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About this report

This report has been funded by the Public Private Alliance for Responsible Minerals Trade ('PPA'), a joint initiative among governments, companies, and civil society to support supply chain solutions to conflict minerals challenges in the Democratic Republic of Congo (DRC) and the Great Lakes Region (GLR) of Central Africa.

This report is the final version. It is the third iteration. Prior versions have been reviewed by the PPA Governance Committee (Enough Project, Ford, GAM, Global Witness, Motorola Solutions, Pact, PAMP, Partnership Africa Canada, USAID, U.S. Department of State), and members of the closed pipe supply chains evaluated herein (AVX, Fairphone, KEMET, MMR, iTSCi). We have sought to mediate and balance a very broad, and sometimes contradictory, range of opinions on content, noting reviewers’ different positions, interests, and experiences.

In order to accommodate commercial sensitivities and business concerns, most of the sources in this report have been anonymised.

Cover Photo – Coltan washing at Kisengo, DRC © Estelle Levin Ltd; photo credit Angela Jorns
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## Acronyms

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<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ASM</td>
<td>Artisanal and small-scale mining</td>
</tr>
<tr>
<td>BGR</td>
<td>Bundesanstalt für Geowissenschaften und Rohstoffe (German Federal Institute for Geosciences and Natural Resources)</td>
</tr>
<tr>
<td>CDMC</td>
<td>Coopérative Des Artisanaux Miniers du Congo</td>
</tr>
<tr>
<td>CEEC</td>
<td>Centre d’Evaluation, d’Expertise et de Certification des substances minérales précieuses et semi-précieuses</td>
</tr>
<tr>
<td>CENADEP</td>
<td>Centre National d’Appui au Développement et à la Participation populaire</td>
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<tr>
<td>CFTI</td>
<td>Conflict-Free Tin Initiative</td>
</tr>
<tr>
<td>CFSP</td>
<td>Conflict-Free Smelter Program</td>
</tr>
<tr>
<td>CLS</td>
<td>Comité Local de Suivi</td>
</tr>
<tr>
<td>COC</td>
<td>Chain of Custody</td>
</tr>
<tr>
<td>COMBEKA</td>
<td>Coopérative Minière du Bien-être de Kalehe</td>
</tr>
<tr>
<td>COMIKA</td>
<td>Cooperative Minière de Kalehe</td>
</tr>
<tr>
<td>CPP</td>
<td>Comité Provincial de Pilotage</td>
</tr>
<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
</tr>
<tr>
<td>CTC</td>
<td>Certified Trading Chains</td>
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<tr>
<td>DFA</td>
<td>Dodd Frank Act</td>
</tr>
<tr>
<td>DMFA</td>
<td>Dutch Ministry of Foreign Affairs</td>
</tr>
<tr>
<td>DRC</td>
<td>Democratic Republic of Congo</td>
</tr>
<tr>
<td>ELL</td>
<td>Estelle Levin Ltd</td>
</tr>
<tr>
<td>FARDC</td>
<td>Forces Armées de la République Démocratique du Congo</td>
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<td>F&amp;X</td>
<td>Electro Materials Limited</td>
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<tr>
<td>GDRC</td>
<td>Government of DRC</td>
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<tr>
<td>ICGLR</td>
<td>International Conference on the Great Lakes Region</td>
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<tr>
<td>ITRI</td>
<td>Previously known as the International Tin Research Institute; now ITRI Ltd</td>
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<tr>
<td>iTSCI</td>
<td>ITRI Tin Supply Chain Initiative</td>
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<tr>
<td>MMR</td>
<td>Mining Minerals Resources</td>
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<tr>
<td>MSC</td>
<td>Malaysia Smelting Corporation</td>
</tr>
<tr>
<td>OECD DDG</td>
<td>OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas</td>
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<tr>
<td>OGP</td>
<td>Observatoire Gouvernance et Paix</td>
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<tr>
<td>PPA</td>
<td>Public Private Partnership for Responsible Minerals Trade</td>
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<tr>
<td>RCD</td>
<td>Rassemblement Congolais pour la Démocratie</td>
</tr>
<tr>
<td>RCM</td>
<td>Regional Certification Mechanism (ICGLR)</td>
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<tr>
<td>SAESSCAM</td>
<td>Service d’Assistance et d’Encadrement du Small Scale Mining</td>
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<tr>
<td>SFH</td>
<td>Solutions for Hope</td>
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<tr>
<td>SMDG</td>
<td>Société Minière de Goma</td>
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<tr>
<td>T.I.C.</td>
<td>Tantalum-Niobium International Study Center</td>
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<td>WMC</td>
<td>World Mining Company Sprl</td>
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<tr>
<td>3Ts</td>
<td>Tin, tantalum and tungsten</td>
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Executive Summary

This study was commissioned by RESOLVE on behalf of the Public Private Partnership for Responsible Minerals Trade (PPA). It is an independent assessment of three closed-pipe sourcing efforts from DRC: Solutions for Hope (SfH), KEMET's Partnership for Social and Economic Sustainability, and the Conflict-Free Tin Initiative (CFTI). The objective was to evaluate these initiatives against their stated goals, and to assess their challenges, benefits, and other lessons learned. The research was separated into three parts: a desk-based preparation phase, a field-based research phase, and a desk-based research phase.

Solutions for Hope (SfH) established the first closed-pipe supply chain in DRC, exporting the first 'conflict-free' tantalum. SfH’s convening power brought together stakeholders across the supply chain, giving downstream buyers the confidence, transparency, and assurance to source from DRC.

KEMET’s Partnership for Social & Economic Sustainability established a vertically integrated supply chain, creating tighter control and reducing price fluctuations. Its long-term commitment has allowed its supplier to invest in the development of mine operations, and has facilitated social impacts through the investment in the Kisengo Foundation.

The Conflict-Free Tin Initiative established a responsible supply chain from a highly volatile and high-risk area through donor funding. Its 'signalling effect' persuaded downstream companies that it was possible to source conflict-free minerals from the Kivus.

History

The ideas and concepts for closed-pipe sourcing systems first emerged between 2010-2011, during the time when the Dodd-Frank Act (DFA) was being developed and entered into force. The goal was to find a way to incentivize industry to ramp up sourcing from DRC and source conflict-free minerals from the region. This would be accomplished by designing systems that would stimulate the market for legitimate flows of minerals, establish conflict-free supply chains, and provide a platform to test and build confidence in the due diligence and traceability initiatives being developed and implemented at the time.

At the time, legislative, civil society, media, and consumer demands created an incentive to explore and implement closed-pipe systems. There were also industry dynamics, particularly in the tantalum industry, which provided a business case for downstream companies to invest in models to support conflict-free and responsible sourcing from DRC and the region.

With legislation pending or newly implemented, traceability and due diligence systems in early development and implementation, and calls for re-invigorating engagement, downstream businesses in this fluid and evolving environment sought a way to accommodate commercial and regulatory requirements, as well as stakeholder expectations. There was also a desire to create positive socio-economic impacts in DRC. The traceability and due diligence systems - CFSI and iTSCi - provided the means for this to happen since the three closed-pipe programs in this report used CFSI and iTSCi due diligence service providers. The closed-pipe system model provided the motivation for downstream companies to (re-)engage with Congolese supply chains. Closed pipe systems enabled greater control over and understanding of the complete supply chain in an integrated fashion, brought greater transparency and made enhanced due diligence – in compliance with U.S. law and international norms - more feasible.

Achievements

The three initiatives achieved their three main goals: finding a way for industry to resume and/or reinvigorate sourcing from DRC; sourcing conflict-free minerals from the region; and designing systems that encouraged and sustained a market for legitimate flows of minerals through the creation of conflict-free supply chains.
The main benefit of all three closed-pipe systems was their role in efforts to maintain, resume and re-invigorate the minerals trade from DRC after the presidential mining ban in the Kivus and a de facto boycott after the passage of DFA. Despite the small volumes sourced through the initiatives compared to the overall volumes sourced from DRC, the initiatives had a signalling effect that conflict-free sourcing from DRC was indeed possible. This fostered downstream confidence, acceptance, and awareness.

The participants and conveners of these systems were ready to take risks that other downstream companies were not. This was of particular weight and importance at the time when these initiatives were created (2011-2012). Having downstream companies visibly and publicly committed and involved in these initiatives helped re-shape perceptions of downstream end-users towards DRC and ASM as a source for minerals. Consequently, they helped market minerals from DRC through a signalling effect that helped to promote and foster legitimate mineral trade and exports.

On the ground, all three initiatives were important for maintaining business and trade in their respective regions. This helped to safeguard livelihoods in Katanga and to re-start the local economy in South Kivu while positively benefiting local business from mining activities. Communities and miners at the MMR mine sites in Katanga additionally benefited from the investments made in mechanization of the mining operations (resulting in increased production) and in the creation of infrastructure projects provided for the community through MMR’s Vinmart Foundation or the Kisengo Foundation.

**Challenges**

All three projects operated in an extremely difficult environment. As such, there were challenges faced by the source mines that are typical of ASM in a conflict-affected and high-risk area. These included communication challenges between stakeholders, distribution of value and cost along the supply chain, and occasional tensions between upstream supply chain actors. Operational risks faced by supply chain actors, and risks posed to local stakeholders by supplier operations were other challenges faced by the initiatives. The report sets out detailed recommendations for tackling these challenges.

**Recommendations for future projects**

Building upon the closed-pipe systems’ initial aims, and their success in achieving these aims, the scope of the initiatives could be broadened in more mature programs or in future initiatives, though it should be noted that it is infeasible for any supply chain to deal with all issues at once.

Future closed-pipe initiatives could benefit from clearly laying out their goals and indicators of success from the beginning. This would allow for continuous monitoring, measurement, and evaluation of impacts, successes, and challenges. It would also help manage expectations of participants and stakeholders.

Closed-pipe models like those featured in this report often rely on a lead organization with strong convening power. This coordinator role can be used to understand the needs and opportunities along the entire supply chain. It can also help to effectively communicate to other stakeholders. If the initiatives featured here – or others drawing from their experiences – wished to create additional value and positive impact along the supply chain, opportunities do exist. An umbrella approach involving supply chain, governmental, donor and civil society commitments to enact further changes will achieve the most meaningful impact in the future.
A note on the Scope of this Assessment

This assessment required examination of all the topics shown in Section 1.1. We wish to point out that there is a gap between what is reasonable to expect the piloted closed pipe initiatives to achieve (their stated goals) versus what we have been asked to evaluate. We ask our readers to bring reasonableness therefore to interpreting our findings.

There are two limitations to bear in mind. First, some of the topics identified for evaluation were not explicit goals of the closed pipe initiatives but rather in mind as desirable outcomes, e.g., local social and environmental benefits, including livelihoods and changes in the security situation. Second, our evaluation refers to responsible mining risks because although they were largely out of scope of the closed pipe initiatives, they were in scope for our evaluation and (most importantly) top of mind for local stakeholders. We feel it is important to give voice to these concerns of Congolese stakeholders so that the closed pipe initiatives can be aware of these, and understand if/how they might be able to support their upstream partners manage these issues better.
1. INTRODUCTION

1.1. Assignment objective and scope

This study was commissioned by RESOLVE on behalf of the Public Private Partnership for Responsible Minerals Trade (PPA). Its main goal is an independent assessment of three closed-pipe sourcing efforts from DRC, namely Solutions for Hope (SfH), KEMET’s Partnership for Social and Economic Sustainability, and the Conflict-Free Tin Initiative (CFTI). The objective was to evaluate these initiatives against their stated goals, and to assess their challenges, benefits and other lessons learned, as well as their application to broader sourcing and due diligence considerations for civil society, government, and companies engaged in the 3TG supply chain. This assessment required examination of all the topics below:

- The degree to which each program has achieved its stated goals/impacts
- **Traceability and due diligence performance** to date, and how these systems support compliance with Dodd-Frank, OECD, ICGLR framework and DRC laws
- **The risk assessment models** in place and their historical efficacy in identifying and addressing “red flags”
- The **business model** for direct sourcing projects and bringing conflict-free DRC minerals into formal, global supply chains, including competitiveness in the global market, and the ability to scale pilots
- **Local social and environmental benefits** of CFTI, SfH, and KEMET including livelihoods, environmental impacts, and benefits for women
- Changes in the **security situation**, such as behaviour of police and militias, as a result of project implementation
- An assessment of any **gaps** in the above that could be addressed; shared **lessons; opportunities** to apply lessons across projects; and opportunities to enhance positive impacts associated with these projects

We wish to point out that there is a gap between what is reasonable to expect the piloted closed pipe initiatives to achieve (being their stated goals) versus what we have been asked to evaluate. We ask our readers to bring reasonableness therefore to interpreting our findings.

There are two limitations to bear in mind. First, some of the topics identified for evaluation were not explicit goals of the closed pipe initiatives but rather in mind as desirable outcomes, (e.g. local social and environmental impacts, including livelihoods, changes in the security situation). It is fair to expect some of these things to be possible or probable outcomes of these initiatives and reasonable to investigate these therefore. This is because these initiatives ultimately sought to ensure the effective implementation of the OECD Due Diligence Guidance in order to keep mineral moving from DRC, support compliance with Dodd-Frank, and bring commercial value to supply chain participants as the basis for achieving the higher responsible sourcing and peace and stability goals of the DDG and the Dodd-Frank Act. It would be unfair (and anti-intellectual) to lambast the initiatives for not achieving more in these domains because they were not express goals for the pilots. As you will see below, we provide recommendations as to how the initiatives might include these going forward so that their own goals can be more expressly tied to the higher goals of the international frameworks they seek to enable implementation of.

---

1 From the RfP by PPA, 18.08.2014.
Second, these initiatives are responsible sourcing initiatives, not responsible mining initiatives. If they brought responsible mining into scope, they could do more to mitigate the broader suite of risks faced by mining operators and their stakeholders and contribute more to a sustainable mineral economy in DRC. Our evaluation refers a lot to such risks because although they were largely out of scope of the goals of closed pipe initiatives as they had originally been designed, they were in scope for our evaluation and (most importantly) top of mind for local stakeholders. We feel it is important to give voice to these concerns so that the closed pipe initiatives can be aware of the ongoing concerns of Congolese stakeholders, and understand if/how they might be able to support their upstream partners manage these issues better to the benefit of all supply chain partners and the stakeholders whose rights and lives they influence.

The outcomes of this research include an analysis of each initiative separately in terms of results, impacts and approaches, a presentation of overall lessons learned and how they fit into the broader due diligence and responsible sourcing context, opportunities for leveraging positive impacts and successful approaches, and recommendations and/or criteria to support PPA in their future grant decisions and initiatives in ensuring sustainable and efficacious achievement of their goals.

1.2. Theoretical approach

To address these aspects, a theoretical research framework was created, detailing the research questions for each of the main topics, the key aspects or indicators to consider when assessing performance, as well as the documentation or data to be reviewed and the stakeholders to be consulted on a desk-based basis or in the field. The following provides an overview of the main topics and research questions, which are reflected in the outline of this report. The more detailed research framework can be found in Annex D.

a) Goals of the initiative
- What were the main goals of the initiative, according to its conveners?
- What was the motivation for different actors to set up or participate in the initiative, what benefits did it bring them?

b) Business model
- What business models have these initiatives developed and implemented? What is unique about these? How has it changed over time and why?
- What have been the business model’s achievements and what have been its challenges for the different stakeholders involved?
- How competitive are these business models on the global market?
- Where have investments for setting up the project come from?
- What has been the project cost to set up, implement, monitor?

c) Economic aspects
- To what extent has the initiative contributed to employment, income and livelihood opportunities?
- To what extent has the initiative contributed to value retention (i.e. higher prices and/or higher margins) upstream?
- To what extent has the initiative influenced local procurement and local investment?

d) Social aspects
- Has the initiative contributed to social projects on the ground and if yes, how effective were these projects?
- Has the initiative created social benefits or risks for miners and/or the local population, and how has it impacted particularly on vulnerable groups of society?

- To what extent have the initiatives improved labour conditions and health and safety at the mines?

- To what extent has the initiative contributed to tax revenues for local government?

- To what extent has the initiative influenced power relationships and the wider governance situation?

\(e\) Environmental aspects
- Did the initiative have environmental protection or management in scope? Why (not)?

- What has the outcome of this inclusion / exclusion been? I.e. how has the project directly or indirectly exacerbated or safeguarded against environmental risks?

- What could the project have done or do to manage environmental risk?

\(f\) Security situation
- What changes in the security situation, such as behaviour of police and militias, can be observed since the implementation of these programmes?

- To what extent is it possible to determine whether these changes occurred as a result of or in connection with programme implementation?

- How have the number of security incidents and the management of these incidents evolved, and has the ability and confidence of stakeholders to deal with them changed over time?

\(g\) Traceability & due diligence; risk identification and management
- To what extent are traceability and due diligence being achieved and how is the project’s performance perceived?

- To what extent are traceability and due diligence measures aligned with the requirements of the DFA, OECD DDG, and RCM/DRC laws?

- What risk assessment and management models do each programme have in place?

- How effective and efficient are these models in identifying and addressing “red flags”?

Not all of these research questions could be examined and elaborated on equally for each of the initiatives, due to conceptual constraints and practical research challenges (please see Annex A for more details on the reporting context).

\[1.3.\] Outline of report

The results of applying the theoretical framework are presented in the following way. Initially, chapter 2 outlines the context and background in which closed-pipe systems were developed and briefly explains the main actors and activities in relation to supply chain due diligence in DRC. The following chapters of the report will discuss each of the initiatives in detail, Solutions for Hope in chapter 3, KEMET’s partnership in chapter 4, and CFTI in chapter 6. Chapter 5 deals with indirect impacts in relation to both Solutions for Hope and KEMET’s partnership, as they worked with the same partners on the ground and in the same geographical area. Chapter 7 broadly discusses the iTSCi traceability and due diligence system used by all three initiatives; traceability and due diligence nuances specific to a particular initiative are discussed in that initiative’s relevant chapter. The report closes with conclusions in chapter 8 and recommendations in chapter 9.
1.4. Definitions

1.4.1. Closed-pipe

This study speaks of ‘closed-pipe sourcing efforts’, ‘closed-pipe initiatives’, and ‘closed pipe supply chains’ as a general expression for the three initiatives in scope. Each of the initiatives’ supply chains was configured slightly differently and changed over time, and thus built upon the standard definition of a closed-pipe supply chain. Per definition, a closed pipe supply chain is a chain involving a limited and pre-determined number of actors with direct relations to each other, i.e. a single mine, a single exporter, a single trader, etc, where the material is sold to a pre-determined customer at a given price. Re-configurations and scales of this definition included:

- A supply chain that defines each actor in the chain from the mine to manufacturer (in the case of KEMET’s partnership and SFH) or from the mine to the smelter (in the case of CFTI), where minerals are integrated into the mass balance system at the smelter, but where minerals from the same mine can also feed into other supply chains. This was the case with SFH in Katanga, KEMET’s Partnership, and a later version of CFTI.

- A sealed-off supply chain, where the minerals from one mine are only sold to one single exporter, one trader, one smelter, one manufacturer and are kept physically separate from other minerals throughout this process. This was the case for the first batch of CFTI minerals at the very beginning of the project.2

- A supply chain where minerals from one mine are only sold to one single exporter, one trader, one smelter, but where the minerals are integrated into a mass balance system at the level of the smelter. This was the case of CFTI after the first batch shipment.

The term ‘closed’ in ‘closed-pipe’ has led to confusion, as it has been interpreted differently by different stakeholders. This was aggravated by the fact that a definition of closed-pipes, how it was originally conceived in each of the three initiatives, has not been communicated or documented explicitly. During the course of this research, stakeholders clarified that it is the first definition (above) that was and is used to describe ‘closed-pipe’ supply chains, as they were not intended to be exclusive, sealed off supply chains, because that would likely be economically sustainable (as shown by the case of CFTI). Since the term ‘closed’ has led to some confusion in that respect, it is recommended that a consistent definition be agreed, communicated and used by the initiatives in the future.

The following illustrates the supply chain set up of each of the three initiatives: The supply chain participants at each tier in violet, and the traceability and due diligence systems and initiatives covering the respective supply chain tier in blue.

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2 Noting that there were other exporters who could have participated but did not buy, and that traders and smelters could have participated but did not choose to do so.
1.4.2. Direct vs. indirect impacts

This study distinguishes between direct and indirect economic, social, and environmental impacts of the initiatives. In a complex operating context such as the DRC it can be challenging to distinguish causation from correlation: which impacts can be ascribed to the initiatives themselves, versus impacts that are more accurately ascribed to the actions of an initiative’s partner or even a third party.

Impacts can generally be defined as the effects or consequences of an action or influence. For the purposes of clarity in this study, a stricter definition is useful: A ‘direct impact’ is

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3 iTSCi membership includes CDMC, MMR, F&X, GAM, Motorola Solutions, Blackberry.
4 iTSCi membership includes CDMC and MMR.
5 iTSCi membership includes COMBECKA, COMIKA, WMC and other exporters in Bukavu, Traxys, MSC, Blackberry, HP, Motorola Solutions. *Note that WMC was not the only iTSCi-approved exporter during the period of CFTI, but the mine did not produce enough for other exporters to buy.
an effect that was caused by a direct action of the initiative itself, for example by the purchase of minerals, by the donation of financial or in-kind contributions, or by the clearly communicated requests and expectations put on other stakeholders.

An ‘indirect impact’ is an effect or consequence where the causal chain is less clear. In this case the effect was not caused by the direct action of the initiative itself, but filtered through an action of the initiative’s partners. In some cases the initiative may have enabled, incentivised, or enhanced the partner’s actions, but as they were not the clear, primary mover, the impact is still ‘indirect’.

This distinction is not intended to diminish the significance of an initiative’s support or influence on its partners. In many cases, an initiative’s support – perhaps through informal conversations, by agreeing in principle with a proposed action by a partner, by proving by example that something was possible, or by making space for an opportunity – may not have been quantifiable by objective third-party researchers, but was still invaluable. Indirect impacts can therefore be considered as leverage demonstrated by the initiatives - by their relationship with the party to whom impact is mostly attributable, they have enabled actions or impacts.

A strict distinction between indirect and direct effect is therefore helpful to highlight those effects that can clearly be established as the result of an initiative’s quantifiable actions. Where an initiative’s influence appears to have been significant, though was not clearly attributable, we have tried to say so. This distinction also allows the initiatives to consider the areas or themes that they are already having a significant indirect impact or leverage on as opportunities for them to clarify or increase their influence in order to have a larger or better, leverage or impact.

1.5. Methodological approach

The research was separated into three parts, a desk-based preparation phase, a field-based research phase, and a desk based research phase.

a) Desk-based preparation phase (January 5-30)
The desk-based preparation phase consisted of an initial review of existing literature and documentation on the initiatives as well as building a detailed research approach (including assessment tools and criteria), fieldwork plan, and stakeholder list. Additionally, the conveners of the initiatives were contacted with a request for more detailed documentation and the solicitation of the fieldwork on the ground. A few initial phone interviews were held with these conveners in order to understand the history and background of each of the initiatives and to get a first sense of their main achievements and challenges. These interviews and a review of the existing documentation were used to identify information gaps and thus the main focus areas for field research. Lastly, the preparation phase was used to organise logistics for the fieldwork and establish initial contact with stakeholders on the ground in DRC.

b) Field-based research (February 1-18)
Fieldwork encompassed a sample of the mine sites included in the initiatives as well as the main export points and administrative centres:

- Solutions for Hope: The mine site and settlement of Mai Baridi and the administrative center and export point Kalemie in Katanga (for the SfH pilot)
- KEMET's partnership: The mine site and settlement of Kisengo and the administrative center and export point Kalemie in Katanga
- Conflict-free Tin Initiative: The Kalimbi mine site, the village of Nyabibwe and the export point and provincial capital Bukavu in South Kivu

A detailed fieldwork itinerary can be found in Annex B.

At these locations, researchers carried out interviews and focus groups with a total of over 106 interlocutors, including miners, cooperatives, mine operators and administrators, traders, exporters, representatives of the provincial and local government(s), industry associations, civil society and representatives of the iTSCi traceability and due diligence system used by all three initiatives, as well as independent researchers and representatives of donor countries. A detailed list of interlocutors can be found in Annex C.

Researchers created generic semi-structured questionnaires for four main stakeholder groups (government representatives, mine site operators and cooperatives, civil society, and local communities) and subsequently adapted them to the specific stakeholders and locations. Focus groups were mainly used with representatives of civil society, local communities and miners’ representatives / cooperatives. Due to logistical and time constraints at the mine sites, government agents and representatives of the iTSCi traceability and due diligence system service provider were organised into a focus group as well. Researchers also used mine site visits and observations, informal interviews as well as review of documentation provided by stakeholders on the ground.

c) Desk-based research and analysis (March 2-27)

The third phase of the study consisted of desk-based research. This involved phone interviews with international stakeholders, such as funders, initiative participants downstream of the exporter, and independent researchers. A total of 17 international stakeholders were interviewed, using semi-structured questionnaires. The detailed list of interlocutors can be found in Annex C. In parallel, the findings of the field research were analysed and served as a basis for the interviews with international stakeholders. In this way, information could be triangulated and gaps could be filled.

For a full discussion of the research context, please see Annex A.
2. CONTEXT AND BACKGROUND

The issue of ‘conflict minerals’ received international attention first in relation to so called ‘blood diamonds’ in the late 1990ies, when NGOs started to raise awareness on how the exploitation and trade of diamonds fuelled conflicts for example in Angola and Sierra Leone. By 2005, NGOs such as Global Witness had also started documenting the links between the exploitation of other minerals (mainly the 3Ts and gold) and conflict and violence in Eastern DRC. In 2009/2010, increased reporting, including by the UN Group of Experts, and advocacy efforts drew international attention to the issue and put increasing pressure on electronics companies in particular to ensure that their supply chains are ‘conflict-minerals free’. This attention and pressure resulted in the inclusion of a Section regarding ‘conflict minerals’ in the US Dodd-Frank Wall Street Reform Act (DFA), which was being developed during that time and signed into law in July 2010.

Though the electronics industry had already been considering what to do about ‘conflict minerals’ in DRC for over a decade, with the intensifying pressure from both NGOs and regulators in 2009-2010, in particular through the prospect of US legislation, industry started to develop systems and initiatives to address the issue through mineral supply chain due diligence, traceability and certification. The scope of opportunity for downstream players in the electronics industry to engage with their supply chains was becoming more apparent, as existing and emerging international norms were gaining traction, giving mandate to companies to do due diligence on supply chains as the basis for enabling them to continue sourcing minerals from conflict-affected areas (e.g. the OECD DDG, the OECD Guidelines for Multinational Enterprises, the UNGPS).

Various such initiatives and systems were being developed at the time. First and foremost, the OECD Due Diligence Guidance on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, which provided a framework and guidance for companies on due diligence processes and activities when sourcing 3Ts and gold from conflict-affected and high risk areas. Other government-led initiatives included the Certified Trading Chains (CTC) Standards a project developed by BGR, and piloted in Rwanda from 2008, which was subsequently integrated into DRC law in their Conflict Minerals Certification Manual in 2011. Industry itself developed initiatives such as the Conflict-Free Sourcing Initiative (CFSI), which includes the Conflict-Free Smelter Program.
The CFSP is based on independent third party audits of mineral smelters/refiners in order to verify that smelters and refiners have systems in place to ensure conflict-free sourcing of minerals. Additionally, the international tin association, ITRI Ltd. and the Tantalum-Niobium International Study Center (T.I.C.) developed the ITRI Tin Supply Chain Initiative (iTSCi), a traceability and due diligence system for the 3Ts covering mineral supply chains from the mine to the smelter and feeding into the CFSP audit process. iTSCi conducts and facilitates the monitoring and assessment of the wider governance situation, the mine sites and the transportation routes, multi-stakeholder incident monitoring, identification and management/mitigation mechanisms, independent third party audits of all operators seeking to join iTSCi (desk-based), and of companies in the supply chain against the OECD guidance, chain of custody implementation and capacity building. iTSCi carried out a pilot project at Nyabibwe in South Kivu for three months from May 2010.

Around the same time, efforts to regulate conflict minerals also made advances in the region. The ICGLR launched its Regional Initiative on the Illegal Exploitation of Natural Resources (RINR) in December 2010, which included as one of six tools the development of a Regional Certification Mechanism (RCM) for the 3Ts and gold in alignment with the OECD DDG, iTSCi and CFSP, and building upon the CTC Standards that had been developed by BGR and already built into national governance frameworks in DRC and Rwanda.

The DRC government itself had integrated the OECD DDG and the standards and requirements of the RCM (based upon the BGR-CTC Standards) into law in 2012. However, the most impactful action of the government regarding conflict minerals was the presidential mining ban, which suspended all mining activities in the provinces of South Kivu, North Kivu and Maniema between 11th September 2010 and 10th March 2011. This had several unintended consequences: it led to a collapse of artisanal mining and trading, consequently impacting negatively on the livelihoods of thousands of artisanal miners and traders. Formal exports of the 3Ts and gold from these provinces almost stopped, while at the same time, smuggling, particularly from the Kivus, increased significantly. Additionally, there were reports that (illegal) mining continued with the involvement of FARDC officers.

The impacts of the mining ban on the economy and livelihoods in Eastern DRC were further exacerbated by the anticipation of the Dodd-Frank Act, which produced further unintended consequences. As a result of the requirements of Section 1502 and the reporting periods prescribed therein, as well as the logic of the CFSP in its first iteration, from April 2011 many downstream companies took a precautionary approach and decided to stop sourcing from DRC and the region altogether, since the potential legal and reputational risks and the costs involved in due diligence activities made it easier and more cost-effective for them to source minerals from elsewhere. Additionally, the systems and tools that would have allowed companies to source ‘conflict-free’ from the region

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15 For a review of industry and non-industry conflict minerals scheme, please Levin and Cook 2013, and Levin et al. 2013.
16 ITRI had developed iTSCi since 2008, and T.I.C. joined the management of it and supported the idea of the joint industry programme from 2011.
17 The pilot was suspended due to the implementation of the presidential mining ban, see below.
18 Government of DRC 2012a and 2012b.
19 See for example Rothenberg, D and Radley, B. 2014
20 Upon doing a conformance check of the CFSP, iTSCi and OECD DDG in 2011, Roesen and Levin (2011) described the then CFSP as follows, “the CFSP is an outcome-oriented audit to confirm in absolute terms that materials at a smelter are ‘DRC conflict-free’. The CFSP does not allow for conflict-managed materials and instead promotes smelters to disengage from all problematic supply chains or risk exclusion from the CFSP for a year (the current timeframe).” Page 28.
were still under development, which increased the difficulty and risks for companies to engage in DRC.\textsuperscript{21} Consequentially, even when the governmental mining ban ended, the official exports of 3Ts and gold from DRC remained significantly below pre-2010 levels.\textsuperscript{22}

When the consequences of the governmental mining ban and Section 1502 on the economy in Eastern DRC became clearer through the criticisms raised by researchers and NGOs, NGOs evolved their messaging from condemnation of ‘DRC conflict minerals’ and ‘blood diamonds’ to encouragement of companies to engage with mineral economies in DRC and source from the region. This contributed to the momentum and created space for legitimate business to continue engagement or re-engage in-region, bolstered by NGOs starting to advocate for the same, but with adequate traceability and due diligence measures in place.

In this dynamic and evolving environment (with legislation pending or being newly implemented and the guidance on the same under development, with the traceability and due diligence system still being developed and not yet understood or believed to be adequate for ensuring compliance with Dodd-Frank and the OECD Guidance, and with calls for continuous or re-engagement increasing), downstream businesses started to look for clarity, and a way to accommodate commercial and regulatory requirements as well as expectations and the desire to create positive socio-economic impacts in DRC.\textsuperscript{23} This was the setting in which the ideas and concepts for closed-pipe sourcing systems first emerged in 2010-2011. These models were developed with the aim of finding a way to re-engage in DRC by using and building confidence in the due diligence and traceability initiatives and systems being set up, and thus to establish conflict-free supply chains from the region in order to support the re-opening of the market.

Additionally each of DRC’s ‘3T’ exports has very different market environments. DRC is in competition with other source countries and occupies a very different position for each mineral. In the case of tin, DRC presently represents less than 5% of global tin production\textsuperscript{24} but is likely to increase in significance once Alphamin’s Bisie project in Walkikale moves to production.\textsuperscript{25} This makes DRC of large strategic importance to the international tin sector in the medium-to-long term and may partly explain ITRI’s decision to invest in improving the sustainability performance – and thus accessibility and credibility - of DRC’s tin supply chains through the development and implementation of iTSCi.

The story for tungsten is quite different, since DRC is not – nor is likely to be – an important strategic source. DRC presently represents less than an estimated 3% of global tungsten production,\textsuperscript{26} 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.).\textsuperscript{27} Given the abundance – and relative simplicity – of alternative sources through which demand can be met, DRC is of low importance to the tungsten market. Tungsten buyers thus need a strong incentive to build sourcing relations with producers in DRC.

Tantalum is quite another story and there were specific industry dynamics that provided a strong business case for buyers of tantalum ore to develop models that would support

\begin{footnotesize}
\begin{enumerate}
\item See for example Rothenberg, D and Radley, B. 2014
\item See for example Rothenberg, D and Radley, B. 2014
\item Interview with downstream participant 1, 12.01.2015
\item According to USGS Statistics from 2012 DRC represents less than 2% of global tin production (USGS 2012)
\item ITRI 2014a
\item Seddon, M. 2013
\item USGS 2014
\end{enumerate}
\end{footnotesize}
conflict-free sourcing from DRC and the region in general. DRC presently represents 12% of global tantalum production and is said to have important reserves: Central Africa as a region hosts an estimated 9% share of the world’s tantalum resources (behind South America, Australia, China and South East Asia, Middle East and Russia). Other commercial factors were also influential:

1. **Price dynamics in the tantalum industry created a business incentive to engage with artisanal producers in Central Africa:** Large-scale, industrial tantalum mining businesses operating in other geographies had started to take advantage of downstream buyers’ reluctance to source tantalum from Africa and were looking to lock customers into long-term contracts for their minerals, which they could promote as conflict-free, which would have ultimately led to higher prices. Additionally, the world’s largest industrial tantalum mine in Australia closed in 2008, and the price of ore more than tripled, so creating a strong commercial driver for downstream buyers to engage with alternative sources, including the artisanal mines in Central Africa. Existing supply chains had to be restructured and alternative ones developed to ensure their commercial feasibility and competitiveness; but the costs for doing so and for implementing due diligence and traceability could not and cannot exceed the costs of sourcing from large-scale tantalum mines in other geographies.

2. **The costs and difficulties involved in mining tantalum generally, in mining tantalum in DRC specifically (traceability and due diligence costs), and in mining tantalum using artisanal and small-scale modes of production (instability of production),** not only created a business case for engaging with ASM, but also one for rationalising, mechanising and industrialising the ASM sector as far as possible. This allows for larger volumes to be produced and prices to be more stable, and should increase returns whilst also increasing the ease of surveillance and risk management. This is especially necessary when sourcing from within DRC for which there are additional costs (due to due diligence and CoC requirements as well as a riskier operating environment for business generally) compared to sourcing from other geographies outside of DRC or the other ‘covered countries’ per the DFA.

3. **Tantalum market and price fluctuations:** Tantalum prices are volatile, as no global prices are set and minerals are traded on a spot market, where prices are set at the point of transaction. Since the electronics industry uses around 60% of tantalum worldwide, this sector was in particular affected by price fluctuations and wished to improve price stability. Additionally, the largest consuming segment of the tantalum capacitor industry (the use of MnO2 semi-conductors) is losing market share, which underlines the industry’s need for more stable prices. Since 9% of tantalum supply on the world market is sourced from Central Africa, engaging in the region offered the opportunity to create greater stability in prices. Establishing the closed-pipe systems in DRC was a project in generating shared value along a conflict minerals supply chain because it allowed AVX and Motorola Solutions as well as KEMET to

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20 USGS 2012
21 Polinares 2012; Burt, R.2011
30 Interview with downstream participant 1, 12.01.2015
31 Interview with downstream participant 2, 15.01.2015
33 Interview with downstream participant 2, 15.01.2015
34 Interview with downstream participant 2, 15.01.2015
35 Communication by MMR, 18.04.2015
36 Interview with downstream participant 2, 15.01.2015. Other sources estimate that 80% of world tantalum production (in the form of concentrate) is from ASM, and of this ‘at least’ 70% from Central Africa (Communication by MMR, 18.04.2015).
minimise price fluctuations for their tantalum supply, while also providing an opportunity to create social and economic value in the region. 37

4. Economic feasibility of due diligence and brand reputation: As electronics brand companies came to understand the origins of some mineral used in their products, total disengagement from the region was not understood to be a long-term solution. Since many of them did not know exactly where their minerals were coming from, generally they wanted to still allow conflict-free material from the region to be allowed to enter the supply chain, but only if economically feasible given the regulatory requirements. 38 Furthermore, companies anticipated that they might get positive coverage if they were to engage in the region in a transparent and responsible way, bringing them added brand value as well. 39

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37 Interview with downstream participant 2, 15.01.2015
38 Interview with downstream participant 1, 12.01.2015
39 Interview with downstream participant 2, 15.01.2015
3. SOLUTIONS FOR HOPE

3.1. Profile and Goals

Solutions for Hope (SfH) is an initiative created by AVX and Motorola Solutions in July 2011 to test how tantalum can be responsibly sourced from DRC. The SfH pilot was developed and implemented against the background and context and the dynamics in the tantalum industry described above, which provided the rationale and business case for the first closed-pipe supply chain initiative. Against this context, SfH was an early leader in addressing these needs by piloting a practical solution.

The SfH pilot project in northern Katanga was the first closed-pipe supply chain model in the region (together with KEMET’s partnership, see below). The project connected pre-defined partners at each level of the supply chain, facilitating an unprecedented collaboration of mines, cooperatives, processors, smelters, component manufacturers and end users.40

The initial pilot project involved two mine sites in northern Katanga on concessions owned by the company Mining Mineral Resources (MMR) and operated by MMR and their supplier Coopérative Des Artisanaux Miniers du Congo (CDMC), a mining cooperative.41

The overall goal of the SfH pilot was to:

- Demonstrate that it is sustainable and feasible for downstream companies to establish credible, responsible, and conflict-free supply chains from mines in conflict-affected areas, and that such pilot projects can complement and mitigate the impacts of regulations such as the DFA.42

Other opportunities included to:

- Use and build confidence in systems and guidelines regarding conflict minerals that had been created around the time of the project start (such as iTSCi43, CFSP, CTC, OECD DDG, ICGLR’s RCM) by putting them into practice,44 and
- Introduce the possibility of expanding on the pilot to other locations and minerals.45

The initial SfH pilot in northern Katanga was completed in June 2013.46

Based on this early leadership, SfH is now conceived as a global platform for supply chain initiatives promoting responsible sourcing, transparency, and economic development. Additional pilot projects are expanding the mineral and geographic scope of sustainable supply chains. For example, SfH is reportedly looking to expand into tungsten and tin, and its model is being tested for gold supply chains in DRC. Additionally, SfH has initiated a programme in Colombia to support transparency in the country’s gold, tantalum and tungsten sector.47 The global platform aims at fostering dialogue and sharing lessons...
learned across geographies and minerals. By streamlining administration across projects, SfH aims to offer a 'one-stop-shop' for companies seeking to source minerals responsibly. 48

3.2. Supply Chain Structure & Business Model

In order to create a closed-pipe supply chain for the SfH pilot, several steps were necessary, which depended in turn upon a variety of factors at the time of implementation. All in all it took under one year to establish the chain and get the first material into manufactured products.50

As a first step, prior to initiating SfH, AVX conducted an assessment of their supply chain and engaged with the smelters as well as with the traders upstream in order to manage risks and improve transparency in the chain.51 The assessment revealed that the traders in the chain were not inclined to transparency, in order to protect their business interests. To circumvent this issue, AVX chose to implement a closed-pipe model with pre-defined actors, and to engage directly with a mine site operator on the ground.52

The second step consisted of finding such a mine site operator.53 SfH chose to implement the pilot at mine sites in Mai Baridi and Luba in the Territory of Nyunzu, Tanganyika District, in northern Katanga,54 which are located on concessions held by the Congolese company Mining Minerals Resources (MMR).55 MMR, part of the Vinmart Group, was chosen as a partner. In 2010, it had just started up business in coltan mining in Katanga and was looking for a buyer for the minerals.56 MMR had also approached iTSCi to install

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48 http://solutions-network.org/site-solutionsforhope/
49 iTSCi membership includes CDMC, MMR, F&X, GAM, Motorola Solutions, Blackberry.
50 Interview with downstream participant 1, 12.01.2015
51 Interview with downstream participant 1, 12.01.2015; Interview with downstream participant 2, 15.01.2015
52 Interview with downstream participant 1, 12.01.2015
53 Interview with downstream participant 1, 12.01.2015
54 http://solutions-network.org/site-sfhtantalum/factsheet/ (30.03.2015). The first shipment of material also included material from the Kisengo mine site. The Kisengo mine site is where the KEMET Partnership is implemented, and is thus discussed in further detail in the respective chapter below. In the chapter on SfH, only Mai Baridi and Luba are discussed.
55 http://solutions-network.org/site-sfhtantalum/factsheet/ (30.03.2015)
56 Interview with downstream participant 1, 12.01.2015; Interview with MMR representative, 16.02.2015
the due diligence and traceability system, prompting an iTSCi feasibility study on Ta for the TIC.57

The fact that MMR was new to the tantalum business and looking for buyers was an important factor in setting up the closed pipe and played an important role in achieving outcomes (see achievements below). Importantly, it meant that MMR was willing to be transparent and agree to the intense scrutiny by auditors, assessors and researchers that came with participating in the SfH pilot, which had been a challenge to finding the right mine site operator.58

Another major factor in the decision to engage with MMR was that at the time (in 2010) the company was already obliged under its permits to provide a social beneficiation program, and that this program was actively underway.59 In 2010, MMR had a contract with the Katanga Provincial Government, which amongst others a.) gave it exclusive rights over the tantalum mines in Luba and Mai Baridi, as well as Kisengo, b.) granted the company the right and responsibility to manage and supervise artisanal miners in these mines while supplying safety equipment to miners, and c.) gave it the right and responsibility to buy minerals at 'fair prices' from the miners (though clarification of what constitutes a fair price, or a process for deciding this, was not elaborated upon in the contract).60 The contract was later transformed into a mining permit in 201161 and in 2014 MMR also obtained a permit for mechanised exploitation.62 Lastly, another reason for engaging with MMR was the implementation of the CTC Standards at its mine sites, which include both social and environmental requirements (Mai Baridi was assessed against the standard in 2013).

For MMR itself, the main motivation to participate in the SfH pilot was the commercial incentive to become ‘conflict-free’ and get access to the global market, as at the time there were no buyers as a result of the de facto boycott of DRC created by the DFA. Additionally, MMR was conscious of the impacts of the de facto embargo on miners and their communities and felt that it was necessary to resume, maintain and develop the minerals trade in order to improve their situation.63

By partnering with MMR, the upstream actors in the supply chain were automatically defined, as MMR had and has a contract with the Coopérative Des Artisanaux Miniers du Congo (CDMC)64, which acts as ‘an outsourced service provider to MMR’65 (this is discussed further below). CDMC is responsible for production and initial processing at the MMR mine sites at Mai Baridi, Luba and Kisengo (and other MMR mine sites),66 as well as for organising and managing the miners, monitoring the operations on the ground, and implementing certain social activities such as capacity building on traceability for miners or handing out tools and safety equipment.67 The cooperative has exclusive rights to buy

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57 Interview with Kay Nimmo, 13.03.2015. This feasibility study was conducted in October 2010, reported in November 2010. MMR’s contact with ITRI aimed to set up ITSCI across the whole of Katanga for all mines, not only Ta.
58 Interview with downstream participant 2, 15.01.2015
59 Interview with downstream participant 1, 12.01.2015
60 Arrêté Ministériel No. 06/1331/CAB.MIN/MAF/KAT/2009;
61 Arrêté Ministériel no. 1033/CAB.MIN/MINES/01/2011 of 5th December 2011
62 MMR representative, personal communication, 23.03.2015
63 Interview with MMR representative, 16.02.2015
64 http://solutions-network.org/site-sfhtantalum/factsheet/ (30.03.2015);
65 Partnership contract between CDMC and MMR; provided by MMR representative on 25.02.2015
66 http://solutions-network.org/site-sfhtantalum/factsheet/ (30.03.2015); RCS Global 2013
67 Interview with MMR representative, 16.02.2015
minerals from the miners,\textsuperscript{68} who sell their production to CDMC \textit{négociants} at trading points close to the mine sites,\textsuperscript{69} and in turn grants MMR the exclusive right to buy minerals from the cooperative.\textsuperscript{70} MMR stores the mineral bags at storage facilities at Luba and Mai Baridi, and later transports them with company-owned trucks to the MMR comptoir in Kalemie for export.\textsuperscript{71}

A goal of the SFH pilot was to use the systems and guidelines regarding conflict minerals that were already being put into practice, including the iTSCi traceability and due diligence system, and the initiative aimed at creating downstream understanding and acceptance of these systems. iTSCi was implemented through a coordinated effort by ITRI, government agencies (SAESSCAM and Division des Mines, as well as CEEC at the point of export), and iTSCi’s partners at the mine sites, trading points and export point.\textsuperscript{72} SFH brought together several crucial factors for the success of the closed-pipe (discussed below): the availability of an operational traceability and due diligence system, the downstream companies’ acceptance of this system, and MMR’s willingness to finance its implementation.

From the point of export at the MMR depot in Kalemie, AVX took direct ownership of the minerals\textsuperscript{73}, as per their contract with MMR for minerals that were channelled through the SFH pilot supply chain.\textsuperscript{74} AVX’s contract with MMR was a so-called ‘spot contract’, initially limited to two container loads to create an initial flow of minerals. The number of containers was then expanded as AVX gained more confidence and more customer buy-in, and for each set of containers the price was negotiated separately. In total, AVX purchased 165 metric tons of ore shipped in eight full container loads from Mai Baridi and Luba.\textsuperscript{75}

The third step in setting up the closed-pipe system was to find a smelter, to which the material could be sent for processing once AVX had purchased it from MMR. At the time, there were no CFSP validated tantalum smelters sourcing from DRC.\textsuperscript{76} However, through Motorola Solutions’ engagement in the CFSI, Electro Materials Limited (F&X), a smelter located in Guangdong, China was found as a project partner.\textsuperscript{77} F&X processed the tantalum into powder and wires for AVX.\textsuperscript{78} F&X has since become compliant with CFSP.\textsuperscript{79} Later, Global Advanced Metals (GAM) also joined SFH and smelted AVX’ material from Mai Baridi and Luba.\textsuperscript{80} The minerals from the sectors of Mai Baridi and Luba were (and are) physically traced up to and inclusive of the point of export from the MMR comptoir in Kalemie, where AVX took control and passed the ore on to F&X for smelting.\textsuperscript{81} At the point of the smelter, minerals entered into a mass balance system (such a mass balance system

\textsuperscript{68} RCS Global 2013
\textsuperscript{69} RCS Global 2013
\textsuperscript{70} RCS Global 2013
\textsuperscript{71} RCS Global 2013; http://solutions-network.org/site-sfhtantalum/factsheet/ (30.03.2015);
\textsuperscript{72} http://solutions-network.org/site-sfhtantalum/factsheet/ (30.03.2015);
\textsuperscript{73} http://solutions-network.org/site-sfhtantalum/factsheet/ (30.03.2015);
\textsuperscript{74} Interview with downstream participant 1, 12.01.2015
\textsuperscript{75} Interview with downstream participant 1, 12.01.2015. A few shipments were also sourced from Kisengo.
\textsuperscript{76} The CFSP audit protocols were completed in 2010 and the first compliant tantalum smelter was validated in December 2010. The Tin protocol was still in development at the time.
\textsuperscript{77} Interview with downstream participant 1, 12.01.2015
\textsuperscript{78} http://solutions-network.org/site-sfhtantalum/factsheet/ (30.03.2015);
\textsuperscript{79} http://solutions-network.org/site-sfhtantalum/results/ (30.03.2015);
\textsuperscript{80} Interview with representative of downstream participant, 19.03.2015; Interview with downstream participant 1, 12.01.2015
\textsuperscript{81} Interview with representative of downstream participant, 19.03.2015; Interview with downstream participant 1, 12.01.2015
is typical for the industry). From F&X, the processed tantalum powder and wires were then transported to AVX’s facility in Czech Republic where capacitors are manufactured.

As a last step in setting up the closed-pipe supply chain, AVX needed downstream buyers for its capacitors. Motorola Solutions was the first and Intel the second buyer of capacitors that included SfH minerals, ready to buy as long as the supply chain was conformant with the OECD DDG and the minerals went through a CFSP validated smelter. However, at the beginning of the pilot it was a challenge for AVX to find additional buyers, because the DFA had made companies hesitant to buy anything from DRC, since acknowledging the purchase of DRC derived products created a reporting duty to the SEC. Additional customers could only be convinced to get on board once they saw that SfH was working. Nevertheless, AVX and SfH succeeded in launching the project, overcoming significant reputational and regulatory risks that others initially assumed prohibited sourcing from DRC. Eventually, downstream customers began to understand the business case for buying capacitors using DRC tantalum (due to the price spikes described above). Blackberry, Fairphone, Flextronic, Foxconn, HP, Intel, Motorola Mobility, and Nokia all joined the SfH pilot and sourced capacitors from AVX providing meaningful endorsement.

### 3.3. Achievements of the Business Model

The supply chain structure and business model of the SfH pilot has resulted in several achievements, the majority of which are aligned with the downstream companies’ and conveners’ aims and motivations as outlined above.

#### 3.3.1. Opening the market for conflict-free minerals

First and foremost, the SfH pilot helped maintain and reinvigorate business and trade and the sourcing of conflict-free minerals from DRC. Its model allowed downstream buyers to source and use minerals from DRC at a time when few companies were ready to face the costs and risks associated with engaging in DRC.

Secondly, SfH is considered a pioneering project bringing together stakeholders along the supply chain. The initiative was able to bring a range of brands and downstream buyers around this sourcing effort and initiative, to demonstrate to upstream stakeholders that the market is willing to engage, takes their business seriously, and is willing to address challenges. At the same time, SfH was also able to bring together multiple stakeholders upstream to address such challenges and other issues of importance to the market. This convening power was important and extremely useful for driving change in the supply chain, which was achieved not through downstream directly addressing challenges or fixing trading relations upstream, but through downstream entities via SfH taking a stand on certain issues, communicating this to upstream

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82 Interview with representative of downstream participant, 19.03.2015
83 [http://solutions-network.org/site-sfhtantalum/factsheet/](http://solutions-network.org/site-sfhtantalum/factsheet/) (30.03.2015);
84 Interview with downstream participant 1, 12.01.2015
85 Interview with downstream participant 2, 15.01.2015
86 Interview with downstream participant 1, 12.01.2015
87 Interview with downstream participant 1, 12.01.2015
88 Interview with downstream participant 1, 12.01.2015
89 [http://solutions-network.org/site-sfhtantalum/participants/](http://solutions-network.org/site-sfhtantalum/participants/) (30.03.2015); Downstream participant 1, personal communication, 27.03.2015
90 Interview with Ken Matthysen, IPIS, 10.03.2015; Interview with Fidel Bafilemba, Enough Project, 07.03.2015
91 Interview with iTSCI/Pact representatives, Goma, 16.02.2015
stakeholders in an appropriate fashion, and offering support to help them address it to their satisfaction.

Thirdly, it enabled landmark ‘firsts’ for various conflict minerals initiatives and businesses. It (together with KEMET’s partnership) allowed MMR to set up their tantalum business by providing an initial market for their minerals. Utilizing the iTSCi system and the CFSP audit programme, the SfH pilot was the first successful and OECD DDG compliant closed-pipe supply chain from Katanga; it produced the first conflict-free export of tantalum from DRC; and it included the first CFSP-compliant tantalum smelter to process material from DRC. Solutions for Hope thus played a role in invigorating economic activities on the ground by creating a demand for minerals mined in Mai Baridi and Luba.

During a time of uncertainty about minerals sourced from the entire region, SfH’s pilot helped motivate downstream buyers to source directly from DRC. The pilot created an opportunity for the nascent systems and programmes, such as iTSCi and CFSP, to be trialled, proven, and improved. Finally, the SfH closed-pipe supply chain model provided downstream companies with an additional layer of transparency and assurance, which helped build their confidence to source from the region.

The SfH business model was able to give downstream buyers the confidence, transparency and assurance they needed to source minerals from DRC by setting up a commercially viable supply chain along which control could be better exerted and risks minimised. In the last five years a plurality of initiatives have sprung up creating potential for duplication and redundancy. However, the SfH accomplishes its goals by activating an established due diligence and traceability system along its supply chain rather than to reinvent the wheel.

3.3.2. Building market confidence through transparency and visibility

SfH’s closed-pipe supply chain model helped increase transparency in the upstream segment for downstream companies and other stakeholders, and provided them with greater visibility of the issues and risks in their supply chain, up to the mine site. While the iTSCi system already includes mechanisms for risk identification, assessment and management, downstream companies felt that the SfH closed pipeline supply chain provided them with an additional level of transparency and visibility, because it allowed them to have a direct relationship with supply chain actors up to the mine site operator.

In consequence, they were better able to understand risks, receive direct information on challenges and incidents, and deal with them more immediately and directly. This in turn helped to ensure their and their customers’ confidence in sourcing from the region. While the DFA and the OECD DDG allow end users to derive assistance from industry schemes like iTSCi and CFSP, they remain ultimately responsible for their due diligence; thus the closed-pipe model provided an additional level of comfort and assurance to

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92 RCS Global 2013
93 Noting that iTSCi had started operations at 12 mine sites in Katanga at the same time, for whose minerals there were also buyers. Pact, personal communication to RESOLVE [26.05.2015]
94 Business incentives and demand for the relevant minerals was high. These companies may have been able to satisfy their mineral needs through the purchase of minerals flowing through iTSCi and the CFSP
95 Interview with downstream participant 2, 15.01.2015; Call with downstream participants, 18.02.2015
96 Interview with downstream participant 2, 15.01.2015; Call with downstream participants, 18.02.2015
downstream buyers, and a way for downstream companies and other entities in the supply chain to do their own due diligence, which is something that the OECD DDG encourages.

Additionally, it allowed downstream buyers to have visibility not only of traceability and due diligence related issues, but also of developmental impacts at the mines, which was important for mission-based downstream users like Fairphone.

The direct presence of downstream brands and buyers in the upstream supply chain, and especially their visits to the ASM mine sites in 2011 (Motorola Solutions) and 2012 (Motorola Solutions and HP), also helped improve the ASM sector’s image and reduce misconceptions and misinformation about ASM in the international tantalum market, thus helping to build confidence in ASM sources. The ASM sector had been facing reputational challenges from competing industry segments (particularly large-scale mining as described in section 2 above), but this was repudiated by the presence of prominent downstream buyers at the ASM mine sites. Particularly for upstream mine operators such as MMR, this was a major benefit of the closed-pipe systems (both SfH and Kemet’s partnership).

3.3.3. Continuity of supply

SfH’s pilot offered significant value addition through shortened supply chain to pre-defined and known actors. This facilitated better and more direct relationships between downstream companies and their suppliers. This in turn helped reduce the risk of disruption of the chain and ensure continuity of supply. Prior to joining the SfH pilot, AVX had accumulated stocks over a period of three years allowing them space to consider opportunities for investment. The 165mt sourced from MMR constituted less than 10% of AVX’s annual consumption of tantalum (which stands at 2.1 million lbs or 952.5mt of tantalite ore annually), as the idea was rather to diversify mineral sources and not ‘put all eggs in one basket’, thus creating dependencies between AVX and MMR.

The continuity of supply and flow of minerals is an important factor at the smelter level, and generally facilitates economic viability and competitiveness across global markets. In the perspective of some supply chain participants, initiatives like SfH would gain to be implemented on a more long-term basis, in order to ensure a more continuous and stable flow of material, which would also translate into continuity of sales upstream, and thus potentially into continuity of income and the ability for mine operators to plan ahead and invest into the mining operations.

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97 Conversation with downstream participant 2, 11.03.2015; Interview with Gregory Mthembu-Salter, 13.03.2015
98 Interview with Gregory Mthembu-Salter, 13.03.2015
99 Interview with representative of Fairphone, 16.03.2015
100 Comment by MMR, 18.04.2015
101 Comment by MMR, 18.04.2015
102 Interview with downstream participant 2, 15.01.2015; Call with downstream participants, 18.02.2015; Conversation with downstream participant 2, 17.02.2015
103 Downstream participant 1, personal communication 15.01.2015
104 Downstream participant 1, personal communication 15.01.2015
105 Interview with downstream participant 1, 12.01.2015; Call with downstream participant 1, 18.02.2015; Interview with SfH supply chain participant
3.3.4. Sustainability

According to AVX, the SfH pilot with MMR was not intended to be a long-term project, but rather to "prime the pump". The last shipment from MMR to AVX under SfH was made in June 2013, de facto ending the SfH ‘closed-pipe’ chain, and MMR sold minerals from Mai Baridi and Luba to other buyers. Prior to the end of the spot contract, both parties were negotiating over a long-term contract, but were never able to come to an agreement. However, AVX emphasises that SfH was never meant to be an exclusive AVX supply chain, and that the end of the pilot and sourcing relationship was conducive to creating sustainable impacts (see below).

Although the SfH pilot did not result in a long-term engagement with AVX, it has supported sustainability: Throughout the time period of the SfH pilot, AVX was the only buyer of minerals from Mai Baridi and Luba – apart from one other buyer who bought minerals from Luba in August and December 2011, thus making SfH very important for MMR in the initial stages of their operation. The ability to sell tantalum through SfH (as well as KEMET’s partnership, see below) indirectly allowed MMR to establish due diligence and traceability measures through financing the iTSCi system, which resulted in MMR being considered a safe and reliable supplier, able to compete on the world market and ultimately sell to multiple buyers world-wide.

Aligned with the flexibility of the actors working in this space, the concept of the SfH pilot did not insist on an exclusivity arrangement. MMR notes that it is open to working with closed pipes or with iTSCi compliant clients on an open market, using the traceability and due diligence system that is accepted locally and internationally.

3.4. Challenges of the Business Model

A challenge of the business model relates to how it is communicated to and perceived by upstream stakeholders. Additionally, because SfH engaged in a high-risk area, the initiative also faced operational risks that were pre-existing in the supply chain and the context. These challenges included the particular structure of the supply chain, price disputes and tensions between supply chain actors, as well as the need for mechanization.

3.4.1. Upstream unawareness and unclear communication

As noted above, SfH values engaging existing infrastructure and systems over duplicating or ‘reinventing the wheel’. However, there is space for SfH to increase awareness of its presence and role in the region at the local level. For example, researchers noted that upstream stakeholders, apart from MMR, were not aware of the initiative or concept of

107 Interview with downstream participant 1, 12.01.2015
108 Interview with downstream participant 1, 12.01.2015; Interview with downstream participant 2, 15.01.2015
109 According to MMR’s export statistics provided by MMR representative on 18.03.2015, in August and December 2011 there had been shipments of ore from Luba to another buyer, but apart from that AVX had been the only buyer of minerals from Mai Baridi and Luba until June 2013.
110 Interview with downstream participant 1, 12.01.2015; Interview with downstream participant 2, 15.01.2015
111 Interview with downstream participant 1, 12.01.2015
112 MMR export statistics provided by MMR representative on 18.03.2015
113 Interview with MMR representative, 16.02.2015
114 Interview with downstream participant 1, 12.01.2015; downstream participant 1, personal communication 15.01.2015
115 Interview with MMR representative, 16.02.2015
Solutions for Hope. In interviews with stakeholders in Katanga, it became clear that MMR and iTSCi are the visible actors on the ground meaning that all activities, impacts, achievements (and challenges) are attributed to iTSCi or MMR. Independent researchers and iTSCi representatives reiterated this as well, sharing that upstream stakeholders are even unclear on what a closed-pipe model is. This represents opportunities for SfH from a branding and communications perspective to consider how they will define and communicate who they are and what they do to upstream stakeholders.

3.4.2. Structure of the supply chain

The SfH model shortened the supply chain to a few pre-defined actors by removing the mineral trader at international level: AVX buys the minerals directly from MMR, and at the local level: MMR, as both exporter and the concession owner, buys minerals directly from CDMC at the mine sites. As discussed above, this model presents several advantages. Less actors in the supply chain builds trust and relationships and pragmatically meant that there were less actors to do due diligence on. In theory the model also provides an opportunity for a greater share of the mineral value to remain at the mine site, as reducing the supply chain tiers means fewer entities taking margin on the minerals. In theory this would allow miners and their communities to benefit more in the form of better prices and increased income. This would work, even without payment of a premium and if minerals are purchased at world market prices (which is imperative for commercial viability according to interviewees).

The extent to which all of the model’s theoretical impacts are taking place and value is being retained in region is not yet immediately obvious on the ground (this is expanded further under ‘economic impacts’ in the next chapter). In some cases, these impacts have not yet come to fruition, in other cases they may be muffled. This is due to several interlinked factors. It must be noted that these factors may not be unique to these mine sites or these two supply chain systems, and are related to the high-risk context in which they operate (hence these issues are not specific to the SfH supply chain, but also feature in KEMET’s supply chain, since both initiatives work with the same partners and supply chain configuration upstream). However, they were presented by upstream stakeholders as relevant and pressing.

First, it was a goal of SfH to test whether sourcing from DRC can be economically viable given the additional costs of due diligence and traceability measures. SfH succeeded in doing so: Downstream buyers at the component level were able to buy the tantalum at a world market price. Their engagement in the initiative was cost-neutral (apart from their initial investment in setting up the pilot and additional cost related to filing a Conflict Minerals Report under DFA) plus additional value for their brand. Upstream supply chain participants shared the important incentive of being able to sell at world market price.

However, the upstream participants also had to bear increased costs related to the implementation of traceability and due diligence (e.g. iTSCi levy). By participating in a pilot, upstream participants also took on costs related to the increased scrutiny and resource demands in the form of assessments, audits, and other research, additional to what a traceability and due diligence initiative would require.) It is important to note that the concentration of traceability and due diligence costs upstream is not specific to

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116 Interview with iTSCi/Pact representatives, Goma, 16.02.2015; Interview with Kay Nimmo, 13.03.2015. Also Interview with Christoph Vogel, 16.03.2015, but only in relation to North Kivu, not Katanga.
117 Interview with downstream participant 1, 12.01.2015; RCS Global 2013
118 Focus group with civil society representatives, Kalemie, 07.02.2015
119 Interview with downstream participant 2, 15.01.2015, 11.03.2015
120 Interview with downstream participant 2, 15.01.2015; Interview with MMR representative, 16.02.2015
closed-pipe supply chains nor unique to the SfH pilot, but rather represents the costs for doing business in conflict-affected and high risk areas where international due diligence standards need to be met. Nevertheless, the concentration of costs upstream impacts on the functioning and sustainability of closed supply chains.

Second, the SfH pilot built on a system where MMR, as the concession holder, exercises its right to channel and buy all mineral production from its sites, and to govern the exploitation through a vertical management and decision-making structure. This is typical and legal for a concession holder, and has benefits in terms of minimising risks in the supply chain, but can have consequences. In this case, it has resulted in disputes around prices and increased tensions between the miners, CDMC and MMR.121 Artisanal miners perceived MMR’s right to the minerals as robbing them of the possibility to sell to and negotiate with other buyers, thus imposing unfavourable prices on them (a monopsony).122 There is a perception that because MMR is the only buyer, it must be using its power to impose prices upon miners, which reduces their income.123 This tends to increase tensions with the miners. In relation to this, it is important to note an ASM cultural issue: One ‘push-factor’ for miners is that ASM offers them liberty and independence from their communities and a life as subsistence farmers, and thus they may resist or abandon supply chain models that constrain their free choice (of selling, for example).124

Third, there seems to be no institutional mechanism for the miners to make their voices heard and negotiate prices. While the CLS could serve as such a forum, civil society organisations have stated that the recommendations of the CLS are often not implemented.125 In contrast to large-scale mines, who have unionised wage labourers and procedures to negotiate with them, the artisanal miners who mine for MMR are not wage labourers and not organised (see below on the role of the cooperative CDMC), and thus have no means of negotiating or influencing the prices, while still being obliged to sell to MMR.126 The miners’ migratory lifestyle (which partly flows from the push-factors of liberty and independence), and thus the fluctuating workforce at the mines, makes it difficult for miners to organise, which would give them some leverage for negotiations.127 In addition, the miners’ migratory lifestyle also makes it difficult for CDMC to register them.

Fourth, CDMC does not necessarily represent the interest of the miners and so faces difficulties to mediate between the miners and MMR. According to civil society stakeholders, CDMC is not an independent cooperative of and by the miners, but acts on behalf of MMR as an intermediary between the miners and the concession owner.128 CDMC was formed in 2009 when MMR received the concessions in northern Katanga and the Provincial Government obliged the company to form a cooperative to organise the miners that were already working on the concessions.130 CDMC, while a cooperative by

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121 Interview with Gregory Mthembu-Salter, 13.03.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
122 Focus group with civil society representatives in Kalemie, 07.02.2015; also Mthembu-Salter, G. 2012
123 Focus group with civil society representatives in Kalemie, 07.02.2015
124 Interview with Ken Matthysen, IPIS, 10.03.2015
125 Comité Local de Suivi are local tripartite Committees involving the Congolese authority, industry and civil society to monitor and address incidents in relation to traceability and due diligence.
126 Focus group with civil society representatives, Kalemie, 07.02.2015
127 Interview with Gregory Mthembu-Salter, 13.03.2015
128 Mthembu-Salter, G. 2012; Interview with Gregory Mthembu-Salter, 13.03.2015
129 Interview with miners at Km4 site in Kisengo; also Interview with SAESSCAM Kalemie, 03.02.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
130 Interview with CDMC representative, 02.02.2015.
name, is, in fact, a trading platform. CDMC does not receive membership contributions, as all miners working on the concession automatically become members. Nor does it make any investments at the mine site itself. It is pre-financed by MMR and collects a commission from the sale of minerals to MMR. Additionally, the agreement between MMR and CDMC refers to CDMC as a sub-contractor. The miners and civil society thus perceive CDMC as an organisation imposed from the outside, working in line with the interests of the buyer, rather than a means of channelling their concerns and grievances. According to miners, they have never participated in meetings where their rights and responsibilities as members of the cooperative have been explained. They do not see CDMC as speaking on their behalf, and seem to have few possibilities for making their opinions heard. The opportunities for further inclusion and improved communication are shared at all levels of stakeholders. While miners have formed a 'Comité de Creuseurs', which acts as intermediary between the miners and CDMC, miners outside this Comité complained that they are never asked for their opinion, and all is discussed and arranged between MMR, CDMC and the Comité members.

These four factors have all fed into tensions around prices and disputes between miners and CDMC/MMR, which in the past have led to violent confrontation (e.g. when the tensions turned into violent protest at the Kisengo mine; discussed in the chapter on KEMET’s partnership).

This is not unique to closed-pipe systems or the MMR's mine sites by any means, and is rather a general aspect of the political economy of DRC's mining sector. As such it is ultimately something the government needs to take a lead on fixing through improving the law. However, in the existing context, it shows the need for mechanisms that increase transparency and better communication between MMR/CDMC and the miners in general, and mechanisms that ensure transparent price setting processes specifically. This would also provide an opportunity to inform and educate the miners and so enhance their understanding of why prices are set at a certain level, so aiding relations between miners and buyer (MMR), minimising the possibility of disputes, and improving mine and community relations.

### 3.4.3. Mechanisation and industrialisation

As stated above, the move towards mechanisation and industrialisation is not specific to SFH as an initiative, but pre-existing in the supply chain and the operating context: The dynamics in the tantalum market (as described in chapter 2) have incentivised a move towards formalisation, professionalisation, and mechanisation of the ASM sector, which has the potential to reap long-term benefits for stakeholders. MMR has started a process towards semi-mechanised and industrialised mining to improve productivity and

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131 Interview with CDMC representative, 04.02.2015.
132 Interview with CDMC representative, 02.02.2015.
133 Interview with CDMC representative, 04.02.2015.
134 Partnership contract between CDMC and MMR, provided by MMR representative on 25.02.2015
135 Informal interviews with miners on site, Kisengo, 05.02.2015; Focus group with civil society representatives, Kalemie, 07.02.2015
136 Informal interviews with miners on site, Kisengo, 05.02.2015, Focus group with civil society representatives, Kalemie, 07.02.2015
137 Mthembu-Salter, G. 2012; RCS Global 2013
138 For example, various studies have questioned whether ASM cooperatives in Katanga and other provinces truly represent artisanal miners and act in their interests. See Cuvelier, C. 2010; Matthysen, K. and Montejano, A.Z. 2014; IPIS 2012.
139 Interview with Ken Matthysen, 13.03.2015; Matthysen, K and Montejano, A.Z. 2014
140 Interview with downstream participant 2, 15.01.2015; Interview with Ken Matthysen, 13.03.2015
therefore margins. MMR and its partners invest their time, energy, resources, and expectations in formalisation, professionalisation and mechanisation, and bear the risk that this investment will not bear returns: Mechanisation and industrialisation of tantalum mines in DRC is costly due to their remoteness and the lack of infrastructure, and thus only economically feasible if the deposit is large and the investment significant.142

Mai Baridi is a smaller site where it has proved increasingly difficult to exploit the ore in an artisanal manner.143 Previously, MMR deployed machinery and excavators to Mai Baridi to help the miners remove the overburden144, which they acknowledged as great help and benefit.145 However, MMR recently moved the machines to the Kisengo mine site, as it was not proving profitable to have them at Mai Baridi.146 Since artisanal mining is, by nature, a precariate occupation, this has fed into the miners’ and local community’s anxiety of being ‘abandoned’ (e.g. not receiving help with machinery anymore; see impacts below), and some miners have become indebted as they were investing in artisanally removing overburden for pits that then turned out to not be productive.147

While increased production can translate into increased returns for the local economy, the move towards mechanisation can also create new risks or enhance existing ones, particularly for the ASM and their community (this is discussed further in the chapter on KEMET’s partnership). Again, this situation is not unique to SFH as an initiative or to its partner mining company, meaning that there are extensive opportunities to gather expertise and insight from different projects and initiatives about the value and methods for clear communication, expectation management, and long-term commitments.

3.5. Costs and investment

The following table lists contributions and investments made in relation to the closed-pipe initiative and/or those which were necessary for its functioning (rather than contributions made due to the initiative).

<table>
<thead>
<tr>
<th>Entity in supply chain</th>
<th>Costs of setting up and maintaining the initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miners</td>
<td>None directly (see below)</td>
</tr>
<tr>
<td>CDMC</td>
<td>Annual iTSCi membership fee</td>
</tr>
<tr>
<td>MMR148</td>
<td>2 million USD to pre-finance the start up of iTSCi at all 3T mine sites in Katanga (including Kisengo, Mai Baridi, Luba), later deducted from the iTSCi levy.</td>
</tr>
<tr>
<td></td>
<td>Annual iTSCi membership fee</td>
</tr>
<tr>
<td></td>
<td>iTSCi levy</td>
</tr>
<tr>
<td>F&amp;X</td>
<td>iTSCi annual membership fee</td>
</tr>
</tbody>
</table>

141 Interview with downstream participant 2, 15.01.2015; Interview with MMR Representative, Kalemie, 03.02.2015
142 Communication by MMR, 18.04.2015
143 Interview with CDMC representative, 04.02.2015.
144 OECD 2012a
145 Interview with miners’ representative in Mai Baridi, 04.05.2015
146 Interview with CDMC representative, 04.02.2015.
147 Interview with miners’ representative in Mai Baridi, 04.05.2015
148 MMR also pays taxes related to production and export, as well as re-investment into social programmes, which occur as costs of doing business regardless of traceability and due diligence initiatives.
<table>
<thead>
<tr>
<th>Entity in supply chain</th>
<th>Costs of setting up and maintaining the initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CFSI audit fees</td>
</tr>
<tr>
<td>AVX</td>
<td>2 Mio USD as up-front payment to MMR for first two container loads ¹⁴⁹</td>
</tr>
<tr>
<td></td>
<td>Otherwise cost neutral (if compared to world market), but higher costs for AVX internally¹⁵⁰</td>
</tr>
<tr>
<td></td>
<td>iTSCi annual membership fee</td>
</tr>
<tr>
<td>Motorola Solutions,</td>
<td>Time / human resources and travel¹⁵¹</td>
</tr>
<tr>
<td></td>
<td>iTSCi annual membership fee</td>
</tr>
<tr>
<td>End buyers</td>
<td>Additional operational cost/ time / human resources and travel¹⁵²</td>
</tr>
</tbody>
</table>

### 3.6. Direct Impacts

#### 3.6.1. Economic impacts

Under SFH, AVX bought a total of 165mt of ore from MMR, which were shipped in 8 'Full Container Loads' of 20 to 24mt of tantalite ore each. According to AVX, each of the container loads had a value of between 1 million and 2 million USD. The value of the container loads varied because during the time of the pilot, the price of tantalite (Ta205) rose from an average of 40 to 50 USD/lb to over 100 USD/lb, peaking at 140 USD/lb, but was always over 1 million per container load.¹⁵³ For MMR, the container loads shipped under SFH were of great economic importance, as at the time of the pilot, AVX was one of MMR's important customers and apart from a few purchases the only one buying ore from Mai Baridi and Luba.¹⁵⁴ The researchers were not able to disclose more detailed export data, nor to precisely verify the extent to which the revenue from AVX's purchases was passed up the supply chain, as due to commercial sensitivities and confidentiality requirements, price levels between AVX, MMR and CDMC could not be disclosed.

It is difficult to calculate whether and how miners' real incomes have changed as a result of the pilot. MMR provides one (important) piece of information regarding impacts on incomes by reporting that the nominal prices per kilo ore paid to miners at Mai Baridi have increased by 380% since 2010.¹⁵⁵ The specific prices paid to miners at Mai Baridi at the time of the research cannot be reported due to commercial confidentiality concerns.

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¹⁴⁹ Interview with downstream participant 1, 12.01.2015
¹⁵⁰ For AVX, buying the minerals at world market price was actually not cost neutral, as AVX had accumulated stock piles of material (finished capacitor grade powder, wire, scrap) in the prior three years. Thus buying at world market price constituted a higher cost than using internal stock piles.
¹⁵¹ Interview with downstream participant 2, 15.01.2015;
¹⁵² Interview with representative of Fairphone, 16.03.2015
¹⁵³ Downstream participant 1, personal communication 15.01.2015
¹⁵⁴ Interview with MMR representative, 16.02.2015
¹⁵⁵ Interview with MMR representative and CDMC representative, Kalemie, 02.02.2015 NB- Due to MMR business confidentiality concerns, researchers are not able to disclose the exact prices paid to miners in this report. Thus a percentage has been supplied.
The total change of miners’ incomes requires consideration of several additional variables, which remain unclear to the authors for several reasons. First, confirmed data on average tantalum prices (as there are no fixed prices) on the world market, in the region, and at the local level were difficult to establish. Second, scant baseline data is available on miners’ historical incomes (prior to 2010). Third, prices paid to miners can vary significantly over time as they are subject to fluctuations in the world market price, the quality of the ore, and the structure of the supply chain (as discussed above), and the negotiating skills of a miner. Fourth, information beyond price points is relevant, such as changes to the quantity of minerals miners were able to sell (thus impacting income independent of changes to price points). Lastly, it is not so much the price of sale that matters as the margin between cost of production and price of sale, i.e. profit. Artisanal miners rarely apply such business lenses to their mining, which is commonly treated as a subsistence rather than business activity. An increase in price by 100% is of minimal value if costs have increased by more or the same. The uncertainties are therefore such that it is not possible to make a qualified judgement on how income has changed. It can be assumed that at least during the time MMR supported the miners with excavators at Mai Baridi to remove the overburden, the costs for the miners were reduced, and thus potentially their margin increased.

Civil society representatives have raised concerns and qualifications that illustrate how miners’ incomes may not necessarily have improved. In the years prior to the establishment of CDMC and MMR’s supply chain, the miners operated in an open market and were free to sell to traders of their choice. Under these conditions, the miners were reportedly often able to achieve better prices through negotiation. Civil society estimates that since MMR with the rights of the concession holder has been able to unilaterally set the prices, the lack of competition has actually reduced miners’ revenues per kilo by around 5,000 FC (5.5 USD) as compared to the years before (however, it was unclear to what extent the price fluctuations on the world market and the changes in costs of production for miners have influenced this as well).

In lieu of sufficient information to report on historical trends in income, the researchers considered the immediate income impact relative to other mines in the region. While it was not possible to report verified, detailed price data, according to iTCSi, the prices for miners at Mai Baridi and Luba (or Kisengo) are not obviously different from what the miners get at other tantalum mine sites in Katanga where iTSCi is implemented without an initiative like SFH. There is anecdotal information that the prices paid for tagged minerals in general tend to be higher if compared to the prices paid for untagged material flowing through supply chains without traceability and due diligence. This applies to Mai Baridi and Luba, but also the other mine sites where iTSCi is implemented. According to this, the most significant income impact for miners presently is tagging, rather than the buying arrangement. However, there might be scope for SFH to have a role in influencing this in the future (see conclusions).

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156 To verify any stakeholder’s claim of changes to prices paid would require a third party source additional to the information provided by MMR and the information provided by the miners themselves. The researchers did make significant efforts to ascertain as much information on this topic as possible. In addition to the information gathered here from interviews, the researchers sought third party data on prices by reaching out to iTCSi; however, iTCSi was not able to disclose the data as price discussions are not made public. The researchers also considered research on changes to prices on minerals in similar situations in other regions of the DRC, such as the Kivus. However, in light of regional and circumstantial variances, it wasn’t deemed appropriate to use this information in this context.

157 Focus group with civil society representatives in Kalemie, 07.02.2015
158 Focus group with civil society representatives in Kalemie, 07.02.2015
159 Interview with Kay Nimmo, 13.03.2015
160 Kay Nimmo, personal communication, 07.05.2015. See also Baflemba, F. 2014.
Thus far this section has tried to focus on monetary income, however a full economic impact analysis would consider, quantify, and include additional factors in income calculations. For example, MMR stated that in addition to prices paid for their minerals, miners get in kind benefits, including safety equipment (further expanded under joint impacts), mining tools, support with large machinery to remove the overburden, motor pumps, diesel and water supplies.  

This support potentially allows the miners to produce higher volumes, thus improving their income even though the prices paid per kilo are similar to other mine sites where iTSCi is implemented.

The development of the mining operation thus is an indirect economic factor. MMR explicitly aims to organise, formalise, mechanise and invest in its mining operations; indeed, government representatives reported this as a key factor in awarding MMR the concession. Mine development, in terms of future earning potential, can be invaluable for long-term economic development. Likewise, MMR was commended as exceptional for its social beneficiation programmes. The miners benefit from basic medical facilities, discussed below, as well as from MMR's CSR projects (through the Vinmart Foundation). These projects are operational at all MMR operated mine sites, including Mai Baridi and Luba, thus channelling value back to the miners and the communities around the mine sites.

3.6.2. Traceability & due diligence

As mentioned above, SfH provided an opportunity to create downstream understanding and acceptance of the iTSCi traceability and due diligence system that was being implemented at the time (as well as of other systems such as CTC and CFSP). As in the case of KEMET’s partnership (below), downstream buyers viewed the implementation of a traceability and due diligence system to be the responsibility of the mining operator, and SfH as an initiative did not contribute directly in financial terms.

According to MMR, the SfH pilot had an impact on their traceability and due diligence in as much as AVX and their customers required MMR to implement a due diligence and traceability system before buying tantalum ore, incentivising MMR to finance the implementation of iTSCi and other due diligence and traceability measures. MMR provided 2 million USD to fund the traceability and due diligence programme by iTSCi at all 3T sites in Katanga over an agreed period as a pre-financement, which was then reimbursed through deductions from the levy. This is indicative of important moments of leverage between iTSCi and SfH that compel joint credit for some of SfH’s successes, and vice versa.

An additional aspect was that due to the high profile of SfH participants, the upstream actors, especially MMR, came under huge pressure regarding their conflict-free status and conformance with the OECD DDG, while bearing the burden of having to implement a traceability system and a transparent supply chain that had not been known or tested before.

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161 Focus group with civil society representatives, Kalemie, 07.02.2015; Interview with MMR representative, 16.02.2015.
162 Interview with Division des Mines, Kalemie, 02.02.2015
163 Interview with Division des Mines, Kalemie, 02.02.2015
164 Interview with MMR representative, 16.02.2015
165 Noting that iTSCi was operational at other sites at the same time as well.
166 Interview with MMR representative, 16.02.2015
167 Interview with MMR representative, 16.02.2015; Interview with MMR representative, Kalemie, 02.02.2015.
168 Interview with MMR representative, 16.02.2015. 
before. While this burden could be seen as a negative impact, it was also seen as a positive impact, as it helped both MMR and the iTSCi initiative to learn and improve.

Importantly, at the level of the smelter, the closed-pipe approach provided a value add in terms of the due diligence burden, as it provided a supply chain of like-minded entities that were already aware of the importance of traceability and due diligence, and where each of the actors could have confidence in the due diligence activities of the other actors. Participants in SfH and CSFI stated to the authors their belief that this has been a factor in influencing and increasing the number of CFSI compliant tantalum smelters sourcing from DRC; unfortunately we have not been able to confirm or deny this.

### 3.6.3. Governance

The SfH model’s ability to allow and require a more direct involvement and presence of downstream brands such as Motorola Solutions in the upstream supply chain, connected with their willingness to source, created leverage to incentivise change towards traceability and due diligence and a conducive political framework for it. The direct communication of the downstream buyers’ and hence the global market’s needs helped increase upstream understanding and awareness, and incentivised the provincial government to address issues more pro-actively (e.g. supporting the implementation of traceability and due diligence).

Indirect impacts on governance and government authorities are discussed in chapter 5.

### 3.6.4. Pioneer status and high expectations

Due to the pioneer character of SfH as an initiative, the pilot created a lot of interest from downstream companies, researchers, and other stakeholders. While the closed-pipe model provided an opportunity for all stakeholders to exercise their due diligence, for upstream stakeholders, in particular MMR, this increased scrutiny meant that they were subject to a lot of visits and enquiries that impacted them directly and cost time, manpower and money. This was partly due to MMR’s general pioneer status as a conflict-free exporter not only in participating in SfH, but also in implementing iTSCi and CTC. For example, MMR has been evaluated twice (2011 and 2012) by an independent auditor against the OECD DDG, BGR has conducted CTC audits, iTSCi conducted baselines and audits at Mai Baridi and Luba, and other reviews have been conducted by independent researchers (such as IPIS, Tetra Tech ARD, and ELL). While being a burden and a challenge for MMR, these assessments also helped the company to learn and improve quickly.

The involvement of high profile participants such as Motorola Solutions (and their direct visit to the mine sites) however also created high expectations from stakeholders on the ground, particularly the miners. While these expectations may have been unrealistic, some of the current frustrations by miners might be explained by their disappointment.

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169 Interview with MMR representative, 16.02.2015
170 Interview with MMR representative, 16.02.2015
171 Interview with representative of downstream participant, 19.03.2015
172 Interview with downstream participant 2, 15.01.2015; Conversation with downstream participant 2, 11.03.2015
173 Interview with MMR representative, 16.02.2015
174 OECD 2012a; Mthembu-Salter, G. 2012; Mthembu-Salter, G. 2011
175 Interview with MMR representative, 16.02.2015
176 Interview with SAESSCAM, Kalemie, 03.03.2015; Interview with iTSCi/Pact representatives, Goma, 1602.2015
that they have not been addressed. This is also connected to the issue of reduced production at Mai Baridi and Luba and the need for investment in mechanisation. Miners and other stakeholders on the ground are frustrated that this investment has not yet materialised, and now fear being ‘abandoned’ while social programmes and investment in mechanisation have been focussed on more productive sites such as Kisengo. Miners and local communities are not necessarily aware that this is not connected to SfH but rather MMR as the concession owner, and question why no investment has been made when a company like Motorola Solutions is somehow involved in their mine. This shows the necessity for closed-pipe systems to manage expectations from the beginning, build understanding of scope and responsibilities, and to have clear, direct and regular communication with the miners as well as local civil society organisations.

### 3.6.5. Social impacts

SfH did not make any direct investments in social programmes on the ground in DRC, as this was not the objective of the initiative. Rather, the aim was to let MMR make social investments through their existing social beneficiation programmes. See below for a discussion of the indirect social impacts.

### 3.7. Indirect Impacts at Mai Baridi and Luba

SfH acts as a facilitator, by being a factor in creating opportunities for the activities of its partners. To this end, the initiative had indirect impacts by working with upstream partners such as MMR, who is obliged and committed to re-invest into the local community, and iTSCI.

#### 3.7.1. Social

While MMR has initiated several social projects at Mai Baridi and Luba through its group-wide Vinmart Foundation, social impacts at these mine sites remained rather limited, as they are both small and little mining activity is happening. Around 109-200 miners currently live at the mining settlement in Mai Baridi with their families; and according to CDMC the number is similar in Luba. Miners come from all over the country, but their numbers have reduced greatly as it is becoming more and more difficult to exploit the ore, and because some of the miners have migrated to gold mines (e.g. Musebe).

As noted in the context section above, the living conditions for the artisanal miners and their families are rudimentary: none of the houses in the community are equipped with electricity or running water. The social projects implemented at Mai Baridi are of a smaller scale than at Kisengo, where KEMET has contributed to the funding of a joint Foundation between them and MMR. Initial projects at Mai Baridi have included the building of bridges to facilitate access and trade, and solar street lamps, installed at the MMR camp and in the settlement of the artisanal miners. Miners and their families are also free to use the fresh water well located at the MMR camp. MMR operates a dispensary at the camp with a medical staff member who is paid by the foundation. MMR’s...
Foundation also finances the medicine stock and pays for the miners’ treatment. Additionally, a school has been built for the children of the mining settlement. While the teachers reported their salaries are paid by parents and the foundation, the school currently does not appear to have any learning materials: desks, chairs or blackboards, so classes are held in empty rooms. As, according to the teacher, there are currently around 60 pupils enrolled in a primary and a secondary class, further investment could represent a meaningful impact for those children and their families.

While such improvements and the provision of utilities and services remain the responsibility of the Congolese state, opportunities persist to broaden and deepen the impact of these projects through closed-pipe arrangements, if more long-term agreements can be reached and thus further investment could be made by the mine operator.

3.7.2. Environmental

While the focus of SfH was put on requirements for a conflict-free supply chain, the initiative was also concerned about environmental impacts. According to SfH conveners, the initiative chose mine sites where the CTC standards were implemented (as they measure environmental improvement) as well as iTSCi (environmental impacts form part of phase three of iTSCi implementation). MMR’s environmental and safety management was another reason for the initiative to engage with them.

MMR has environmental obligations required by the government. At Mai Baridi and Luba, MMR provides the miners with water to wash the ore, obviating the need to wash in the streams and rivers. MMR has also installed sanitary facilities at the mine sites, but it was unclear whether they were being used. Unfortunately, the researchers were not able to verify this nor ascertain the underlying reasons as they could only visit the MMR camp and the settlement at Mai Baridi, and not the actual mining pits (see research context in Annex A).

3.7.3. Other

There are other impacts that SfH may potentially and indirectly have contributed to by enabling MMR, in particular, as well as CDMC and iTSCi, on a broader geographical scale than the mine sites Mai Baridi and Luba. However, these impacts need to be attributed to these upstream actors and cannot be attributed to SfH, as they might have occurred regardless of the initiative; but SfH could have had a role in enhancing them. These impacts are discussed below in chapter 5 ‘Katanga: joint impacts’.

3.8. Conclusion

As the earliest of the three closed pipe initiatives, SfH was a pioneering initiative. It was shaped by downstream buyers’ desires to lead amidst the emerging regulations of the DFA and concerns raised by NGOs regarding sourcing from the region. It was motivated by commercial incentives, with downstream buyers looking for price stability and upstream actors looking for legitimate markets. It was designed to use the due diligence

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182 Focus group with representatives of SAESSCAM, CDMC and iTSCi, Mai Baridi, 04.02.2015
183 Noting that Mai Baridi was audited in 2012.
184 Noting that the implementation of iTSCi’s phase 3 has not yet started in most mines.
185 Downstream participant 2, personal communication.
186 Interview with MMR representative, 16.02.2015
187 No observations were made, but the situation may be similar to Kisengo, where people stated that miners do not use these facilities.
tools and systems that were being developed at the time as well as to facilitate social and economic impacts in DRC.

Utilizing iTSCi and the CFSP, the pilot succeeded in establishing the first conflict-free and OECD DDG conformant supply chain of tantalum from the DRC, proving that conflict-free sourcing from DRC was indeed possible and helping to break the de facto market boycott of minerals from DRC. The model of the SfH pilot and the transparency on upstream due diligence it generated was able to give downstream buyers the confidence and assurance they needed in order to be willing to source minerals from DRC for two reasons. First, it set up a commercially viable supply chain along which there was a degree of cooperation, coordination and transparency over and above the fit between iTSCi, the CFSP, and the OECD DDG, which allowed for better control and risk minimisation. Second, the public involvement and commitment of consumer facing downstream brands provided a strong signal for both the international market downstream and the supply chain actors and regulators upstream that minerals trade from DRC was possible if certain conditions relating to traceability and due diligence are fulfilled. These two factors can be considered as the main value-add of the initiative.

With regards to economic and social impacts on the ground, the picture is less conclusive. The material sourced by AVX under the pilot was of economic importance particularly for MMR, since AVX was almost the only buyer of minerals from Mai Baridi and Luba during the time of the pilot and bought 79% of the ore exported from these two mine sites. During this time, MMR was able to establish itself as a legitimate and responsible exporter and managed to attract additional buyers. SfH as a willing buyer, which made business activities possible, thus facilitated and enabled MMR’s economic and social impacts in the region to a certain degree.

As the prices that miners receive at Mai Baridi and Luba seem not to be significantly different to prices at other tantalum mine sites in Katanga where iTSCi is implemented, the superior economic value of a closed-pipe system to the miners is not obvious. While prices paid to miners by MMR are reported to have increased almost fourfold nominally, miners and civil society felt that they have not increased sufficiently in real terms. The traceability costs borne upstream compounds this deficit. Meanwhile, the structure of the pre-existing supply chain is not conducive to improving the situation for the miners. In particular, the miners reported lacking a representative, institutionalised mechanism to negotiate prices and make their concerns heard. In the absence of clear channels for communication, dialogue and fair price negotiation, the miners perceived that unfavourable prices were being imposed on them by MMR.

The SfH pilot had indirect social and environmental impacts only, by helping their partners and suppliers to get their business established on the ground. Knowing and managing social and environmental impacts was not in scope for the SfH project.

3.8.1. Recommendations

SfH is uniquely positioned to take engage stakeholders across the entire supply chain from mine to end-user. This provides an opportunity for leverage and influence various supply chain tiers, to offer informed support to supply chain stakeholders. As a pioneer, SfH has proven its ability to build consensus around a progressive vision. This same leadership could be used to address issues of concern to SfH members and stakeholders (such as ASM and local communities).

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188 Roesen, G. and Levin, E. 2012.
SfH’s convening power has proven to be very important and useful for driving change, particularly in relation to conflict minerals due diligence and the issues in scope for the OECD DDG (for example, by increasing transparency and visibility in the supply chain). This convening power could be mobilized with the goal of improving risk management or opportunity maximization in line with priorities identified by SfH, its stakeholders or suppliers. Risks could be identified through a broader risk-based due diligence exercise, and could include issues that pose operational risks to the initiative’s suppliers, issues that are expressed as particularly important to local stakeholders, or risks that are posed to vulnerable groups and stakeholders by the initiative’s suppliers’ operations.

Such operational risks are inherent when operating in DRC and other high-risk areas. Addressing these risks is ultimately the responsibility of the mining operator and the government. However, international frameworks for responsible sourcing give mandate for buyers to exert pressure on buyers to address these things and business sense suggests that in a context such as DRC there is scope for buyer to also provide support in this regard.

For example, SfH could use its convening power to pursue greater shared value between source mines and local communities. This might mean making specific requests or providing targeted support to achieve partners’ CSR ambitions, and to better manage operational risks (including broader human rights and environmental issues that would be in scope for SfH members and downstream buyers generally). Doing so could help upstream entities improve community or stakeholder relations (which can translate into lowering operating costs), and enhance developmental benefits generally, ultimately generating greater stability and prosperity.

Some specific opportunities include:

- Working with MMR, CDMC, provincial government, concerned civil society organisations, and other miner representative organisations to explore options for more efficacious distribution of traceability and due diligence costs, risks and benefits.

- Supporting source mines carry out a risk and opportunity assessment exercise to know what risks it poses to stakeholders and vice versa through its operations as well as the supply chain due diligence activities required by its buyers, as the basis for risk mitigation and opportunity maximisation planning.

- Our research identified a specific risk of poor relations between ASM and their buyers (cooperatives and concession-holders) or a risk that ASM operating on concessions continue to do business with informal buyers. In this case, SfH could convene the relevant stakeholders to understand the basis of poor relations and scope and build mechanisms for building trust in trading relations, e.g. by ensuring fairer prices, income, benefits, and/or protections for miners, or facilitating the development of organisation and authentic representation for improved trading and labour relations. Such actions would engender better business relations between the ASM and the cooperatives, and ultimately between the cooperatives and the concession-holders, so enhancing the long-term sustainability and value of the entire supply chain and for mining communities at-large.

- Labour and trading relations could also be improved by a.) helping establish an appropriate third party to provide support to miners, or b.) including enhanced expectations of what should be in supplier contracts with the initiative’s trading partners, e.g. that SfH mine operators make further commitments to support their artisanal suppliers manage certain stated risks better.
In relation to all of the above, it is more possible for SfH to support source mines improve their operating practices to the benefit of stakeholders if SfH buyers **prioritise longer-term buying relationships** over short-term contracts. A longer-term relationship enables the buyer to make more meaningful demands in terms of risk management and reporting on the risks in Annex II of the DDG, and ultimately helps them do due diligence better since they come to know their supplier well. It also provides an opportunity to start to wrap in additional due diligence expectations, e.g. regarding health and safety, or regarding labour and trading relationships, in line with local stakeholders’ priorities and international norms (e.g. the UNGPs, OECD Guidelines for MNEs, etc.) From the perspective of the supplier there are also benefits to a longer-term relationship (see the Kemet Partnership, below).

Additionally, SfH buyers of future SfH projects could do due diligence on the cooperatives with which permit holders enter into agreements or contracts, or leverage their negotiating position to request transparent governance of cooperatives focusing on miners’ well-being. In eastern DRC, some cooperatives may be controlled by entrenched political or economic power-brokers or power structures historically or actually linked to armed groups.

This would see SfH moving from enabling responsible sourcing and fostering trade towards additionally enabling responsible mining. This would take SfH a step further towards a full responsible sourcing initiative that is able to ensure that buyers are sourcing from mining operations that ultimately know and attend to their operational risks in a broader sense, additional to the core focus on conflict financing, business practices and egregious human rights abuses as per Annex II of the OECD DDG.

Lastly, SfH could also utilise its full supply chain alliance to provide market-based commentary and recommendations to on-going processes to improve governance and the evolving regulatory framework of conflict minerals supply chains in DRC.

Given these recommendations, it is important to highlight the role and responsibility of the Congolese state. While a closed-pipe supply chain is a model that can help address and improve those issues, broader impacts will only be achieved if the government and its partners (e.g. donors) assume their responsibilities in addressing some of the challenges highlighted above. Without government authorities addressing issues such as for example cooperative structures or illegal taxation of miners by state agencies, efforts by initiatives such as SfH risk yielding little results.
4. KEMET PARTNERSHIP FOR SOCIAL AND ECONOMIC SUSTAINABILITY

4.1. Profile and Goals

KEMET is a global manufacturer of a wide range of capacitors, which, depending on the type, include tin, tantalum, tungsten and gold. The goal of KEMET’s partnership for social and economic sustainability is to source conflict-free tantalum through a vertically integrated closed pipe system from the Kisengo mine in Katanga. The partnership aims to do so in a socially and economically responsible way, through the funding of the Kisengo Foundation that supports social and economic sustainability projects at the mine and the village of Kisengo. Additionally, one of the main aims of the partnership has also been to increase production at the mine.

The Kisengo concession is owned by MMR and operated by the Coopérative Des Artisanaux Miniers du Congo (CDMC), just as the mine sites of Mai Baridi and Luba under the SfH project, and also uses iTSCI as a due diligence and traceability system. The Kisengo mine was chosen by KEMET because the iTSCI traceability and due diligence system was being implemented there, and MMR was seen as an experienced operator with legal concessions. Additionally, Katanga was viewed as a relatively secure region compared to the Kivus. In addition to entering a purchasing agreement with MMR, KEMET has helped establish and fund the Kisengo Foundation through the donation of 1.5 Mio USD.

4.2. Business case for setting up the partnership

Similar to the SfH pilot, the KEMET partnership was developed and implemented against the background and context described at the outset, as well as the dynamics in the tantalum industry. Tantalum is a critical raw material for KEMET, and its price can have a significant impact on the company’s operational costs. Prior to establishing the KEMET partnership and the vertically integrated supply chain, KEMET sourced its tantalum from third parties (smelters), which resulted in a lot of price fluctuations. Furthermore, the costs of tantalum from industrial mines were getting to a point where certain industries started using alternative materials, such as ceramics, thus providing a clear business case for engaging with the ASM sector in Central Africa and DRC, as the extraction of tantalum in the DRC was less costly. KEMET had already discussed how this could be achieved in a socially and economically responsible way in 2009-2010, before the Dodd Frank Act came into being.

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189 KEMET 2013; KEMET 2014; Interview with supply chain company, 15.01.2015
190 Interview with supply chain company, 15.01.2015
191 KEMET 2013; KEMET 2014; Interview with supply chain company, 15.01.2015. Additionally, CTC evaluates the mine site and RCM certificates cover exports.
192 Interview with supply chain company, 15.01.2015; supply chain company, personal communication, 09.03.2015
193 Interview with supply chain company, 15.01.2015
194 Interview with supply chain company, 15.01.2015
195 Interview with supply chain company, 15.01.2015
4.3. Structure of Supply Chain & Business Model

KEMET has partnered with MMR, the concession owner of the Kisengo mine, through a long-term contractual agreement on the purchase of tantalum ore from Kisengo. MMR in turn has a contract with CDMC to manage the mine site (as at its other mine sites that were partners under SHF). However, contrary to SHF, KEMET decided to vertically integrate its supply chain, meaning that from the export point in DRC onwards, the ore is processed in facilities belonging to KEMET. To realise this vertical integration, KEMET built a tantalum refinery in Matamoros, Mexico, where the tantalum ore coming from the MMR comptoir in DRC is processed into K-salt, an intermediate product for capacitors. Prior to that, KEMET also acquired a smelting operation, KEMET Blue Powder in Nevada, where the K-Salt is processed into capacitor grade tantalum powder, before it is transported to KEMET’s facilities in Mexico and the U.S. for additional processing. The material is subsequently used to manufacture capacitors in those facilities as well as in China.

About 70% of KEMET's tantalum consumption is currently sourced through its vertically integrated chain, and the rest is sourced through other supply chains. These 70% sourced through the vertically integrated chain are not all sourced from Kisengo, but also include ore sourced from other ‘conflict-free’ sources. As with SHF, and aligned with common industry practice, KEMET builds on a mass balance model and does not separate the ore from Kisengo from the materials from other sources.

KEMET was one of four companies with products containing conflict-free minerals from DRC that filed an audited Conflict Minerals Report to the SEC in 2014, which is a significant achievement. KEMET filed two of its capacitor product categories as conflict-free, as the minerals used in them came from Kisengo and other conflict-free sources.

4.4. Achievements of Business Model

On a general level, the achievements of KEMET’s model are similar to those of SHF: it has helped reduce price fluctuations and ensured continuity of supply for KEMET, and reduced supply chain complexity, which helped increase transparency within the supply chain. It also helped to maintain and invigorate, particularly for MMR, and was essential

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196 iTSCI membership includes CDMC and MMR. Before the facility in Matamoros, Mexico was put into operation, KEMET used a processing plant in South Africa.
197 KEMET 2014; Interview with supply chain company, 15.01.2015; supply chain company, personal communication, 09.03.2015
198 KEMET 2014; Interview with supply chain company, 15.01.2015
199 Interview with supply chain company, 15.01.2015.
200 Interview with supply chain company, 15.01.2015
in building the confidence of downstream markets to source from DRC, further enhancing the ‘signalling effect’ and fostering legitimate mineral exports from DRC.

KEMET’s vertically integrated supply chain achieved confidence building around responsible sourcing from DRC. In the early stages of KEMET’s decision to source from DRC, the company listened to the concerns of downstream buyers, many of who would have preferred to avoid the region altogether. The customers questioned whether KEMET’s model to mass balance Congolese material with material from other sources (as batch smelting would have been too costly) could result in increased reporting obligations and negative public opinion.

The vertically integrated chain allowed KEMET to alleviate customers’ concerns through tight controls and a CFSP validated process of material from DRC. KEMET also simplified the supply chain down to essentially two main partners, the ore provider and KEMET, which allowed greater control and building downstream confidence. Indeed, the vertical integration model was so instrumental in convincing downstream buyers that it has allowed KEMET to source conflict-free not only from DRC, but from other countries identified as high-risk. Additionally, the vertically integrated chain allows KEMET to gear the smelting and processing to their own specific needs of capacitor manufacturing.

For MMR, the KEMET partnership provided several benefits, as KEMET pushed the programme early on and supported MMR with their top management. MMR’s first shipment of tagged production was sold to both KEMET and AVX, and KEMET was essential in having tagged tantalum production from Katanga accepted in the market. KEMET’s long-term commitment to source from Kisengo, as well as its investments in the Foundation, have resulted in additional achievements. It has allowed MMR to plan over the long-term and thus invest in the mine operations at Kisengo, and it has also facilitated social impacts through the activities of the Kisengo Foundation (described in detail below).

Additionally, as with SfH, the direct presence of a buyer and manufacturer in the upstream supply chain, and their repeated visits to the ASM mine sites, helped improve the ASM sector’s image and were essential in reducing misconceptions and misinformation about ASM in the tantalum market. For MMR, this was one of the major benefits provided by the closed-pipe systems.

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201 Interview with supply chain company, 15.01.2015; supply chain company personal communication, 09.03.2015
202 Supply chain company, personal communication, 09.03.2015. Before the facility in Matomoros, Mexico was put into operation, KEMET used a processing plant in South Africa.
203 Interview with supply chain company, 15.01.2015
204 Comment by MMR, 18.04.2015
205 Comment by MMR, 18.04.2015
4.5. Challenges of Business Model

The supply chain model of the KEMET Partnership faces similar challenges to those encountered by the SfH pilot as they were working with the same partners at different mine sites. The initiative faces operational risks that are pre-existent in the supply chain and in the context of a high-risk area (and are not specific to the closed-pipe). Such challenges can emerge from the structure of the supply chain, the mechanization process, as well as from price disputes and tensions between supply chain actors. While the aspects and challenges described in the following sections are not specific to the KEMET closed-pipe, they were specifically mentioned by stakeholders in Kisengo.

4.5.1. Imperative to increase production and therefore mechanisation

The structure of a vertically integrated supply chain, and the investments that KEMET made in acquiring the two processing facilities, result in an imperative to source enough material to operate these facilities at their capacity; thus creating an incentive for KEMET to buy material from other sources and invest heavily in the improvement of production at Kisengo. The structure of the supply chain model has thus created the imperative to move away from traditional ASM at Kisengo and to increasingly mechanise the mining operation. Indeed, one of KEMET’s main aims during the course of its partnership has been to increase production at the mine. This has brought investment into the mine and has helped mechanization and professionalization of the operation.

This process had already been started by MMR, which provides geological expertise, water pumps as well as excavators and machinery to remove the overburden at the pits where artisanal miners mine. Additionally, the company has implemented an entirely mechanised operation at ‘Bovou’, one of the sites in Kisengo. According to MMR, this mechanised site is a first pilot to test how such mechanisation processes can be best implemented. This highlights the long-term commitment of MMR to the area and could provide an opportunity for lessons learned in the mechanisation process, and allow for the piloting and fostering of alternative livelihoods projects in the long-term.

With regards to the excavators and the removal of overburden, miners acknowledge that it helps them greatly, as it reduces the time, labour efforts and investments needed to reach the ore. Additionally, it helps to reduce accidents, as miners operate in open pits rather than deep tunnels. There are, however, several challenges connected to this type of mechanisation. First, there are disputes amongst the miners around which team gets the help of the machines and when, and they complain that the machines are only deployed for teams that have good connections with the CDMC pit supervisors. While the miners might not understand the difficulty of planning the deployment of a few machines across six sub-sectors in Kisengo, it also indicates that tools for mechanisation can be used as a means to favour or discipline miners (e.g. not allowing

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206 While these challenges were observed and mentioned by stakeholders in Kisengo, it is likely that they also occur at other MMR mine sites such as Mai Baridi or Luba (where SH was present), as well as other mine sites in Katanga. For logistical reasons, researchers spent more time at Kisengo than at Mai Baridi, and thus were able to collect more information at Kisengo.
207 Interview with supply chain company, 15.01.2015; KEMET 2014
208 Interview with supply chain company, 15.01.2015
209 Interview with supply chain company, 15.01.2015; KEMET 2014
210 Interview with MMR representative, 16.02.2015
211 Focus Group with representatives of the Miners’ Committee, Kisengo, 06.02.2015
212 Informal interview with miners on site, Kisengo, 05.02.2015
213 Informal interview with miners on site, Kisengo, 05.02.2015
214 Informal interview with geologist and machines operator at the Km4 mine site, Kisengo 05.02.2015
them access to the machines if they do not behave as CDMC/MMR would like them to).215 This is exacerbated by the fact that state services, who are responsible for the distribution of pits after the overburden is removed from an area, allegedly use their power to demand bribes from the miners who want to be allocated the best pits; or allocate them to miners with whom they have a personal relationship.216 Second, and related to this, the miners paradoxically seem to fear the use and deployment of machinery to their pits, as according to them this was how the process of mechanisation started in Bovou, where they are now not allowed to mine anymore, and they fear that they will be pushed out of the remaining areas as well (noting that it is unclear whether miners had lost jobs in the process at Bovou, as they may have moved to other sectors and sites in Kisengo).217

With regards to the process of mechanisation at Bovou, there have been several challenges that increased the miners’ discontentment and frustration. In order to install the mechanised operation, which meant the displacement of artisanal miners from the site, MMR offered the pit owners at Bovou compensation,218 and states that all have been paid.219 According to miners in Kisengo and civil society organisation in Kalemie, some pit owners accepted the offer, but others refused to leave the site. According to the same sources, the remaining miners had to abandon their pits when MMR stopped providing the water for washing the ore (which had been brought to the pits from the river by MMR pumps).220 This process manifested two concerns amongst the mining community. First, miners now fear that the machinery provided by MMR could be further used as disciplinary tools, and second, they fear they will be pushed away from other productive mine sites.

KEMET is aware that transition from ASM tends to displace mine workers, and plans to counter-balance these impacts by providing and supporting education in the community (through the Kisengo Foundation, see below), in order to facilitate alternative livelihoods and allow people to access formal employment at the mechanised operation.221 MMR states that it will continue to buy from artisanal miners and has no intentions of evicting them altogether, and believes that there is space for both types of exploitation at Kisengo.222

As stated above, the long-term commitment of MMR and KEMET to developing the Kisengo mine could provide an opportunity to develop best practice, aligning their processes of displacement with international standards such as the IFC framework (further expanded in the conclusions below), and developing a formal mitigation plan for negative effects of increased mechanisation on mine workers and the community in Kisengo. The long-term commitment of the partnership also provides the opportunity for developing, testing and implementing alternative livelihoods projects, which would help to mitigate negative effects of displacement. Such plans are likely to have long-term benefits, whereas in the mid-term other income opportunities need to be ensured (e.g. allowing mining on other sites in Kisengo, which MMR is already doing).

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215 Focus group with civil society representatives, Kalemie, 07.02.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
216 Informal interview with the President of the Miners’ Committee at the Km4 mine site, Kisengo, 05.02.2015; Focus Group with representatives of the Miners’ Committee, Kisengo, 06.02.2015
217 Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015.
218 Interview with MMR Mine Site Administrator, Kisengo, 05.02.2015
219 Representative of MMR, personal communication, 04.05.2015.
220 Focus group with civil society representatives, Kalemie, 07.02.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
221 Interview with supply chain company, 15.01.2015
222 Interview with MMR representative, 16.02.2015
4.5.2. Structure of supply chain

At Kisengo, the exclusion of traders between the mine site and the exporter initially created challenges for MMR and CDMC, and had wider economic impacts. Before MMR’s and CDMC’s arrival and the implementation of the closed-pipe and traceability system, there were many different négociants present at Kisengo, mainly arriving from Bukavu and Uvira. These traders greatly resisted MMR’s claim to all minerals from its site, and were often found trying to steal minerals and smuggle them out of the concession. According to MMR, this issue has greatly improved over the years, and the remaining traders in the Kisengo mining camp complained to the researchers about being pushed out of their economic activity.

The reception of this change by the miners is complicated by the complexity of the local economy. MMR as the concession owner, through CDMC, is now the only buyer in the supply chain from Kisengo, practically eliminating the competition amongst these traders. As is often the case in mining communities the traders played many roles in the local community, including that of an informal ‘bank’ providing liquidity. While this included an important role in pre-financing miners and the supply chain, it also nourished the local economy with a steady circulation of cash. Now, the local economy must exclusively depend on the liquidity of MMR (see below). This dependency could erode economic resilience for the local community particularly if MMR creates fewer jobs for ASM over time and does not work to increase local content (i.e. procure goods and services from the local community, as far as is possible in such a context). In theory, this could potentially create a push for migration out of the region as miners seek new opportunities with their families, potentially putting the community into decline.

This illustrates a complexity in development investment. While concession rights are set in law, the structure of supply chains can result in the traders and other local actors being pushed out of the supply chain and out of business, which is not well received or accepted by communities on the ground, who would prefer a selection of buyers in an open, competitive market. However, according to MMR, the exclusion of these traders also had advantages, as it helped stop illegal trade and the smuggling of minerals to neighbouring countries and introduce traceability, which consequently has helped the government to collect taxes. Notably, the traders had not invested in developing the mine, nor in social programmes for the local community, both of which MMR is committed to.

In Kisengo, the structure of the supply chain and the issues connected to that (perceived monopsony, and limited opportunity for price negotiations, as described above in the chapter on SFH) have led to a risk of violence. In 2011, violent protests erupted at the Kisengo mine site, apparently started by miners who were unhappy with the price that CDMC offered for their minerals, leaving one person dead and some property destroyed. CDMC had reduced the price for minerals because MMR had also reduced the price it paid to the cooperative, and justified the move with falling tantalum prices on world markets.

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223 Interview with traders (commerçants) in Kisengo, 05.02.2015
224 Informal talk with MMR representative, Kisengo, 06.02.2015
225 Informal talk with MMR representative, Kisengo, 06.02.2015
226 Informal interviews with traders and villagers, Kisengo, 05.02.2015.
227 Informal interviews with miners, traders and villagers; Interview with Kay Nimmo, 13.03.2015
228 Informal interviews with miners, traders and villagers, Kisengo, 05.02.2015
229 This could be a potential future impact, and was not observed during the research.
230 Interview with Kay Nimmo, 13.03.2015; Interview with Ken Matthysen, IPIS, 13.03.2015
231 Informal talk with MMR representative, Kalemie, 06.02.2015
and its high overheads due to its obligations regarding due diligence and social benefits.\footnote{Mthembu-Salter, G. 2012}

Following this event, it was decided that in order to prevent and manage such incidents in the future, the Provincial Ministry of Mines, together with government agencies (SAESSCAM, Division des Mines, CEEC), CDMC and MMR should set the price paid to miners per kilo of tantalum. \footnote{RCS Global 2013; Interview with MMR representative, Kalemie, 02.02.2015; Interview with representative of CDMC, Kalemie, 02.02.2015; Interview with Division des Mines, Kalemie, 03.02.2015} Once a quarter, the price is adjusted according to the fluctuation of global market prices. However, this is a difficult exercise, as there is no international fix price for tantalum, and civil society in Kalemie and other stakeholders state that MMR still plays the main role in setting the base price, \footnote{Interview with miners' representative in Mai Baridi, 04.05.2015; Interview with Gregory Mthembu-Salter, 13.03.2015} because the government agents do not know about MMR's costs. \footnote{Interview with Gregory Mthembu-Salter, 13.03.2015} While according to CDMC, the mechanism for price fixing through the government has reduced the disputes around prices to a certain degree, \footnote{Interview with representative of CDMC, 02.02.2015} the mechanism is not seen as credible by other stakeholders.\footnote{Interview with Gregory Mthembu-Salter, 13.03.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015}

### 4.5.3. Liquidity impacts: Credit and indebtedness

Given the structure of the supply chain and MMR's role as the only buyer of minerals, the company's liquidity becomes an important factor in the functioning of the whole system. Usually, MMR pre-finances CDMC, which in turn every morning allocates funds to its buyers, who then buy minerals from the miners at the sale points in the pits. At the end of the day, the CDMC buyers return to the MMR depot with the minerals they bought, and return any unspent funds to CDMC. \footnote{Informal interviews with CDMC buyers at the mine site, Kisengo, 05.02.2015} However, according to miners working at Kisengo and other stakeholders, this system often does not work, as there is often a lack of liquidity on behalf of MMR, and CDMC buyers do not have money to buy the miners' production. In these cases, the miners' production is bought by CDMC on credit, meaning that the amount sold by the miner is registered and will be paid once funds are available; or sometimes a small part of the value of minerals is paid and the rest is registered for when funds are available.

This poses a huge challenge on the part of the miners, as they live off their day to day revenue, and ruptures in liquidity can sometimes last as long as one or two weeks.\footnote{Interview with civil society representatives, Kalemie, 07.02.2015; Informal interviews with miners, traders and villagers, Kisengo, 05.02.2015; focus group with representatives of SAAESSCAM, Division des Mines, Police des Mines and iTSCI, Kisengo, 05.02.2015} To support themselves and their families, miners are forced to take up credit from the local traders ('commerçants'), often indebting themselves, as traders request an interest rate of 10%.\footnote{Informal interviews with traders at Kisengo, 05.02.2015; Focus group with Comité de creuseurs, Kisengo, 06.02.2015} In addition to creating negative social impacts, the liquidity problems also

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\footnote{Mthembu-Salter, G. 2012}
create a risk to traceability, as it incentivises miners to sell their minerals clandestinely to other buyers.

According to MMR, the issue of liquidity at Kisengo is caused by logistical challenges inherent in the remoteness of Kisengo and Kalemie and the economy of DRC: There is no banking system available, and thus all payments at the mine site have to be made in cash. The cash has to be physically transported from a bank to the mine site, which given the remoteness of Kisengo and the status of the roads takes time. Additionally, the only bank branch in the area is located in Kalemie, but this bank itself depends on cash shipments from banks in Lubumbashi, which are usually flown in by a commercial airline that operates only irregularly and unreliably.

### 4.6. Costs and Investments

The following table lists contributions and investments made in relation to the closed-pipe initiative and/or those which were necessary for its functioning (rather than contributions made due to the initiative).

<table>
<thead>
<tr>
<th>Entity in supply chain</th>
<th>Costs of setting up and maintaining the initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miners</td>
<td>None directly</td>
</tr>
<tr>
<td>CDMC</td>
<td>Annual iTSCi membership fee</td>
</tr>
</tbody>
</table>
| MMR\(^{244}\)          | 2 million USD to pre-finance the start up of iTSCi at all 3T mine sites in Katanga (including Kisengo, Mai Baridi, Luba), later deducted from the iTSCi levy \(^{245}\)  
  Annual iTSCi membership fee  
  iTSCi levy |
| KEMET                  | Cost-neutral purchase of minerals (world market price)  
  Investment of 1.5 million USD in Kisengo Foundation (not planning to recover this) \(^{246}\)  
  Total of 85.7 million USD for the acquisition of KEMET Blue Powder \(^{247}\)  
  Investment in the refining facility in Mexico \(^{248}\)  
  iTSCi annual membership fee  
  CFSI annual membership fee, excluding audit costs |

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\(^{241}\) Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines and iTSCi, Kisengo, 05.02.2015  
\(^{242}\) Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines and iTSCi, Kisengo, 05.02.2015  
\(^{243}\) Interview with MMR representative, Kalemie, 02.02.2015  
\(^{244}\) MMR also pays taxes related to production and export, as well as re-investment into social programmes, which occur as costs of doing business regardless of traceability and due diligence initiatives.  
\(^{245}\) This is the same amount as already mentioned in the chapter on SfH, since it was used to start iTSCi at all 3T mine sites in Katanga.  
\(^{246}\) Interview with supply chain company, 15.01.2015  
\(^{247}\) Supply chain company, personal communication, 09.03.2015.  
\(^{248}\) KEMET considers this information proprietary.
4.7. Direct Impacts

4.7.1. Traceability & Due Diligence

As in the SFH pilot, MMR financed the implementation of ITSCi and KEMET made no financial contribution. In both cases, downstream buyers viewed the implementation of a traceability and due diligence system to be the responsibility of the mining operator.

4.7.2. Economic Impacts

KEMET has a long-term contractual agreement with MMR for the purchase of tantalum ore from Kisengo. It was not possible to obtain information on the timeframe of this agreement or the volumes KEMET committed to purchase, as KEMET considers this proprietary information. MMR states that KEMET is an economically very important customer for their business, even though it is not the only buyer of ore from Kisengo.

The researchers cannot disclose more detailed statistics on exports from Kisengo. KEMET itself states that the shipments from MMR can be classified as very important for its business; and while the company provided information on the volume sourced for a specified audit period, due to commercial confidentiality, the amount of ore sourced from Kisengo cannot be published. Also due to commercial confidentiality, it was not possible to obtain an indication of the price range that KEMET pays for ore from MMR. KEMET states that it buys the ore from MMR at world market prices, as the company views it as imperative that the initiative is financially sustainable.

At the Kisengo mine, nominal prices per kilo ore for the miners have increased around 300% since 2010, according to MMR (researchers are not able to disclose more detailed information on prices). As stated in the chapter on SFH, according to ITCSi, the prices for miners at Kisengo are not obviously different from what the miners get at other tantalum mine sites in Katanga where ITCSi is implemented. There is anecdotal information that the prices paid for tagged minerals in general tend to be higher if compared to the prices paid for untagged material; this applies to Kisengo as well as other ITCSi mine sites.

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249 Interview with representative of Apple, 16.03.2015
250 Interview with MMR representative, 16.02.2015
251 Interview with MMR representative, 16.02.2015
252 Interview with MMR representative, 16.02.2015. More detailed information about the economic importance of KEMET as a customer to MMR was not available due to commercial sensitivity and confidentiality.
253 Interview with MMR representative, 16.02.2015
254 Supply chain company, personal communication, 09.03.2015
255 Supply chain company, personal communication, 23.03.2015
256 Interview with MMR representative and CDMC representative, Kalemie, 02.02.2015
257 Interview with Kay Nimmo, 13.03.2015
258 Kay Nimmo, personal communication, 07.05.2015. See also Bafilemba, F. et al 2014
Not all ore from Kisengo is produced artisanally anymore, since the mechanised plant at the Bovou sector started operations in 2014. The current average daily production at the artisanally mined sectors in Kisengo is around 600kg, whereas the mechanised production at Bovou amounts to 600-800kg per day.\(^{259}\) According to stakeholders, the artisanal production results in a daily injection of around 18,000 USD into the local economy across the 6 sectors of Kisengo.\(^{260}\)

It is difficult to calculate the approximate earnings of artisanal miners from that amount, as the number of miners fluctuated greatly over the past 3.5 years. In 2009, when MMR bought the concession in Kisengo (and before the KEMET partnership started), there were around 4,000 artisanal miners on the site.\(^{261}\) Today, according to MMR, there are around 1,500 artisanal miners working across Kisengo's six sectors.\(^{262}\) The Kisengo mining settlement has between 7,000\(^{263}\) and 15,000\(^{264}\) inhabitants, of which the 1,500 artisanal miners may be part. As an illustrative calculation\(^{265}\), given these numbers, the local economic contribution of artisanal mining (in general, not only related to KEMET's closed pipe) could be 12 USD per inhabitant per day, or more realistically between 2.57 USD and 1.2 USD per inhabitant per day, depending on numbers. This is comparable to DRC's GDP per capita of 809 USD (PPP, current international USD) in 2013\(^ {266}\), and above the national rural poverty line of approximately 0.81 USD per person per day.\(^ {267}\) However, it is important to consider that miners also have to support their (sometimes large) families from this amount. Depending on the number of family members who depend on the miner's income, their income potentially falls below the rural poverty line (thus in the higher estimate, a family of more than 3 would live below the rural poverty line, and in the lower estimate even a two person household would live below the rural poverty line – provided of course that there is no other, additional income in the family).

4.7.3. The settlement at Kisengo and its different stakeholder groups

In order to understand the economic (and social) impacts of the mining activities and the influx of cash it brings to the area, as well as the impacts of the Kisengo Foundation, it is important to understand the history of the settlement in Kisengo, as well as its social structure and different stakeholder groups.

What today is called ‘Kisengo’ is not an actual village, or at least it is not perceived as a village by local stakeholders, but as a mining camp, a temporary settlement that has served as a trading point, whereas the actual village of Kisengo is located some 18km away.\(^ {268}\) When the mineral deposit was discovered by artisanal miners, they started building their shelters and creating the settlement in the place where today MMR's mining camp is located. At the time, the chief of the village 18km away encouraged his people to also move to the camp, so that they could profit from the mining. Thus today, two distinct

\(^{259}\) Interview with MMR representative and CDMC representative, Kalemie, 02.02.2015; Focus group with civil society, Kalemie, 07.02.2015

\(^{260}\) Focus group with CDMC site managers (‘chefs de site’) at Kisengo, 05.02.2015

\(^{261}\) Interview with representative of CDMC, Kalemie, 02.02.2015

\(^{262}\) Interview with MMR representative and CDMC representative, Kalemie, 02.02.2015

\(^{263}\) Interview with CDMC representative in Kisengo, 05.02.2015

\(^{264}\) Interview with supply chain company, 15.01.2015

\(^{265}\) This calculation can only be very illustrative, since many factors changed over the years, e.g. world market prices, number of miners, exchange rates, etc.

\(^{266}\) World Bank Data 2013, DRC GDP per capita, PPP (current international USD)

\(^{267}\) According to UNDP, revenue per inhabitant was 319 USD in 2013, i.e 0.87$ per person per day. In the DRC DSRP 2011-2015, the average revenue per inhabitant is calculated at 298 USD per annum, i.e. 0.81$/day/inhabitant.

\(^{268}\) Focus Group with representatives of the Miners' Committee, Kisengo, 06.02.2015.
stakeholder groups live at the mining settlement with their families (some already since 5-6 years) 269: On one hand, there are the people indigenous to the area, the surrounding villages or the Kisengo settlement itself. This stakeholder group mostly lives off subsistence agriculture and the trade of agricultural goods, and is generally not involved in the mining activities. On the other hand, there are the miners and their families, who are seen as ‘nomads’ who have come from other parts of the country and move from mine site to mine site as they please. For most of them, mining is the main economic activity and profession, and some of their wives and women are also involved in mining activities.271

Due to the history of the settlement, both of these stakeholder groups perceive it as a temporary settlement rather than a village, a place where one stays for some time, but is not actually ‘home’. This means that they use their income made in the Kisengo settlement to invest in their hometowns and villages rather than in the settlement itself, which explains why the large amounts of cash injected through the mining activities are not necessarily visible at the settlement.272 This also has certain implications for social projects, as part of the inhabitants may not necessarily see the settlement as something to be invested in or taken care of, but rather as a place to make money, thus potentially leading to a certain mentality of theft and appropriation of projects or infrastructure that were intended for the common good (see below).273

A third stakeholder group in the Kisengo settlement are the traders who trade goods from Kalemie in Kisengo (commerçants, as opposed to négociants, who trade in minerals). Some of them used to trade in coltan before MMR and CDMC arrived; they brought goods from Kalemie to Kisengo, bought coltan from their proceeds and sold the minerals in Bukavu (often pre-financed by comptoirs there). With the arrival of MMR and tangentially the implementation of the closed-pipe supply chain, these activities largely stopped (as discussed above). However, it seems that the commerçants are still economically influential players in Kisengo, often acting as creditors to the miners and sometimes even CDMC (as discussed above).274

4.7.4. Impacts on the local economy and continued livelihoods

These two stakeholder groups in Kisengo, the people indigenous to the area, and the migratory mining population, seem to lead lives that are quite different from each other, and also have different perceptions regarding economic impacts, income, personal security and expectations towards MMR.275 With regards to economic impacts of the mining activities and the cash influx into the local economy, two distinct impacts should be noted: First, the population indigenous to the area who are not directly involved in mining, but who are selling agricultural goods or traded merchandise from Kalemie, stated that on the one hand the injection of cash means that they now have customers who can afford their products.276 This is confirmed by other stakeholders stating that the

269 Interview with School Director, Kisengo, 05.02.2015; Focus group with women miners, Kisengo, 05.02.2015
270 ‘Autochtone’ is the Congolese French expression for ‘indigenous’, a word that the people in Kisengo used to describe themselves.
271 Focus group with women miners, Kisengo, 05.02.2015
272 Focus Group with representatives of the Miners’ Committee, Kisengo, 06.02.2015
273 Focus Group with representatives of civil society and FEC, Kisengo, 05.02.2015; Focus Group with representatives of the Miners’ Committee, Kisengo, 06.02.2015
274 Informal interviews with miners, traders and villagers, Kisengo, 05.02.2015
275 Interview with School Director, Kisengo, 05.02.2015; Informal interviews with miners, traders and villagers, Kisengo, 05.02.2015; Focus group with women miners, Kisengo, 05.02.2015
276 Interview with School Director, Kisengo, 05.02.2015
resumption of mining activities has allowed local farmers, traders and business operators to sell their commodities to miners who earn from their mineral sales every day.277

On the other hand however, villagers in the Kisengo settlement also stated that this injection of cash has caused the prices of food and other goods to rise higher and higher, leading to comparatively high living costs at the mining settlement.278 This seems not to have been mitigated by the improvement of roads and increased accessibility to the mine site.279 The high living costs were a particular concern to women (who are traditionally responsible for preparing meals and providing clothes, and who are less or not involved in mining, apart from miner’s wives who mine tailings), and the ‘autochthones’, who are not involved in mining, but continue to live off subsistence farming and thus benefit indirectly, through the sale of agricultural goods, from the cash injection.280 This is also connected to the complaint by civil society that MMR is not hiring enough ‘autochthones’ at the camp and only creates income and employment for miners.281 While it is normal for a mining company to create income and employment for miners, this is an indication of the different economic impacts felt by the two stakeholder groups.

4.7.5. Environmental and Social Impacts

According to MMR, KEMET had inquired about the company’s environmental policies when engaging with them.282 Apart from that, there seem to have been few requirements or expectations regarding environmental management. MMR does have environmental policies and a department, but states that implementing traceability and a conflict-free supply chain had been the primary focus up to now; and that while the company has already been working on environmental impacts, it intends to have an increased focus on environmental issues in the near future.283

At Kisengo, MMR is managing the operation’s impact on water resources; it has stopped the washing of minerals in streams and rivers by providing water pumps that bring the water directly to the washing areas next to the mining pits. Deforestation seems to be an issue connected to both the artisanal mining areas and the industrial sector.284 Other environmental impacts stem from human waste around the settlement and mine site, as the latrines provided are not well positioned and the miners do not use them. According to the President of the Miners’ Committee, more sensitisation regarding sanitary installations is needed.285

Representatives of civil society organisations also mention an impact of mining activities (in general) on food security, particularly in the territoire of Nyunzu, where Kisengo is located. The territoire had been the ‘breadbasket’ for maize, but since a lot of people have moved away from agriculture into mining, food production has reduced. The population now has to get some supplies from elsewhere, which has meant that prices for these foodstuffs as well as malnutrition have increased.286 There would be an opportunity to

277 Interview with MMR representative, Kalemie, 02.02.2015
278 Interview with School Director, Kisengo, 05.02.2015; Informal interviews with miners, traders and villagers, Kisengo, 05.02.2015
279 Interview with School Director, Kisengo, 05.02.2015
280 Interview with School Director, Kisengo, 05.02.2015
281 Focus Group with representatives of civil society and FEC, Kisengo, 05.02.2015
282 Interview with MMR representative, 16.02.2015
283 Interview with MMR representative, 16.02.2015
284 Focus group with civil society representatives, Kalemie, 07.02.2015
285 Interview with CDMC site managers (‘chefs du site’), Kisengo, 05.02.2015; informal interview with the President of the Miners’ Committee, Kisengo, 05.02.2015.
286 Focus group with civil society representatives, Kalemie, 07.02.2015
mitigate this by launching projects to provide alternative livelihoods, or by providing non-mining populations with micro-credits and technical support to increase their agricultural production.  

According to civil society representatives, vulnerable groups such as the Mbuti are generally marginalised in DRC and have not profited much from MMR’s social projects. They are not involved in mining at Kisengo, but the area is their hunting territory. As they hunt at night, the pits pose a danger for them. The implication being made by these statements is that there is more MMR could do to safeguard the rights of these indigenous people and, were responsible sourcing in a broader sense the purpose of the KEMET Partnership, then attention to this issue by KEMET could help put its management on the radar for MMR.

4.7.6. The Kisengo Foundation

MMR, as part of the Somika Group, implements social projects at all their mine sites through the group-wide Vinmart Foundation. For Kisengo however, a separate foundation, the Kisengo Foundation was created to implement social projects specifically in Kisengo. The aim of the Foundation is to finance social and economic projects at the mine and the village and KEMET’s main goal with the partnership and foundation was to ‘improve security to build economic and social stability’. The Kisengo Foundation was fitted with a capital fund of a total of 2.5 million USD, with a contribution of 1.5 million USD from KEMET and around 1 million USD from MMR.

The Foundation is a non-profit organisation under DRC law. It is managed by a board of five directors, two of which are appointed by KEMET and three by MMR. It is the Foundation (and consequently MMR), which is responsible for deciding on social projects and how the money should be spent based on the needs of the local community. Originally, in 2011, KEMET had approached the NGO Pact (which is also implementing iTSCI) to be a partner in the implementation of social programmes, but Pact declined the offer because they felt that it might have constituted a conflict of interest with the implementation of iTSCI (i.e. for Pact to be both the assurers of the system as well as the recipient of funds from KEMET could be construed as a lack of impartiality).

According to KEMET, their initial funding of 1.5 million USD has been fulfilled. The Kisengo Foundation states that there is still some money available to continue the projects that have already been implemented, and that there are some new projects in planning. KEMET states that it is committed to continue funding the Foundation and managing logistics support for external donations. Additionally, the Foundation is open to contributions from others and it continues working with the industry and non-

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287 Focus group with civil society representatives, Kalemie, 07.02.2015
288 Focus group with civil society representatives, Kalemie, 07.02.2015
289 Interview with MMR representative, 16.02.2015
290 Interview with MMR representative, 16.02.2015
291 KEMET 2014
292 Interview with supply chain company, 15.01.2015
293 KEMET 2014
294 Interview with supply chain company, 15.01.2015
295 KEMET 2014
296 Supply chain company, personal communication, 09.03.2015
297 Interview with supply chain company, 15.01.2015
298 Interview with iTSCI/Pact representatives, Goma, 16.02.2015
299 Interview with supply chain company, 15.01.2015
300 Interview with MMR representative, 16.02.2015
According to KEMET, the Foundation currently receives support from a large customer. KEMET believes that true sustainability is not achieved through complete reliance on external funding. The intention is that the Foundation’s projects become self-sustaining in the long run, by using revenues generated through the mine. MMR stated that it is prepared to continue funding the Foundation, and would see it as ideal if all buyers who buy minerals from Kisengo would contribute to it.

The Foundation has financed “a school, a medical clinic, fresh water wells, solar street lighting and other infrastructure improvements”, which are discussed in detail below. The school and clinic are governed through the Kisengo board, which includes representatives from both KEMET and MMR. The partnership is currently looking for partner organisations in order to supplement their infrastructure projects with human resources such as teachers and doctors.

4.7.6.1. Social projects of the Kisengo Foundation

Overall, MMR’s and the Kisengo Foundation’s social achievements are highly regarded by both government actors and civil society. They state that the impacts are particularly visible and important at the mine site, as the communities around them used to be very poor. Even though mining activities already took place before MMR arrived, none of the social projects existed, and stakeholders regard it as a great achievement of MMR and the Kisengo Foundation to channel some of the value of minerals back to the local level. According to them, MMR is the only company with such CSR projects, making them a pioneer in the area. While this overall achievement should be held high, there are some challenges associated with the individual projects and the consultation process, which are discussed in detail below.

Consultation process & local ownership

According to CDMC and MMR, the individual projects of the Kisengo Foundation are decided upon through a participative consultation process with the local community. Meetings with all stakeholder groups of the community, including the Mbuti (an indigenous pygmy group which has suffered long-standing marginalisation), was held to determine the community’s priorities for social projects. At the meetings, the participants were divided into smaller sub-groups, who then decided on their list of priorities. The sub-groups’ priorities were then brought back together, and the overall priorities were selected based on the agreement of the majority of sub-groups. According to MMR, consultations with the local population were held in 2010, 2011, 2012, 2014 and 2015.

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301 Interview with supply chain company, 15.01.2015
302 Supply chain company, personal communication, 09.03.2015
303 KEMET 2014
304 Interview with MMR representative, 16.02.2015
305 KEMET 2014
306 KEMET 2014
307 KEMET 2014
308 Interview with Division des Mines, Kalemie, 02.02.2015; Focus group with civil society representatives, Kalemie, 07.02.2015
309 Interview with Division des Mines, Kalemie, 02.02.2015
310 Interview with SAESSCAM, Kalemie, 02.02.2015
311 Additional information on when this consultation happened, whether it was one consultation or several, and whether additional consultations are planned in the future, was requested from MMR for this version of the report. However, due to the tight deadline it was not yet possible to include this information in this version of the report.
312 Interview with MMR representative and CDMC representative, Kalemie, 02.02.2015
313 Representative of MMR, personal communication, 30.04.2015.
Government agents confirmed that the community decided on the priorities, but stated that they were not involved in decision-making, and rather saw their role in monitoring MMR’s plans to make sure what is being promised in terms of social projects is actually being implemented.  

While it is commendable that the Foundation had a consultation process with local stakeholders (which is not always the case in CSR projects in general), there have been some complaints around it. For example, civil society representatives acknowledged the fact that there was a consultation, but stated that they have some concerns about the prioritisation of projects in the process. According to them, a pre-fixed list of priorities was presented to the community, and the consultation was not very participative, but rather a matter of getting the village chiefs to sign. In the Kisengo settlement itself, some stakeholders stated that they were never consulted on the projects (for example, the group of women miners). While consultation does not have to be universal to be meaningful and representative, it is essential that vulnerable groups are expressly considered and included, and their points of view solicited, even if it’s outside of that type of forum.

Additionally, civil society representatives raised the issue of participation in the implementation of projects. According to them, the community and civil society are not really involved in creating the plan for a particular project or actually implementing it on the ground. Consequently, the people do not feel like they ‘own’ the activities and projects, but rather believe it is ‘a hospital for MMR’ or ‘electrification for MMR’, which in turn makes them less likely to appreciate it, care for it, or even use it. It also limits the potential for these infrastructure projects to have wider (and potentially more far-reaching), though perhaps less tangible outcomes based on how the process is run, who is involved and in what ways.

The MMR representative on site acknowledged this and stated that they would actually want the community to take more ownership of the projects, particularly to reduce issues like theft (see below). This illustrates the importance of not only a participatory consultation process, but also participatory (at a minimum) mechanisms for implementing the projects, e.g. by including community members in the planning and building of infrastructure, in monitoring and maintenance, and involving them in financing parts of the projects (not just school fees and hospital consultation, but also for water and electricity), and the management of expectations of the community from the beginning. This would increase the feeling of ownership and inclusivity by the community, and would help increase the lifespan and thus sustainability of the Foundation’s projects. Of course, the optimal scenario is the foundation supports local NGOs or businesses to implement these projects with them to build these organisations’ capacity and include local content (i.e. procure goods and services from the local community) as much as possible.

Public electrification

314 Interview with Division des Mines, Kalemie, 02.02.2015
315 Focus group with civil society representatives, Kalemie, 07.02.2015
316 Focus group with women miners, Kisengo, 05.02.2015; Focus group with representatives of civil society and FEC, Kisengo, 05.02.2015; Informal interviews with miners, traders and villagers, Kisengo, 05.02.2015
317 Focus group with civil society representatives, Kalemie, 07.02.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
318 Focus group with civil society representatives, Kalemie, 07.02.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
319 Interview with MMR Site Manager, Kisengo, 05.02.2015
The Kisengo Foundation financed the establishment of solar powered streetlights at Kisengo,\(^{320}\) a project that has also been implemented at Mai Baridi and Luba (financed by Vinmart Foundation). For all three mine sites, a total of 45 streetlights were installed.\(^ {321}\) In Kisengo, they were installed at MMR’s camp and along the main road of the settlement. According to KEMET, the public electrification helped to improve the security situation and facilitated mobility during the night.\(^ {322}\) However, the researchers were not able to assess the impact of the street lights, as by that time none of the street lights in the settlement were working anymore, because almost all solar panels and batteries had been stolen from the lampposts, and those that remained were removed again and are stored at MMR’s camp in order to protect them from theft.

Residents of the settlement and civil society stated that they would have preferred to get electricity in their houses rather than just along one street, and that in this way, households would have benefited more and theft could have been prevented.\(^ {323}\) Most of the houses in the settlement do not have access to electricity, and only very few have their own small solar panels. Interestingly, the President of the Miners’ Committee operates a small fuel powered generator at his house, and has drawn electricity cables from his power supply to several houses in the neighbourhood in return for a fee. An option for the Foundation could have been to support the President of the Miners’ Committee in developing this business, in exchange for giving him ownership over the streetlights and demanding a proportion of new development come from renewable energy. While MMR certainly benefits from streetlights at the camp and along the streets, there may have been options for less expensive and more effective ways to benefit the community with regards to electricity.

**Water supply**

The Kisengo Foundation also funded the installation of water wells to provide the local population with access to fresh water.\(^ {324}\) 5 water holes around the settlement were constructed with the help of MMR’s machines.\(^ {325}\) Particularly the women appreciate these wells, as it reduces the time and physical efforts they spend carrying water, and has positive impacts on their health and that of the broader community.\(^ {326}\) Before the Foundation constructed the wells, there had been cholera outbreaks in the settlement, but these have stopped occurring,\(^ {327}\) showing the large impact that fresh water supplies can have at a mining settlement. However, as with other infrastructure projects, maintenance remains an issue. According to local stakeholders, at the time of the field research, three wells did not work anymore (including the one at the school), as their pumps have been broken, and one has contaminated water leaking into it.\(^ {328}\)

**Health Centre**

MMR had already started constructing the hospital before the partnership with KEMET was formed; but once the Kisengo Foundation had been established, its funds helped

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\(^{320}\) KEMET 2014

\(^{321}\) Interview with CDMC representative, 05.02.2015

\(^{322}\) KEMET 2014

\(^{323}\) Focus group with representatives of civil society and FEC, Kisengo, 05.02.2015

\(^{324}\) KEMET 2014

\(^{325}\) Personal communication, downstream company, 26.05.2015

\(^{326}\) Interview with School Director, Kisengo, 05.02.2015

\(^{327}\) Interview with supply chain company, 15.01.2015

\(^{328}\) Interview with MMR representative, 16.02.2015; Interview with School Director, Kisengo, 05.02.2015
finalise the project,\textsuperscript{329} by contributing funds to the building and equipment of the centre and financing medical professionals from the US and elsewhere to train the local staff to run the hospital in the longer term.\textsuperscript{330}

The health centre seems fully equipped and has two patient rooms with a total of 36 beds, a consultation room for the resident doctor with a stationary and portable ultrasonic instrument, an operation theatre, a sterilising room and machinery, a separate room for women to give birth, a room for radiology (but the machine is not operational yet), a small laboratory for blood tests, a storage room for equipment such as syringes, sterilising liquid, surgeon knives, etc, a small dispensary for medicaments, as well as toilets and showers.

The hospital is powered by solar panels (the only ones that are not stolen, because they are guarded), but half of the batteries do not work anymore. Additionally, there is a machine to create electricity from wood; but it looked unused and staff was not able to say when they had used it the last.

The health centre has a resident doctor who was deployed from Lubumbashi in November 2014 and is paid by the foundation. According to him, staff include 10 nurses, 2 maids and 2 guards, as well as 5 staff working as first aiders at the mine sites (researchers only met one nurse).\textsuperscript{331} The staff is not paid by the Foundation but receives an allowance from the state.\textsuperscript{332}

The resident doctor at the centre, Dr. Oidalamba, stated that when he arrived, he received 20-30 patients per day, but that this has now levelled off to around 5-10, meaning about 48 per week and 144 per month.\textsuperscript{333} At the time of the visit, there were 26 patients. According to Dr. Pépé Kapend Kabaku, the doctor supervising the Zone de Santé Nyunzu, the most frequent cases are malaria, respiratory illnesses, diarrhoea and measles.\textsuperscript{334} Dr. Oidalamba also adds typhoid, meningitis and STIs such as syphilis.\textsuperscript{335} The more complex cases are referred to the regional hospital in Nyunzu, a days journey away.\textsuperscript{336}

According to the Kisengo Foundation, surgeries are not allowed without supervision, and are only carried out when experienced doctors are present (for example doctors from Bukavu Panzi Hospital).\textsuperscript{337} The Kisengo Foundation and KEMET also finance some of the doctors of US-based medical Foundation 'Upright Africa' to travel to DRC and train local and regional doctors in the prevention and treatment of musculoskeletal and spinal injuries, which are the most common injuries at mine sites.\textsuperscript{338} So far 50 surgeries have been carried out in Kisengo.\textsuperscript{339}

Patients pay 2000CF (2.22 USD) for the consultation with the doctor and 5000CF (5.55 USD) for more complex testing and interventions such as ultrasonic testing or childbirth.

\textsuperscript{329} Interview with MMR representative, 16.02.2015
\textsuperscript{330} KEMET 2014
\textsuperscript{331} Interview with Doctor at the Hospital, Kisengo, 05.02.2015
\textsuperscript{332} Interview with Doctor at the Hospital, Kisengo, 05.02.2015. It is common for government agents who are recruited locally to receive an allowance rather than an official salary.
\textsuperscript{333} Interview with Doctor at the Hospital, Kisengo, 05.02.2015
\textsuperscript{334} Interview with Medecin Chef de Zone de Santé de Nyunzu, Kalemie, 07.02.2015
\textsuperscript{335} Interview with Doctor at the Hospital, Kisengo, 05.02.2015
\textsuperscript{336} Google maps estimate: Kisenge to Nyunzu is 19 hours via R630. Likely to be significantly longer in practice and depending on the season.
\textsuperscript{337} Interview with MMR representative, 16.02.2015
\textsuperscript{338} KEMET 2014
\textsuperscript{339} Interview with MMR representative, 16.02.2015
Patients receive a prescription but have to buy their medicines themselves, from the dispensary at the hospital or at the pharmacy in the settlement.  

According to the doctor supervising the Zone de Santé Nyunzu, Dr. Pépé Kapend Kabaku, the Foundation has greatly helped the community in Kisengo, as there had not been any health centre at the settlement before. He sees the centre as well equipped, well organised and well frequented by patients. No other health centre in the ‘territoire’ (county) has a permanent doctor, and Kisengo has become a referral centre where services can be provided that other centres do not offer. This has already reduced the number of cases that were referred to the hospital in Nyunzu, the county capital. Additionally, he is pleased that the centre is well integrated in the state health system with regards to monthly/yearly planning, monitoring and data collection. Villagers in Kisengo appreciate the presence of a doctor, and particularly the women feel that the possibility of giving birth in a health centre has benefited them by eliminating the need to travel to Nyunzu in case of complications. Considering the great logistical challenges in bringing all the equipment and materials to Kisengo, and in finding staff and doctors and staff prepared to work permanently in such a remote area, the establishment of the centre can be considered an achievement.

However, a few challenges remain and could be improved with the support of the Foundation. One of the major issues seems to be the remuneration of personnel (apart from the doctor). The allowance they receive from the state is meagre and not paid consistently, thus the personnel is not very motivated to work. The Medical Director of the Nyunzu Health Zone hoped that Kisengo Foundation would also pay the personnel, but so far this has not happened.

Second, while the health centre is well equipped with physical instruments, the dispensary seems to be stocked with only a small quantity of essential medicines. This was confirmed by both Dr. Pépé Kapend Kabaku and Dr. Oidalamba, who stated that there were no basic medicines in stock when he arrived, and that he and his team organised what they have in stock now. Given that the most common cases include easily preventable and curable illnesses such as diarrhoea, a lot of positive impact could be created by stocking the dispensary with essential medicines, especially for the more common illnesses, and combine treatment with consultation and prevention.

School
The Kisengo Foundation has built three school buildings (including toilets, but these are not yet used) and financed their equipment. The school’s rooms were equipped with a blackboard and desks, and the children have received pens and paper through the foundation. The Foundation has also provided schoolbooks, but these have not yet been

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340 Interview with Doctor at the Hospital, Kisengo, 05.02.2015
341 Interview with Medecin Chef de Zone de Santé de Nyunzu, Kalemie, 07.02.2015
342 Interview with Medecin Chef de Zone de Santé de Nyunzu, Kalemie, 07.02.2015
343 Interview with Medecin Chef de Zone de Santé de Nyunzu, Kalemie, 07.02.2015
344 Interview with School Director, Kisengo, 05.02.2015
345 Interview with MMR representative, 16.02.2015
346 One of the doctors interviewed said 12 USD per month, another said 100 USD per month.
347 Interview with Doctor at the Hospital, Kisengo, 05.02.2015; Interview with Medecin Chef de Zone de Santé de Nyunzu, Kalemie, 07.02.2015
348 Interview with Medecin Chef de Zone de Santé de Nyunzu, Kalemie, 07.02.2015
349 Interview with Doctor at the Hospital, Kisengo, 05.02.2015; Interview with Medecin Chef de Zone de Santé de Nyunzu, Kalemie, 07.02.2015
given to the school and are still kept at the MMR camp because the storage room at the school has not yet been finished and lacks a lock where the books could be kept safely.\footnote{Interview with School Director, Kisengo, 05.02.2015}

The school had started with 800 children, but by now there are already 1228 pupils\footnote{Interview with School Director, Kisengo, 05.02.2015} (or over 1600 according to MMR), and their number is still growing.\footnote{Interview with MMR representative, 16.02.2015} This is a big challenge for the 29 teachers and the school director: Children sit on the floor in the classrooms because the room is so full, and to operate all classes, the old school building (with mud walls and thatched roof) is still used. However, the foundations for an additional new building have already been laid. The school requests a small fee from parents for school maintenance, 1000 CF (ca. 1 USD) per child per trimester.\footnote{Representative of MMR, personal communication, 30.04.2015. Additionally, the Provincial Government charges 100 CF per child per month.} Even though this is not much, some parents cannot or do not pay, but the school director states that they still try to accommodate the children as much as possible.\footnote{Interview with School Director, Kisengo, 05.02.2015}

The school used to be run by the Catholic Church, with which a partnership contract is currently being discussed.\footnote{Interview with MMR representative, 16.02.2015} The teachers are still provided by the church, and are paid an allowance of 100 USD per month by the foundation.\footnote{Interview with School Director, Kisengo, 05.02.2015} The school director would like to see the school integrated into the state services as a long-term solution, so that the teachers would, in theory, be paid a salary by the state.\footnote{Interview with School Director, Kisengo, 05.02.2015} There are plans to realise that, and MMR states that it would like to have government teachers to provide training for the teachers in Kisengo.\footnote{Interview with MMR representative, 16.02.2015}

The school director is satisfied with the school and the help of the foundation, but has identified the need to organise additional vocational courses for adolescent girls and adult women in the settlement. According to her, women are often left alone to fend for the family and feed the children, while their husbands migrate to other mine sites or spend most of the money for themselves; thus vocational skills would help women earn their own livelihoods.\footnote{Interview with School Director, Kisengo, 05.02.2015}

In conclusion, the Kiseng Foundation has achieved a number of social projects in a very difficult environment where almost nothing of this sort had existed before despite the exploitation of minerals, even though the nature of the projects is geared towards obtaining the social license to operate than at socio-economic transformation of the area.

\textbf{4.8. Conclusion}

KEMET’s partnership was set up slightly after the SfH pilot and after the iTSCi system had already been implemented at Kisengo. KEMET’s partnership and supply chain operates with the same partners and operators in the upstream supply chain as the SfH pilot did, but with two main differences: first, KEMET sources the material from Kisengo through a vertically integrated supply chain, which further reduced the supply chain participants, and also allowed KEMET a tighter control over the supply chain, which helped convince downstream buyers. Second, KEMET helped establish and fund the Kisengo Foundation, which is implementing social projects at Kisengo, thus having a direct social impact on the ground.
The motivations for setting up the KEMET partnership were largely commercial, with the focus being on stabilising prices (as with the SfH pilot) and as a way to access comparatively more economic mineral sources while having a social impact. It was a strategic decision not so much motivated by the DFA, as KEMET had been discussing such a partnership before 2010.

Economically, KEMET’s long-term commitment and agreement with MMR and the significant percentage of exports from Kisengo bought by KEMET have helped MMR to plan in the long-term and invest in the mine in Kisengo. This commercial security is of huge value to mineral producers. It also provides a level of certainty on income and profits allowing them to budget for and invest in operational improvements, including risk mitigation and community benefits.

Besides this important commercial value from long-term trading relationship, economic impacts were found to be largely the same as at other iTSCi operated mine sites, as the prices paid to miners developed in the same way as at other tantalum mine sites in Katanga where iTSCi is implemented. Miners and civil society state that the prices have not improved in real terms, which seems to be influenced by the same factors as in Mai Baridi and Luba. Miners feel that unfavourable prices are imposed on them, since they do not have any real negotiating power or mechanisms. At Kisengo, this has even resulted in violent protests in the past.

Such challenges and operational risks are inherent in operating in DRC and high-risk areas and are not directly related to KEMET’s closed pipe system. Addressing such challenges is principally the responsibility of the mining operator and the government. However, KEMET’s closed pipe model could potentially take an indirect role in supporting efforts to address those challenges by helping their mining partners or through appropriate third parties. Some possible actions in relation to the above-mentioned challenges could be:

- The KEMET partnership could build on its long term engagement and commitment to MMR and the Kisengo mine to scope and build mechanisms for building trust in trading relations, e.g. to ensure fair prices and income for miners, to facilitate the development of organisation, enfranchising and representation of miners for improved trading and labour relations, or improved protections and benefits for miners. Supporting improved miners’ organisation will at the same time support them in assuming greater responsibilities for risk management.
- As stated in the chapter on SfH, labour and trading relations may be improved for example by facilitating the creation of support to miners through an appropriate third party to support them, or by including enhanced expectations of what should be in supplier contracts, e.g. commitments to support artisanal suppliers manage certain stated risks better.
- Similar to SfH, the KEMET partnership could seek to support third party efforts that aim at better organisation and representation of miners, such as reforms in governance or regulatory environment, or development agency projects targeted at this issue.
- The process for communicating price decisions to miners and the community could be improved, and made more transparent and direct. This would also result in miners being more aware and informed of the reasons for price levels offered to
them. This could be done through existing mechanisms, such as community outreach fora.

Similarly, KEMET’s closed-pipe model could potentially take such an indirect role in addressing two other challenges resulting from the context of a high risk area in DRC:

- While very much rooted in the logistical difficulties of doing business in the DRC, the liquidity problems of MMR has come at a huge cost and risk to the wellbeing of the poorest in the system: the miners and their families. KEMET (or its customers) could commission a study to look into this issue and support MMR and relevant local partners and stakeholders in finding possible solutions. One option could be to pilot mobile payment systems such as M-Pesa, since there is network coverage in Kisengo and miners seem to have mobile phones. At the same time, this system would address the issue of cash payments, which according to the OECD DDG should be avoided where practical.

- The imperative to increase production has brought investment into the mine and has helped development, mechanisation and professionalization of the operation. However, this will inevitably lead to the physical removal of ASM from certain areas and less work for and potentially the economic displacement of ASM (unless new deposits are exploitable on the concession), which is particularly sensitive in post-conflict settings. Through the Partnership, the opportunity exists to support and ensure alignment of these processes with international standards such as the IFC Sustainability Framework and the IFC Handbook for Preparing a Resettlement Action Plan. In addition, it is suggested that the Partnership continues to implement and communicate plans to counter-balance displacement impacts by continuing to support education, alternative livelihoods, and developing the local economy through the Kisengo Foundation. Here, the Partnership could consider incentivizing the creation of shared value (see below).

The KEMET partnership, through the Kisengo Foundation, has successfully undertaken a number of infrastructure projects in a difficult and remote area. These include establishing a fresh water supply, providing a new school building and materials, and establishing a fully equipped hospital.

The Foundation can continue to effect positive change and has an opportunity to sustain and build on these infrastructure investments by a.) prioritising development of the local economy (for example local procurement, skills training and recruitment can also have rich and lasting impacts across stakeholder groups (further expanded below)) and b.) implementing process-based projects based on the infrastructure projects that have already been done. For example, involving the health centre in community outreach to manage or prevent common health and safety issues. This offers immediate and long-term benefits for the miners and the broader community and can strengthen the mine’s relationships with both.

Similar benefits could come from collaboratively exploring the many ways in which the mine and the community are linked: how the mine itself is run, how it engages local communities as a mine, and how it fosters independence from the mine. These questions will inform projects with immediate positive impacts; in time, they can also lay foundations for sustainable growth, empowering communities and enabling them to take care of their own wellbeing.

360 IFC n.d.
A collaborative approach can do much to generate broader and more sustainable impacts through the foundation. For example, social projects may have a more sustainable impact if they are conceived as joint ventures, and done not for the people, but with them, to the extent that is possible in such a transient population. Consultation processes should be informed, active, meaningful, representative (multi-level), and participatory. This does not require universal participation of everyone in the community, but what matters is the process through which it is decided who will be invited to participate, and that vulnerable groups are expressly considered and included, and their points of view solicited, even if it is outside of the usual decision-making forum. Additionally, grievance or whistle-blowing mechanisms can be effective means to ensure that instances of damaging social projects are addressed. Lastly, social impacts will be enhanced if the local community is invested and involved in the design and implementation and evaluation of social projects: The Foundation provides the funds and potentially coordination support, whereas the community provides the time and governance structures to help decide what to do, how to do it, and then provide people to help implement it, and evaluate its success. In this sense, social projects also become an opportunity for providing temporary employment and training opportunities for both miners and non-miners. This will help ensure that social impacts are sustainable and last beyond the life of the Foundation and/or the mining operation itself.

There is a wide range of organisations that specialise in supporting extractives companies with their community relations and CSR work, which could provide greater guidance and potential support. These include but are not limited to CARE International, Integrity Action, the Carter Center, the Devonshire Initiative, and consultancies such as Synergy (where this would not pose a conflict of interest noting their role as iTSCI auditor) or Intersocial Consulting. Many of these have existing experience in DRC.

361 Tools to consider: IFC 2014; ICMM n.d.; Australian Government 2006; Parker, A. et al 2008; UNEP 2003; World Resources Institute 2009
5. KATANGA: JOINT INDIRECT IMPACTS

The term ‘indirect impact’ as used in this report is an effect or consequence where the causal chain is unclear. In such a case the effect was not caused by the direct action of the initiative itself, but potentially filtered through an action of the initiative’s partners. In some cases the initiative may have enabled, incentivised, or enhanced the partner’s actions, but as they were not the clear, primary mover, the impact is ‘indirect’. This also means that many of the aspects discussed in this section are not directly related to the SFH and KEMET closed-pipe systems, but form part of the operational context in Katanga, in which the initiative’s partners operate.

5.1. Security situation

All stakeholders, from government and iTSCi agents to MMR, CDMC, miners and local communities, agree that the security situation at and around the mines in northern Katanga has improved greatly since the implementation of the traceability and due diligence measures in 2011. All confirm that there are no armed groups and no FARDC at Mai Baridi, Luba or Kisengo, and that the Police des Mines, which has a formal contract with MMR, is working well to secure the mine sites. Independent assessments had awarded the status ‘conflict-free’ to Mai Baridi and Luba already in 2012 and to Kisengo in 2011, as there was no presence of illegal armed groups around Mai Baridi, Luba or Kisengo or along the transportation route to Kalemie, and consequently no evidence of illegal armed groups directly or indirectly benefiting from minerals at the mine sites or along transportation routes.

The assessments pointed out the FARDC checkpoints along the mineral transportation route to Kalemie, and the risk of soldiers illegally demanding bribes along the transportation routes and benefiting from the transport of MMR minerals from Mai Baridi and Kisengo to Kalemie, and from the transport of equipment from Kalemie and to the mines (even though in 2012, no evidence of this was found). This risk still exists, particularly with gold transports from Musebe, but researchers found no evidence of soldiers stopping MMR vehicles and demanding bribes.

5.2. Economic impacts and livelihoods

5.2.1. Employment

In northern Katanga, MMR employs a total of 171 locals (not counting the expats); 48 of which are in Kalemie, 11 in Luba, 20 in Mai Baridi, 90 in Kisengo, and 2 in Nyunzu. Around 10-15% of employees are women, who are hired as cooks, household aids and cleaners. At the mine sites, local villagers are hired as guards or ‘machinistes’ (water pump operators). The more technical staff however is hired in Lubumbashi, such as the

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362 Interview with Division des Mines, Kalemie, 02.02.2015; Focus group with civil society representatives, Kalemie, 07.02.2015; Focus group with representatives of civil society and FEC, Kisengo, 05.02.2015
363 Interview with MMR representative and CDMC representative, Kalemie, 02.02.2015; Focus group with civil society representatives, Kalemie, 07.02.2015; Interview with CDMC site managers (‘chefs du site’), Kisengo, 05.02.2015
364 Mthembu-Salter, G. 2012
365 Mthembu-Salter, G. 2011
366 Mthembu-Salter, G. 2012; Mthembu-Salter, G. 2011
367 Mthembu-Salter, G. 2012
368 Focus group with civil society representatives, Kalemie, 07.02.2015
369 MMR Employment Statistics as provided by MMR representative on 25.02.2015
370 Interview with MMR representative, Kalemie, 02.02.2015
drivers of vehicles and machines or the staff operating the mechanical plant and processing in Kisengo. 371 Salaries depend on function, but employees get social benefits such as family allocations and a certain amount for lodging and transport.372

Both government agents and civil society acknowledge that MMR has created employment in Kalemie and on the ground at the mine sites373, and state that MMR’s presence has also indirectly created jobs in small trading businesses (food and consumables), as well as in the hospitality and restaurant sector.374 Nevertheless, civil society would like to see greater transparency in recruitment and dismissal processes.375 This would enhance the positive impacts identified.

5.2.2. Local procurement and tangential markets

Additional to the employment opportunities created by MMR, the presence of the company has also brought some indirect benefits for the local economy and tangential markets and businesses. For example, MMR has a company procurement policy376 and MMR in Kalemie states that large machinery has to be imported from outside the country, but everything else is procured in Lubumbashi or Kalemie itself.377 For the mining camps, most necessities are procured in Kalemie, and only few agricultural goods and foodstuffs such as bananas and vegetables are bought in the mining settlements.378 This brings some economic opportunities and markets to the communities around the mine sites as well as to businesses in Kalemie, but to date the impacts of such local procurement seem rather limited and could be fostered further. Local stakeholders in Kalemie recommended that in order to ensure that the economic impacts are spread widely and to reduce the risk of only small groups of people profiting from procurement, competitive tendering processes should be implemented.379

5.2.3. Public infrastructure

MMR has invested in mine site accessibility and has funded the repair and improvement of roads from Kalemie to both Mai Baridi and Kisengo, including by repairing or building several bridges over streams.380 This has greatly facilitated and accelerated the access to the mine sites and the transport of minerals to Kalemie, but also the trade and transport of goods from Kalemie to the mine sites and further into the interior of the country (Manono, Mbuji-Mayi).381 This has also facilitated government agents’ and iTSCI agents’ access to the mine sites.382

371 Interview with MMR Mine Site Administrator, Kisengo, 05.02.2015
372 Sample employment contract of a driver, provided by MMR representative, 25.02.2015
373 Focus group with civil society representatives, Kalemie, 07.02.2015; Interview with Division des Mines, Kalemie, 02.02.2015
374 Interview with Division des Mines, Kalemie, 02.02.2015
375 Focus group with civil society representatives, Kalemie, 07.02.2015
376 Interview with MMR representative, 16.02.2015; Interview with MMR representative, Kalemie, 02.02.2015
377 Interview with MMR representative, Kalemie, 02.02.2015
378 Interview with MMR representative, Kalemie, 02.02.2015; Interview with MMR Mine Site Administrator, Kisengo, 05.02.2015
379 Interview with FEC representatives, Kalemie, 03.02.2015
380 KEMET 2014
381 Interview with MMR representative, Kalemie, 02.02.2015
382 Focus group with representatives of SAESSCAM, CDMC and iTSCI, Mai Baridi, 04.02.2015
5.3. Tax revenues

All government agents and civil society representatives interviewed stated that through the implementation of iTSCi’s traceability and due diligence system and the increased transparency in the supply chain, the government has been able to collect statistics on the amount of minerals produced and exported, and hence collect tax revenues. Both government representatives and civil society considered this as one of the most important achievements of the implementation of traceable supply chains. For the fiscal year of 2012, MMR declared to have paid a total of 2,824,601 USD in taxes (noting that this amount is for all its mine sites, not only those where closed-pipe projects are implemented). MMR and CDMC pay taxes on both the production and export of minerals:

<table>
<thead>
<tr>
<th>1.1. Production</th>
<th>1.2. Export</th>
</tr>
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<tbody>
<tr>
<td>Miner cards</td>
<td>Export fee</td>
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<tr>
<td>Cooperative agreement</td>
<td>Export license</td>
</tr>
<tr>
<td>Négociant/trader cards</td>
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<tr>
<td>Processing authorisation</td>
<td></td>
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<tr>
<td>Use of mechanical equipment</td>
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</tbody>
</table>

While the collection of tax revenues is an important achievement in itself, the economic and social impacts remain less clear. Several stakeholders, including government representatives, stated that the tax revenue generated by MMR (and other mining companies in the Tanganyika District) does not flow back to the villages, territories or even the district of Tanganyika, and benefits neither the local population nor the local government agents.

The current tax regime in Kalemie requires that 60% of taxes are sent to the central government, 25% to the provincial government, and only 15% remain in the territory where minerals are extracted. While it is not the task of economic operators such as MMR or initiatives like SfH to directly address these issues, they may wish to engage or support community-based accountability structures that measure, scrutinise, publicise and/or advocate on tax retrogression so they might be able to monitor the impacts that come from their fiscal payments. It also shows the urgent need for fiscal reform in the DRC mining sector in order to achieve greater and more equally distributed social and economic impacts.

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383 Interview with Division des Mines, Kalemie, 02.02.2015; Interview with SAESSCAM Kalemie, 03.02.2015; Focus group with civil society representatives, Kalemie, 07.02.2015; Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines and iTSCi, Kisengo, 05.02.2015
384 EITI 2012
385 Interview with Division des Mines, Kalemie, 02.02.2015
386 Interview with Division des Mines, Kalemie, 02.02.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
387 Interview with Division des Mines, Kalemie, 02.02.2015
388 Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
5.4. Governance

With regards to governance, the implementation of traceability and due diligence in upstream supply chains (in general, not only in relation to closed-pipe systems) has allowed the government to increasingly monitor, control and govern the extraction and trade of minerals. Government representatives repeatedly mentioned the advantages of being able to collect and analyse statistics on production and exports, as well as having transparency in terms of the actors involved in supply chains, which have helped to increase the authorities' ability to manage and govern the sector and in turn have helped to reduce fraud and increase legal exports. Additionally, government agents felt that their capacity and knowledge regarding the implementation of traceability and due diligence has increased through training and capacity building measures by iTSCi and its partners. Critical voices state that while government agents appointed in mining locations have increased knowledge in the technical aspects of traceability and due diligence, they generally lack the background capacities to fully manage and govern not only the due diligence and traceability process, but the sector as a whole.

The implementation of traceability and due diligence has also increased the government agencies’ responsibilities (particularly of SAESSCAM and Division des Mines), and consequently their importance and authority in the sector. This comes not without challenges: Government agencies currently lack the personnel, funds, equipment and logistical capacity to cover and monitor the many often very remote and hardly accessible mine sites, thus facing difficulties in their ability to expand due diligence and traceability to additional sites.

A major challenge is the remuneration of government agents, particularly of those who are responsible for implementing due diligence and traceability on the ground at the mine sites. These agents are often paid very little, irregularly or not at all, and in addition have to pay for their transport to the mine site from their own pockets. This increases the likelihood of them not doing their jobs properly or asking for bribes from miners and traders (this is further discussed in chapter 7, on traceability and due diligence).

As a consequence, while fraud and smuggling have been reduced by increased oversight and capacity of the government, other situations of corruption have emerged (noting that this is not a result of closed-pipes as such, but prevalent across Eastern DRC). Some result from a necessity, e.g. field agents asking for bribes for subsistence, while others also result from an opportunity flowing from a position of increased importance, presence and authority of government agencies in the sector.

In order to address the issue of unpaid government agents and to lower the risk of corruption, MMR provides monthly allowances for the state agents responsible for the implementation of the traceability scheme. While this addresses risks of bribery and corruption, civil society representatives have also raised that this creates a dependency of state agents on the entity that they are supposed to monitor and regulate, so affecting their independence. This gives MMR indirect power over government agents in relation

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389 Interview with Division des Mines, Kalemie, 02.02.2015; Interview with SAESSCAM, Kalemie, 02.02.2015
390 Interview with Division des Mines, Kalemie, 02.02.2015; Interview with SAESSCAM, Kalemie, 02.02.2015
391 Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
392 Interview with Division des Mines, Kalemie, 02.02.2015; Interview with SAESSCAM, Kalemie, 02.02.2015
393 Interview with SAESSCAM, Kalemie, 02.02.2015; Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines, iTSCI, Kisengo, 05.02.2015
394 Focus group with representatives of civil society and FEC, Kisengo, 05.02.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015;
to the implementation of traceability as well as political influence, inasmuch as state agents do not want to or do not dare to contradict MMR, even on site level.\footnote{Focus group with civil society representatives, Kalemie, 07.02.2015}

\section*{5.5. Occupational Health and Safety}

At all mine sites, SAESSCAM agents control the pits for their safety and close them if not deemed safe enough.\footnote{Focus group with representatives of SAESSCAM, CDMC and iTSCI, Mai Baridi, 04.02.2015; Focus group with representatives of SAAESSCAM, Division des Mines, Police des Mines and iTSCI, Kisengo, 05.02.2015} Even though the rates have been reduced, accidents caused by pit collapse and landslides, including fatal ones, still occur, particularly in the rainy season, and when miners clandestinely mine in pits that have been closed.\footnote{Focus group with representatives of SAESSCAM, CDMC and iTSCI, Mai Baridi, 04.02.2015; Focus group with representatives of SAAESSCAM, Division des Mines, Police des Mines and iTSCI, Kisengo, 05.02.2015} Additionally, there could be a potential risk of exposure to radiation when coltan is mined and washed.\footnote{Focus group with civil society representatives, Kalemie, 07.02.2015; Interview with Fidel Bafilemba, 07.03.2015} So far, no studies have been done on the potential consequences and prevention measures on radiation in coltan mining.\footnote{Interview with Fidel Bafilemba, 07.03.2015}

With regards to health and safety in general, MMR, via CDMC, provides miners at the mine sites with protective equipment such as overalls, boots and helmets. However, miners at the pits the researchers visited in Mai Baridi and in Kisengo did not wear any of this equipment. On the one hand, this is due to the miners’ refusal to use the equipment in the pits and/or use it for other purposes; some of the miners stated that it hinders their work and is too hot, and according to CDMC some use their helmets to collect water.\footnote{Interview with CDMC and MMR Site Manager, Kisengo, 05.02.2015; Focus group with representatives of SAESSCAM, CDMC and iTSCI, Mai Baridi, 04.02.2015; Focus group with representatives of SAAESSCAM, Division des Mines, Police des Mines and iTSCI, Kisengo, 05.02.2015} Interestingly, women miners complained that they were never given any equipment by CDMC.\footnote{Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines and iTSCI, Kisengo, 05.02.2015} On the other hand, miners also sell the equipment when they are short of cash.\footnote{Focus group with representatives of SAAESSCAM, Division des Mines, Police des Mines and iTSCI, Kisengo, 05.02.2015}

For CDMC, this has been frustrating, as they have not been able to change this practice even when raising awareness through signs and controlling the entrance to the pits.\footnote{Interview with CDMC site managers (‘chefs du site’), Kisengo, 05.02.2015; Focus group with women miners, 05.02.2015} While the miners state that they would like the equipment for free and that they do not have the means to purchase safety equipment, CDMC states that it would like to try to levy small fees on safety equipment instead of handing it out for free, so that miners value their equipment and use it in a responsible manner. This solution could potentially render better results, if accompanied by awareness-raising and sensitisation of miners.

According to an ITRI press release,\footnote{ITRI 2012a} in April 2011 (prior to the establishment of SfH at Mai Baridi) iTSCi project staff had launched an awareness campaign at the mine to address the poor health and safety conditions, poor hygiene and human rights standards. They supported the establishment of a Monitoring Committee for social, environmental and security issues, which became responsible for ensuring that the mine site was safe and secure for workers, and that rules regarding child labour, forced labour and other human rights violations are known and enforced. As a result, according to iTSCi, miners...
started wearing safety equipment, amongst other achievements.\textsuperscript{405} There may be lessons learned from this process that could help CDMC and MMR deal with the challenges mentioned above.

In the processing facility at Kisengo, miners wear overalls and protective equipment such as boots, helmets and dust masks. This was observed by the researchers, but civil society and other stakeholders voiced a suspicion that this is only done when there are visitors at the site.\textsuperscript{406}

\textbf{5.6. Conclusion}

Both SfH and KEMET could help further improve these indirect social and economic impacts by:

- Further increasing and improving MMR’s local employment and procurement policies and practices
- Using their downstream participants’ leverage and influence in multi-stakeholder fora to incentivise the government to retrogress taxes into the salaries of local government agents and public services at the local level
- Find ways to incentivise upstream partners (e.g. through contracting relationships) to further improve health and safety at the mines, and to take more participative approaches, such as involving miners in awareness raising activities or carrying out training in emergency response procedures with ASM operating on concessions.

Indirectly, this also links back to government responsibilities and the need for action regarding a better organisation and representation of miners that is seen as legitimate and credible.

\textsuperscript{405} ITRI 2012a

\textsuperscript{406} Focus group with civil society representatives, Kalemie, 07.02.2015, Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015
6. CONFLICT-FREE TIN INITIATIVE

6.1. Profile and stated goals

The CFTI was conceived as a multi-stakeholder initiative brought together by the Dutch Ministry of Foreign Affairs (DMFA) and aimed at establishing a conflict-free source of tin from the DRC. The initiative started in September 2012, two years after the presidential mining ban was lifted, and ran until May 2014 (according to iTSCi) or August 2014 (according to CFTI). It was inspired by SfH and convened government, businesses and civil society along the supply chain, from the mine to traders, exporters, a smelter in Malaysia, manufacturers of soldering paste, and end-users in the electronics and steel industry. The initiative installed a supply chain of tin ore from the Kalimbi mine near Nyabibwe in South Kivu, a site which was previously validated as conflict-free (green), by utilizing the iTSCi upstream traceability and due diligence system, and CFSP validation at the level of the smelter. Fairphone, Philips and Tata Steel used tin from CFTI in their products, and other partners who participated in the initiative included AIM Metals & Alloys, Alpha, Apple, Blackberry, HP, Motorola Solutions, Nokia, and Traxys.

The initiative’s main objective was to convince downstream buyers that it was possible to source conflict-free minerals from the Kivus, and to foster the demand for and willingness to source conflict-free minerals from the Kivus, since the requirements of Section 1502 of the DFA had caused some companies to avoid sourcing from the area altogether, resulting in the widespread loss of livelihoods for miners and their families. The initiative’s main aim was to open the supply chain and keep it “open, integrated and conflict-free”, by conforming with the OECD DDG and integrating it into the ICGLR’s RCM, and to offer access to world markets for the artisanal mining sector in DRC.

The establishment of traceability was conceived to be a first step towards formalisation of the sector, with the aim to initiate the process towards increased employment for the local population and improved working conditions for miners.

6.2. Rationale and business case for setting up CFTI

The idea for CFTI came up in 2012 at the OECD Forum on Responsible Mineral Supply Chains, where representatives of the DRC government had made it clear that DRC was not able to sell minerals on the market, and that only once a mineral flow is established, due diligence measures could be implemented. The DMFA met with Philips to examine the possibility of a project that could have positive impacts on the ground. The SfH pilot in

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407 ITRI 2014b
408 Kay Nimmo, personal communication to RESOLVE, 26.05.2015
409 Representative of DMFA, personal communication, 19.03.2015. Originally, the project was planned to run from April 2012 to March 2014, but due to delays in approval of the project, ran from September 2012 to August 2014. Representative of DMFA, personal communication, 19.03.2015
410 http://solutions-network.org/site-cfti/ (30.03.2015);
411 http://solutions-network.org/site-cfti/ (30.03.2015);
412 http://solutions-network.org/site-cfti/ (30.03.2015);
413 http://solutions-network.org/site-cfti/process/ (30.03.2015); ITRI 2014b
414 http://solutions-network.org/site-cfti/ (30.03.2015);
415 http://solutions-network.org/site-cfti/participants/ (30.03.2015);
416 Interview with Pact/iTSCi representatives, Goma, 16.02.2015
417 http://solutions-network.org/site-cfti/objective/ (30.03.2015);
418 http://solutions-network.org/site-cfti/ (30.03.2015);
419 http://solutions-network.org/site-cfti/process/ (30.03.2015);
420 http://solutions-network.org/site-cfti/ (30.03.2015);
421 http://solutions-network.org/site-cfti/ (30.03.2015); http://solutions-network.org/site-cfti/process/ (30.03.2015);
Katanga served as an inspiration, but the aim was to take it a step further, to implement a closed-pipe in the Kivus, for a different mineral (tin instead of tantalum), and involving industries other than the electronics sector.422 For the DMFA, the aim was to see whether it was possible to develop a system that could supply conflict free minerals and at the same time create and maintain a market demand from international companies, and establishing a pilot project in order to see what can be learned from it and whether and how it could be expanded.423

For Philips, there was no commercial or business incentive to participate in the initiative, rather the contrary. The company’s internal supply chain inquiry had shown that their suppliers were not sourcing from DRC (or did not know), and it was difficult to make a case for a project that involved sourcing from DRC. Participation was rather motivated by sustainability, responsible sourcing and CSR concerns, to not contribute to the informal boycott of DRC and have a positive impact on the ground.424 The involvement of the DMFA as a funder was an important reason for Philips to participate, as this provided more credibility to the initiative and Philips felt more confident that it was the right thing to do. Similarly, an important factor was the involvement of civil society and NGOs at the outset of the initiative, as their approval of the initiative was important for Philip’s confidence that participation would not have negative impacts on their brand.425

For Traxys, the trader, as well as WMC, the exporter, participation was largely motivated by the possibility to restart trading activities conformant with the new requirements.426 Traxys was a long-term customer of WMC and had been active in the Kivus in the past but had subsequently suspended their activity. The CFTI and the implementation of traceability provided the framework that was needed for the company to feel confident to start trading again and to meet the requirements of the OECD DDG and the CFSI.427 Traxys mainly got involved because of their long-term relationship with WMC and their experience in providing the logistics to source from the region.428

422 Interview with representative of Philips, 10.03.2015
423 Interview with representative of DMFA, Goma, 17.02.2015
424 Interview with representative of Philips, 10.03.2015
425 Interview with representative of Philips, 10.03.2015
426 Interview with representative of Traxys, 13.03.2015
427 Interview with representative of Traxys, 13.03.2015
428 Interview with representative of Traxys, 13.03.2015
6.3. CFTI Business Model

6.3.1. Structure of supply chain

The first step in establishing the CFTI pilot was the validation of the Kalimbi mine as 'green' by the joint validation teams in 2012 (together with 4 other mine sites in Kalehe territory). In October 2012 (following the release of the SEC rule in August), initiating the CFTI closed-pipe supply chain, the iTSCi traceability and due diligence system was implemented from mine to export with funds for iTSCi’s implementing partner Pact from the Dutch Ministry of Foreign Affairs and the South African Development Bank, as well as the iTSCi levy at comptoir level. Kalimbi had already been the pilot site for iTSCi tagging in 2010 (though these activities had been suspended due to the presidential mining ban) and the BGR CTC project in 2011-2012.

The Kalimbi mine is situated 5km from Nyanibwe town, around 90km northeast of Bukavu in the territory of Kalehe. The mine is divided into two sections, Koweit and T20, which are operated by two mining cooperatives, COMBECKA (Coopérative Minière du Bien-être de Kalehe) and COMIKA (Coorperative Minière de Kalehe), who historically have had a conflictive relationship. The official titleholder was SHAMIKA Congo Kalehe SPRL, a subsidiary of Canadian mining company SHAMIKA Resources, which had been granted an exploration license in a concession that included Kalimbi in 2007.

From the tunnels in Kalimbi, tin ore is brought to the washing area, where it is washed and then bagged and tagged with mine tags by SAESSCAM agents, who record all data into the mine log book. The ore is then brought to Nyanibwe, where individual négociants crush it and manually concentrate it, before it is bagged and tagged again with négociant tags by agents of Division des Mines (which record all data in the négociant log book), in preparation for transport to Bukavu. The first bags of conflict-free ore from Kalimbi were transported to Bukavu in October 2012, where the minerals produced by both COMIKA and COMBECKA were bought by the comptoir WMC, which was the only buyer of

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Note that WMC was not the only iTSci-approved exporter during the period of CFTI, but the mine did not produce enough for other exporters to buy.

429 iTSCI membership includes COMBECKA, COMIKA, WMC and other exporters in Bukavu, Traxys, MSC, Blackberry, HP, Motorola Solutions. *Note that WMC was not the only iTSCI-approved exporter during the period of CFTI, but the mine did not produce enough for other exporters to buy.

430 http://solutions-network.org/site-cfti/process/ (30.03.2015); Channel Research 2013a

431 Channel Research 2013a; http://solutions-network.org/site-cfti/process/ (30.03.2015);

432 Channel Research 2013a

433 Channel Research 2013a; Cuvelier, J. 2010

434 Channel Research 2013a

435 Channel Research 2013a
minerals from Nyabibwe up until the funding from DMFA ended in August 2014, even though there were other iTSCi approved exporters. This was driven by the fact that the mine did not produce enough to support multiple exporters.

In December 2012, WMC sold the first shipment of 24mt of tin ore to the mineral trading company Traxys, its long-term customer. In January 2013, Traxys in turn shipped the first two containers of tin to the Malaysia Smelting Corporation Berhad (MSC), the CFTI’s partner smelter, which has been certified as compliant with the CFSP, thus integrating the CFTI supply chain with the traceability and due diligence requirements of the CFSP protocols. From the smelter, the processed CFTI tin would be sold to AIM Metals & Alloys, a solder manufacturer that had been Philip’s long-term supplier, and from there on to Philip’s own manufacturing plants. Alpha, another manufacturer of soldering paste, also purchased tin from MSC, and by September 2013 sold its products containing CFTI tin to Fairphone and Philips.

The external donor funding – and thus practically speaking CFTI as an initiative – ended in August 2014. Even though the initiative aimed at being self-financing after an initial funding period, iTSCi consequently faced challenges in covering the costs for implementing the due diligence and traceability system (discussed further below in challenges of the business model). However, by the third quarter of 2014, new arrangements between iTSCi, local exporters and key mineral buyers enabled iTSCi to continue operating at the Kalimbi mine and expand to new areas without the funding that had originally kick-started CFTI.

6.3.2. Model change: From physically traceable to mass balance

Originally, the CFTI model was conceived to treat the ore as a batch process that required physical separation of the batches of ore from Kalimbi from other batches of ore throughout the supply chain (though not all companies supported this model). Philips’ initial order of 20 tonnes of tin was thus traced separately in batches, where the solder manufacturer had to indicate which bars included CFTI tin, and also the Philips factory traced the products containing CFTI tin separately. This was done because Philips feared that they would only be able to sell products containing CFTI tin to certain customers, since some of their customers might have shied away from buying products that contained minerals from DRC, as that would have imposed a reporting obligation (and thus increased costs) on them. However, it turned out that Philips’ customers did not require physical tracing, so reporting on a company level (as opposed to product level) was sufficient.
Additionally, the batch model was economically infeasible, as implementing systems to keep the ore separate increased the administrative burden and related costs for Philips\textsuperscript{446}, as well as the smelter (MSC).\textsuperscript{447} MSC would have had to accumulate stocks of tin from Kalimbi in order to process them separately, and it would have taken months to have a sufficient quantity due to the relatively low production levels of the mine.\textsuperscript{448} End users would have had to pay the costs associated with this and conduct additional product reliability/performance checks on the new CFTI-only solder if it did not meet the electronic grade specifications, which would have additionally increased their costs.\textsuperscript{449} Philips thus saw no added value in full physical traceability, given that the tin would consist a small part of the product unlike for gold in some jewellery supply chains.\textsuperscript{450}

Thus after the initial successful shipment of 20 tonnes, Philips decided to abandon physical segregation and not order special batches anymore.\textsuperscript{451} Thus the CFTI model was turned into a ‘blended’ system, in which CFTI tin was not kept separate from the level of the smelter downwards and could be mixed with other material, essentially resulting in normal procedures for all supply chain actors (abandoning segregated processing, but not traceability).\textsuperscript{452} This means that any company sourcing tin from MSC potentially has tin from Kalimbi in their supply chain; thus ultimately achieving the purpose of CFTI – creating demand for conflict-free minerals from South Kivu and have downstream buyers source without worry - even though the strict closed-pipe model was technically abandoned.\textsuperscript{453}

Some CFTI participants originally proposed that there should be a premium on tin sourced from Kalimbi that could be re-invested in social programmes around the mine site.\textsuperscript{454} However, most downstream buyers were not willing to pay a premium, with the argument that this would not have been financially sustainable due to a highly competitive global tin market and electronics industry.\textsuperscript{455} Additionally, they felt that the long-term sustainability of the project would be compromised.\textsuperscript{456}

\textbf{6.4. Achievements of Business Model}

The CFTI pilot is considered to have been a courageous move, demonstrating that it was possible to bring together representatives of all supply chain levels to build a conflict-free supply chains from South Kivu, which previously had been considered too risky for downstream companies.\textsuperscript{457} Before the pilot, no mine in the Kivus was exporting traceable minerals under a traceability and due diligence system, and it was difficult to convince downstream buyers to buy from there, which also meant that it was difficult to find funds to implement traceability.\textsuperscript{458} The CFTI, through the funding from the DMFA and South

\begin{footnotesize}
\begin{itemize}
\item[446] Interview with representative of Philips, 10.03.2015 ; 15.01.2015; Interview with representative of Traxys, 13.03.2015
\item[447] Interview with representative of Philips, 10.03.2015; 15.01.2015; Interview with representative of Traxys, 13.03.2015
\item[448] Interview with representative of Traxys, 13.03.2015
\item[449] Interview with downstream participant 2, 15.01.2015
\item[450] Interview with representative of Philips, 10.03.2015
\item[451] Interview with representative of Philips, 10.03.2015; Interview with downstream participant 2, 15.01.2015; Interview with representative of Traxys, 13.03.2015
\item[452] Interview with representative of Philips, 10.03.2015
\item[453] Interview with representative of Philips, 10.03.2015; Interview with downstream participant 2, 15.01.2015
\item[454] Interview with iTSCi/Pact representatives, Goma, 16.02.2015; Interview with Kay Nimmo, 13.03.2015
\item[455] Interview with representative of Philips, 10.03.2015; Interview with downstream participant 2, 15.01.2015
\item[456] Interview with representative of Philips, 10.03.2015
\item[457] ITRI 2014b; Interviews with iTSCi/Pact representatives, Goma, 16.02.2015; Interview with Kay Nimmo, 13.03.2015
\item[458] Interviews with iTSCi/Pact representatives, Goma, 16.02.2015
\end{itemize}
\end{footnotesize}
Africa Development Bank, thus not only kick-started the implementation of traceability and due diligence financially, but was also essential in persuading all stakeholders, particularly downstream buyers, to participate through their political weight and influence.459

The initiative, under the DMFA and its representative HRH Prince Jaime de Bourbon Parme, brought together all stakeholders along the supply chain, and convinced them of the need and utility of CFTI, which could be considered an achievement itself460, given that it was the first conflict-free supply chain established from the Kivus. This was specifically important for downstream users like Philips, who up to that point had only engaged directly with first tier suppliers, as it increased the understanding of the complexity of the supply chain, and the difficulty of bringing transparency to it.461

The main achievement of CFTI was the establishment of a supply chain from a highly volatile and high-risk area by funding the start up of the due diligence and traceability system, which convinced and reassured downstream buyers that it was possible to source conflict-free minerals from South Kivu462 – again resulting in a 'signalling effect' for the downstream market, spearheading and fostering legitimate mineral trade and exports from the Kivus.

This in turn allowed upstream actors to resume mining, trading and exporting activities after the presidential ban and the de facto boycott,463 creating positive economic impacts on the ground (further discussed below).464 The CFTI also allowed iTSCi to scale up to other sites in North and South Kivu, thus being a catalyst for the resumption of trade in these provinces: Provincial level stakeholders state that in their view, the CFTI has succeeded as thanks to the funding provided to iTSCi/Pact and the involvement of downstream buyers, the pilot provided the foundation for expansion of traceability and due diligence in South Kivu.465 This is confirmed by iTSCi, who upon successful implementation of the CFTI, was able to start traceability in other high-risk locations in South and North Kivu.466

Additionally, the CFTI achieved a lot of publicity and increased awareness, and could be used as a communication and PR vehicle to publicise the fact that DRC is open for business and that sourcing from the Kivus is possible.467 It is worth noting that while several downstream buyers participated in CFTI, lending their name to the initiative but also getting publicity for it, the vast majority of material from the initiative was sold on the open market.468 Philips, as a downstream buyer, was able to get positive attention and recognition for its participation. However, this remained rather limited to the niche of

459 Interviews with iTSCi/Pact representatives, Goma, 16.02.2015; Interview with Kay Nimmo, 13.03.2015
460 Interview with representative of the Cabinet of the Provincial Minister of Mines, Bukavu, 10.02.2015; Interviews with iTSCi/Pact representatives, Goma, 16.02.2015; Interview with representative of DMFA, Goma, 17.02.2015;
461 Interview with representative of Philips, 10.03.2015
462 Interview with representative of DMFA, Goma, 17.02.2015; Interview with representative of the Cabinet of the Provincial Minister of Mines, Bukavu, 10.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015; Interviews with iTSG/Pact representatives, Goma, 16.02.2015; Interview with Fidel Bafilemba, 07.03.2015
463 Interview with representative of Traxys, 13.03.2015; Interview with WMC, Bukavu, 11.02.2015
464 Interview with civil society representatives, Bukavu, 11.02.2015; Interview with Fidel Bafilemba, 07.03.2015
465 Interview with representative of the Cabinet of the Provincial Minister of Mines, Bukavu, 10.02.2015
466 Interview with Kay Nimmo, 13.03.2015
467 Interview with representative of Traxys, 13.03.2015
468 Interview with Kay Nimmo, 13.03.2015
conflict minerals’, as it proved difficult to communicate the complex topic to the general public and the broader customer base, which would have helped to set the brand apart.469

6.5. Challenges of Business Model

6.5.1. Competitiveness / Economic Viability

The main challenge of the CFTI model was economic viability. Its competitiveness was influenced by several aspects, in particular, the supply chain structure. The CFTI sourced from only one mine site (Kalimbi), which produced poor quality ore. The ore could not be mixed with other iTSCI material as there were no other iTSCI sites open yet. Additionally, after the first few months of project implementation, the mine did not produce sufficient volume.

According to Traxys, while the largest factor influencing costs in the CFTI supply chain was the price of ore as dictated by the world market price, other factors influenced competitiveness on the world market, particularly costs associated with ore impurities (7% of total costs), as well as the level of taxation (a combined 6% of total costs):470

The CFTI’s initial inflexible closed-pipe supply chain model proved to be too constraining to balance out these challenges. In particular, these factors meant that the material from CFTI was not competitive with tin sourced from other sources, whose commercial costs were lower.471 It must be noted however that the material from Kalimbi cannot be taken as representative of material from the area and region. In the case of this specific mine, the assumption that sourcing from Central Africa would be cheaper did not turn out to be true, which rendered the CFTI closed-pipe system to be even less economically feasible.472

6.5.2. Factor 1: Quality of Ore and Monopsony/Monopoly

During the period of CFTI, the Kalimbi mine produced increasingly low-grade ore due to a high level of arsenic, pyrite and other impurities.473 The impurities caused WMC great difficulties, and the costs related with those impurities together with taxation levels in the CFTI supply chain resulted in reduced prices for upstream actors. This created great frustration amongst négociants and miners, who had the impression that prices were being kept down as a result of the CFTI closed-pipe supply chain that now forced them to sell to only one buyer (WMC), which was de facto the only buyer even though other comptoirs were approved (but could not buy due to low volumes), and which, in their eyes, used its de facto monopsony to dictate prices.474

It is unclear to what extent a de facto monopsony of WMC influenced prices in the upstream supply chain. According to WMC another comptoir had an export license at the time of the project, but was not buying or exporting.475 This (and the de facto monopsony)

469 Interview with representative of Philips, 10.03.2015
470 http://solutions-network.org/site-cfti/results/ (30.03.2015);
471 Interview with representative of Traxys, 13.03.2015;
472 Interview with representative of Traxys, 13.03.2015;
473 http://solutions-network.org/site-cfti/status/ (30.03.2015);
474 Informal interviews with miners in Kalimbi, 12.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; Loch, M. 2013a, Al Jazeera 2013
475 Interview with WMC, Bukavu, 11.02.2015
also resulted from the fact that the volume produced by the mine was not enough to support multiple buyers in the first place.

This situation created several challenges in the CFTI supply chain. First, it led to increased tensions between upstream supply chain actors, as each actor felt he was being cheated out of a fair price by the actor downstream, as particularly miners and négociants seemed to have little understanding of the costs the comptoir had to bear due to the low quality of ore and the structure of the closed-pipe supply chain that did not make mixing with minerals from higher quality sources possible.\(^{475}\) This might have been exacerbated by the fact that the purity grade is only measured at the WMC comptoir, but not at the mine site or in Nyabibwe, which created mistrust amongst the miners and négociants as to whether purity grades are manipulated in order to reduce prices.\(^{477}\)

Second, it created an incentive for fraud, as the miners and négociants were compelled to sell their minerals to one buyer as a result of which they lost the power to negotiate prices. This created an incentive for négociants to sell their material illegally to buyers coming from Goma.\(^{478}\)

During much of the project lifespan and due to the nature of the supply chain, the Kalimbi mine was the only supplier to WMC, which made it difficult for the comptoir to balance out ore impurities (due to there being no other iTSCi mine sites available), which increased costs and thus decreased prices (as described above).\(^{479}\) This also had an impact on the implementation of traceability and due diligence, as there was not enough industry revenue available to cover the costs of the implementation of iTSCi.\(^{480}\) In 2013, there were plans to expand to other sites in Nyabibwe to balance ore impurities from Kalimbi.\(^{481}\) But it was only towards the end of the CFTI when the implementation of iTCSi was expanded, at the end of 2013 to subsectors around Nyabibwe (which turned out not to be productive enough), and elsewhere in the Kivus throughout 2014 and into 2015.\(^{482}\)

\subsection{6.5.3. Factor 2: Structure of production at Kalimbi and need for mechanisation}

At the beginning of the initiative in 2012, the ore production at Kalimbi was good and reached up to 100 mt per month in the first months. However, over the course of the project, production declined, and consequently, the Kalimbi mine only produced a reduced amount of tin.\(^{483}\) The first factor in the decline of production were price declines on the global market (and related to the factors mentioned above), which meant that many miners stopped producing and left Kalimbi.\(^{484}\)

The second and most important factor is the structure of production at Kalimbi. Minerals are mined artisanally from underground tunnels, which by now have to be dug as far as 100m into the mountain until they hit the mineralised pockets (for artisanal mines, the legal limit is 30m). This has created several challenges for artisanal miners, such as the

\begin{itemize}
\item \(^{475}\) Interview with WMC, Bukavu, 11.02.2015
\item \(^{476}\) Interview with WMC, Bukavu, 11.02.2015
\item \(^{477}\) Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015
\item \(^{478}\) Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015. See also UN Group of Experts on DRC 2014.
\item \(^{479}\) Interview with WMC, Bukavu, 11.02.2015
\item \(^{480}\) Interview with downstream participant 2, 15.01.2015
\item \(^{481}\) Interview with downstream participant 2, 15.02.2015
\item \(^{482}\) Interviews with iTSCi/Pact representatives, Goma, 16.02.2015
\item \(^{483}\) ITRI 2014b
\item \(^{484}\) Interview with WMC, Bukavu, 11.02.2015
\end{itemize}
flooding of tunnels by groundwater, which, combined with the breakdown of old water pumps and a limited supply of spare parts, limited production considerably.485

In order to increase efficiency and production, the exploitation at Kalimbi would have needed to move towards semi-mechanised exploitation.486 However, given the structure of the CFTI supply chain, there was little support or incentive for semi-mechanisation, as this would have been the responsibility of the concession owner (who, in the case of CFTI, was different from the cooperatives operating the mine), and thus mining has remained traditional ASM. This hindered the ability to generate the volumes needed to support the additional cost of due diligence and traceability.487 According to CFTI’s website, local investors who could have supported mechanisation and an upgrade of equipment were not easily found.488 This in turn is connected with the structure of the cooperatives and power struggles, which had an influence on the level of production (explained below).

### 6.5.4. Factor 3: Ownership & management of cooperatives

Another factor influencing both the level of production and the levels of investment in the mine is the structure and internal organisation of the two cooperatives operating in Kalimbi.489 This is partially rooted in the history of the cooperatives and their long-lasting disputes with the landowners. In the 1980’s, after the Société Minière de Goma (SMDG), which had worked the Kalimbi mine on a semi-industrial scale, had departed, relatives of the local chief (‘Chirimwami’) took over the operations, and in the early 1990’s one of them, Placide Chirimwami, created COMBECKA. During the war 1998-2002 he developed relationships with the RCD (Rassemblement Congolais pour la Démocratie) to maintain control of Kalimbi. This was unpopular with some of the miners, and as a response they created COMIKA.490 Nevertheless, Placide was able to keep some control over Kalimbi.491

Besides the disputes between the cooperatives, there were disputes with the landowners around Kalimbi. Seven people claim landownership around Kalimbi, based on customary land titles that Chief Chirimwami had given them in the 1970’s. When the landowners tried to collect compensation payments from the cooperatives, COMBECKA filed a lawsuit against them. However, the landowners won the case and it was ruled that they should receive a compensation of 0.4% of the production (4 out of the 10% royalty on production exacted by the cooperative). In 2012 the landowners in turn went to court against COMIKA for not paying this compensation. This dispute was later resolved with the help of the NGO OGP (Observatoire Gouvernance et Paix), and the landowners and cooperatives agreed to a payment of 3%, of which 0.5% was to be set aside for community development initiatives.492

The conflictive history of the cooperatives still has an impact on their management today. According to stakeholders in Nyabibwe, there have been several instances where the traditional chief intervened in the management of COMIKA, most recently by changing the

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485 Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; Channel Research 2013a; [http://solutions-network.org/site-cfti/status/](http://solutions-network.org/site-cfti/status/) (30.03.2015)
486 Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015
487 Interview with representative of DMFA, Goma, 17.02.2015; Interview with downstream participant 2, 15.01.2015
488 [http://solutions-network.org/site-cfti/status/](http://solutions-network.org/site-cfti/status/) (30.03.2015);
489 Interview representative of IOM, Bukavu, 10.02.2015
490 Channel Research 2013a; Cuvelier, J. 2010
491 Channel Research 2013a;
492 Channel Research 2013a
Committee of COMIKA in 2013 and January 2015. Such actions are often underlined by tribal or ethnic motivations, which have caused tensions between the miners and former management of COMIKA and the newly installed committee. This in turn has had negative impacts on the levels of production at Kalimbi, as a large number of miners who were faithful to the ousted Committee have abandoned mining activities.

These ownership and management issues of the cooperatives were exacerbated by the fact that the concession holder SHAMIKA did not have a mining permit and did not seem to have plans to develop the mine or intervene in the activities there, while the cooperatives still needed an agreement from the concession holder and pay a certain fee for mining on the concession. All these factors meant that there was little overall commitment towards investment in the mine operation from both the concession holder and the cooperatives, and little structures in place to accumulate the capital to finance the mechanisation needed to improve production levels.

For downstream participants, cooperatives involved in the CFTI were less formally organized and seemed to have a need for more technical and managerial capacity. This in contrast to the structure of the Solutions for Hope initiative, in which MMR was the main partner on the ground, which seems to have made it easier to communicate directly and to implement and manage the closed supply chain.

This could be mitigated by building the technical and financial capacity of the cooperatives to manage the mine as a business and put in place policies and procedures for financial accounting, membership lists, investment and capacity building, etc, and by providing them with loans/credits to mechanise the mine.

6.5.5. Factor 4: Fees, taxes and governance

The establishment of a formal, transparent and traceable supply chain allowed the government agencies to collect taxes and fees on mineral production and trade, which in itself is a positive impact. However, in the case of CFTI, the taxation levels and fees imposed by the government (additional to the iTSCi levy), combined with the cost factors above, have had a large impact on the economic unviability of the supply chain, particularly for the traders and miners, since higher costs for the exporter lead to lower prices for the traders, as the exporter cannot change its sales price which depends on world market prices. This cost burden needed to be passed up the supply chain, in turn further reducing the prices for traders and miners, and thus in turn also reducing production levels.
The main incident in this regard was when the government started to implement a harsh taxation regime between September and December 2013, when the fees for SAESSCAM services (‘frais rémunératoires pour services rendus’) were increased from 0.1$/kg to 0.5$/kg for produced tin ores.502 Through the iTSCI-initiated mechanism of the CLS, supply chain actors were able to negotiate the taxation level down to 0.3$/kg.503 In this case, the CFTI’s visibility and the direct involvement and weight of downstream users was an advantage, as downstream participants became aware of the issue and were able to work together with upstream participants and other stakeholders in order for the in-region actors (government and mining community) to come to a mutually acceptable agreement.504

6.5.6. Lessons learned and sustainability

The CFTI’s challenges with regards to costs, prices, economic viability and competitiveness were only mitigated and its sustainability only ensured once the closed-pipe model had been abandoned and the supply chain transformed into a more open market system.505 The intention to keep the CFTI at Kalimbi during the funding period meant that at the end of the CFTI both local operators and iTSCI faced major financial risks and needed due diligence and traceability to start at additional mines in South Kivu; and it was only the extension of the system which mitigated the low production levels at Kalimbi and prevented iTSCI from stopping work and the mine closing.506 The implementation of traceability at additional sites around Nyabibwe and the opening of new pits at Kalimbi, assisted exporters to balance out ore impurities and thus pay better prices for better material.507 Several other approved exporters in Bukavu could now also buy ore from Kalimbi, which gave négociants back the opportunity to negotiate prices and to sell to customers of their choice.508 While négociants see this as a step in the right direction, they feel that the diversification of exporters has not necessarily resulted in a diversification of prices offered, as in their perspective the tin ore has been sold to the same smelter (MSC) until only very recently.509 Even with this expansion, the mine sites do not produce enough to make the system financially viable.510 This means that now several other exporters and traders buy at the same few mines where traceability is implemented (including Kalimbi),511 which do not produce enough material to fill the capacity of all exporters.512 The opening up of the CFTI closed-pipe system to an open market system thus needs to be accompanied by the validation of additional mine sites and the extension of traceability to other mine sites.

502 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Interview with WMC, Bukavu, 11.02.2015. Other additional fees were created through the establishment of the basket fund, which increased costs particularly for the exporter and the négociants (discussed in further detail below).
503 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
504 Interview with downstream participant 2, 11.03.2015
505 Interviews with iTSCI/Pact representatives, Goma, 16.02.2015; Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015
506 Kay Nimmo, personal communication, 13.02.2015
507 Interview with WMC, Bukavu, 11.02.2015; Interviews with iTSG/Pact representatives, Goma, 16.02.2015
508 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
509 Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015. Thaisarco has also begun to source Congolese tin under the iTSCI scheme.
510 Interview with Kay Nimmo, 13.03.2015
511 Interview with representative of Traxys, 13.03.2015; Interview with representative of IOM, Bukavu, 10.02.2015
512 Interview with WMC, Bukavu, 11.02.2015; Interview with representative of Traxys, 13.03.2015;
(diversifying supply)\textsuperscript{513}, which requires additional funding in the initial stages\textsuperscript{514}, and the broadening of downstream buyers, including smelters (diversifying demand), essentially moving to upstream and downstream markets that are actually free in practice as well as in principle.

From the funder’s perspective, DMFA concludes that the closed-pipe system required a high level of monitoring, which made it costly and labour intensive and created difficulties to be cost effective, which resulted in a large investment of funds for only a limited amount of tin.\textsuperscript{515} It must be noted that a higher level of monitoring is required for high-risk areas such as the Kivus as compared to other areas. For upstream stakeholders such as WMC and Traxys, an open market system is preferable and more financially viable than the closed pipe under CFTI, particularly when considering the structure of the global tin market.\textsuperscript{516} They recognise the CFTI as having given a name and a branding to launch the system, and affirm that closed-pipes are easier to control for end users and downstream buyers.\textsuperscript{517} For Philips, it is equally preferable for CFTI to become a standard, open supply chain to be extended to additional mines, exporters and smelters, as this increases the sustainability of the initiative. From the company’s perspective, the CFTI has succeeded as a pilot now that the tin sourced from Kalimbi is integrated in a ‘normal’ open supply chain through the mass balance system, and thus running on its own.\textsuperscript{518} For Fairphone, whose mission includes to have a traceable supply chain as well as creating a positive impact at the mine level (and to communicate this openly), a closed-pipe provided the advantage that the company had visibility on the particular mine it was sourcing from, thus allowing them to have visibility of impacts. This is often difficult in an open market system as suppliers and smelters often do not communicate which exact mine sites they source from \textsuperscript{519} (noting that this is often regarded as commercially confidential information).

In summary, the need for an open market is an important lesson learned for closed-pipe systems such as the model of CFTI, as it shows how a restricted, closed-pipe supply chain and a limited amount of mines and operators can create challenges, and that open supply chains with conflict-free minerals flowing into international markets are more viable.\textsuperscript{520}

### 6.6. Costs and investments

<table>
<thead>
<tr>
<th>Supply chain entity</th>
<th>Costs &amp; investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperatives</td>
<td>None</td>
</tr>
<tr>
<td>WMC, Traxys, other companies</td>
<td>iTSCi membership fee</td>
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<tr>
<td></td>
<td>WMC: iTSCi export levy</td>
</tr>
<tr>
<td></td>
<td>Traxys: Contribution to iTSCi smelter levy\textsuperscript{521}</td>
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<tr>
<td></td>
<td>Traxys &amp; WMC: Financing of market building at Nyabibwe</td>
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<tr>
<td></td>
<td>Time investment</td>
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</tbody>
</table>

\textsuperscript{513} Interview with WMC, Bukavu, 11.02.2015  
\textsuperscript{514} Interview with Kay Nimmo, 13.03.2015  
\textsuperscript{515} Interview with representative of DMFA, Goma, 17.02.2015  
\textsuperscript{516} Interview with WMC, Bukavu, 11.02.2015; Interview with representative of Traxys, 13.03.2015  
\textsuperscript{517} Interview with WMC, Bukavu, 11.02.2015  
\textsuperscript{518} Interview with representative of Philips, 10.03.2015  
\textsuperscript{519} Interview with representative of Fairphone, 16.03.2015  
\textsuperscript{520} ITRI 2014b  
\textsuperscript{521} Interview with representative of Traxys, 13.03.2015
<table>
<thead>
<tr>
<th>Smelter (MSC)</th>
<th>iTSCi membership fee</th>
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</thead>
<tbody>
<tr>
<td>Solder manufacturers (AIM, Alpha)</td>
<td>iTSCi membership fee</td>
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<tr>
<td></td>
<td>Adapting supply chain (AIM)</td>
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<tr>
<td>CFTI end users</td>
<td>Cost-neutral sourcing of minerals (world market price)</td>
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<tr>
<td></td>
<td>iTSCi membership fee (Apple, BlackBerry, Motorola Solutions)</td>
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<tr>
<td></td>
<td>Absorbing increased logistical costs incurred at solder manufacturer by sourcing from DRC (Philips)</td>
</tr>
<tr>
<td></td>
<td>Additional operational cost / time / human resources &amp; travel</td>
</tr>
<tr>
<td>Funders (DMFA &amp; SA Govt)</td>
<td>DMFA: Financial contribution of 1,295,953 USD&lt;br&gt;DMFA: Financial contribution of 1,295,953 USD (EUR 907,168) of funding, which was intended for activities executed by Pact/iTSCi and its local partner NGOs BEPAT and later ARDERI to implement and monitor the iTSCi traceability scheme in Kalimbi (which included capacity building for government agents, cooperatives and other supply chain actors, as well as the establishment and training of the CLS and CPP). This funding was complemented initially by the Development Bank of Southern Africa through its Department of Trade and Industry's Regional Spatial Development Initiatives Program (until July 2013), as well as the contributions (membership fee and levy) that industry made to support the costs of implementing iTSCi at local, national and international level. Philips (nor other downstream users) made no financial investment apart from sourcing tin through the initiative, but the company absorbed a small increase in logistics costs that had resulted from their long-term solder supplier (AIM) following the request to change their supply chain and source from MSC. Additionally, as with all participants in the CFTI supply chain, Philips invested a large amount of time internally and externally, in working with their supplier AIM, participating in work groups, reaching out to other industry members, and through external communication efforts. Traxys did not have to make financial investments or change its business model in order to participate in CFTI. However, the company had to invest more time into due diligence and increased levels of scrutiny on documentation in order to be able to meet the CFSI requirements. Additionally, the company also invested time in raising awareness on due diligence and working with its supplier WMC on such issues.</td>
</tr>
</tbody>
</table>

6.7. Direct Impacts

522 Representative of DMFA, personal communication, 19.03.2015. This also included funding for activities in Maniema.
523 Representative of DMFA, personal communication, 19.03.2015. Additionally, funds were given to Resolve for the website management. Also ITRI 2014b. The amount quoted also included funding for activities in Maniema.
524 ITRI 2014b; Representative of DMFA, personal communication, 19.03.2015
525 Interview with representative of Philips, 10.03.2015
526 Interview with representative of Traxys, 13.03.2015
6.7.1. Economic impacts

a) Production and income in the initial phase of the project

Philips' first order of CFTI tin amounted to 20 tonnes, which took a year to come through the supply chain to the manufacturer. Once the batch arrived in Philips' factory in late 2013, it lasted for four months. Overall, by February 2013, around 332 tonnes of minerals had been produced at Kalimbi and 117 tonnes of minerals (net export weight) from the mine had been exported under CFTI, with a total value of around 1.7 million USD. By the end of 2014, Traxys had bought roughly 600 tonnes (export weight) of cassiterite from Kalimbi in total; of which around 450 tonnes were sourced during the time the DMFA provided funding (October 2012 – August 2014). Up until the end of the funding, WMC and Traxys were the main buyers of tin from Kalimbi, and thus of large economic importance in the value chain.

The re-implementation of traceability through funds from the CFTI at the beginning of the project brought back a large number of miners that had previously left Nyabibwe: At the start of the project in late 2012, there were only around 100 miners registered at the mine site, but by February 2013, cooperatives recorded 1,294 artisanal miners at the mine, plus traders and service providers. Consequently, production increased significantly in the initial phase of the project. The increase in production was also aided by the arrival of some basic material to pump water out of the tunnels and a reduction in disputes between the two cooperatives. After this peak, the production levels dropped again: In 2013, Kalimbi produced 484.347 tonnes, and in 2014 around 249.417 tonnes, according to the statistics of SAESSCAM in Nyabibwe.

b) Impacts on the local economy and tangential markets

Consequently, the initiative helped restart the local economy, which had collapsed during the presidential ban and the de facto embargo, by providing employment and income to hundreds of miners. This was a particularly important impact, and helped restart all economic activities (side businesses, tangential markets) in Nyabibwe, as the community is economically fully dependent on the Kalimbi mine because 80% of the miners in Kalimbi are from Nyabibwe itself (and not migrant miners). However, this dependency also means that economic and social life in Nyabibwe was highly affected by the price fluctuations and production decrease caused by the factors mentioned earlier. Nevertheless, stakeholders in Nyabibwe, particularly the women, stated that overall the living conditions in Nyabibwe had generally improved slightly over the last five years, but were always dependent on the amount of production at the mine. According to an ITRI

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527 Interview with representative of Philips, 10.03.2015
528 Kay Nimmo, personal communication, 26.05.2015
529 Channel Research 2013a; ITRI 2013b
530 ITRI 2013b
531 Interview with representative of Traxys, 13.03.2015
532 Interview with representative of Traxys, 13.03.2015
533 ITRI 2013b
534 Channel Research 2013a
535 Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015
536 http://solutions-network.org/site-cfti/ (30.03.2015); ITRI 2013a
537 Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015. Also ITRI 2013a.
538 Interview with civil society representatives, Bukavu, 11.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
539 Focus group with representatives of women’s association AMOPEMIKAN, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015
statement of 2013, the economic recovery of Nyabibwe increased the cash flow in the region\textsuperscript{540}, allowing the local population to earn a living and to send their children to school,\textsuperscript{541} and allowing women to support their families’ income by trading products to the miners who could now afford them.\textsuperscript{542}

\textit{c) Sustainability of impacts}

However, the situation almost a year after the end of the initiative shows that these impacts have not been sustainable, most likely due to the factors that had posed challenges to the business model of CFTI as a whole. While according to ITRI the potential income of miners and négociants had risen from 2-4 USD per kilo ore before the start of the initiative to around 5.5-6 USD per kilo in 2013 (depending on purity grade and world market prices),\textsuperscript{543} by now the prices paid to miners have come down to 3.5-4 USD per kilo again (noting that this is related to the tin world market price, and not the CFTI as an initiative).\textsuperscript{544} According to an independent researcher, there has been a decrease of real prices at all iTSCI sites except one (including Kalimbi) when comparing local price fluctuations with the prices on the global tin market since before the mining ban.\textsuperscript{545} With regards to current prices, anecdotal information suggests that in comparison with the prices paid for untagged material, prices for tagged material are higher.\textsuperscript{546} The number of miners also fell to around 500 when production is good, and down to 200-300 when not much is produced (as at the time of our visit).\textsuperscript{547}

Additionally, low production levels that have resulted from ASM mining techniques becoming unsuitable for exploitation in Kalimbi which has also caused economic activity in Nyabibwe to slow down again.\textsuperscript{548} This shows the need for investment to support the adaptation of production techniques to the changing situation of the deposit to sustain the positive economic impacts that CFTI had by funding the implementation of the iTSCI traceability scheme.

CFTI also helped increase employment opportunities at the level of the comptoir. In 2010, at the time of the governmental mining ban and prior to CFTI, no minerals were being processed, while in 2013, there were more than 70 employees working at WMC processing CFTI minerals.\textsuperscript{549} CFTI thus helped restart WMC’s activities and the exporter depended fully on the supply of minerals from Kalimbi until iTSCI was implemented at other sites around Kalimbi in 2014.\textsuperscript{550} However, even in 2013 the comptoir was only working at 40% of its capacity.\textsuperscript{551}

\textsuperscript{540} ITRI 2013b
\textsuperscript{541} ITRI 2013a
\textsuperscript{542} ITRI 2013b
\textsuperscript{543} ITRI 2013b; Loch, M. 2013b
\textsuperscript{544} Informal interviews with miners in Kalimbi, 12.02.2015; Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015. It should be noted that ore from Kalimbi has high levels of impurities, which reduces its price.
\textsuperscript{545} Interview with Christoph Vogel, 16.03.2015
\textsuperscript{546} Kay Nimmo, personal communication, 07.05.2015. See also Baflemba, F., et al 2014
\textsuperscript{547} Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015
\textsuperscript{548} Focus group with COMIKA and COMBECKA representatives, 13.02.2015;
\textsuperscript{549} Loch, M. 2013a
\textsuperscript{550} Interview with WMC, Bukavu, 11.02.2015
\textsuperscript{551} Loch, M. 2013a
6.7.2. Traceability & due diligence impacts

CFTI partly funded the implementation and set-up of iTSCi in Kalimbi, which allowed the start up of traceability and phase-in of the levy for the exporter in an area where previously there had been no means to finance such activities; \(^{552}\) and where no concession holder was present who could have taken on the financial burden of the iTSCi levy, as in the case of SH and KEMET’s partnership. This resulted in the first traceable supply chain from the Kivus and thus both the opportunity for downstream buyers to source from DRC and the uptake of formal mining and trading activities upstream. Additionally, it has helped build the capacity of government agents to manage and implement the traceability scheme; agents of SAESSCAM and Division des Mines state that they now feel capable of implementing the iTSCi traceability and due diligence system on their own.\(^ {553}\)

Around CFTI, complementary activities were funded (including by iTSCi) that contributed to risk identification, monitoring and management by the CSAC/CLS. With these funds, two civil society organisations, the Observatoire Gouvernance et Paix (OGP) and the Centre National d’Appui au Développement et à la Participation populaire (CENADEP), conducted capacity building on traceability and financed the organisation of meetings of the CSAC/CLS and transport for its members (OGP), monitored and reported incidents through the launching of an early warning mechanism, and provided the necessary equipment for the CLS to monitor and manage incidents, such as mobile phones, cameras, printing devices, etc. (CENADEP, with funds from the PPA).\(^ {554}\)

The funds for these activities have or are running out, but according to stakeholders, this has only affected the capacity-building component, while the CSAC/CLS continues to monitor and address risks and hold regular meetings.\(^ {555}\) All stakeholders seem content with the CSAC/CLS as a mechanism for monitoring and managing risks, and considered it a useful and practical forum for all stakeholders to come together, discuss risks and issues, and find solutions acceptable to everyone.\(^ {556}\) According to WMC, there had been more incidents at the beginning of the initiative, but this improved over time and now the incidents are usually minor (such as weight differences in log books).\(^ {557}\) However, the miners and cooperatives voiced frustration that the NGOs had been the ones to receive funds, whereas they themselves had not benefitted from financial support or investment.\(^ {558}\)

6.7.3. Social impacts

Apart from the activities described above, few social projects were implemented in the community in Nyabibwe, compared to the supply chains in Katanga. This resulted from the ownership structures and issues around the cooperatives and the concession holder, which meant that no mine owner or operator was investing in social projects (described above) and partially from the fact that the idea of a premium payable by downstream was abandoned by downstream buyers who were not able to pay a higher price, and thus no

\(^{552}\) Interviews with iTSCi/Pact representatives, Goma, 16.02.2015
\(^{553}\) Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015
\(^{554}\) Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015
\(^{555}\) Focus group with civil society representatives, Nyabibwe, 13.02.2015
\(^{556}\) Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with representative of the Cabinet of the Provincial Minister of Mines, Bukavu, 10.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015
\(^{557}\) Interview with WMC, Bukavu, 11.02.2015
\(^{558}\) Focus group with COMIKA and COMBECKA representatives, 13.02.2015
funds were available for social projects. Indirect social impacts are further described below.

As a direct impact, the CFTI, as a pilot site located in South Kivu, attracted a lot of attention and interest from various stakeholders, including from downstream companies, media and journalists, as well as independent researchers. On one hand, this attention has created positive impacts by carrying a positive story from the DRC and showing the world and the global market that conflict-free sourcing from the Kivus is achievable, as well as by creating incentives for upstream actors such as government agents to facilitate a traceable, conflict-free supply chain and a conducive legal and political framework.559

On the other hand, the increased scrutiny and attention put all upstream stakeholders under a spotlight. This added to general stakeholder fatigue and a feeling of alienation by upstream stakeholders, particularly at the Kalimbi mine, the community in Nyabibwe, and the exporter WMC, that resulted from a large number of visits, assessments, research enquiries, interview requests that took a lot of time and energy for upstream stakeholders.560

High expectations, created by the pilot and the involvement of globally recognised brands, added to the frustration felt by all stakeholders on the ground, including miners, cooperatives, traders and civil society. While in their view, they had been an integral part to the functioning of the pilot and had worked hard to implement traceability, they now felt that the benefits that they were expecting or that had been promised were not emerging, even though they had voiced their concerns and needs to so many visitors.561 They particularly voiced this in relation to their need for mining equipment and investment in mechanisation, which despite their hopes had never appeared, and the trading centre (‘centre de négoce’), which had been planned and announced by IOM, but was never realised.562 The production decrease and falling prices in turn fed into fears that Kalimbi, even though it had been the pilot site and poster child, would be abandoned by downstream stakeholders and that the benefits and the investment would now go to more productive sites such as Numbi.563

6.7.4. Environmental impacts

The CFTI did not address environmental issues, or have any goals, requirements or expectations towards addressing environmental impacts.564 While the priorities were put on implementing traceability in order to restart economic activities, this could be considered as a gap. Nyabibwe is around 15km from the edge of a World Heritage Site, the Kahuzi-Biéga National Park, and in particular the highland arm of that park which is prime habitat for the critically endangered eastern lowland gorilla (Gorilla beringei graueri). Whilst we found no indication that the mine is having any impact on the park,

559 Interview with civil society representatives, Bukavu, 11.02.2015; Interview with downstream participant 2, 15.01.2015
560 Interview with WMC, Bukavu, 11.02.2015; Informal interviews with miners in Kalimbi, 12.02.2015; Focus group with COMIKA and COMBECKA representatives, 13.02.2015
561 Informal interviews with miners in Kalimbi, 12.02.2015; Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015
562 Focus group with civil society representatives, Nyabibwe, 13.02.2015
563 Focus group with civil society representatives, Nyabibwe, 13.02.2015
564 Interviews with iTSCI/Pact representatives, Goma, 16.02.2015; Interview with Fidel Bafilemba, 07.03.2015
its proximity to this category of PA (and noting KBNP’s Status as a World Heritage Site in Danger)\(^{565}\) should make due diligence on environmental risks a priority.

In addition, mining activities are related to several environmental impacts, including deforestation, which seem to be of major concern for the cooperatives, government agents, as well as civil society organisations.\(^{566}\) The deforestation of the hilltop where the Kalimbi mine is situated has greatly increased the risk of landslides, which can result in accidents in the tunnels.\(^{567}\) According to stakeholders, there have already been attempts to address this issue, but additional funding for reforestation and awareness raising and capacity building is needed.\(^{568}\) Additionally, the washing of minerals in the small stream below the Kalimbi hill has caused siltation, which may impact on villages further downstream.\(^{569}\) An additional source of water contamination is the fact that there are no sanitary installations at the mine.

6.8. Indirect Impacts

As stated above, the term ‘indirect impact’ as used in this report is an effect or consequence where the causal chain is unclear. In such a case the effect was not caused by the direct action of the initiative itself, but potentially filtered through an action of the initiative’s partners. In some cases the initiative may have enabled, incentivised, or enhanced the partner’s actions, but as they were not the clear, primary mover, the impact is ‘indirect’. This also means that many of the aspects discussed in this section are not directly related to or dependent on the CFTI, but form part of the operational context in which the initiative’s partners operate.

6.8.1. Security situation

Prior to the start of the pilot, the security situation in South Kivu was dominated by armed groups who were indirectly or directly implicated at certain levels of the mineral supply chain from the province. However, by October 2012 the situation had improved and the accessibility of Kalimbi and its considerable production at the time made it a good candidate for the CFTI pilot.

The mines in Nyabibwe have had a history of control by the FARDC,\(^{570}\) and in 2012 the FARDC seemed to still extort money from miners.\(^{571}\) However, the FARDC is not currently present at the mine sites, and does not seem to benefit directly or indirectly from mineral exploitation or trade.\(^{572}\) Stakeholders interviewed on the ground acknowledged that the FARDC was fulfilling its task of protecting the population, and even helped to apprehend


\(^{566}\) Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with Division des Mines, Bukavu, 10.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015; Interview with Fidel Bafilemba, 07.03.2015

\(^{567}\) Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015

\(^{568}\) Focus group with civil society representatives, Nyabibwe, 13.02.2015

\(^{569}\) Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015. While Nyabibwe itself is upstream from the mine, it suffers from serious shortage of fresh water supply (Focus group with civil society representatives, Nyabibwe, 13.02.2015)


\(^{572}\) Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015; Interview with FARDC Representative, Nyabibwe, 12.02.2015;
fraudsters who tried to trade minerals without iTSCi tags.\textsuperscript{573} Cooperatives and négociants additionally stated that FARDC or other armed personnel do not dare to impose illegal taxes on them anymore.\textsuperscript{574} Since the end of 2013, after the defeat of the M23 rebellion in North Kivu, the security situation has further improved and rebel activity has ceased.\textsuperscript{575}

There was one major security incident that stakeholders on the ground still mention as the most serious one in the history of CFTI.\textsuperscript{576} In 2013, iTSCi staff, Global Witness and the CLS had reported that there were still incidents with FARDC officers being involved in the minerals trade from Kalimbi, smuggling untagged material along an alternative transport route, creating an alternative supply chain of untagged materials.\textsuperscript{577} This issue was consequently addressed and mitigated through the CLS by working closely with local, provincial and national authorities.\textsuperscript{578} The FARDC colonel who had been discovered as trading untagged material was consequently transferred to another area and prevented from re-engaging in illegal trade. \textsuperscript{579}

At the Kalimbi mine, unlike at Mai Baridi or Kisengo, no Mining Police is present. Representatives of the cooperatives stated that they have repeatedly requested the deployment of police agents to Kalimbi, but that this was never granted.\textsuperscript{580} According to them, the reason they were given was that there were not enough officers available to be deployed to Kalimbi. The cooperatives find it difficult to monitor and manage incidents without the mining police, but have taken to organising their own security at the mine: they have organised groups of miners into civil guards (‘guardes creuseurs’), who patrol the mine to make sure no untagged material enters or leaves the mine and that no children or pregnant women enter the mine.\textsuperscript{581} Stakeholders did not mention any misconduct at the hands of these mining guards.

\textbf{6.8.2. Economic: Dependency of local economy and livelihoods}

The dependency of Nyabibwe on the Kalimbi mine and certain aspects around how the supply chain from Nyabibwe is organised have fed into a system of debt that affects miners, cooperatives, traders, women and a larger set of economic actors in Nyabibwe. The négociants often take on the role of pre-financers or money lenders to the miners or the cooperatives, for example to cover the costs of digging new tunnels and removing the overburden until the miners hit the mineralised layer (which can take up to one year in Kalimbi), or to finance fuel or the motors for the water pumps.\textsuperscript{582} But due to the low production, miners and cooperatives have become indebted to the négociants and do not earn enough to repay their debts.\textsuperscript{583} It must be noted that the situation described below

\begin{footnotesize}
\begin{itemize}
\item[573] Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015; Interview with FARDC Representative, Nyabibwe, 12.02.2015
\item[574] Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Interview with négociants Nyabibwe, Feb 2015
\item[575] http://solutions-network.org/site-cfti/status/ (30.03.2015); Interview with FARDC Representative, Nyabibwe, 12.02.2015
\item[576] Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015; Interview with representative of IOM, Bukavu, 10.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015
\item[577] CFTI 2013a; Channel Research 2013a
\item[578] CFTI 2013a
\item[579] http://solutions-network.org/site-cfti/status/ (30.03.2015);
\item[580] Focus group with COMIKA and COMBECKA representatives, 13.02.2015
\item[581] Focus group with COMIKA and COMBECKA representatives, 13.02.2015
\item[582] Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
\item[583] Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
\end{itemize}
\end{footnotesize}
is not specific to Kalimbi or the CFTI supply chain, and can be observed at other ASM mine sites. It is rather a symptom of the lack of formalisation efforts and access to formal financial services in the ASM sector in general.

This issue extends to the broader economy in Nyabibwe. For example, women who work as buyers at the mine and transport the ore to Nyabibwe are pre-financed by the traders in Nyabibwe, but have stated that the traders often buy the ore at a lower price than the original pre-finance credit, creating a situation of debt for the women.584 Women who sell food at the mine and operate a small restaurant also risk getting indebted, as they sometimes buy their supplies on credit from the local market. In order to service their debts, they depend on the miners being able to afford a meal, which in turn depends on the production at the mine. In an additional cycle of credit and debt, the women sometimes provide the miners with meals on credit. Hence, if there is no production and miners cannot pay back their credits, everyone else in the chain gets indebted too.585

This has had additional human rights impacts in the past, as creditors have tried to force their debtors to pay back by engaging security forces such as the Police, which has resulted in violence and abuses in some cases.586 However, such instances seem to have been reduced through the presence of the initiative,587 through increased production at least at the start up of the traceability system, and through the management of incidents through the multi-stakeholder mechanism CLS/CSAC, which according to stakeholders seems to be effective and credible in managing such issues.588

The traders themselves bear a risk of getting indebted as well. It often happens that the trucks that transport goods and people along the road to Bukavu do not arrive on time (minerals are supposed to be transported from Nyabibwe to Bukavu twice a week, but no specific vehicle for mineral transports exists, and the bags have to be loaded on the common, public trucks).589 This means that the négociants may already have declared their lot to the government agents to receive an iTSCi négociant tag, and had to pay their suppliers (miners) as well as the taxes due to the Division des Mines and SAESSCAM 590, but have not received their payment from the transporter yet.591

The impacts of this system of credit and debt show the extreme dependence of Nyabibwe on the Kalimbi mine. This is underlined by the situation of women who work in activities related to the mine, as washers of tailings, buyers, transporters, and sellers of food. According to them, they have no means of feeding their families if there is no production at the mine.592 They had started working at the mine in 2010 out of a need to survive and to feed their children, as their husbands, who work as miners, were not able to bring home sufficient income for the family. They continue to work at the mine today, because this necessity is still there. They complain that if their husbands earn something, they spend it on beer, while the women need to find their own way to feed the children and send them to school. The women strongly feel that this dependence on the mine should be broken, particularly because of the negative impacts of indebtedness, which they see as their

584 Focus group with representatives of women’s association AMOPEMIKAN, 13.02.2015
585 Focus group with representatives of women’s association AMOPEMIKAN, 13.02.2015
586 Interview with civil society representatives, Bukavu, 11.02.2015
587 Interview with civil society representatives, Bukavu, 11.02.2015
588 Interview with civil society representatives, Bukavu, 11.02.2015
589 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015
590 The “autorisation de transport des minerais” (ATM), 10 USD per shipment to Division des Mines, and and 0.3 USD/kg to SAESSCAM.
591 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
592 Focus group with representatives of women’s association AMOPEMIKAN, Nyabibwe, 13.02.2015
biggest challenge. They would prefer not to work at the mine, if they had the financial means, since they feel they actually lose a lot of money. This underlines the need for investment in mechanisation at the mine while at the same time supporting the kick-starting of alternative economic activities in Nyabibwe.

6.8.3. Social

6.8.3.1. Local disputes

As described above, the two cooperatives COMBECKA and COMIKA have had a conflictual history and relationship. In the past and prior to the start of tagging, there had been recurrent conflicts between them, sometimes resulting in deaths. However by 2013, the cooperatives seemed to collaborate, due to a mediation effort by the provincial government. Stakeholders state that the local disputes between the cooperatives diminished, also due to the implementation of traceability and the incident management mechanism of iTSCI and the CLS/CSAC, as well as due to the increased awareness of upstream stakeholders that the market and downstream buyers would only continue sourcing if these issues were resolved without violence.

In general the cooperatives are described as rather dysfunctional, as not really representing the miners but as having imposed their hierarchy from outside in order to mainly protect their own interests. According to civil society representatives, the cooperatives do not have proper decision-making organs, policies or a mechanism where members have a say over the use of their contributions.

6.8.3.2. Working conditions, health and safety

According to an ITRI press release, the CFTI and the re-starting of tagging helped improve working conditions and health and security issues in the mines, as cooperatives started buying protective equipment such as boots and helmets for the miners, providing water pumps and stabilising the mine shafts with wood in order to reduce accidents. However, during the researchers’ mine site visit, miners did not seem to wear any protective equipment. The miners complained that the cooperatives were not active in improving working conditions, and other stakeholders stated that there was a lack of sensitisation of the miners and cooperatives on the part of SAESSCAM. While miners expected protective equipment to be provided by the cooperatives, the cooperatives in turn expected it to be donated and stated that they did not have the funds to provide it. This shows that the cooperatives do not seem to have the means to provide protective equipment to the miners, and that the miners are not always able to channel their concerns and requests through the cooperatives.

There is a certain risk of tunnel collapses and landslides, as well as sudden flooding of the tunnels by ground water, and accidents continue to happen, but are occasionally fatal.

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593 Focus group with representatives of women’s association AMOPEMIKAN, Nyabibwe, 13.02.2015
594 Channel Research 2013a
595 Interview with civil society representatives, Bukavu, 11.02.2015; Channel Research 2013a
596 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
597 Interview with civil society representatives, Bukavu, 11.02.2015
598 ITRI 2013b
599 Interview with representative of IOM, Bukavu, 10.02.2015
600 Focus group with COMIKA and COMBECKA representatives, Nyabibwe, 13.02.2015
601 Focus group with COMIKA and COMBECKA representatives, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015
SAESSCAM states that they, in cooperation with the cooperatives, work to supervise the dangerous pits, which has helped reduce accidents.602

6.8.3.3. Tax revenues

All stakeholders interviewed agree that the implementation of the traceability and due diligence system has helped formalise the sector and increased transparency, thus allowing the government to earn increased tax revenues from mineral exploitation and trade.603

However, as in Katanga, these increased revenues do not seem to flow back to the local level and the government agents working on the ground to collect them. The revenues have not been used to improve the services of SAESSCAM or Division des Mines on the ground, even though they are responsible for monitoring exploitation and trade, and implementing the traceability system.604 The agents are paid very little and irregularly if at all,605 and do not receive any means or compensation for transport to and from the mine sites.606 This increases the risk of government agents not being willing or able to monitor the mine and the tagging and trading points, and may incentivise corruption, as government agents seek means to earn a living or pay their transport costs. Indeed, incidents of government agents asking for small bribes from miners and négociants seem to be recurrent.607

6.8.3.4. Basket fund and social investment

A similar issue seems to be occurring with taxes levied for the basket fund, an initiative that was established by the Government in 2013 and aims at incentivising actors along the mineral supply chain to contribute to a fund that will be used for development projects at the mine sites and surrounding communities. The fund requires the payment of 180 USD per tonne exported, of which 75 USD have to be paid by the exporter, and the remaining 105 USD per tonne by the transporters, the traders and the miners combined. In practice, according to the traders, the exporter has been paying the full 180 USD, subtracting the 105 USD from the payments they make to the traders.608 This has caused some frustration amongst the traders, as this additionally reduces the price they can achieve, and according to them they have never seen a break down of the costs and fees that influence the prices they are paid by the exporter.609

There has been controversy over the management of the fund. At the beginning, the idea had been for the Provincial Government to manage it, but this was contested by the contributors and civil society for fear of mismanagement.610 Additionally, there were

602 Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015
603 Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015; Interview with Division des Mines, Bukavu, 10.02.2015; Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; ITRI 2013b
604 Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with Fidel Bafilemba, 07.03.2015
605 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with Fidel Bafilemba, 07.03.2015
606 Interview with SAESSCAM and Division des Mines, Nyabibwe, 12.02.2015; Interview with representative of IOM, Bukavu, 10.02.2015
607 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015; Channel Research 2013a
608 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
609 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015
610 Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with OIM Bukavu and PAct RDC Feb 2015
disputes over how the funds would be used. A compromise has now been found being tripartite management of the fund, where all three stakeholder groups need to agree on a project, which then needs to be approved by the CPP: FEC takes the responsibility to implement projects, civil society contributes to the project design together with beneficiary communities, and the office of the Provincial Governor ensures the release of funds. The stakeholders have also agreed to using 75% of the funds for the implementation of projects on the ground and 25% for the functioning of the office of the Provincial Monitoring Committee (CPP).  

However, partly due to the dispute around fund management and the mistrust between stakeholders trying to outdo each other over the distribution of funds, no money has yet been released, and funds collected from the exporter have not yet resulted in any social projects on the ground. This has caused WMC to suspend its contributions to the fund until further notice. 

Although in principle the management of the fund is now determined, taxpayers and stakeholders on the ground have raised the issue of prioritization and location of social projects, as they fear that the Provincial Government will not necessarily channel back these funds to the mining areas such as Kalimbi and Nyabibwe, but use them elsewhere, or on more productive sites. 

This is where downstream participants and buyers could use their leverage and weight to support local efforts in ensuring that the contributions to the basket fund are managed properly and transparently, and that the funds are allocated to projects that will benefit the local communities around the mines (e.g. public infrastructure or livelihoods), or that help build the capacities of mining cooperatives, and that appropriate consultation and participation of the community is ensured.  

Besides its contribution to the basket fund, WMC, in partnership with Traxys, has initiated their own CSR project in Nyabibwe by constructing a new market building for the population. According to stakeholders, the construction of the building had been delayed, and in the meantime the population contacted another funder, UNDP, which began work immediately. WMC then started its own construction, which has resulted in two new market buildings being built in the same place; one still under construction, and the other not yet in use. 

6.9. Conclusion
In contrast to SfH and KEMET’s partnership, the CFTI was convened and funded by a donor (DMFA). While SfH served as a conceptual model, the CFTI took it a step further by testing and implementing it in South Kivu and for a cassiterite supply chain. The CFTI successfully established a conflict-free supply chain from South Kivu, a highly volatile area that was previously considered too risky, by bringing together all stakeholders involved.

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611 Interview with Division des Mines, Bukavu, 10.02.2015  
612 Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015; Interview with representative of IOM, Bukavu, 10.02.2015  
613 Interview with representatives of the négociant association ANEMISKA, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015; Interview with representative of IOM, Bukavu, 10.02.2015  
614 Interview with Fidel B AFLemme, 07.03.2015  
615 Interview with WMC, Bukavu, 11.02.2015  
616 Focus group with COMIKA and COMBECKA representatives, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 13.02.2015
Through the presence of a donor that funded the implementation of the iTSCi due diligence and traceability system, this was possible at a small mine site where no supply chain actor was able to kick start the system. Furthermore, only ASM cooperatives, not the concession holder, were involved in the mining operation. Since this is the case for many ASM sites, this indicates that the establishment of viable supply chains from the majority of mines will require initiatives or supply chain models that can provide this start-up funding. The presence of a donor additionally increased the credibility of the initiative and the supply chain, and gave downstream buyers the confidence to get involved. Lastly, the initiative also served as the base for the expansion of the iTSCi traceability and due diligence system in South Kivu, based on the lessons learned throughout the pilot.

The first lesson learned was that a physically segregated processing and separate supply chain of tin was too costly and economically infeasible. After the initial shipment, the supply chain was therefore opened up to a mass balance model from the level of the smelter, resulting in a supply chain that was no different than other supply chains from iTSCi covered mines.

Secondly, the CFTI closed supply chain was not viable enough on the global tin market, due to ore impurities that were specific to that mine that could not be balanced out within the supply chain, taxation levels and other costs related to sourcing tin from DRC (e.g. transportation, costs of traceability & due diligence). This was an impediment to a sole source option for responsible buyers. Additionally, production levels quickly tailed off after an initial upturn, due to increased exploitation difficulties and falling prices. Little investment into mechanisation was made as a result of the ownership and operational structures of the mine (Shamika as concession holder, but mine operated by cooperatives), and the management difficulties and disputes of the cooperatives.

These challenges could only be mitigated by transforming the restricted closed supply chain with few mines and operators and opening it up through expanding iTSCi to other mines to reduce market dependency on one source and introduce competition between sources. Even with this transformation, challenges remain, and require further opening up of the supply chain upstream (diversifying supply by extending mine site validation and traceability and due diligence to additional sites) and downstream (increasing smelter buyers). A lesson of this might be that a closed pipe that wishes to work in a 'fully sealed' sense must have an optimal deposit in mineralogical terms, to essentially cover the extra costs associated with 'full sealing'.

Another lesson could be that a fully sealed and exclusive supply chain poses a problem from a monopsony, price balancing and dependency point of view. A different configuration of a 'closed-pipe' system may be more feasible: One in which downstream buyers commit to sourcing from one specific mine or area, but enable the mining operator, traders and exporters to sell to other buyers outside of this 'closed-pipe' supply chain. This would reduce the challenges associated with the economic viability of sealed supply chains, while a sole source situation from the downstream point of view would still enable provenance claims and investment at the mine and local communities. For the upstream supply chain stakeholders, this would then be an open market situation, whereas for downstream buyers, this would still constitute a 'closed-pipe' system in the sense that all entities in their particular supply chain are defined and it is known which mine or area the minerals come from.

The economic impacts of the CFTI initiative were large at the beginning, as production levels and prices increased, particularly since Nyabibwe as a village is highly dependent upon the mine. After this initial upturn, economic impacts levelled off and were only...
mitigated by the opening up of the system and the expansion of traceability to other mines. This helped the migratory miners, who had gone to more productive sites, but not so much the community of Nyabibwe; an issue that still manifests itself indirectly through the cycles of debt in the local economy.

In this regard, there may have been scope for CFTI as an initiative to incentivise the mechanisation of and investment in the mine, and to support or incentivise initiatives to further build the capacities of the cooperatives to manage their mining operations as a business while at the same time disincentivising political disputes and interference. However, it must be noted that the concession owner is responsible for the development of the mine and would not only need to be engaged and implicated in such efforts, but also made the 'owner' of such processes. Additionally, the CFTI could have explored ways of supporting and funding projects that help build and strengthen alternative livelihoods in Nyabibwe.

The CFTI had few direct social impacts, as the priority was put on funding the traceability and due diligence system to establish a conflict-free supply chain, and the plan for a premium that could have been used to fund social projects was not realised. One of the main impacts was the high levels of attention that the initiative created, and the high expectations of upstream stakeholders, which over time turned into stakeholder fatigue and frustration. As with the other closed supply chain models, this shows the importance of managing stakeholder expectations from the beginning, whilst also really assessing threats to the system so these may also be communicated to avoid disappointment.

There are a few indirect social impacts where the CFTI could have played a more pronounced role as a catalyst: First, health and safety at the mine seems to have improved through the oversight of state agents, but accidents still happen and the cooperatives are unable to provide adequate equipment and training to miners. Here, the CFTI could have provided funding for projects that, in addition to the activities already covered by iTSCI, raise awareness on health and safety with miners, provide them with basic equipment and train them in using it, as well as supporting preparation and training in emergency response procedures.

Second, through the implementation of traceability, the government is now able to collect tax revenues. However, this does not seem to flow back to government agents on the ground in the form of salaries (which would help reduce the risk of corruption), or to local communities in the form of better public services. Similarly, a basket fund for social projects for local communities has been established, but so far no funds have been released. While this is in the sovereign domain of the national and provincial government, there could have been scope for the CFTI to provide a platform or forum to discuss these issues with the government.

Lastly, the CFTI did not have environmental issues in scope, as the priority was put on implementing traceability in order to restart economic activities. However, addressing environmental impacts resulting from mining is a high priority for almost all stakeholders involved in Kalimbi/Nyabibwe, and this could be a focus of a second phase of CFTI, together with support for mechanisation, capacity building of the cooperatives, and projects on health and safety.
7. DUE DILIGENCE AND TRACEABILITY

Establishing a conflict-free upstream supply chain in conformance with DFA and the OECD DDG was imperative and the main goal of all three closed-pipe initiatives, particularly for the downstream conveners and buyers involved.617 To achieve this, all three initiatives used and relied on the mine site validation process by multi-stakeholder teams as well as iTSci, the later of which in turn is conformant with and feeds into the CFSP covering the smelters.618 This makes iTSci a critical piece to the success of these initiatives – noting that the system is not implemented differently in closed pipe systems than it is elsewhere.

7.1. Due Diligence

The iTSci traceability and due diligence system is aligned with the requirements of the OECD DDG as well as with the RCM and DRC laws. Additional to chain of custody tagging and tracking of minerals in cooperation with SAESSCAM, Division des Mines and CEEC (see section 6.2), iTSci conducts and facilitates the following due diligence activities:

- Monitoring and assessment of the wider governance situation, the mine sites and the transportation routes,
- Multi-stakeholder incident monitoring, identification and management/mitigation mechanisms through the CLS and CPP
- Independent third party audits of all operators seeking to join iTSci (desk-based), and of companies in the supply chain against the OECD guidance
- Chain of custody implementation.

Whilst iTSci’s due diligence activities were of course extremely valuable to the closed pipe initiatives and their partners, the closed-pipe initiatives importantly created a certain opportunity for downstream users to conduct enhanced due diligence in addition to iTSci. Participating in a closed pipe created alternative means for accessing information within the supply chain outside of iTSci, for example through direct communication channels such as group phone calls or the use of independent assessors.619 This helped downstream actors do their own due diligence in addition to what iTSci provided. This is something the OECD Guidance encourages620, even if it allows companies to be assisted by industry schemes.

Though the greater transparency, communications and visibility was beneficial for the downstream participants of the initiatives, these additional due diligence activities increased the burden and costs for upstream participants. Downstream participants could support iTSci to improve the transparency, visibility, and the immediacy of data sharing that they desire, also tailoring mechanisms for delivering these more to their needs, for example by supporting iTSci’s plan to switch to digital data collection. This may bring benefits, such as improved and more immediate data and information, but could potentially also lead to increased costs for iTSci, which would be passed to members, and then ultimately back upstream. Alternatively, closed-pipe models could be used to test alternative traceability and due diligence systems and their performance in these regards; or downstream participants could commit to funding, supporting and strengthening

617 Interview with downstream participant 2, 15.01.2015
618 http://solutions-network.org/site-cfti/process/(30.03.2015)
619 Interview with Gregory Mthembu-Salter, 13.03.2015
620 Noting that this is also enabled through iTSci, which publishes ‘due diligence lists’ to encourage buyers to do their own due diligence parallel to iTSci.
independent monitoring and reporting activities by local stakeholders, e.g. NGOs or government.

Lastly, closed-pipe systems could in theory also establish and rely on their own due diligence measures, without having to rely on iTSCi or other traceability or due diligence systems. For example, the initiatives helped MMR establish and use its own due diligence system including the creation of a proprietorial traceability software and information database, though currently building on the iTSCi tagging system. Such a system will only be feasible for larger operators and concession holders, and not at mine sites such as Kalimbi (CFTI), which are operated by cooperatives.

On the other hand, there may come a time when a completely different system is possible. At the time when the three closed pipes were set up, the need for a traceability scheme was clear for all stakeholders, but given the development over the last few years, there may be a point where supply chains from DRC could work without (physical) mineral tracking. Closed pipe systems offer an interesting model for testing this as they essentially create islands of good governance. Supply chain participants feel that at this point in time, only a sealed-off supply chain – a closed pipe in the strict sense, where there is only one mine, one exporter, etc – would be able to provide a completely risk-free level of assurance in that case; and that such supply chains would hardly be commercially feasible. However, this might still be an option to be considered particularly for geographies that are less affected by conflict, where for example closed pipe systems in the more peaceful parts of DRC work to address the worst abuses in Annex II and enter a process of gradual formalisation of the sector, so creating islands of good practice where physical tracking of the mineral wouldn't be necessary, documentary tracking would be adequate, and assurance would focus on progress against these major issues.

While downstream participants do their own due diligence through the closed pipe system, they largely rely on the iTSCi incident reporting process and the iTSCi-initiated multi-stakeholder mechanisms of the CLS and the CPP to address, manage and resolve risks and incidents in the upstream segment. These structures consist of upstream industry, miners' cooperatives, civil society organisations, and government agencies on a local level (CLS) and on the provincial level (CPP). The large majority of stakeholders on the ground perceive these mechanisms as very helpful and effective forums, where all stakeholders are involved to find solutions that are acceptable to everyone, though in Katanga, civil society organisations added the concern that recommendations of the CLS are sometimes not followed through, and that there should be a stronger mechanism or incentive for enforcement. Since closed-pipe systems rely on these incident and risk management procedures, they (and their downstream participants) could support and strengthen them even further, e.g. by providing funding for their logistical organisation (as in the case of CFTI), or by using their leverage to make sure that recommendations are implemented.

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621 OECD 2012a; Mthembu-Salter, G. 2012; RCS Global 2013
622 Noting that such systems would have to meet CFSP Standards.
623 Interview with Richard Robinson and Karen O'Donnel, USAID, 10.03.2015
624 Interview with representative of downstream participant, 19.03.2015
625 CFTI 2013a; http://solutions-network.org/site-cfti/ (30.03.2015)
626 Interview with MMR representative and CDMC representative, Kalemie, 02.02.2015; Focus group with civil society representatives, Kalemie, 07.02.2015; Focus group with civil society representatives, Nyabibwe, 12.02.2015; Interview with civil society representatives, Bukavu, 11.02.2015; Focus group with representatives of SAESSCAM, CDMC, iTSCi, Mai Baridi, 04.03.2015
627 Focus group with civil society representatives, Kalemie, 07.02.2015
7.2. Traceability

The implementation of traceability and iTSCi’s chain of custody tracking was imperative for all three initiatives from a legal standpoint, as well as an assurance and access to the market point of view. Some of the vulnerabilities related to iTSCi and the governance context that did come up during our fieldwork and at the three mine sites we visited are discussed below. Since downstream participants and the initiatives as a whole needed, relied on, and benefitted from the market assurance iTSCi was able to provide, the closed-pipe models could be used by downstream participants to more actively help support and improve traceability and due diligence upstream.

First, the government faces difficulties in fulfilling its roles in implementing the iTSCi traceability component, as personnel, capacity and infrastructure is lacking, which makes it difficult for government agents to access and be present at the remote mine sites. The biggest issue is that government agents are paid very little, irregularly or not at all, as the taxes levied do not seem to trickle back into the local state services on the ground. This increases the likelihood of them not doing their jobs properly or asking for bribes. MMR mitigates this by paying allowances to state agents responsible for the implementation of mineral tracking, but through that creates a certain conflict of interest by paying the people responsible for monitoring the company’s actions. Here, the structure of closed pipes could be used to leverage the presence, visibility and involvement of downstream actors, which has proven effective in other matters such as taxation levels in South Kivu, to incentivise the government to retrogress taxes to where they are levied and pay the state agents on the ground.

Second, there is a general risk of minerals entering the supply chain from nearby mine sites that are operational (and validated), but where iTSCi has not yet been able to install its system, due to price incentives and the necessity of having iTSCi tags. This is a potential issue for example in Nyabibwe, where traders process the ore in their homes after the mine tag is removed and before the négociant tag is added. However, stakeholders say that this risk is generally small, as untagged material is rather illegally exported and those responsible for tagging can easily spot an increase in production and usually know the miners and traders of a particular place well and are familiar with the structure and colour of the ore, so that they would recognise ore from other places. Additionally, bringing good quality material into Kalimbi would downgrade the ore, which disincentivises such activities.

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628 Interview with representative of Division des Mines, Kalemie, 03.02.2015; Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines, iTSCi, Kisengo, 05.02.2015; Interview with SAESSCAM, Kalemie, 03.02.2015; Interview with representative of IOM, Bukavu, 10.02.2015; RCS Global 2013
629 Focus group with SAESSCAM, Division des Mines, iTSCi representatives, Nyabibwe, 12.02.2105; Focus group with civil society representatives, Nyabibwe, 12.02.2015; Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines, iTSCi, Kisengo, 05.02.2015; Channel Research 2013a
630 Focus group with representatives of civil society and FEC, Kisengo, 05.02.2015; Interview with Claude Iguma Wakenge, Bukavu, 10.02.2015;
631 Noting that other initiatives have started to address this, for example PROMINES and other donor activities are currently working to build the capacity within the government for the management of taxes, payment of staff, etc.
632 Focus group with civil society representatives, Kalemie, 07.02.2015; Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines, iTSCi, Kisengo, 05.02.2015; Interview with representative of, IOM, Bukavu, 10.02.2015
633 Interview with representative of Division des Mines, Bukavu, 10.02.2015; Interview with representative of IOM, Bukavu, 10.02.2015; Focus group with SAESSCAM, Division des Mines, iTSCi representatives, Nyabibwe, 12.02.2105; Interview with civil society representatives, Bukavu, 11.02.2015; Al Jazeera 2013
634 Focus group with civil society representatives, Nyabibwe, 12.02.2015; Focus group with representatives of SAESSCAM, Division des Mines, Police des Mines, iTSCi, Kisengo, 05.02.2015;
Closed pipe systems as a model working with only one mine are rather unsuitable for addressing this risk, as in order to mitigate it, more sites would have to be validated and included in iTSCI (or other traceability and due diligence initiatives). One of the prerequisites (amongst others) for this is funding, and downstream participants or funders of closed-pipe initiatives could contribute to this. The CFTI provides a good example of how an originally closed supply chain has been transformed into an ultimately more sustainable open system through the funding provided by the original conveners of the initiative. Additionally, closed-pipe supply chains could provide a testing ground for alternative traceability systems, in order to test how feasible and viable they are, and to see if and how they could be extended.636

Third, there is a risk of minerals leaking from a closed-pipe system, as the structure of the supply chain obliges miners or traders to sell to a specific counterpart at a given price (e.g., MMR as the concession holder, or WMC as the exporter in the initial stages of CFTI), which creates incentives to bypass the counterpart and sell to other actors paying slightly higher prices (as would normally happen in an open market system).637 Given that the costs of implementing traceability and due diligence are concentrated upstream, it is easier for actors who do not have to bear those costs (because they are acting illegally or smuggle minerals out of the country) to offer more competitive prices. To reduce these risks, closed-pipe supply chain models could test ways in which the cost for traceability is less concentrated upstream, either by engaging downstream users in helping to bear these costs in the start-up phase, or by finding ways to decrease the cost burden, e.g. by helping extend the iTSCI system to further mine sites, by helping improve production at mine sites, or by testing alternative traceability schemes and their financial viability. Additionally, closed-pipe systems could help and incentivise concession holders to find better and more effective ways to set and negotiate the prices with miners.

Additionally, a few more specific challenges related to traceability and due diligence at these three mine sites were mentioned by stakeholders on the ground:

- In Nyabibwe, all stakeholders expressed the need for a trading center, where minerals would be traded, processed, weighted, tagged centrally and stored securely.638 According to them, this would minimise the risk of contamination of the supply chain by removing the issue of négociants working in their houses, and thus increase the credibility of the supply chain, provide actors with precise instruments to weight minerals and define their quality, which would result in more transparent pricing, and reduce the risks of small bribes asked by government officials by allowing easier monitoring.639

- Also in Nyabibwe, stakeholders mentioned the need for vehicles specifically designated to mineral transports, as currently minerals are transported on the general trucks that transport other goods and passengers, which according to them increases the risk of bribes extracted along the transport route.640

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636 In the light of the above, alternative systems would have to be compatible and harmonised if minerals should be traded in an open market with two or more systems in operation.
637 Focus group with civil society representatives, Kalemie, 07.02.2015;
638 Noting that such trading centers were planned (funded by USAID and IOM), but are not currently operational in the Kivus.
639 Focus group with SAESSCAM, Division des Mines, iTSCI representatives, Nyabibwe, 12.02.2105; Interview with representatives of trader’s association, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 12.02.2015
640 Focus group with SAESSCAM, Division des Mines, iTSCI representatives, Nyabibwe, 12.02.2105; Interview with representatives of trader’s association, Nyabibwe, 13.02.2015; Focus group with civil society representatives, Nyabibwe, 12.02.2015
At all three mine sites\(^{641}\), it proved hard for stakeholders to keep track of the number and identity of miners. At Kalimbi, the cooperatives do not have statistics on miners, and only have lists of the team leaders, and only few of the miners we spoke to were able to produce their carte de creuseur. At Mai Baridi, Luba and Kisengo, CDMC conducts a census of miners each year, but due to migration and fluctuating numbers, this outdates quickly. MMR/CDMC provided the miners with cartes de creuseurs after the first census, but has not re-done that since.\(^{642}\) It is the responsibility of the government to register miners and issue cartes de creuseurs, and such issues may be addressed through programmes supporting the government in miner registration (by donors or local / international NGOs).

\(^{641}\) This is the case also for other ASM mine sites across DRC.

\(^{642}\) Focus group with SAESSCAM, Division des Mines, iTSCI representatives, Nyabibwe, 12.02.2105; Focus group with civil society representatives, Nyabibwe, 12.02.2015; Focus group with representatives of COMIKA & COMBECKA, Nyabibwe, 13.02.2015; Focus group with Comité de Creuseurs, Kisengo, 06.02.2015
8. CONCLUSIONS

8.1. Summary comparison across initiatives
The following table provides an overview of the three initiatives and a summary of their structural differences as well as their key direct and indirect impacts.

<table>
<thead>
<tr>
<th></th>
<th>Solutions for Hope (Pilot)</th>
<th>KEMET’s partnership</th>
<th>CFTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiative participants</td>
<td>Downstream: AVX, Blackberry, Fairphone, Flextronics, Foxconn, HP, Intel, Motorola Mobility, Motorola Solutions</td>
<td>Downstream &amp; smelter/refiner: KEMET</td>
<td>Downstream: AIM Metals &amp; Alloys, Alpha, Apple, Blackberry, Fairphone, HP, ITRI, Motorola Solutions, Nokia, DMFA, Philips, Tata Steel</td>
</tr>
<tr>
<td></td>
<td>Smelter/refiner: F&amp;X, Global Advanced Metals</td>
<td>Upstream: MMR, CDMC</td>
<td>Smelter/refiner: MSC</td>
</tr>
<tr>
<td></td>
<td>Upstream: MMR, CDMC</td>
<td></td>
<td>Upstream: COMBEKA, COMIKA, Traxys, WMC and other exporters</td>
</tr>
<tr>
<td>Due diligence and traceability system used for CFSP access</td>
<td>iTSCi/Pact</td>
<td>iTSCi/Pact</td>
<td>iTSCi/Pact</td>
</tr>
<tr>
<td>Mine site location</td>
<td>Mai Baridi and Luba, Katanga</td>
<td>Kisengo, Katanga</td>
<td>Kalimbi/Nyabibwe, South Kivu</td>
</tr>
<tr>
<td>Supply chain structure</td>
<td>Supply chain with pre-defined actors (minerals from the same mine can also feed into other supply chains)</td>
<td>Supply chain with pre-defined actors (minerals from the same mine can also feed into other supply chains)</td>
<td>Originally a closed-pipe in a sealed sense (only one mine, one exporter, one trader, one smelter), then transformed into a more open</td>
</tr>
<tr>
<td>Solutions for Hope (Pilot)</td>
<td>KEMET’s partnership</td>
<td>CFTI</td>
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<tr>
<td>Mass balance</td>
<td>Vertically integrated supply chain (reducing it to two main actors, MMR as the mine operator and exporter, and KEMET)</td>
<td>market system (several mines, traders, exporters feeding into the supply chain) First physically traceable, then converted into mass balance</td>
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</table>

**Key direct impacts and challenges**

- First successful and OECD DDG compliant closed-pipe supply chain from Katanga; produced the first conflict-free export of tantalum from DRC; and included the first CFSP-compliant tantalum smelter to process material from DRC
- Increased transparency, visibility and assurance for downstream buyers and gained their confidence to source from DRC
- Reduced the actors in the supply chain, which reduced the actors on which due diligence needed to be done, allowed a higher level of confidence and direct relationships between the
- Long-term contractual agreement and on-going project allowing for long term plans and investment at the mine site
- KEMET is the only long term contractual and ongoing project where social investments have been done
- Income for miners and their families
- Injection of cash into the local economy: Locals not involved in mining have more customers for their products, but at the same time living costs increased
- Incentivised environmental policies

- First traceable supply chain from the Kivus (through the funding for the implementation of due diligence and traceability system, including capacity building of government agents)
- Initial phase of the project (levelling off towards the end):
  - a) Increase of production and increased numbers of miners working at the site
  - b) Income creation for miners & employment creation at level of the exporter/comptoir
  - c) Restart and recovery of local economy in Nyabibwe
<table>
<thead>
<tr>
<th>Solutions for Hope (Pilot)</th>
<th>KEMET’s partnership</th>
<th>CFTI</th>
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</thead>
</table>
| supply chain participants and facilitated communication and understanding of risks, incidents and challenges | • Direct investment into social and infrastructure projects for the local community through the Kisengo Foundation: Public freshwater wells (which reduced cholera outbreaks and had other positive health impacts); fully equipped referral hospital with a resident doctor treating around 144 patients a month; a new school building equipped with desks and blackboards, attended by over 1600 pupils.  
• Mechanisation of parts of the Kisengo mine, thus increasing production, but also displacing ASM  
• Exclusion of local traders (due to ownership of MMR & status of CDMC), which had played an important role in pre-financing, resulting in a dependance |
| • Provided an platform to build downstream confidence in newly developed initiatives and systems, such as iTSCi and CFSP | • Increased transparency in the supply chain  
• Impact on governance: Visibility and direct involvement of downstream participants supported upstream supply chain participants in successfully negotiating feasible taxation rates with the government  
• Attracted a lot of attention and interest: helped communicate a positive story, but also led to stakeholder fatigue  
• Created high expectations on the ground, which led to frustration resulting from the challenges of the project |
| • Allowed direct involvement and presence of downstream companies on the ground, which helped incentivise authorities to create change towards traceability and due diligence and a conducive political framework for it | • High burden of interest and scrutiny for supply chain participants, but conducive for improvement and learning  
• Created high expectations on the ground, which in some cases led to frustration and disappointment |
| • High burden of interest and scrutiny for supply chain participants, but conducive for improvement and learning | | |
| | | |
| | | |
## Key indirect impacts and challenges

<table>
<thead>
<tr>
<th>Solutions for Hope (Pilot)</th>
<th>KEMET’s partnership</th>
<th>CFTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Income for miners and their families (but prices achieved not significantly different from other iTSCI mine sites)</td>
<td>on the liquidity of MMR, and indebtedness of miners</td>
<td>• Security situation has improved, FARDC seems not involved in minerals trade anymore</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Improvement and decline of local economy dependent on mine production (positive impact at initial phase of the project, declining or</td>
</tr>
</tbody>
</table>

### Key indirect impacts and challenges

- Social and infrastructure projects at the mine sites through the Vinmart Foundation (street lighting, water wells, dispensary with medical staff member, financing of medical treatment and medicine stock, school building)
- Incentivised environmental policies and management
<table>
<thead>
<tr>
<th>Solutions for Hope (Pilot)</th>
<th>KEMET’s partnership</th>
<th>CFTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Allowed MMR to establish due diligence and traceability measures through financing the iTSCI system, which resulted in MMR being considered a safe and reliable supplier, able to compete on the world market and ultimately sell to multiple buyers world-wide</td>
<td>• Miners supported with mining tools and equipment and large machinery to remove the overburden (by MMR), reducing the time and investment needed for them to reach the ore</td>
<td><strong>negative impact towards the end of the project</strong></td>
</tr>
<tr>
<td>• Miners supported with mining tools and equipment and large machinery to remove the overburden (by MMR), reducing the time and investment needed for them to reach the ore</td>
<td>• Disputes around pricing and tensions between the miners, CDMC and MMR</td>
<td><strong>• Reduction of disputes and conflicts between the two cooperatives</strong></td>
</tr>
<tr>
<td>• Security situation has improved greatly, and no armed groups or FARDC are involved at the mine sites</td>
<td>• Security situation has improved greatly, and no armed groups or FARDC are involved at the mine sites</td>
<td><strong>• Improved working conditions &amp; health and safety at the beginning of the project, but measures seem to not have lasted (e.g. protective equipment)</strong></td>
</tr>
<tr>
<td>• Direct employment creation by MMR at the mine sites and in Kalemie</td>
<td>• Indirect income generation through the presence of MMR and the miners: Convenience shops, restaurants, guesthouses</td>
<td><strong>• Reduction of accidents due to increased supervision by SAESSCAM</strong></td>
</tr>
<tr>
<td>• Indirect income generation through the presence of MMR and the miners: Convenience shops, restaurants, guesthouses</td>
<td>• Improved roads &amp; bridges between Kalemie and the mine sites (by MMR)</td>
<td><strong>• Increased tax revenues for government</strong></td>
</tr>
<tr>
<td>• Improved roads &amp; bridges between Kalemie and the mine sites (by MMR)</td>
<td>• Procurement in Kalemie &amp; procurement of a few agricultural goods at the mine sites (by MMR)</td>
<td></td>
</tr>
<tr>
<td>• Procurement in Kalemie &amp; procurement of a few agricultural goods at the mine sites (by MMR)</td>
<td>• Increased tax revenues for the government</td>
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<tr>
<td>• Increased tax revenues for the government</td>
<td>• Reduction of accidents in the mine through increased supervision by SAESSCAM</td>
<td></td>
</tr>
<tr>
<td>• Reduction of accidents in the mine through increased supervision by SAESSCAM</td>
<td>• Little positive impact on health &amp; safety, as protective equipment distributed to the miners is not being used</td>
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</tbody>
</table>
8.2. Main achievements and benefits

The main benefit of these ‘closed-pipe’ systems has been their role in the efforts to resume, invigorate or maintain the minerals trade from DRC after the presidential mining ban and the de facto boycott. While the volumes sourced through the initiatives are small compared to the overall volumes sourced from DRC through the ‘normal’ conflict-free channels of iTSCi and the CFSP, the three initiatives discussed in this report were essential to demonstrating that conflict-free sourcing from DRC is indeed possible and were critical to ensuring downstream confidence, acceptance and awareness of this. The participants and conveners of these three closed-pipe systems were ready to take risks that others were not, which was of particular weight and importance at the time when these initiatives were created (SfH and KEMET’s partnership in 2011, CFTI in 2012). Having downstream companies visibly and publicly committed and involved in these initiatives has helped re-shape the perceptions of downstream end-users towards DRC and ASM as a source for minerals and consequently helped market minerals from DRC through a signalling effect that helped promote and foster legitimate mineral trade and exports from DRC.

The closed pipe model seems to have been important for downstream buyers to consider sourcing from DRC, particularly since at the time when these initiatives were set up the tools and systems (including the OECD Guidance and iTSCi) were still new. The closed-pipe initiatives provided a platform and opportunity to facilitate downstream understanding, awareness and acceptance of these tools and systems and provided an opportunity for learning and improvement. This subsequently helped build confidence in such systems, which again helped increase legitimate trade and export from the DRC.

While in principle and practice the closed pipe systems relied on iTSCi (and CFSP) for the traceability and due diligence conformant with the OECD Guidance, downstream buyers at the same time needed and wished for greater transparency and visibility as well as more immediate communication than what iTSCi provided, and the closed pipe model was essential to establish and maintain their trust. As DRC moves to become more stable, one would expect that closed pipes will be seen as less necessary as traceability and due diligence needs adjust to reduced risks. There may be scope for these initiatives in other geographies, however, particularly where risks are high, credibility is low and where downstream buyers need enhanced assurance. There may also be scope for using these models for other minerals, and perhaps for testing and evaluating alternative traceability and due diligence systems.

Additionally, establishing the closed-pipe systems in DRC was a project in generating shared value along a conflict minerals supply chain because it allowed downstream companies (particularly in the tantalum sector) to minimise price fluctuations for their tantalum supply, while also providing an opportunity to create social and economic value in the region (as in the case of KEMET’s partnership). Closed pipes were also useful for downstream companies not only from a due diligence and traceability point of view, but also from a mission-based point of view. Knowing which exact mine site you are sourcing from also allows you to track the impacts you have on the ground, and to communicate this to your customers. While the closed pipe model is designed to provide that information, it could in theory also be achieved through increased transparency and communication in open supply chains.

On the ground, all three initiatives were important in maintaining or re-starting business and trade after the presidential mining ban and the de facto boycott in their respective regions. This resulted in increased production, livelihoods and income for the miners, as well as in a boost for the local economy around the mine sites, as local business and trade benefited from the cash injection resulting from mining activities. Communities and miners at the MMR mine sites in Katanga additionally benefitted.

643 Apart from the conclusions drawn from our field and desk research, the conclusion section was also inspired by discussions with our interviewees and their own thoughts and research on closed pipe systems. This includes: Interview with Ken Matthysen, 10&13.03.2015; Interview with Christoph Vogel, 16.03.2015; Interview with Claude Iguma, 10.02.2015; Interview with Fidel Bafilemba, 07.03.2015; Interview with Richard Robinson and Karen O’Donnel, 10.03.2015.

644 SfH constituted 0.27% of export totals from DRC and Rwanda (0.71% of totals from DRC), Kemet’s partnership constituted 0.96% of export totals from DRC and Rwanda (2.48% of totals from DRC), and CFTI constituted 1.69% of export totals from DRC and Rwanda (4.38% of totals from DRC) in the time period between January 2011 and June 2014. See Annex E.
from the investments made in mechanisation of the mining operations (supporting them in increasing production) and in infrastructure projects provided for the community (through the Vinmart Foundation or the Kisengo Foundation).

It must be acknowledged that the closed-pipe systems were operating with partners and were part of an overall operational context in which not all impacts or achievements can be attributed directly to a specific actor or initiative, or where aspects are not directly related to or dependent on the closed-pipe (as described in the sections on ‘indirect impacts’). This is indicative particularly of important moments of collaboration and inter-dependence between iTSCI and the closed-pipes that compel joint credit, i.e. we must be careful not to pay too much credit to SfH vis-à-vis what iTSCI has also achieved, and vice versa on certain issues.

It is difficult to assess precisely if the lives of miners and local communities have improved overall at the hands of these initiatives, as many other external factors play into the quality of life (security/conflict, governance, state of national and global economy, fluctuations of world market prices of commodities, etc). Compared to the situation during the presidential mining ban and the de facto boycott (following 2010), their situation seems to generally have improved with regards to livelihood/economic options for both miners and other stakeholders in the local community. When comparing to the situation before the presidential mining ban and the de facto boycott (prior to 2010), the picture is less clear, particularly regarding miners’ livelihood and income. Neither of this can be attributed to closed-pipes specifically. However, the investment and infrastructure projects realised by MMR and the Kisengo Foundation certainly brought increased benefits to miners and communities when compared to the situation before 2010 (though also creating additional challenges).

Lastly, all three closed-pipe models made a direct involvement and presence of downstream companies on the ground possible. This visibility and involvement provided opportunities to support and leverage incentives for better governance of the sector, for example with regards to traceability and due diligence or taxation levels.

8.1. Scalability

For downstream actors, closed pipe systems are particularly interesting when increased control over the supply chain is required (particularly in relation to due diligence and traceability requirements), or when visibility of the mine site provides added value in terms of the company mission. Thus there may be specific instances where downstream buyers want or have to opt for a closed-pipe model, for example in cases where a specific material or mineral is critical to their business (for example for tantalum it makes more sense to be sourced through closed-pipes, as it is critical to specific electronics materials and security of supply must be ensured).645

Upstream, closed-pipe systems seem to be most viable at highly productive mines with a clear ownership structure, where for example a mine operator owns the concession, and has strong management systems and control of production to effectively operate a closed-pipe system as well as an incentive and capacity to mechanise the operation in order to create economies of scale and counteract the additional costs of due diligence and traceability. Particularly for smaller, less productive sites where ownership structures are less clear, and modes of production are less organised, closed-pipe systems are not feasible, and an open market system may be more appropriate. However, closed-pipes may be crucial as an investment for getting things going and setting standards for competition and good practice before opening up the market.

As the examples of the three closed-pipes systems show, what is really needed is not an extension of closed-pipes in a ‘sealed’ sense, as they are not economically viable particularly for smaller mines and for tin supply chains, and are not able to include a broad base of mines into the market. What needs to be expanded are supply chains where downstream do and can do their own due diligence and are involved and present upstream (thus using the closed-pipe model’s advantages of increased leverage upstream and increased transparency for downstream as it stands), but in a way that is not constraining

645 Interview with downstream buyer, 16.03.2015
upstream actors further in their business than they already are with bearing the costs of traceability and due diligence, and in a way that allows the maximum number of mine sites and economic actors to resume business. This is further expanded below in section 8.1.1.

Additionally, there is a need for supply chain models that deliver conflict-free products, and are also able to incentivise and support better economic, social and environmental impacts on the ground. The enabling of such impacts will particularly require action by government, donors and civil society in addition to what industry actors and supply chain models are able to do. The closed pipe model, by creating longer-term sourcing relationships (i.e. ‘closed-pipes in an open market’), provides the business case and framework for making this more possible and viable.

8.1.1. Closed pipes and ‘open market’

Closed pipe models may be most effective if they are intentionally designed to be a ‘kick-starter’ in post-conflict economies with a view to transitioning a mineral sector from one discrete and trustworthy source to islands of responsible production and, eventually, to a general area where responsible production and sourcing become the norm.

A closed-pipe system that involves only one source and a limited number of upstream partners does not necessarily translate into broader impacts on the ground; broader impacts are better achieved when there is a vision of scale and sectoral transformation such that the system stimulates a greater number of upstream operators to start their business and increase sales and volumes traded from the region as a whole. The case of the CFTI demonstrates that a restricted closed-pipe may not be sustainable and that a closed-pipe should not limit the ability of upstream actors to sell to other customers, and that broader economic impacts and enfranchisement may be achieved upstream by an ‘open market’ system. The CFTI has helped address such issues by funding the extension of traceability and due diligence to other mine sites and thus essentially transforming its function from its original closed-pipe form. Thus to achieve broader economic impact in terms of volumes and sales from DRC, closed pipe models seem to be less suitable, since they focus on specific mines, and a broader commitment to sourcing from the DRC as a whole might have had broader impacts on the ground.

However, closed-pipe models (if distinct from an exclusivity of supply arrangement), as the example of the three initiatives shows, can exist in an ‘open market’ situation, and can provide added value in this configuration. For example, where the downstream buyer has a structured, long term relationship with a specific supplier or mine operator, allowing the buyer to make claims about those relationships and provenance, as well as require certain things through its contract (such as for example investment in the mine, social programmes for local communities, improvement of health and safety, etc), but enabling the mine operator to sell to other buyers outside this closed-pipe supply chain. At the same time, the buyer could theoretically establish multiple such relationships across the region but still operate through a range of closed pipes, and the seller can theoretically establish a range of such relationships with buyers at the same site.

In summary, the closed-pipe model can add value if it does not limit the ability of upstream actors to sell to other customers. If the model is combined with fostering and enabling an ‘open-market’ over time (not necessarily through the model itself, but through donor support to the

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646 In theory, the advantages of such an ‘open market’ system over a closed pipe model are that:
- Issues around pricing and (perceived) monopsonies are reduced, and related to that, competition between diverse economic actors is enhanced, thus creating incentives for improving prices paid to miners, and thus miner incomes;
- Existing actors in the supply chain, such as traders, can continue their business (so maintaining their livelihoods) and fulfil their commercial functions (e.g. pre-financing), which are often essential for the local economy and the mine operations;
- Minerals from different sources can be mixed, thus enhancing their quality and price whilst still allowing business for mine sites with lower quality material; and
- All types and sizes of mines can get a share of the business and sell their minerals, including the truly artisanal ones. (In fact, Fairtrade and Fairmined gold work with such open markets precisely because of the importance of market competition for building resilience and commercial viability in producers allowing ordinary traders to step in and buy when the Fairtrade or Fairmined licensed trader is not in a position to buy.)
government or NGOs), whilst maintaining improved visibility on and manageability of supply chain risks, it can be of particular value to both downstream and upstream segments of the supply chain.

The question then becomes whether buyers and downstream companies need exclusivity (a ‘sealed’ chain) to be willing to invest economically and socially in a mine, or whether it would be enough for them to put in place a fixed contract with a guaranteed amount of purchase, in exchange for the mine operator to invest in the mine and social programmes, whilst allowing the operator to sell to other parties who consequently also benefit from the claims made about responsible sourcing. This then comes down to branding and whether the downstream buyer wishes to make a brand distinction as being the enabler of these responsible activities.

### 8.2. Opportunities for improvements and addressing challenges

The three closed-pipe systems have provided ‘proof of concept’ and have achieved their goal of finding a way for industry to (re-)engage in DRC and source conflict-free minerals from the region. Building upon the closed-pipe systems initial aims, and their success in achieving these aims, the scope of the initiatives could be broadened.

Closed-pipe models like those featured in this report often rely on a lead organization with strong convening power. This coordinator role can be used to understand the needs and opportunities along the entire supply chain. It can also effectively communicate to other stakeholders. If the initiatives featured here – or others drawing from their experiences – wished to create additional value and positive impact along the supply chain, opportunities do exist.

While the aspects discussed below were not part of the original goals of closed-pipe systems, they could be achieved in more mature programs or in future initiatives, though it should be noted that it is infeasible for any supply chain to deal with all issues at once – a process for prioritization and staging must be followed as part of the design phase. It must also be acknowledged that these initiatives are not solely responsible for achieving this by any means. Nor do they operate in isolation of one another. An umbrella approach involving supply chain, governmental, donor and civil society commitments to enact further changes will achieve meaningful impact most efficaciously.

The following aspects could be considered to increase the impact and benefits of closed-pipe models along the supply chain:

#### 8.2.1. Broadening the focus

Closed-pipe initiatives could consider broadening the focus and supporting increased positive local impacts on the ground. These might move beyond focusing on creating ‘conflict-free’ supply chains to instilling ‘responsible business’ practices more broadly. For example, noting that Annex II of the OECD DDG considers a narrow set of supply chain risks compared to the broader set of supply chain risks found in the UNGPs or the OECD Guidelines for MNEs. In that sense, when conducting due diligence on a potential producer, closed-pipes could identify priority risks that require management over and above what is in Annex II of the OECD Guidance and potentially build mitigation of these into contracts and management systems.

The closed pipe models were created and implemented as a response to traceability and due diligence requirements and with the main goal of creating conflict-free supply chains in conformance with the OECD Due Diligence Guidance. The OECD Due Diligence Guidance provides a framework for doing supply chain due diligence generally. It includes an Annex of a Model Conflict Minerals Policy that specifies certain risks that should be in scope for due diligence; one can consider these listed risks as those that must be managed as the minimum acceptable practice to allow businesses to continue to do business in a conflict-affected or high-risk area.

In this way, management of these risks is a starting point for responsible sourcing. However, the OECD DDG is expressly designed to operationalize the due diligence component of the OECD Guidelines for Multinational Enterprises. The expectation is that businesses will seek to continuously improve, in time adding other risks of importance to their brand and corporate policies, or their sectors, stakeholders or buyers. A range of international norms for responsible business provide mandate to look at a broad
suite of social, environmental, and economic risks, such as the OECD Guidelines, the UN Guiding Principles, the Global Compact, and so on.

Indeed, the authors are aware of a range of companies already using the guidance (or planning for using the guidance) in this way to source 3TG from DRC and elsewhere. Thus, while broader social, economic and environmental risks and impacts were therefore not in scope for the closed pipes during the period of piloting for the purposes of this evaluation, they are likely to be expected by stakeholders in any future project: conflict minerals due diligence is now gaining traction, and stakeholders are asking questions as to why occupational health and safety, ASM-LSM relations, and women's rights are not on the agenda. With this in mind, it would be prudent for the closed-pipe initiatives to consider how they might use their models to attend to these demands.

8.2.2. Adding value for impacted upstream stakeholders

Given the nature of closed-pipe supply chains, where downstream companies are already intermittently present and visible on the ground, the model has good potential to create greater positive impacts on the ground than it does currently. Closed pipe initiatives could consider enhancing awareness that the costs of traceability and due diligence requirements are being pushed upstream, and that this may need a counterbalance or complementary measures that add value for impacted upstream stakeholders. Measures to address this could include the following:

a. Research into how these costs could be spread and carried along the supply chain and how the efficiency of the system increased, including an analysis of distribution of cost and how this can be mitigated. Closed-pipe participants could then consider ways to structure the supply chain and the trading terms so that it offers better or more transparent prices for miners and balances out such costs.

b. If no mechanism can be found to improve prices while satisfying the downstream need to avoid premiums, upstream dissatisfaction may be appeased and compensated through incentivizing, advocating for, or providing social investment on the ground. This could be done by downstream companies, mine operators or through third parties such as donor agencies together with the government or NGOs. Such measures could for example consist of supporting the improvement of health and safety for artisanal miners while providing them with more efficient and better yielding mining techniques, or in establishing public-private partnerships to address community priorities in social development.

c. Consider doing more to help local communities capitalize upon the economic opportunity the mineral asset offers and supporting alternative and supplementary livelihoods for miners and their communities. Alternative economic sectors should be promoted and fostered (through the mining operation itself, e.g. local procurement and recruitment, or third party programs), particularly in connection with the imperative and move towards mechanisation and industrialisation of mine sites. This will promote long-term sustainability, stability, and local buy-in.

Indeed, the action of industrialisation places a responsibility on concession-holders to address miners' lost access to the resource, in line with the miners’ human right to a livelihood and the company's responsibility to respect human rights. In addition, where a mining company's activities impoverish a (legally acting) stakeholder, they are entitled to compensation under the IFC Sustainability Framework. Compensation may include access to alternative (viable) livelihoods. Alternative livelihood projects need to take into account that ASM is already an alternative livelihood (to subsistence farming and other natural-resource based activities like charcoal-making, timbering, hunting), and should be implemented over the long term, ideally including miners, communities, local economic actors and government in the design and decision-making.

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647 Representatives from Congolese and international NGOs and multilateral organisations made such demands at the 8th UN-ICGLR-OECD-UN Forum on Responsible Minerals Supply Chains in November 2014 in Kinshasa, for example.
d. Closed pipe initiatives could invest in setting up **community-based accountability structures** to help with their due diligence. This would build local capacity, reduce costs, and introduce systems capable of identifying issues early, and bringing resolutions that are democratic and democratizing. In conflict-affected areas, such structures must be carefully constructed and themselves subject to scrutiny, but models exist both in the CLS and CPP and in other initiatives in the region, such as Integrity Action’s work with Oxfam, using the DevelopmentCheck tool.

### 8.2.3. Addressing operational risk at the level of the mine

The closed-pipe systems faced challenges and **operational risks that are inherent in mining in and buying from DRC and other high-risk areas**. Addressing such challenges is the primary responsibility of the mining operator and the government. However, the **closed-pipe sourcing systems could indirectly support efforts to address those challenges** by incentivizing, encouraging, and supporting their mining suppliers to improve management of operational risks at the level of the mine (including broader human rights and environmental issues that are considered in scope for downstream companies), and the way in which vulnerable stakeholders (including miners) are impacted by the operational or due diligence activities of their suppliers. In particular, this could mean considering the following aspects and risks:

- **Pricing mechanisms and representation of miners:**

  Currently, authentic representation of miners and transparent mechanisms for price negotiations and price communications remain elusive, partly due to badly written Law648. This debilitates communication, exacerbates grievances and frustrations and could lead to additional frictions. As long as these imbalances exist (or are **perceived** to exist), tensions between supply chain actors will remain and the closed-pipe supply chain model will enjoy little legitimacy with the miners and other local actors.

  Closed-pipe models could consider the structure of the supply chain upstream and the way in which it impacts on labor and trading relationships as well as miners’ perceptions and grievances regarding prices, and the utility of helping to improve miners’ organization and representation in order to improve trading and labor relations upstream. This could be done through supporting and encouraging innovative approaches by a mine operator and potential third parties, such as building on a long term engagement and commitment to the mine operator to scope and build mechanisms for enhancing miners’ voices and building trust in trading relations, e.g. by helping to build mechanisms for fairer compensation for miners, facilitating the development of organization, enfranchisement and representation of miners for improved trading and labor relations, or improved protections and benefits for miners. Supporting improved miners’ organization will at the same time help them assume greater responsibility for risk management and due diligence.

  Additionally, downstream companies in future closed-pipe projects could do due diligence on the cooperatives with which permit holders enter into agreements or contracts, or leverage their negotiating position to request transparent governance of cooperatives focussing on miners’ well-being. In eastern DRC, some cooperatives may be controlled by entrenched political or economic power-brokers or power structures historically or actually linked to armed groups.

- **Role of supply chain actors in the local economy:**

  The shortening of the supply chain in the case of the closed-pipe supply chains in Katanga has meant excluding local traders. This has helped increase transparency and strengthen assurance. But it has also impacted the local economy, as the traders were nourishing the local economy with a steady circulation of cash. Given the concession holder’s (MMR’s) legal right as the exclusive buyer of minerals, the company’s cash flow and liquidity now is an important factor in

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a precarious local economy. When the financing system stalls, miners and their families (who survive off day to day revenues) face huge challenges and may have to take out loans at exorbitant rates, compounding their vulnerability. This also threatens traceability, as it incentivizes miners to sell minerals clandestinely to other buyers. There may be an opportunity for closed-pipe supply chain models to support or incentivize their mining partners in addressing and managing such cash-flow challenges.

8.2.4. Bringing responsible mining in scope

Closed-pipe supply chain models also provide the opportunity to enable responsible mining in addition to enabling responsible sourcing and fostering trade. This of course needs the complementary efforts of mine operators, government, donors and NGOs and may not be achieved by the efforts of closed-pipes alone. But it is typically expected that nation-states will foster mineral economies that deliver longer-term gains and value to local and national stakeholders and, as corporate citizens, mining companies and their buyers are expected to support this ambition as far as is possible.

The closed-pipe model could provide a useful mechanism for incentivising and advocating such efforts. This would take the model a step further towards a more comprehensive responsible sourcing initiative that is able to ensure that buyers are sourcing from mining operations that ultimately know and attend to their operational risks in a broader sense, additional to the core focus on conflict financing, business practices and egregious human rights abuses as per Annex II of the OECD DDG.

This could mean seeking to incentivize, encourage, and support mining operators in conducting social projects with and for the people. From the perspective of local community benefits, addressing issues like occupational health and safety, labour rights, displacement and resettlement, discrimination, environmental management can be crucial for enhancing benefits, fulfilling human rights generally, but importantly pre-empting conflict triggers that are commonly associated with mining and in particular with industrialising sectors such as we have seen is occurring at the sites where the initiatives have operated.

It also could mean seeking to achieve wider positive impacts through how a mining operation itself is run, how it engages with local communities, how it prevents and mitigates environmental damage, and how it stimulates the local economy and creates shared value (e.g. through employment, salaries, price structures, or local procurement), such that it enables and empowers local actors to take care of their own welfare and contribute to a more stable and prosperous DRC.
9. RECOMMENDATIONS

9.1. For PPA

- For future closed-pipe or other projects, **create a more explicit theory of change & framework to implement it**, e.g. a logical framework including, goals, outcomes, activities, as well as indicators of success / change / impact that can be monitored, measured and evaluated over time.

- Since the term ‘closed’ in ‘closed-pipe’ has led to confusion and has been interpreted differently by different stakeholders, **agree a consistent and explicit, documented definition to be communicated and used by the initiatives in the future**.

- Maintain the pioneering status of these closed-pipe initiatives by **enabling experimentation with supply chain models that go beyond closed-pipe conflict-free supply** to enable due diligence on and thus the management of a broader set of sustainability and human rights risks on the ground while at the same time harnessing the positive impacts of closely involving and engaging downstream buyers in the supply chain upstream. This could be done through:
  - Funding and promoting projects that compensate for the cost of traceability and due diligence upstream, in particular projects that aim at providing additional social value for the local communities, miners and their families, for example providing micro-loans for equipment to miners, or using the value of minerals to to transform the local economy and help build alternative economic sectors / viable alternative livelihoods for miners, their families and local communities
  - For future closed-pipe or other projects, recognise that ‘conflict-free’ sourcing is but the start of responsible sourcing in a high-risk area and encourage the gradual inclusion of other supply chain risks (such as those identified in the OECD Guidelines for MNEs and the UNGPs (for example)) into scope for due diligence a.) as far as is feasible and b.) based on a materiality assessment done in partnership with local stakeholders.
  - Specifically fund and promote projects that improve community-based accountability mechanisms for mineral sector operators and the traceability and certification systems they depend upon.

Recommendations as to how to address the issue of the cost of due diligence and traceability generally:

- Support the extension of due diligence and traceability to additional mine sites and areas (thus reducing the costs overall), e.g. potentially through establishing new closed-pipe projects that help start up due diligence systems at a given mine or a given area. This could take the form of:
  - funding (as CFTI did over the course of the project), which may be necessary particularly for small, artisanal mine sites ; or
  - an agreement with a mine operator in a closed-pipe, i.e. downstream agrees to buy X amount over a given period of time, and the mine operator agrees to finance the start up of the system ; which may be more feasible for larger mine sites where the mine operator owns the concession

- Use the closed-pipe model to test and pilot alternative due diligence and traceability systems (similar to the way in which SFH has provided a platform for iTSCi and CFSP to be tested and put to practice), in order to see whether such a system can deliver assurance at lower costs to the participants in the supply chain. Ensure such pilots are independently evaluated, and carry out a cost-benefit analysis to understand the impacts of introducing multiple systems, the implications for government, exporters and importers, as well as the risk of incompatibilities creating loopholes that can be used to defraud the system(s)

‘Closed pipe’ systems in ‘open market’ situations :

- Many of the structural deficiencies that currently inhibit an open market situation in DRC need to be addressed by the government of DRC, in collaboration with donors and development agencies. However, closed-pipe systems could play a role in enabling a more open market situation upstream while still adding value for downstream buyers and mine operators alike.
The CFTI provides an example of how donor funding has allowed the extension of traceability and due diligence to further sites, thus kickstarting the creation of more open legal markets and increasing economic viability upstream, while still maintaining a ‘closed-pipe’ supply chain with improved supply chain visibility (transparency) and control, thus allowing downstream actors to make provenance claims and have immediate relationships with supply chain actors.

- The PPA could further test such supply chain arrangements to see how mass balance models would need to be configured to allow downstream buyers to make provenance claims while at the same time allowing and supporting upstream supply chain participants to sell to and buy from other buyers outside of this specific supply chain. This may be of particular importance and impact for small, less productive, artisanal sites, where minerals are sold to independent traders before arriving at the point of export (as in the case of CFTI) and may prove more challenging in these situations.

### 9.2. For SfH

- Consider reconceiving Solutions for Hope as a catalyst for incubating or kick-starting new supply chains to get mineral flowing (in terms of mineral production and first trade) and the formal economy going in challenging environments

- Ensure clear communication as to what the initiative is and does and what it means to participate in it, both internally (to participants and source mines) and externally

- Endeavour to manage stakeholder expectations from the beginning, particularly upstream; build an understanding of scope and responsibilities, and establish or foster channels for clear, direct and regular communication with the miners as well as local government and civil society organisations and between all actors in the supply chain

- Aim at creating a more explicit theory of change & framework to implement it, e.g. a logical framework including, goals, outcomes, activities, as well as indicators of success, change or impact that can be monitored, measured and evaluated over time

There is an opportunity for the SfH model to consider including additional aspects in the future or for new pilots, and to evolve the model further. In particular, the model could consider including additional goals regarding broader positive economic, social and environmental impacts (so helping avoid future conflict triggers). In this case, the following potential areas of activity are suggested:

- Use the initiative’s convening power to drive change on additional issues that SfH or its stakeholders or suppliers deem to be a sphere where they could leverage change; for example regarding issues that emerge through a broader risk-based due diligence exercise, issues that pose operational risks to the initiative’s suppliers, issues that are expressed as particularly important to local stakeholders, or risks that are posed to vulnerable groups and stakeholders by the initiative’s suppliers’ operations.

- Consider supporting or incentivising social programmes at the level of the mine that go beyond infrastructure to consider processes. In particular, SfH could support SfH mine operators to effectively carry out projects that:
  - manage operational risk (and related impacts on society and the environment)
  - enhance developmental and transformative contribution through economic linkages - local content, local employment, local procurement - and community empowerment, and

- If providing funding towards social programmes is not considered an option, the initiative may also consider mechanisms to ensure that the configuration of the supply chain and the operations / actions of its participants do not create negative impacts for local stakeholders, and/or find ways to mitigate them, and that the processes by which they do things have social empowerment considerations built into them
• Noting some specific priority issues for Congolese supply chain operators and stakeholders, consider supporting or incentivising the improvement of labour and trading relations in the supply chain for example by facilitating the support to help miners organise through an appropriate third party (e.g. in collaboration with NGOs), or by including enhanced expectations of what should be in supplier contracts with the initiative’s trading partners, e.g. that mine operators make further commitments to support their artisanal suppliers manage certain stated risks better (e.g. supporting the development of transparent and fair processes and structures to negotiate and determine price/payment values and terms).

• There is a lot of scope for empowerment of the miners in this way, in partnership with third parties. Organisations like the Alliance for Responsible Mining, who are experts at organising artisanal miners, would be well placed to help Solutions for Hope achieve this. The Local Support Organisations who have worked in Uganda, Kenya, and Tanzania to bring about Fairtrade gold in the last three years could also introduce lessons from the wider region. Lessons from the development of the ASM Federation in Mongolia would also be instructive (Swiss Development and Cooperation’s on-going Sustainable Artisanal Mining project), as well as from the World Bank’s concluded Sustainable Management of Mineral Resources Project in Uganda. Experiences from the coffee sector could be instructive, e.g. the Eastern Congo Initiative.

• Consider using the SFH model as an experimenting platform to see what types of supply chain arrangements and distribution of DD and traceability costs could potentially ensure better prices and incomes for miners, e.g. by helping to build mechanisms that incentivise greater benefits upstream

9.3. For KEMET
• Consider creating a more explicit theory of change for future partnerships that have a social dimension, and a framework to implement it, both for the initiative as well as the Kisengo Foundation, e.g. a logical framework including, goals, outcomes, activities, as well as indicators of success / change / impact that can be monitored, measured and evaluated over time

• Potentially support or incentivise MMR in ensuring that compensation and resettlement processes in relation to mechanisation of the mine are planned thoroughly and aligned with international standards such as the IFC Sustainability Framework and IFC Handbook for Preparing a Resettlement Action Plan.

• Consider supporting or incentivising mechanisms (e.g. potentially through third parties or partner organisations) that would help ensure that mechanisation and resettlement processes are complemented with viable alternative livelihood programmes and measures to stimulate economic diversification and job creation through social programmes that go beyond charity, such as incentivising local procurement and local content

• Potentially commission a study to look into the issue of liquidity and its impacts on the miners and local economy, and consider supporting or incentivising MMR in finding possible solutions. One option could be to pilot mobile payment systems such as M-Pesa, since there is network coverage in Kisengo and miners seem to have mobile phones. Such a system would also help address the issue of cash payments, which according to the OECD DDG should be avoided. Another potential system could be MineralCare, a credential & due diligence system, that works with wristbands for miners that are chargeable with money.

As with SFH, there is an opportunity for the Kemet closed-pipe supply chain to consider including additional aspects, and to evolve the model further. In particular, the model could consider including additional goals and activities regarding broader positive economic, social and environmental impacts, potentially in partnership with other organisations. The following are suggestions for such additional aspects that could be considered:

• Consider ways to support, incentivise or pilot mechanisms that could help increase transparency and better communication between MMR/CDMC and the miners in general. This
could be part of community engagement strategies, potentially supported by third parties or the Kisengo Foundation.

- The KEMET partnership could support MMR in improving mechanisms for price negotiations with miners. This could consist of using its leverage as an important downstream buyer to suggest a reconsideration and improvement of the current price-setting mechanism to increase transparency and enable improved credibility and ensure that it achieves its goal of conflict-avoidance and fair price setting.

- Consider supporting or incentivising better organisation of miners, potentially through third parties and/or the Kisengo Foundation, so that they can be involved and represented in the price setting process, and empowered to negotiate better (on the one hand) and assume greater responsibility for risk management on the other. This could be done through supporting the creation of a new miners’ cooperative that is focused on representation more than commercialisation, or by better enfranchising miners into CDMC (within the boundaries of what is possible under Congolese law). Through democratic miner representation new business models may also become possible. For example, a joint venture between the cooperative (as producer) and MMR (as concession-holder/exporter), with miners as wage labourers who share a portion of the profits as bonuses may be desirable.

Kisengo Foundation

- Consider conceiving social projects through joint planning processes and implemented through joint programmes.

- Ensure that consultation processes are informed, active, meaningful, representative (multi-level), and participatory.

- Ensure that vulnerable groups are expressly considered and included, and their points of view solicited, even if it’s outside of the usual decision-making forum.

- Consider ensuring that the community is invested and involved in the design and implementation and evaluation of social projects. This could be done through using existing community based monitoring and community action tools, such as for example IntegrityAction’s Development Check. This will ensure that social impacts are sustainable and last beyond the life of the Foundation and/or the mining operation itself.

- Consider using the opportunity of the mineral capital to contribute to sustainable transformation towards a more resilient and prosperous society locally and nationally; for example by seeking wider positive impacts through how the mine itself is run, how it engages local communities, how it stimulates the local economy through local procurement and local recruitment, how it fosters independence from the mine in time by laying foundations for good governance and sustainable growth, such that it empowers communities and enables them to take care of their own wellbeing. This might include an increased focus on process-based rather than infrastructure projects. This would also contribute to peace, stability and good governance in the local community if it is done well.

9.4. For CFTI

Noting that the CFTI has ended and is not being continued, the following recommendations could be viewed as lessons learned or aspects to consider if a similar initiative were to be initiated in the future.

- Manage expectations of local stakeholders from the beginning, and factor in impacts of increased attention in order to prevent stakeholder frustration.

- Support better production techniques and the mechanisation of the mine by finding mechanisms to support investment, and support or incentivise initiatives to further build the capacities of the cooperatives to manage their mining operations as a business while at the
same time disincentivising political disputes and interference; noting that the concession owner is responsible for the development of the mine and would need to be engaged and implicated in such efforts and made the ‘owner’ of such processes.

- Explore ways of supporting and funding projects that help build and strengthen alternative livelihoods in viable businesses in other sectors to reduce the dependency of Nyabibwe on the mine site to reduce the debt cycle. Particularly involve women in the design and implementation of these measures
- Support local efforts to ensure transparent management and use of funds from the basket fund, the implementation of projects at mine sites and the appropriate involvement of the communities in designing, implementing and monitoring these projects
- Targeting mines: In order to avoid similar structural challenges to those of Kalimbi, a future CFTI project should consider the following:

  - If the aim is to establish a closed-pipe system involving only one mine, the mine should
    - sit on a viable, rather large mineral deposit with high quality ore (this would have to be established through a geological assessment)
    - be operated by a mine operator who owns the concession or who has the permission of the concession holder, and who can thus make the appropriate investments into formalisation, professionalisation and mechanisation of the mine
    - be able to produce enough in order to ensure economic viability of a closed pipe to the level of the smelter/refiner
  - If the aim is to establish a viable conflict-free supply chain that has broader economic and social benefits, CFTI should consider implementing a project in a certain area with several mines, rather than just one mine. This would allow smaller, less productive mine sites to sell into a legitimate supply chain, but still ensure the economic viability of the supply chain by helping to balance reduced/ fluctuating production or ore impurities of one mine site, and would have the advantage that downstream buyers would still be able to determine where exactly their minerals come from. This option would need to be accompanied by funding and measures to ensure that cooperatives (or other bodies) operating the mines have the capacity and willingness to operate them as a viable business and re-invest into the development of the mine.

9.5. For all three initiatives

- Future closed-pipe initiatives could benefit from clearly laying out their goals and indicators of success from the beginning. This would allow for continuous monitoring, measurement, and evaluation of impacts, successes, and challenges. It would also help manage expectations as the document could be shared with participants and stakeholders.
- Incentivise, support or fund projects that improve working conditions and health and safety for miners, and go beyond handing out protective equipment; involving awareness rising activities, participatory methods and rewards / penalties to incentivise new behaviours
- Incentivise, support or fund measures to mitigate environmental impact and restoration/rehabilitation projects (potentially in connection with alternative livelihoods – FESS project in Sierra Leone and SDC’s ESEC II frugal environmental rehabilitation method could provide inspiration)
- Support efforts by local actors to lobby for increased retrogression of taxes.

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649 See Lubovich, K. and Suthers, E. 2007; Stacey, J. 2014
10. BIBLIOGRAPHY

Al Jazeera 2013: Congo’s Tin Idea. People & Power, 02.05.2013. At: http://www.aljazeera.com/programmes/peopleandpower/2013/05/20135194315617767.html (02.01.2015)


ITRI 2014a: Conflict-free mines in the Kivus continue to grow within the iTSCi programme. iTSCi Press Release, 28.08.2014

ITRI 2014b: South Kivu will build on CFTI project conflict-free mineral success. iTSCi press release, 24.06.2014.


Loch, M. 2013a: Day 3 in the DRC: "When can we join?". Blog, CSR at Motorola Solutions, 19.02.2013. At: http://communities.motorolasolutions.com/blogs/corporate_responsibility/2013/02/19/day-3-in-the-drc-when-can-we-join (02.01.2015)


Motorola Solutions and AVX 2014: Motorola Solutions and AVX Expand Solutions for Hope in Democratic Republic of the Congo. Press release, 13.03.2014.


Rothenberg, D. and Radley, B. 2014: “We miners take our lives in our hands, save nothing, and believe only in luck”. The lived Experience of Human Rights and Labour Violations in Select Artisanal Mining Sites in North and South Kivu.


11. ANNEX A: Research Context

a) Support by initiative participants
The researchers have received generous support for this study by the participants, supply chain actors and stakeholders of the three Initiatives - Solutions for Hope, KEMET’s partnership, and CFTI. Particularly the conveners of the initiatives provided valuable documentation and background information, and were available for interviews, clarifications and questions throughout the research period. The staff of MMR were extremely helpful and forthcoming in organising the logistics for the fieldwork in Katanga (for both SfH and Kemet’s partnership), and provided a large amount of useful documentation in addition to their constant availability for questions and clarifications. Additionally, the miners and communities of Mai Baridi, Kisengo and Nyabibwe as well as all representatives of government, civil society, donors and independent researchers provided their valuable time and generous contributions towards our research.

b) Availability, cooperation and involvement of initiative partners
To achieve its goals, this study was largely dependent on the availability, cooperation and involvement of the different partners and supply chain actors in each initiative. The study was commissioned through the PPA and with the agreement of the downstream funders and conveners on the three initiatives. While actors in the downstream segment were largely informed about the study and its goals and were ready to contribute, researchers encountered several challenges with regards to the availability of upstream partners.

First, even though it serves as the traceability and due diligence system in all three closed-pipe initiatives, iTSCi stated that they had not been considered in the study by the PPA and were not requested to participate in it. As the study assignment included an assessment of the “traceability and due diligence performance to date, and how these systems support compliance with Dodd-Frank, OECD, ICGLR framework and DRC laws” and of “the risk assessment models in place and their historical efficacy in identifying and addressing ‘red flags’”, iTSCi was of the view that the study could not be performed without involving iTSCi, but that iTSCi had not been requested to participate in it. Thus iTSCi’s perspective was that the study could not be a study on iTSCi, but a study on closed-pipes, and that all aspects of traceability and due diligence related to iTSCi that were not funded by the closed pipes could not be part of the assessment because iTSCi had not been asked for nor given permission for a study on iTSCi, and that in addition the study should report benefits that are only above what would be expected and achieved at iTSCi sites. While iTSCi did provide information and reply to questions upon request, the different views over iTSCi’s participation in the study impacted on the researcher’s ability to fulfil these two research questions given by the Terms of Reference (TOR). Researchers were only able to assess how (or how not) the closed-pipe initiatives have directly impacted or influenced traceability and due diligence, as well as whether and how the due diligence activities conducted by the initiative partners outside of iTSCi have added value for the initiative overall.

Second, our original proposal included an assessment of SfH’s activities in North Kivu, in order to assess the process of expansion and scaling, and what the challenges and benefits were for each of the stakeholders involved in this process. However, due to a tight field research timeline and the upstream partner’s other commitments and limited availability at the time, it was not possible to visit the mine site in Rubaya. Subsequently, and with the involvement of the downstream conveners, it was decided that the assessment would put a main focus on the first SfH pilot in Katanga.

c) Challenges of a tight timeline and logistical constraints
The researchers’ fieldwork itinerary was planned densely to minimise costs, which resulted in a tight timeline. This posed great challenges for the upstream supply chain participants, who nevertheless tried to accommodate and support us as far as possible. In order to be transparent about the ways in which we carried out the field research, a few challenges must be noted. First of all, combined with the logistical challenges inherent in accessing mine sites and travelling in eastern DRC, this allowed only 1-2.5 days to be spent on research activities at each location. This meant that the research and findings presented in this report must be interpreted as being based on a snapshot in time, particularly when it comes to the upstream segment of the initiatives. Researchers have attempted to counterbalance this by also
interviewing independent researchers who have spent long periods of time researching the issues on the ground.

Additionally, time and capacity constraints of the facilitators and interview partners on the ground had an influence on how much time the researchers were able to spend with certain stakeholders and at certain mine sites. For example, the original plan to spend 9 days in Katanga at the mine sites and offices of Mining Minerals Resources (MMR) was not possible, due to both logistical constraints and MMR's availability and capacity as a facilitator (noting that MMR of course had other responsibilities and was in every aspect extremely helpful and supportive for the field work). Given that MMR had another delegation visiting around the same time, the time spent in Katanga was shortened to a total of 6 days, of which 3 could be spent at the mine sites. Due to these time constraints, and the logistical difficulty in accessing the mine sites during the rainy season, the researchers were only able to visit Mai Baridi and Kisengo (not Luba). Luba was still included in the discussion of SfH, based on secondary sources and existing literature, but no fieldwork could be carried out at the mine. Additionally, the time spent at Mai Baridi was shortened to a few hours due to logistical challenges, which allowed only for a visit to MMR's camp and the mine settlement, including interviews with state agents, representatives of the traceability and due diligence system iTSCi, CDMC, the president of the miners' committee, but not a visit to the pits themselves.

d) Availability and reliability of information and data
The research needed to accommodate concerns around commercial confidentiality, particularly with regards to certain aspects of prices and volumes sourced through the initiative's supply chains. This particularly affected the chapters on economic impacts, where researchers had to work with the data and information available or gathered during the fieldwork that was not considered commercially sensitive. Some supply chain participants also provided indicative information regarding volumes and prices, and researchers in some cases were granted access to information under the condition of non-disclosure, which allowed them to get an impression of impacts.

An additional difficulty was that some of the initiatives had only little original project documentation where the goals, measures of success and definitions where explicitly stated and communicated. This became visible for example in the ways the term 'closed-pipe' was interpreted differently by different stakeholders, but also in other instances. The researchers had to largely rely on statements made by initiative participants or conveners as to what the goals, measures of success and definitions were. Different stakeholders had different ideas on these things and in some cases no documentation was available to clarify the different positions. In these cases, the researchers have tried to state this in the report. It is recommended that for future closed-pipe projects, such documentation is created and communicated more explicitly.

With regards to information gathered through interviews and focus groups, researchers attempted to confirm statements made by certain stakeholders with the statements of others in order to triangulate information and ensure its reliability. For this report, researchers have attempted to include only information that was stated by two or more stakeholders on the ground.
### 12. ANNEX B: Fieldwork itinerary

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<th>Date</th>
<th>Location</th>
<th>Activity / Stakeholders</th>
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<tr>
<td>Sun 1</td>
<td>Bukavu</td>
<td>Arrival in Bukavu</td>
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| Mon 2  | Travel Bukavu to Kalemie | Arrival in Kalemie  
MMR offices: MMR and CDMC  
Government representatives: Civilité |
| Tue 3  | Kalemie      | Division des Mines  
SAESSCAM  
FEC |
| Wed 4  | Mayi Baridi (SfH) | Travel Kalemie - Mai Baridi  
Meetings at MMR and CDMC offices in Mai Baridi  
CDMC representatives  
iTSCi representatives  
SAESSCAM representatives  
Comité de creuseurs  
Village walk & informal talks  
Travel Mai Baridi - Kisengo |
| Thu 5  | Kisengo      | MMR representative  
CDMC representative and chefs du site  
iTCSI  
SAESSCAM  
Division des Mines  
Police des Mines  
School Director  
Permanent Doctor at the hospital  
Civil society and FEC  
Women miners  
Village walk and informal interviews with traders, inhabitants  
Mine site walk and informal interviews with miners |
| Fri 6  | Kisengo      | Comité de Creuseurs  
Visit to the processing facility  
Travel Kisengo - Kalemie |
| Sat 7  | Kalemie      | Civil society  
Medecin Chef de Zone de Santé de Nyunzu |
<p>| Sun 8  | Kalemie      | Report writing / Day off                                                                      |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Activity / Stakeholders</th>
</tr>
</thead>
</table>
| Mon 9 | Bukavu | Travel Kalemie – Bukavu  
Government: civilité |
| Tue 10 | Bukavu | IOM  
Division des Mines  
SAESSCAM  
Cabinet of the Provincial Ministry |
| Wed 11 | Bukavu | WMC  
Civil society  
 iTSCI |
| Thu 12 | Nyabibwe | Travel Bukavu – Nyabibwe  
Civilité  
SAESSCAM  
Division des Mines  
 iTSCI  
FARDC  
Mine site walk and informal interviews with miners |
| Fri 13 | Nyabibwe | Cooperatives: Comika & Combecka  
Women's association: Association des Mamans Operatrices dans les sites minières de Kalimbi à Nyabibwe (AMOPEMIKAN)  
Traders & trader's association: Association des négotiants des minerais stannifères de Kalehe (ANEMISKA)  
Civil society |
| Sat 14 | Nyabibwe - Bukavu | Travel Nyabibwe - Bukavu |
| Sun 15 | Bukavu - Goma | Travel Bukavu - Goma |
| Mon 16 | Goma | Government: Civilité  
 iTSCI/Pact  
Representative of the Dutch Ministry of Foreign Affairs |
| Tue 17 | Goma | Civil society |
| Wed 18 | Goma - Bukavu | Travel Goma - Bukavu |
## 13. ANNEX C: List of interviewees

<table>
<thead>
<tr>
<th>Name &amp; contact details</th>
<th>Position &amp; Organisation</th>
<th>Stakeholder Group</th>
<th>Research method</th>
<th>Location</th>
<th>Interview Date</th>
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14. ANNEX D: (Initial) Research approach

This document must be considered as a research tool and an evolving document, as the approach and the questions were changed, modified and adapted over time. The document below is dated 15th January 2015 and shows the research framework designed during the preparation phase, prior to the field-based and desk-based research. This means that not all stakeholders listed as ‘stakholders to consult’ have actually been consulted, but were listed as an initial idea of who could provide information on a particular topic.

Overall research framework
Our approach includes four levels of assessment with associated research questions, building on evaluation frameworks and criteria commonly used in development cooperation.650

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<tr>
<td>Results / outputs:</td>
<td>Effectiveness</td>
<td>To what extent have the stated goals of each initiative been achieved, or not? What determined success or failure?</td>
</tr>
<tr>
<td>Approaches / activities:</td>
<td>Efficiency</td>
<td>Which business models, traceability and due diligence systems, and risk assessment models have worked best, which have not worked well? What activities or approaches generated the above impacts? What gaps or opportunities are there for enhancing positive impacts and mitigating negative ones?</td>
</tr>
<tr>
<td>Learning and innovation</td>
<td>Sustainability</td>
<td>Lessons learned: What improvements would help achieve goals better? How might positive impacts and successful approaches be leveraged in order to enhance the program’s efficacy?</td>
</tr>
</tbody>
</table>

650 Noting that the different steps of logical frameworks are not directly comparable to the OECD DAC criteria; there are overlaps and each of the criteria can be applied to each step separately. Here, both are used to distinguish different layers of research and guide the research focus.
## B. Research approach by topic

### Goals of the initiative
This chapter answers the following question:
- To what degree has each programme achieved its stated goals?
- If a programme has not achieved its goals, what is the gap? Why is there this gap? What will it take to fix this?

### Business and management models
This chapter answers the following questions:
- What business models have these initiatives developed and implemented? What is unique about these? How has it changed over time and why?
- What have been the business model's achievements and what have been its challenges for the different stakeholders involved?
- How competitive are these business models on the global market?
- Where have investments for setting up the project come from?
- What has the project cost to set up, implement, monitor?

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
</table>
| The project is financially sustainable and competitive on the global market. | - What is the project's business model? How did it change?  
  - How competitive is the pricing of minerals sold from the project?  
  - Does the project have cash flow / liquidity issues? If so, how are these managed? Is this management sustainable?  
  - Where have investments for setting up the project come from? | Desk  
  - The books / accounts to show turnover, P&L month by month since start-up.  
  - Sales statistics  
  - History of tin and tantalum prices  
  - Information on financial investment by sponsors, if any  
  - Information on ‘business case’ for sponsors & downstream buyers and sponsors of the initiatives (Kemet, Motorola Solutions, AVX) | Refiners  
  - Downstream buyers and sponsors of the initiatives (Kemet, Motorola Solutions, AVX) |
<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>What has the project cost to set up, implement, monitor? Have these costs been met? How? Are these means sustainable? What opportunities are there for better cost efficiency?</td>
<td>downstream buyer (to what extent do the projects make financial sense and why)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How are project funds managed and to what degree are funds and profit re-invested to scale the project?</td>
<td>Information on long-term plans by sponsors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To what extent are projects aware of the needs and requirements of downstream buyers, and to what extent are they taken into account?</td>
<td></td>
<td>Mine site management, comptoirs, exporters</td>
</tr>
<tr>
<td>The project is scaleable, in terms of implementing it at additional mine sites and increasing production and export.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What are impediments to scaling up and extending to further mine sites?</td>
<td>Desk Evaluations and reports by academics and civil society</td>
<td>Downstream buyers and sponsors of the initiatives (Kemet, Motorola Solutions, AVX)</td>
</tr>
<tr>
<td></td>
<td>What are impediments to increasing production and export?</td>
<td></td>
<td>iTSCI</td>
</tr>
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<td></td>
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<td>Pact</td>
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<td></td>
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<td></td>
<td>CBRMT, Enough Project, Global Witness, IOM</td>
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<tr>
<td>Performance Indicators</td>
<td>Questions</td>
<td>Documentation to review</td>
<td>Stakeholders to consult</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Accounting and management policies</td>
<td>Exporter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Geotechnical data and information on technology requirements</td>
<td></td>
</tr>
</tbody>
</table>
Economic and social aspects
This chapter answers the following questions:

• What have the impacts been on society generally?
• To what extent has the initiative contributed to employment, income and livelihood opportunities?
• To what extent has the initiative contributed to value retention upstream?
• To what extent has the initiative influenced local procurement and local investment?
• Has the initiative contributed to social projects on the ground and if yes, how effective were these projects?
• Has the initiative created social benefits or risks for miners and/or the local population, and how has it impacted particularly on vulnerable groups of society?
• To what extent have the initiatives improved labour conditions and health and safety at the mines?
• To what extent has the initiative contributed to tax revenues for local government?
• To what extent has the initiative influenced power relationships and the wider governance situation?
<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
</table>
| **The project has increased income, employment or other livelihood opportunities.** | To what extent has the initiative contributed to employment, income and livelihood opportunities? | Desk  | Tin and tantalum prices  
Evaluations and studies (if available) |
|                                                            |                                                                           | Field  | Employment and investment statistics of the initiative  
Employment statistics in the wider area | Pact, CBRMT, Enough Project, Global Witness, IOM, academics, etc. |
|                                                            |                                                                           |                                            | Local communities  
Miners and employees at the mine site  
civil society groups (e.g. Pole Institute, CERN, CENADEP, etc)  
Cooperatives, Business associations (E.g. FEC)  
Church and other religious leaders  
Local experts |
<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The project has increased tax revenues for local governments, local investment and economic linkages with other sectors.</strong></td>
<td>To what extent has the initiative influenced local procurement and local investment? To what extent has the initiative contributed to tax revenues for local government?</td>
<td>Desk: Tax revenues (if available) Evaluations and studies (if available) Field: Records on taxes, fees and royalties paid Records of local investment (if available) List of local suppliers / service providers</td>
<td>Pact, CBRMT, Enough Project, Global Witness, IOM, etc Local communities SAESSCAM Provincial &amp; local authorities Traditional/customary authorities, e.g. chefferie Cooperatives, Business associations (E.g. FEC) civil society groups (e.g. Pole Institute, CERN, CENADEP, FEC, etc)</td>
</tr>
<tr>
<td><strong>The project has improved labour conditions and health and safety of workers.</strong></td>
<td>To what extent have the initiatives improved health &amp; safety and labour conditions?</td>
<td>Desk: Evaluations and studies (if available) Field: Policies on labour and workers’ rights: right of assembly, representation by unions, working</td>
<td>Pact, CBRMT, Enough Project, Global Witness, IOM, etc Miners and employees at the mine site iTSci / Pact field teams Cooperative representatives Business associations</td>
</tr>
</tbody>
</table>
## Performance Indicators

<table>
<thead>
<tr>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Who have been the main beneficiaries of the interventions?</strong></td>
<td>Desk: Evaluations and studies (if available)</td>
<td>Pact, CBRMT, Enough Project, Global Witness, IOM, etc</td>
</tr>
<tr>
<td><strong>To what extent have the initiatives increased opportunities for women, Mbuti, ex-combatants and other vulnerable groups?</strong></td>
<td>Field: Employment statistics and contracts</td>
<td>Local communities</td>
</tr>
<tr>
<td><strong>In what ways do local communities see the initiative as positive?</strong></td>
<td>Field: Stakeholder engagement policies &amp; documents</td>
<td>Miners and employees at the mine site, civil society groups (e.g. Pole Institute, CERN, CENADEP, etc)</td>
</tr>
<tr>
<td></td>
<td>Field: CSR documents</td>
<td>Church and other religious leaders, FEC</td>
</tr>
</tbody>
</table>

The project has had positive social impacts for the local population, particularly vulnerable groups, and has contributed to the fulfilment of human rights.
**Environmental aspects**

This chapter answers the following question:

- Did the initiative have environmental protection or management in scope? Why (not)?
- What has the outcome of this inclusion / exclusion been? I.e. how has the project directly or indirectly exacerbated or safeguarded against environmental risks?
- What could the project have done or do to manage environmental risk?

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
<tbody>
<tr>
<td>The project has environmental aspects in scope and aims to minimise, remediate and rehabilitate environmental impacts on water, soil, agricultural land, vegetation and forest cover, fauna, etc.</td>
<td>- How significant a risk does the project and its activities pose to environmental quality?</td>
<td>Desk Evaluations and studies (if available)</td>
<td>Pact, CBRMT, Enough Project, Global Witness, IOM, etc</td>
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<tr>
<td></td>
<td>Did the project consider these factors in their design? Why (not)?</td>
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<tr>
<td></td>
<td>To what extent has the project incorporated environmental protection into its goals and project activities? In other words, is environmental management in scope? Should it have been? Could it be?</td>
<td>Field Environmental policies and practices (e.g. rehabilitation, tailings management, etc.)</td>
<td>Mine site management</td>
</tr>
<tr>
<td></td>
<td>What environmental impacts on water, soil, agricultural land, vegetation and forest cover, fauna have been observed and/or reported?</td>
<td></td>
<td>Local communities</td>
</tr>
<tr>
<td></td>
<td>To what extent have such impacts or incidents been</td>
<td></td>
<td>Civil society groups with environmental focus</td>
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<tr>
<td></td>
<td></td>
<td>Environmental incident documentation &amp; follow-up</td>
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<tr>
<td>Performance Indicators</td>
<td>Questions</td>
<td>Documentation to review</td>
<td>Stakeholders to consult</td>
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<tr>
<td></td>
<td>dealt with? Have they been adequately dealt with?</td>
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</table>
Security aspects
This chapter answers the following questions:

- What changes in the security situation, such as behaviour of police and militias, can be observed since the implementation of these programmes?
- To what extent is it possible to determine whether these changes occurred as a result of or in connection with programme implementation?
- How have the number of security incidents and the management of these incidents evolved, and has the ability and confidence of stakeholders to deal with them changed over time?

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
<tbody>
<tr>
<td>The presence of regular armed groups (FARDC, police) around mine sites and transportation routes has diminished.</td>
<td>How has the presence of armed groups changed (or is perceived to have changed) since project start?</td>
<td>Desk: Monitoring data from MONUSCO, IPIS, Enough Project and other civil society groups, iTSCi/Pact risk assessments (if available)</td>
<td>Pact, CBRMT, Enough Project, Global Witness, IOM, etc</td>
</tr>
<tr>
<td>Stakeholders feel able to monitor and identify security incidents; and when incidents happen, stakeholders feel more able to manage them</td>
<td>To what extent do mine workers and communities perceive their security as enhanced and note a positive change in the behaviour of armed groups?</td>
<td>Field: Incident reports and management (incident history, rate, severity) Risk identification, assessment and management documentation Internal monitoring &amp; assessment reports/data</td>
<td>Representatives of MONUSCO Local</td>
</tr>
<tr>
<td>Local stakeholder perceive their personal security as enhanced and note a positive change in the behaviour of regular armed groups.</td>
<td>To what extent can these effects be attributed to the initiatives (if at all)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance Indicators</td>
<td>Questions</td>
<td>Documentation to review</td>
<td>Stakeholders to consult</td>
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<tr>
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<td></td>
<td></td>
<td>mining police; SAESSCAM</td>
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<td></td>
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<td>Division</td>
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<td></td>
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<td>des mines</td>
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<td></td>
<td>IOM-JMAC</td>
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<td></td>
<td>Mine site management and</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>miners/workers</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Local communities</td>
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<td></td>
<td>civil society groups (e.g. Pole</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Institute, CERN, CENADEP, etc</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Women representatives/org, Transporter association, Commodities traders</td>
</tr>
</tbody>
</table>
Traceability and due diligence aspects
This chapter will examine the following questions:
- To what extent are traceability and due diligence measures aligned with the requirements of the DFA, OECD DDG, and RCM/DRC laws?
- To what extent are traceability and due diligence being achieved and how is the project's performance perceived?

<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
</table>
| Traceability and due diligence measures are aligned with the requirements of DFA, OECD DDG, RCM and DRC laws | - To what extent are the traceability system & due diligence measures aligned with these requirements? What are the gaps?  
- Are the traceability and DD measures being undertaken adequate for compliance with DFA, DDG, RCM, RDC Laws etc.? | Desk  
Technical documentation on DFA, OECD DDG, RCM, DRC laws  
Previous evaluations, audits, reports regarding traceability and due diligence  
Gap assessments if available | ICGLR country representative in Kinshasa  
ICGLR Technical Unit on Natural Resources in Bujumbura;  
DRC Ministry of Mines;  
Traceability and Due Diligence Initiatives  
See below  
Others see below |
<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traceability and due diligence measures are perceived to perform well</td>
<td>How is the project being perceived with regards to traceability and due diligence?</td>
<td>Desk</td>
<td>Internal policies regarding traceability &amp; due diligence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incident reports</td>
<td>iTSCi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluations, audits, other reports</td>
<td>Pact</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iTSCi and CTC audit reports</td>
<td>CBRMT, Enough Project, Global Witness, IOM,</td>
</tr>
<tr>
<td>Field</td>
<td>Bag &amp; tag, tracking data and statistics</td>
<td>Provincial Division des Mines, SAESSCAM, CEEC</td>
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</tr>
<tr>
<td></td>
<td>Internal policies regarding traceability and due diligence</td>
<td>Mine site management and miners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk identification, assessment and management systems and policies</td>
<td>Pact / iTSCi field team</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Incident reports &amp; incident management documentation</td>
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</tbody>
</table>
Risk assessment and management models in place
This chapter addresses the following questions:

- What risk assessment and management models do each programme have in place?
- How effective and efficient are these models in identifying and addressing "red flags"?
<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
</table>
| Risk identification, assessment and management systems are effective and efficient and  | - What risk identification, assessment and management systems are in place?  
   correspond with the requirements of the OECD DDG.                                                                                          | Desk OECD DDG 3T Supplement and Appendix: Guiding Note for Upstream Company Risk Assessments | Buyers / conveners of projects (Kemet, Motorola Solutions, AVX)                                           |
<p>|                                                                                       | In what ways do the initiatives’ risk identification, assessment and management models correspond with, omit, and go beyond the recommendations of the OECD DDG? |                                                                                                             | iTSci                                                                                                     |
|                                                                                       | To what extent have these systems worked well? What are the challenges?                                                                                                                                   |                                                                                                             | Pact                                                                                                      |
|                                                                                       | What are the red flags these have uncovered? What other red flags have existed during this period? Did the risk assessment models pick up all of these? |                                                                                                             | CBRMT, Enough Project, Global Witness, IOM, Gregory Mthembu-Salter                                       |
|                                                                                       | To what extent are these systems perceived as effective and efficient?                                                                                                                                     |                                                                                                             |                                                                                                           |
|                                                                                       | OR                                                                                                                                                                                                       |                                                                                                             |                                                                                                           |
|                                                                                       | Risk identification, assessment and management systems and policies (whichever is available)                                                                                                               |                                                                                                             |                                                                                                           |
|                                                                                       | Reports, evaluations and audits                                                                                                                                                                         |                                                                                                             |                                                                                                           |
|                                                                                       | Risk assessments of iTSc/Pact &amp; follow up                                                                                                                                                                 |                                                                                                             |                                                                                                           |
|                                                                                       | Field Conflict minerals policies                                                                                                                                                                          | Mine site management and miners                                                                              |                                                                                                           |
|                                                                                       | Risk identification, assessment and management systems and policies                                                                                                                                        | Pact/iTSc field team                                                                                         |                                                                                                           |
|                                                                                       |                                                                                       | SAESSCAM                                                                                                     |                                                                                                           |</p>
<table>
<thead>
<tr>
<th>Performance Indicators</th>
<th>Questions</th>
<th>Documentation to review</th>
<th>Stakeholders to consult</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Incident reports and management, contingency plans</td>
<td></td>
</tr>
</tbody>
</table>
15. ANNEX E: iTSCI exports by sourcing programme

![Graph showing iTSCI exports by sourcing programme vs. Open Market (Kg) January 2011 to June 2014.]

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Dates</th>
<th>% of Total Exports (Kg)</th>
<th>Exports (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Market</td>
<td>Jan 2011 to Jun 2014</td>
<td>97.08%</td>
<td>45,296,522</td>
</tr>
<tr>
<td>CFTI</td>
<td>Oct 2012 to May 2014</td>
<td>1.69%</td>
<td>707,796</td>
</tr>
<tr>
<td>KEIET</td>
<td>Aug 2011 to Jun 2014</td>
<td>0.96%</td>
<td>406,821</td>
</tr>
<tr>
<td>Solutions for Hope*</td>
<td>Jul 2011 to Jun 2013</td>
<td>0.27%</td>
<td>127,836</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>100.00%</td>
<td>46,558,480</td>
</tr>
</tbody>
</table>

*Tonnes represent mine production which will undergo further processing prior to export. Actual exported tonnes may therefore be lower than shown here for the above sourcing programmes. Additionally, the percentages show the production at mines supplied to those closed pipe initiatives but not all mineral from those mines will have gone to those closed pipes, also leading to a possible overestimation.