress has been made but there are still gaps.** The Congolese state and business are motivated to take action on conflict minerals. Stakeholders consulted generally acknowledge the increased awareness and understanding of the conflict minerals issue and some positive progress since the government and its partners started implementing traceability and certification systems in 2010. There are some gaps, however, that require attention.

a. DRC has made great progress in gradually formalizing its tin and tantalum supply chains, but less so for tungsten – for which there is hardly any market interest – and for gold – for which there is strong market interest, but from unscrupulous buyers with no interest or need to source responsibly. These different market realities require different strategies for engaging 'responsible buyers' through measures to assure the sustainability performance of Congolese mineral supply chains.
b. Attention to the human rights issues privileged in the OECD Guidance has led to a neglect of other human rights issues (in particular labour rights) that are of concern to the market, to governments, and civil society.
c. Good governance of conflict minerals supply chains requires a broader set of interventions and fundamental reforms. Traceability and certification initiatives should be accompanied with tangible technical, material and financial support for artisanal mining communities, to work on the gaps.

3. **There are a lot of systems for doing due diligence on conflict minerals supply chains, but there is not a system for doing due diligence on the performance of the conflict minerals initiatives.** Instead, ad hoc studies – such as this one – are used by donors, governments, NGOs, the market to try to judge the integrity and functionality of the conflict minerals and traceability initiatives upon which they are depending. In theory the Independent Mineral Chain Auditor of the ICGLR RCM will act as a 'watchdog' and will fulfil this function to some extent, but the IMCA is unlikely to be fully functional and effective for some time yet. The market needs reassurance that these conflict minerals initiatives are robust and effective. This reassurance will come through improved mechanisms for accountability, including transparency and *standardized* evaluation. Tightening accountability mechanisms will *drive efficacy* in terms of the ability of the initiatives to achieve their goals (and those of their users) better and for less money; *improve feasibility* by creating feedback loops between users, stakeholders and the initiatives and a compulsion to respond to criticisms and fix problems, and *enhance credibility* precisely because these processes are in place.

a. **Transparency.** All the initiatives could do better to be more transparent. For example, all normative documents should be published and easily accessible to all stakeholders in DRC, the Great Lakes Region, and internationally. This is absolutely not the case at present. All evaluations of the initiatives should be published.
b. **Performance evaluation must be standardized and ongoing.** Government of DRC, businesses operating in DRC and the market all need to understand the differing values and offerings of the initiatives. However existing evaluations are inadequate or not publicly available: CTC is evaluated for BGR, but the findings are internal to BGR; iTSCi is evaluated on a quarterly basis per its MoU with GDRC, but these evaluations are not published. In sum, the initiatives either have no Theory of Change or Monitoring and Evaluation System, or the M&E they do is not publicly available. This is not good enough for the market, which is relying so heavily upon these systems to enable them to fulfil their downstream compliance obligations. It is also not good enough for Congolese stakeholders who are both the intended beneficiaries and/or impacted parties. It would be tremendously helpful if all of them could be piloted under standardized test conditions and for findings to be communicated to stakeholders including published on the Internet by the GDRC and each initiative. Establishing a logical framework, by which one could monitor and evaluate if the theory of change is working and goals are being achieved, would enable more meaningful accountability and allow system users and stakeholders to judge whether or not they are getting benefit and 'value for money' out of each system, and push for improvements that will maximize the development and stability dividend that can come from their implementation.
c. **The need for additional field-testing.** Our research has found that – based on the information that was available to us – all the traceability systems on offer are credible and have the potential to be commercially efficacious and feasible. However, only iTSCi has undergone an OECD Conformance

check. All but ITOA are derived from traceability systems that are proven in other commodities in other contexts, and some have already been piloted in DRC. The findings of these pilots have not been published, however. Nor were criteria of assessment published. When we requested reports of these evaluations from partners, we were not able to get them. Evaluations provided by the companies tested did not present the evaluation criteria, and only provide a compliance statement without evidence of how this was derived. This leads us to conclude that the potential initiatives must be properly field tested: BSP, MineralCare, ITOA, etc. Those that have previously been field-tested, like MetTrak or GeoTraceability, should be piloted again in order to enable standardized and adequate evaluation. These 5 or 6 pilots must be subjected to the same performance evaluation criteria.

d. **Transfer of experiences to other GLR countries.** Independent oversight of pilots in DRC will also help the ICGLR glean lessons learned and consider implications and leverage possibilities of any new, trialled initiative both for DRC but also for other Great Lakes Countries.

4. **Traceability and due diligence are not the same thing!** Putting all efforts on getting the perfect traceability system is not enough from a supply chain due diligence point of view. The OECD Due Diligence Guidance makes this clear. Traceability is a means to an end, albeit an important one. It is easy to focus on this as the solution, but doing so leaves other important things off the radar. As one interviewee puts it, traceability is easier to rally round, measure and deliver on than goals such as 'good governance' or 'conflict prevention'. [599]

   a. Fully physical traceability (identify preservation) is the most expensive option. Do conflict minerals supply chains in DRC need to be fully tracked to satisfy the market's chain of custody requirements, which are tied to the specific 'conflict-free' claims they wish to make? So far, upstream initiatives operate on the basis that they *do*. Under the US Dodd-Frank Act, the crucial point is the determination of whether the mineral originated in DRC or the Great Lakes Region and, if so, if it directly or indirectly financed an armed group. If the focus of the DFA moved away from the need for full *material* assurance to assurance of the financial benefit from the mineral, then would full tracking of the *mineral* be necessary? Would it be enough to practice due diligence on the integrity of the trading parties only? The gap in this situation is the risks that may be manifest whilst the mineral is in transit, and which can best, or only, be identified through physically tracking minerals (e.g. knowing progress of the mineral in real-time, alerting mineral owners or trading parties to variations in the anticipated route, delays, or other disruptions). A chain of responsibility solution may, however, be particularly practical as a first step for gold which is such a slippery mineral anyway.
   b. The second possible adjustment to reduce costs is removing the necessity for tracking to specific mine sites across the board, and rather requiring that only in zones of known insecurity. [600] Imagine an area in DRC where peace and stability exist, where none of the Annex II risks occur systematically, where these risks are effectively monitored and where risk events are adequately mitigated and remediated. In other words, imagine a place where there is rule of law, and that law adequately protects human rights, ensures businesses respect human rights, and meaningful grievance mechanisms exist. A trader buying from such a place would then only need to report to buyers that the minerals came from this zone and not the specific mine of origin. It is not inconceivable that Congo's mining areas will progressively achieve this desirable state of affairs, but this is a medium- to long-term journey that will take great leadership, vision and determination amongst local politicians and businesses. However, even in such a situation, companies still need to do due diligence, though the due diligence measures to be taken may be less onerous and thus less costly. Additionally, even where such enclaves exist, there is always the risk of laundering of other minerals into these areas meaning new forms of 'import' controls or leakage would be essential. This is akin to Kimberley Process Certification Scheme system.

5. **Ensuring responsible sourcing contributes to development and stability in DRC.** All of the 3Ts initiatives' goals are technical, focused on enabling responsible sourcing. Regardless of whether the higher goal is simply to deliver a service (traceability) or to contribute to peace, stability and socio-economic development in DRC (certification), the fact is that these initiatives could be doing more for development in all cases, especially in the context of improved mining governance and formalization, with all the attendant benefits therein. Again,

[599] Interview with interviewee no. 1
[600] Interview with interviewee no. 2

the traceability initiatives are just a tool that generates the data that make it possible for entities to do due diligence to enable them to responsibly source minerals from conflict-affected and high-risk areas in DRC. Initiatives that simply offer a traceability and data management service do not need a higher goal of social benefit or development gain, but can contribute to these things through how they are implemented. This should be monitored and reported on.

6. **Protection of vulnerable people.** Imposition of traceability and due diligence systems generally has created additional costs for upstream actors in DRC and in particular the miners. We are also concerned that piloting be done in a way that is sensitive to the politics of using Congolese mineral communities as a laboratory for proving the concepts for traceability and due diligence tools, particularly where these are private sector initiatives led by a profit motive. The pilots should seek to safeguard participants and vulnerable third parties against direct or indirect negative social or economic impacts of any pilot.

7. **It is not possible for ASM to be formal in all cases, making access to legitimate supply chains extremely challenging.** In the case of gold, fewer than 20 artisanal mining permits (ZEA's) have been issued to ASM miners throughout the DRC, making this a huge impediment to formalization and legitimization of the sector. ZEA's currently occupy less than 3% of the total number of gold mine sites in the DRC. This means that ASM miners, whether individually, as a cooperative or a small company, have very limited legal access or security of tenure on ASM mining sites. One of the key issues here is that many of the permit-holders are effectively absent, based overseas, and maintaining their permits annually, but without any exploitation at the site. Indeed, in Orientale Province, one of the DRC's main gold producing areas, only two industrial gold mining companies are currently operational. As part of the formalization of ASM gold activities, as well as for 3Ts, ASM miners need increased security of tenure and allocation of ASM permits. In fact, the current situation for awarding ZEA's is somewhat ponderous – requiring a proposal by the provincial governor and the provincial minister of mines, which then needs to be approved and codified with an arrêté at the national level. Instead, this process could be streamlined and effectively decentralized, with the issuance of ASM title being handled by the provincial Division des Mines. Another issue is that the ZEA permit does not provide exclusivity for a sole permit holder. In order to encourage investment and provide security of tenure, ASM title could be awarded to permit holders on an exclusive basis, renewable after 2-3 years.

8. **Competition and complementarity.** The MOU between GDRC and GeoTraceability now opens the door for competition and pilot projects to evaluate each system.

    a. **It is crucial to maintain market stability and credibility** whilst introducing alternatives.
    b. **It is imprudent to enable diversity without addressing the capacity of state agencies to cope** with this. State agencies' roles in implementing, supervising or evaluating these systems must be clarified in each case. The burden on the state could be improved by rationalizing various elements (e.g. mine site validation & certification, data management).
    c. **Harmonization between systems.** The GDRC could do more to enable harmonization of various elements of the upstream assurance system, such as rationalizing the joint validation missions, rationalizing the CTC certification audits, enabling data sharing and publication, and so on. Rationalising processes would also reduce the burden on state agencies.
    d. **Complementarity must be emphasized.** The traceability / due diligence systems must not only be considered as potential stand-alone solutions. Complementarity and possible synergies between the respective systems must be key considerations. This is especially the case given that some systems provide traceability but no due diligence, and vice versa. With the 3Ts, there is potential opportunity for iTSCi or CTC to collaborate with other traceability systems, such as GeoTraceability, for example. In the case of gold, for example, from PAC's own evaluation of its earlier project in Orientale, while highly effective at the mine site / cooperative levels and initially beyond, the traceability system broke down in the supply chain between the smaller and the grand négociants, after which they lost track of the gold. In the light of that experience, the earlier incarnation of the PAC model undoubtedly needs reinforcement of traceability at the négociant stages of the CoC. This could be an opportunity for PAC's model to be complemented by ITOA's system of sequentially-numbered envelopes, or indeed ARM's similar proposal. The imminent onset of piloting 3T traceability systems should go beyond evaluating the individual initiatives and traceability systems, but should also

examine the implications of a diversity of systems. This would bring benefits through complementarity and the spur of supervised competition.

e. **Different systems suit different situations; not all are universally appropriate.** Following on from the need to bear in mind possible complementarities and synergies between the respective systems, such that different systems might be combined to work together, there should also be a recognition that some systems may be better suited to different mine site environments. The more technologically advanced systems, such as GeoTraceability and MineralCare, may be less appropriate for smaller and/or more remote mine sites, but could benefit from greater economies of scale at larger and/or more accessible sites. Also, as part of the DRC government's stated intention to achieve compliance with the ICGLR RCM Standards, due diligence must work in tandem with traceability. Thus, for example, BSP's provision of due diligence assurance could also eventually complement ITOA's traceability system, or that of MineralCare (noting that Mineralcare does include a lot of due diligence already), as well as its existing partnership with GeoTraceability.

f. **The use of technology.** Stakeholders are sceptical that technology-intensive systems are appropriate to DRC. Whilst understanding these concerns, they do not necessarily take into account the diversity of conditions (e.g. scale of site, location, human resource context, commercial context) pertaining to the great range of 3TG sites within the DRC. Undoubtedly, some sites will be less suited to technology-intensive systems, while others may offer potential gains in efficiency and cost-benefit through the implementation of technology-intensive systems. Thus, we are of the opinion that conclusions on the appropriateness of a system based on its use of technology are premature without allowing for that technology to be tested under standard (easy) and extreme (likely to fail, e.g. based on weather, literacy, education level of users) conditions.

9. **The GDRC could push through efficiencies in the upstream supply chain assurance system**. The GDRC already carries out a range of elements of the upstream supply chain assurance system, in line with the RCM in particular. These include entity approval (through licensing), mine site validation, mine site certification (partially through CTC), and export procedures (RCM certificate issuance). There is more GDRC could potentially do in each regard, e.g. building due diligence on key points required by the OECD DDG into its licensing approval system, requiring initiatives to share data generated through Chain of Custody system implementation in certain forms (aggregated and disaggregated), and so on.

10. **Mine Site Validation and Certification could be significantly rationalised.** While the joint validation missions are indubitably a cumbersome mechanism, they exist in a very particular context, whereby challenges such as widespread and unpredictable insecurity, infrastructure deficiencies, the sheer scale of the DRC's geography, lack of resources and capacities among government agents, all played a role in moulding the development of the current joint validation model. Given the specificity of that context, it is now apposite to explore ways in which the validation process can be streamlined, made more sustainable, so viable over the short to medium-term, and responsive to some of the criticisms adumbrated earlier in this study. Redesign of the mine validation paradigm for the DRC is not part of this study's terms of reference. However, the validation process undoubtedly has a knock-on effect on the costs of and perceived effectiveness of the traceability and due diligence systems in place. Also, a validation process, sustainable and viable over the long-term, is crucial for sectorial stability and growth. A number of suggestions for improvements were raised by interlocutors for this study:

    a. Development of capacity-building project by international development partners, such as that by BGR, to train mines inspectors as a replacement for the joint validation missions. As security improves, this will become increasingly feasible across the board, transferring ownership of the process to government agencies

    ~~b.~~ iTSCi, or whatever certification initiative(s) accredited as operational in the DRC for 3TG,[601] does validation, in tandem with a government mines inspector, as per the ICGLR RCM. This would have the added advantage of building capacity for government agencies responsible for mine site validation

[601] Mining company, concession-holder, cooperative, negociant, entité de traitement, or a consortium of these

7.1.2. Gold-specific Conclusions

11. **The absence of any functioning traceability system for ASM gold** is both a challenge and an opportunity for the DRC government. Unlike the 3Ts, there is no entrenched incumbent system. The imminent onset of pilot projects, initiated by CBRMT and BGR, provides a unique opportunity to field-test both individual traceability / due diligence systems and combinations thereof. This will allow the evaluation of the systems, their suitability in the DRC context, and their potential complementarities. Planning for this evaluation of these pilots from the outset of their implementation is crucial. If the process of evaluation and subsequent selection of system(s) is conducted in an open and transparent manner, the DRC government will be able to avoid some of the controversies which have dogged traceability of the 3Ts. It may be that the pilot projects will demonstrate that the most effective and cost-efficient traceability system for the DRC's ASM gold should depend upon one sole model, multiple models and/or combinations of different complementary models. However, regardless of the outcome, their field-testing and evaluation should ensure that stakeholders would be confident that the designation of approved traceability system(s) would have been based upon a thorough analysis of their respective strengths and weaknesses in the DRC context.

12. **It is hard to incentivize miners to declare their gold production.** The successful implementation of any traceability system depends upon persuading miners to declare their production, and négociants their transactions. While the tax rate at the national level is regionally competitive, current high rates of taxation at the provincial level serve as a significant disincentive against such declarations. Given the fungibility of gold and the relatively weak presence of regulatory authorities at mine sites, stricter enforcement of the fiscal regime cannot be the only solution. While increased capacity-building of custom agents, and other incentives for the interdiction of smuggled gold (such as percentage commissions of the value of the gold seized being paid directly to the customs agent(s) at the border post, as opposed to more senior customs officials) may have a role to play as part of a multi-faceted approach to tackling the problem, stakeholders have to be persuaded that it is in their interests to declare their gold.

13. **Validation of ASM gold mine sites has been slow, and needs to be accelerated**. This is a general point but especially urgent in the case of gold ASM sites. The fact that no ASM gold mine site in Orientale Province is currently validated underlines the urgency for the streamlining of the validation process. While some stakeholders have taken the position that validation of ASM gold sites should wait until a functioning traceability system is in place, this runs the risk of falling into a 'chicken and the egg' dilemma, as is evinced by the fact that there are currently very few legitimate sites at which pilot projects can be rolled out.

14. **In the DRC and broader GLR context, market access for gold is significantly different to that of the 3Ts**. There is currently no market penalty for non-certified DRC gold because DRC gold is not of great market significance. Non-certified DRC gold will almost inevitably find a market beyond the DRC borders because controls outside of DRC are inadequate to prevent it being laundered into legitimate supply chains. In that respect, implementation of a traceability system immediately compliant with the strictures of the DFA for the sourcing of conflict-free gold may not be the most pressing priority for the DRC government. Rather, in the spirit of the OECD Guidance requiring governments and other stakeholders to work towards implementation of conformity with the OECD Guidance, the DRC government can consider phasing in the traceability / due diligence system(s) for gold progressively and taking into account the realities on the ground. For example, gold production and export from provinces such as Bas Congo, Kasai and Equateur, are currently subject to the same traceability and certification requirements as provinces in eastern DRC, even though the former provinces are not affected by conflict. This currently leads to either non-declaration of gold produced in those provinces, or the issuance of ICGLR export certification for gold, which is non-compliant with RCM Standards. Indeed, in the context of the DRC's geographical scale as well as its difficult and costly transportation links, it is possible that the implementation of rigorous traceability systems may not be the most appropriate solution for such conflict-free provinces. Given the risk and costs of transport, as well as the relative ease of cross-border gold smuggling, it is almost certainly currently more cost-effective for a smuggler of gold from eastern DRC to export illegally into bordering countries, such as Uganda, Burundi and Tanzania, than to attempt access into the gold export supply chain from central and western provinces. It may be more appropriate, therefore, for traceability requirements on conflict-free areas to be made more lax (from physical to documentary tracking, for example) and emphasis to be placed instead on miner, negociant and comptoir registration and

support to these supply chain operators to formalize and professionalize their business activities more generally.

15. **The abrupt transition from the previous system of certification, through certificats d'origine, to the ICGLR RCM export certification, runs a significant risk of undermining the credibility of the ICGLR RCM.** ICGLR export certificates are currently being issued to ASM gold, which, albeit declared to CEEC, is non-compliant with RCM Standards, especially with regard to CoC and transportation routes. This is indubitably the case as no traceability system for ASM gold is currently operational. The DRC government could consider a twin-track approach to export certification, with certificats d'origine, which involve a less rigorous CoC due diligence, co-existing with the gradual and phased implementation of ICGLR RCM export certification in places where this is possible. Certificats d'origine would be particularly suited for provinces outside the known conflict areas of eastern DRC.

16. **Only one traceability / due diligence system for ASM gold has been tried, tested, and then publicly evaluated in the DRC context** – PAC's Just Gold. The other systems, such as CEEC's ITOA, GeoTraceability/BSP, MineralCare, and the ARM model, are seeking to be operational in the DRC. Fairtrade is also possible, if supply chain operators or a local supply chain organization expressed a desire to trial it. Prior to recommendation, or not, regarding any of those systems, there needs to be field-testing in the DRC context. Most critical is the need for the DRC government to be able to make best use of its financial and human resources so as to be eventually compliant with "conflict-free" regulations. While pilot projects serve a useful role in the process leading to selection of systems, issues such as sustainability, cost and ownership are crucial considerations. In that light, it may be that the CEEC ITOA system has a definitive advantage, certainly in terms of ownership, as a "Congolese solution for a Congolese problem", as well as in terms of utilizing and building capacity in existing government human resources.

17. **The creation of a market penalty for gold that is not conflict-free could be helpful, *if conditions are created that make conflict-free gold much more feasible for ASM*.** Traceability will inevitably be just one facet of what should be a multi-faceted approach to ensuring compliance with "conflict-free" regulations, and significantly increasing the volume of declared and certified gold exported from the DRC. While there is currently no market penalty for non-certified DRC gold, the DRC government can over the medium-term work with international partners to create a market penalty. This should involve sensitization of those authorities responsible for the management of trading hubs, such as the DMCC in Dubai. Financial institutions operating in trading hubs could be encouraged to require evidence of DRC export certification before accepting deposits from suspected DRC gold traders. The DRC government and its partners should work with international advocacy groups and the media to internationalize awareness of the negative impacts of illicit DRC-sourced gold. This would gradually lead to a stigmatization of non-certified DRC gold, and thus contribute to shutting down, or at least limiting, market access to the global supply chain for non-certified DRC gold.

7.2. Recommendations

7.2.1. General Recommendations

1. **Mine site validation to be streamlined and accelerated**. The number of DRC government validation missions should be increased. The current validation system involves multiple entities and agencies. This is probably unsustainable at its current pace, and cost. This process should be streamlined, involving fewer stakeholders, and capacity developed for DRC government agents to undertake validation missions, without the need for international partners on-site. Looking beyond the pilot projects, as the respective traceability and certification system(s) is/are rolled out across the DRC, the implementing partners and DRC government agents could undertake joint validation missions as part of mine site traceability implementation. *This is especially urgent for ASM gold.*

2. **ASM permits**. ASM miner cooperatives and small companies should be granted greater security of tenure and should be issued with an increased number of ASM permits. This is necessary as part of the DRC government's push to formalize ASM through the development of cooperatives. Exclusive rights and security of tenure are needed to ensure investment by ASM stakeholders. ASM permit holders should also have exclusive title, renewable for 2-3 years. The process for issuance of ASM permits should be streamlined, and decentralized to the level of the provincial Division des Mines. Absentee permit-holders, who maintain their title, without exploitation at the site, could be required to undertake a minimum annual investment as part of their obligations in order to retain title. Also, as discussed below, in certain cases, LSM companies could be encouraged to cooperate with ASM cooperatives to allow exploitation on certain, designated areas within their concessions unsuitable for industrial mining.

3. **Democratization of cooperative structures**. As the DRC government commits to ASM formalization in part through the setting up of cooperatives, it needs to be ensured that cooperative structures bring tangible benefits to ASM miners. Otherwise the temptation for miners, often faced by relatively high percentages of their production being payable as dues to the cooperative, will be to bypass the cooperative, not declare their gold, and sell illicitly to négociants. It is also a potential local conflict trigger. Miners need to have a sense of ownership, voice, and a stake in the cooperative. As part of the pilot projects and subsequent roll-out of the traceability system(s), cooperatives need to be moved towards democratization, and forego the rentier/PdG model whereby influential local personalities control the cooperative for their own interests, often at the expense of the miners. Moreover, where cooperatives function essentially as sub-contracted trading entities that gather product from ASM miners on behalf of the concession-holder, they should not be called a co-operative. This is a misnomer and hides the reality of continued marginalization of the miners. Appropriation of the term 'cooperative' by these trading platforms prevents scope for miners to truly organize into actual cooperative-type structures. Such organization is an essential step in the formalization and legitimization of the sector as a whole, per Appendix 1 of the Gold Supplement of the OECD Guidance.

4. **Building capacity of government agencies.** Any traceability system, whether a pilot project or more widely operational, will depend upon the government agents tasked with its implementation, management and supervision, from mine site to exporter. At the mine site level, SAESSCAM agents are most often underpaid, irregularly paid, if paid at all. This inevitably demoralizes staff, and encourages corruption. Agents need to be incentivized through better and regularly paid salaries. Moreover, through a return to SAESSCAM's original remit of outreach and up-skilling for ASM miners, as opposed to its primary current role as collector of fiscal and parafiscal charges, in tandem with a reduction in taxes levied at the provincial level, SAESSCAM and other government agencies present at the mine site will be better able to maintain supervision of mining activities and the volumes of gold produced at the mine site. Building the capacity of government agencies will not only ensure their ability to do their jobs, it will disincentivise corruption and enable higher performing traceability and certification systems, so protecting the overall credibility of these systems and DRC's access to responsible markets.

5. **Protection of vulnerable people.** GDRC needs to work with supply chain operators to consider how the costs of upstream due diligence can be distributed more fairly so the burden is not placed disproportionately on the most vulnerable in the chain. This should also be mandated as a key consideration for the piloting of initiatives: how will costs be distributed? Pilots must also take action to know and mitigate risks of negative impacts of piloting on vulnerable people.

6. **Impact assessment.** Without wanting to dilute and undermine the ability of these initiatives to achieve their existing goals, the GDRC should seek to understand and publish if and how each of these initiatives contributes to achieving improved minerals sector governance, formalization and legitimization of the ASM sector (per Appendix I of the Gold Supplement of the OECD DDG), development, and stability. This will ensure GDRC and other stakeholders can understand their value in these regards, and help them choose between them if need be. All the assurance or certification initiatives do offer some sort of social benefit or development gain as part of their package, though some more than others. The quality of these social or development outcomes should be assessed as a starting point. A fuller evaluation would include assessment of a.) how each initiative prevents or causes harm to Congolese stakeholders, a.) how they add value to Congolese business and society generally, and c.) how they add value to Congolese business and society specifically in the locations where they operate or have influence. To that end, all initiatives should be compelled to consider and create safeguards on their initiative's negative impacts in these regards, and to enhance their positive impacts where possible but without affecting their commercial viability.

7. **MOU's and OECD Guidance conformance.** In order for companies to be able to rely upon assurance systems operational in DRC, DRC must insist that any initiative with which it signs a Memorandum of Understanding has undergone an OECD DDG conformance check by a knowledgeable and credible independent body to ensure that, once operational, the initiative will be judged as adequate by the market. Letters of support are, of course, helpful but a conformance check has more weight.

8. **Data reliability and Transparency**. DRC should aggregate and publish data, statistics and reports of relevance to downstream buyers of 'conflict minerals' on its website (www.mines-rdc.cd). This could act as a portal of data gathered from each of the initiatives that can be made public. This and more sensitive data could also then be passed to the IMCA and database of the RCM in aggregated and disaggregated form. DRC should include data disclosure requirements in the MoUs they have with initiatives, including requesting certain data points, and types of data to enable standardisation of data to ensure comparability and meaningful aggregation. This act would also support improved communications and thus transparency, to aid downstream businesses.

9. **Sustainability of systems.** Of course downstream businesses are concerned about the cost of implementation of initiatives, but also wish to ensure that the cost of an added due diligence burden upon the market's insistence is fairly distributed in the upstream segment and that the most vulnerable in the supply chains (the miners and their families) do not bear unreasonable costs. As part of its consideration as to allowing new initiatives to operate in DRC, GDRC should also demand that these initiatives present information on their business model including how they will be financed (start-up capital and ongoing income), and how profits or excess income will be distributed to ensure costs are reasonable and fairly distributed. Donors may wish to work with GDRC to elaborate on how this can be done appropriately.

10. **Permitting initiatives to operate in DRC.** The GDRC needs to establish and publish its procedure for vetting and approving a conflict minerals initiative or traceability service provider that wishes to pilot and become operational in DRC. In all cases, an initiative must be piloted before its entrance into the market can be approved more generally. The approval process should be run by a steering committee involving the national ministry of Mines, provincial Ministry of Mines and the independent evaluator. This committee would not only judge system performance on an ongoing basis, but make recommendations to the initiative and steering committee on adjustments that should be made to ensure credibility, improve performance and minimize any risks that the system may pose to third parties. The process for applying to operate as a traceability system in DRC should be published on www.mines-rdc.cd to enable other initiatives to do this efficaciously (in the interest of ultimately reducing upfront costs and the price that industry will have to pay for implementation).

Figure 10 The 3 Steps for Granting Permission to a Traceability or Certification Initiative to Operate in DRC

A. Fulfilment of basic criteria to allow piloting to occur. This can be done under the framework of an 'interim MoU'
B. Evaluation of pilot and evidence prove that test conditions have been met or surpassed allows for an MoU for operation of an initiative to be granted.
C. The MoU with the initiative is granted on a renewable basis. Renewal of agreement for initiative to operate is conditional upon satisfactory performance as judged by the expert evaluator based on findings of ongoing monitoring and evaluation, and approved by the steering committee. Termination of the MoU can take place under extraordinary circumstances, e.g. serious and persistent credibility or integrity failings or lack of market acceptance. This would likely occur based upon a recommendation by the ICGLR's Independent Mineral Chain Auditor, for example.

A. Basic criteria for allowing piloting to occur should include:

- **Proof of concept** – has the initiative been trialled successfully in another setting? If not, does it offer enough potential benefit to Congolese stakeholders to be worthy of the investment in piloting (noting the level of effort this is going to take of supply chain operators and especially vulnerable groups)
- **Status as applicability as a conflict minerals initiative -** Confirmation of scope that makes it applicable as a 'conflict minerals' initiative
- **OECD conformance check -** Has an independent OECD conformance check been carried out? Has this confirmed theoretical conformance? If not, this should be carried out. The eventual granting of a MOU should be conditional on the completion of an independent OECD conformance check.
- **Scope & completeness-** Identification of exactly which elements of an upstream conflict minerals assurance system are in scope (based on the key elements of an upstream assurance system). Which are not and how will these be covered? Are there any significant gaps?
- **Scope and applicability** – to what parts of the market is it most suitably applied?
- **Endorsement by critical stakeholders.** Does the initiative have endorsement by market actors, e.g. an industry association? By Congolese supply chain operators, e.g. is there an operator willing to trial it?
- **Sustainable financing:** How will the initiative be funded in pilot / start-up phase? Is there proof this will materialize? How certain is this funding? What is the business model for achieving financial sustainability over time? Is this coherent and realistic?
- **Value and justification for access to market -** Does the initiative have the potential to gain market traction, get to scale, and drive social transformation?
- **Contribution to mineral sector development:** How will implementation of this initiative improve mineral sector governance in DRC generally? Will it add value over and above what would be happening anyway?
- **Accountability mechanisms:** Does the initiative have a logical framework by which its performance can be evaluated over time? If not, how can you judge its performance? Does the initiative have channels and processes for managing grievances against it; are these adequate?
- **Risk and impact assessment**: has the initiative carried out an assessment of risks and potential negative and positive impacts that may occur due to its implementation? Does the GDRC agree with this assessment? Has the initiative a plan for mitigating these risks and negative impacts and for enhancing positive impacts?
- **Credibility, feasibility, efficacy**: are there any reasons to believe the initiative will have issues with credibility, feasibility or efficacy? If so, are these preventable or surmountable?
- **Process:** is the process by which the initiative is going to be piloted and evaluated satisfactory to the GDRC and third parties?

B. Criteria for evaluating a pilot and judging if an initiative should be allowed to operate in DRC

- The government should apply standard criteria to evaluate the performance of a pilot. They may wish to derive these from and improve upon the criteria in chapter 2 of this study, as well as those that shall have been used in step one – has the pilot proven the theoretical assessment?
- GDRC or a donor partner should commission and develop standard criteria for evaluating pilots of initiatives and publish these so that pilots can take place with as minimal bureaucracy as

possible. Until such a time as this happens, the government should insist that any initiative seeking to pilot in DRC undergo a formal third party evaluation process. GDRC should be allowed to review and approve that evaluation process to ensure that it is aligned with its own requirements to ensure it can base an approval decision on having full evaluation information.

C. Create an MoU with the Initiative

Getting a copy of the existing MOUs with iTSCi and GeoTraceability has proven challenging as both parties need to agree to disclosing to a third party.[602] Since transparency is a major factor in initiative credibility and market confidence, the GDRC should insist that both parties publish the signed MOU on their respective websites within 1 month of contract signature. At present this remains subject to agreement and within 3 months for iTSCi. [603]

ELL examined the Memorandum of Understanding signed between iTSCi and the Government of DRC on 17th February 2012, and renewed again in 2014, the purpose of which is the implementation of iTSCi. We have used this, and the findings of our research generally, to propose a set of requirements / conditions that should be in such an MoU to improve the credibility, performance and thus sustainability of certification initiatives operational in DRC. This can be found in Annexes.

[602] Kay Nimmo, pers. Comm. to Estelle Levin, [DATE]; Gerald Beaulieud, pers.comm. to Estelle Levin, 21.11.2014.
[603] Government of DRC and ITRI 2012

7.2.2. Gold Specific Recommendations

1. **Pilot projects**. Both CBRMT and BGR are in the process of developing pilot projects for gold traceability. These projects will be an opportunity to field test and evaluate the different gold traceability systems currently seeking operationalization in the DRC – potentially as stand-alone systems and as combined systems which can complement each other along the same supply chain. CEEC's ITOA, making use of existing DRC government human resources as well as building institutional capacity, should be encouraged to work in tandem with other traceability / due diligence models. The two pilot project programs, CBRMT and BGR, should be encouraged to work together to avoid duplication, and maximize the possible permutations of traceability system combinations, as well as geographical locations.

2. **Realistic and legal taxation at the provincial level**. For there any to be any hope of increased declaration of gold at the mine site or négociant levels, there needs to be a significant rationalisation of fiscal and parafiscal charges at the provincial level. The overall tax burden should be reduced to 4%: maintaining the national 2% levy at export, reducing the provincial taxes to 2%, and abolishing the 1% négociant taxe de vente. As part of the pilot projects, implementing partners should negotiate with provincial governments for fiscal exemptions or significant reductions regarding provincial taxation. This will be an opportunity to demonstrate that a lower tax rate encourages fiscal compliance on the part of stakeholders, thus increasing the tax take for both provincial and national government. At the same time, taxes paid to the *chefferie*, or *redevance coutumier*, need to be codified and integrated into existing DRC mining legislation, as otherwise they will be illegal taxes and thus non-conformant with OECD Guidance and non-compliant with the ICGLR RCM.

3. **Certificats d'origine co-existing with ICGLR RCM**. ICGLR RCM export certificates should only be issued where compliance with RCM Standards can be assured. As a **temporary and immediate** measure, certificats d'origine should be re-introduced for certain sites and provinces. This would effectively mean that gold sourced from sites which have not as yet been integrated into a functioning traceability / due diligence system should be subject to certificats d'origine for export. This would be especially relevant to DRC gold-producing provinces not affected by conflict, such as Bas-Congo, Kasai and Equateur. Meanwhile, the pilot projects, with their onus to ensure compliance with "conflict-free" traceability and due diligence requirements, would be subject to ICGLR export certification.

4. **Increased cooperation between LSM and ASM**. LSM gold producers, such as Banro and the eventual successor entity to Anglo Gold at Mwongbwalu, should be encouraged to engage in increased cooperation with ASM miners on and around their concessions. Initiatives such as Banro's transplanting of miners from Namoya to Matete, with transfer of knowledge, skills and equipment, should be further encouraged. These LSM concessions cover vast tracts of land, are home to significant numbers of ASM miners and their families, and contain gold deposits, which are unsuited to industrial production. The new mining code may well allow for such cooperation between ASM cooperatives and LSM companies. While it should be accepted that LSM actors will be understandably wary of reputational and economic risk involved in sourcing from ASM miners, well managed programs could be beneficial to both parties, such as at Mwongbwalu and Banro's Mukungwe. As part of this initiative, medium scale and LSM gold companies should be encouraged to become RJC members. As well as providing conflict-free, social, environmental, human rights, sustainability and business integrity standards, RJC Standards also cover relations between LSM and ASM stakeholders. LSM gold companies should also be required to apply and report in line with the World Gold Council's Conflict-Free Gold Standard. This provides guidance for procurement from ASM miners on LSM concessions.

5. **International stigmatization of non-certified DRC gold**. As part of a multi-faceted approach to ensuring compliance with OECD Guidance, the DRC government and its international partners should increase efforts to sensitize downstream stakeholders, such as the authorities managing trading hubs (e.g. DMCC), regarding the need to deny market access to non-certified DRC gold. Financial institutions operating in such trading hubs should be encouraged to deny banking facilities to proceeds from illicit DRC-sourced gold. International media and advocacy groups should be encouraged to internationalize awareness of the negative impacts associated with DRC non-certified gold, as part of a process aimed at limiting market access to gold smuggled from the DRC. Also, it should be borne in mind that many of the major players previously and currently involved in illicit export of non-certified DRC gold, whether based in the DRC or neighbouring countries, will still have a role to

play in the event of widespread legal export of DRC-sourced gold, not least in terms of pre-financing along the supply chain. Thus, in certain cases, clandestine smuggling networks could be induced to engage in legitimate trading and export, through incentives such as less onerous tax rates and, in certain cases, reputational rehabilitation and lifting of sanctions.

7.3. Conflict Minerals Initiatives and the Bigger Opportunity for Positioning Congo as a Preferred Source for Responsibly Mined and Traded 'Conflict' Minerals

All of the above recommendations pertain to the specifics of setting up credible responsible sourcing systems in DRC. There is a bigger opportunity here, however, that we wish to re-state and expand upon here, in the conclusion.

Companies have feared penalty in the market for sourcing minerals from the DRC or one of the adjoining countries at all. They are especially put off if a.) there is even a small chance that an incident of direct or indirect finance or benefit to an illegal armed group may occur as they wrongly assume this automatically compels a 'not found to be DRC Conflict-free' designation, or b.) they may not be able to confirm with 100% certainty that when sourcing from DRC or a covered country they have definitely *not* encountered such an incident in their supply chain. In other words, companies perceive that there is no margin of error, compelling either perfect engagement (through a risk-free source in the GLR) or no engagement. This incentive to disengage entirely is excessive since other companies, as well as the CFSI, interpret that a 'conflict-free' designation is possible where a risk has occurred but its *mitigation* is in line with what is set out in the OECD Guidance.[604] Nonetheless, when combined with the obvious costs of doing due diligence and filing a conflict minerals report, this has incentivised huge numbers of US companies *and their suppliers* to intentionally boycott the Great Lakes Region and, in some cases, Africa as a whole.[605]

Attracting these buyers back to the region requires three things:

- First, there must be a *commercial* benefit to buying from DRC (e.g. security of supply, cheaper product, market advantage through communications opportunities that focus on the company as a good global citizen);
- Second, the *risks* involved must be low (e.g. ease of doing business, ability to depend upon upstream due diligence assurance systems that are credible, affordable, feasible); and
- Third, *the US Government,* Industry Associations and Conflict Minerals Initiatives supporting business to comply with Dodd-Frank must continue and intensify their efforts to communicate the conditions under which companies can source from DRC and report as 'conflict-free' and, potentially, introduce other commercial incentives for 'conflict-free' sourcing from DRC and its adjoining countries. Companies need to understand that it is not about *whether* there has been a risk event but rather, *when* there has been a risk event you can report as conflict-free if a.) this was outside of the control of the supplier (as a test of the effectiveness of their due diligence measures) *and* b.) risk mitigation has been appropriately handled, *and* c.) any necessary remediation has occurred or is in process.

In the longer-term, however, even addressing these things may not be enough for DRC to compete with other producers and re-enter the market as a preferred source of 3TG. As stated in chapter 4 there is a paradigmatic shift towards market-based accountability and it is here to stay. This sourcing paradigm emphasises high business performance, resource efficiency, and social and environmental risk mitigation. The conflict minerals regimes have emerged as part of this paradigm, to enable businesses to source from conflict-affected and high-risk areas, but they address only a *minority* of the risks that are of concern to downstream business. Yet our consultations with downstream businesses for this and other studies has revealed that businesses using gold and the 3Ts consider that supplier performance on the *broad set* of responsible sourcing issues is increasingly central to their procurement decisions. DRC will remain at the bottom of the list as a desirable source of 3TG unless it can prove that it is addressing the conflict minerals issue, on the one hand, *and* the broader set of supply chain risks on the other. Countries or regions that do not have a 'high-risk' or 'conflict-free' determination under the OECD Due Diligence Guidance are automatically easier and cheaper sourcing options, especially for American and, soon, European businesses.

[604] Interview with interviewee no. 36
[605] Cuvelier, J.; Van Bockstael, S.; Vlassenroot, K. and Iguma, C. 2014; see also Rothenberg, D. and Radley, B. 2014; Geenen, S. and Radley, B. 2014.

This means DRC has to work harder to present itself as an attractive sourcing option on the *broadest* set of commercial, human rights, and environmental issues, and especially for tungsten, for which it is a very marginal source for the global market. The conflict minerals initiatives provide an entry point for achieving this position, and this should be pushed harder in a *gradual* process of scope expansion and higher performance in ways that do not threaten to undermine the viability of these emerging systems.

DRC's ecological importance, poverty levels, and human rights record are such that the market needs to hear a strong message of intentional 're-positioning' by DRC as from being *the* problem source of 3TG in the world to *the* leading source for responsible mining and sourcing if they are to take a leap of faith and make the investments necessary to re-engage for the long-term. But here is DRC's unique opportunity:

- DRC's ecoregions have global importance to planetary biodiversity, ecosystem services and climate change mitigation. Responsible businesses would see greater potential impact in supporting Congolese minerals businesses that are seeking to mitigate environmental risk than they might in other countries where the ecosystems are more degraded or less significant globally.
- DRC unfortunately performs poorly in terms of human rights and especially in the minerals sector. Implementation of systems to manage the risks outlined in Annex II of the OECD Guidance is encouraging to 'responsible sourcers' but many are sceptical of buying when so many other human rights issues remain inadequately addressed or unaddressed (e.g. forced labour, collective bargaining, women's rights, child protection, etc.). Responsible businesses would see greater social transformation potential in supporting Congolese minerals businesses that acknowledge their responsibility to respect all human rights and seek to support the fulfilment of human rights in how they do business.
- DRC has a bad reputation for corruption, mismanagement and high business risk. These issues continue to be a threat to the integrity and commercial performance of its minerals sector. Rather obviously, responsible businesses would have greater appetite for buying from DRC if the corruption risk was lower, and accountability mechanisms could be proved to work.

Following through on this commitment would require a range of actions, but could start by a commitment to institutionalize or at the very least incentivize the use of responsible exploration and mining standards by businesses operating in DRC's mining sector. Responsible mining standards could be used by mining entities to give their downstream clients assurance that they are a responsible source in line with the DDG (noting that DDG is a sourcing standard, not an operating standard). Standards which deliver and assure performance on a range of international normative documents (including the IFC Sustainability Framework, World Bank Safeguards, UN Global Compact, UN Guiding Principles, ILO Conventions, World Heritage Conventions, and so on and so forth) would have greatest value. Some of these standards are explained in a little detail in chapter four (e.g. RJC CoP and CoC, IRMA, Fairtrade, Fairmined) but others could be considered also, such as PDAC's e3 standard for exploration companies, the ICMM Sustainable Development Framework, and more.

There are various things the GDRC could do to incentivize take-up of these standards.

- Just as GDRC has integrated the CTC into national law, it could also require businesses operating in their jurisdiction to become compliant with one or some of these standards within a pre-determined time period as a condition of retaining their operating licences. The CTC-based national certification mechanism reflects this vision to a certain extent.
- GDRC could provide fiscal incentives for participation in these schemes, offering a reduced royalty rate, or other fiscal advantage, for companies that can demonstrate compliance, for example.
- These and other incentives could be identified, scoped out, detailed and piloted in partnership with Congolese businesses, international businesses operating in DRC, their buyers, and the initiatives themselves.
- The GDRC could formally invite these initiatives to work with businesses operating in DRC, and start a conversation about what conditions would be necessary for each to initiate activities.
- An awareness raising campaign could be undertaken by GDRC, buyers of Congolese materials, the refiner initiatives detailed above and the responsible mining initiatives, so engaging with Congolese businesses to communicate to the private sector.

Endorsing participation in these other schemes by mining entities operating in DRC through one or some of these actions would indicate to the world that Congo is cognizant of its global environmental importance and duty to protect human rights, is very serious about enabling responsible mining and sourcing generally in its territory, and has an ambition to work in partnership with business to lead the world in best practice in these regards.

The GDRC could also encourage and enable existing conflict minerals initiatives to expand the scope of their due diligence activities to gradually incorporate the broader set of risks that are in scope of the major international responsible business frameworks. This should be done carefully and based on existing risks in local operating environments, and starting in sites where the systems have plateaued in their mitigation of risks identified in Annex II of the OECD Guidance, suggesting capacity to expand to other issues. These mining areas cannot be expected to run before they can walk, but getting them on an escalator of gradual improvement on existing risks in scope, and gradual expansion to new risks, is the vision the world needs to see to have confidence that they can support DRC in the transformation of its mining sector into a world leader for responsible mining and sourcing. Planning on how to do this would have to happen in consultation with the initiatives, obviously. It is clear that some are already thinking in this way, noting the 'phase 3' of iTSCi in its original plan and their gradual addition of health and safety and child protection issues into management at some sites, and the BSP's intention to have a broader standard, though this is still under development.

Of course this is a relatively ambitious idea, and would require political support from the highest levels to gain traction. And no doubt scepticism will remain. In which case the national and provincial Governments should at the very least engage these initiatives, consider what they might offer GDRC and the provinces, and consider how to incentivise mineral businesses to seek certification with these voluntary initiatives. These initiatives should also seek to engage GDRC to scope what DRC may have to offer with regards their own strategic plans for achieving scale and impact. This, at least, is a first step to leverage these conflict minerals initiatives to achieve deeper impacts that are more likely to deliver a resilient mineral sector upon which a prosperous future can be built for the Congolese nation.

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