

Conflict Minerals Traceability Models in light of Dodd-Frank Section 1502

By

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In Central Africa, mineral production sites are scattered over an immense territory where basic transport infrastructure is often lacking. Limited accessibility, security issues and lack of capacity of most State agencies are significant obstacles when it comes to tracing the chain of custody of conflict minerals. The very same reasons explain why armed groups or criminal networks have been able to exert control over the production of significant quantities of conflict minerals in the DRC.

Pursuant to Section 1502 of the Dodd-Frank Act, issuers, who are unable to determine that the conflicts minerals¹, necessary to the functionality or production of their products, did not originate from the DRC countries², must compile a Conflict Minerals Report. This report will be subject to an independent private audit and must indicate the facilities used to process these minerals, the country of origin of the conflict minerals and the efforts the issuer undertook to determine the mine or their location of origin with the greatest possible efficiency. In other words, the law requires that conflict minerals be traced from the place where they were extracted as ore to the facility where they were processed into a metal to be used in or for the manufacture of a product. The purpose of this article is to examine the models which can be used to trace conflict minerals and to assess them against the Dodd-Frank section 1502 requirements.

Five traceability models have been identified. The common purpose of these models are to collect information on the chain of custody of conflict minerals originating from the DRC countries; and (2) in light of the information collected, use one's best endeavours to prevent conflict minerals, which are fuelling violence in Eastern DRC, from entering into the chain of supply and ultimately the world market. None of the models examined claims to be perfectly impermeable. Numerous situations are likely to pollute the chain of custody. Minerals extracted from a mine controlled by an armed group can easily be mixed with clean minerals in an attempt to hide the provenance of the illicit minerals or simply to consolidate the load. Conflict minerals mined in the DRC can be exported illegally to a neighbouring country and laundered by mixing them with the domestic production of that country, or simply smuggled and sold in a third country that shares no borders with the DRC.

On the other hand, the absence of reliable and sustainable traceability solutions will cause thousands of artisan miners and their families in the DRC to lose their income due to "the embargo or quasi-embargo" triggered by Dodd-Frank section 1502 on minerals from the DRC³.

¹ The conflict minerals are columbite-tantalite (coltan), cassiterite, gold and wolframite.

² The DRC countries gather 10 countries in Central Africa: Angola, Burundi, the Central African Republic, the Democratic Republic of Congo, Uganda, Rwanda, Sudan, Tanzania and Zambia.

³ GeSI & EICC Fifth tantalum and tin supply chain workshop, 07 December 2010, Washington D.C. In North Kivu province, cassiterite exports plummeted to 21 tonnes in April 2011 from 1148 tonnes in March. Coltan exports from the province have halted altogether in April, down from 54 tonnes. Malaysia Smelting Company (MSC), which buys more than 80% of eastern Congo tin, has announced it would stop buying untraced Congolese minerals from the beginning of April 2011.

The need for an efficient and compliant traceability solution is therefore undisputable. In this context, all five models will be assessed to the requirements of Dodd-Frank section 1502 as interpreted by the SEC (Security and Exchange Commission). The purpose is to determine how adequate a particular model may be for (1) the accomplishment of the *reasonable country of origin enquiry*⁴ required from issuers that use necessary conflict minerals of undetermined origin; and (2) if required, the compilation of a *Conflict Minerals Report* that issuers must furnish if they use necessary conflict minerals originating from the DRC countries or if they are unable to determine that these conflict minerals do not originate from the DRC countries.

1. International Conference on the Great Lakes Region

A. Presentation

The International Conference on the Great Lakes Region (ICGLR) is an inter-governmental organization gathering eleven member states: Angola, Burundi, the Central African Republic, the Republic of Congo, the Democratic Republic of Congo, Kenya, Uganda, Rwanda, Sudan, Tanzania and Zambia. Founded in 2000, the ICGLR is based on the recognition that political instability and conflicts in these countries have a considerable regional dimension and thus require a concerted regional effort to promote sustainable peace and development. The ICGLR enjoys a strategic position in Central Africa⁵, giving its model a significant geographical advantage when it comes to dealing with the illegal trade of conflict minerals in the region. The model however suffers from a lack of awareness⁶ outside the region, in particular amongst stakeholders such as the US State Department, the GeSI/EEIC and industrial actors in the supply of conflict minerals. Besides, a first attempt to collect reliable statistics from the ICGLR Members has proven very difficult⁷.

B. Model

In order to break the link between mineral revenues and rebel financing, the ICGLR has adopted the Protocol on the Fight against the Illegal Exploitation of Natural Resources. This protocol came into effect in June 2008 and provides a legal basis for a regional certification mechanism for the exploitation, monitoring and verification of natural resources within the Great Lakes Region. In 2010, the ICGLR decided upon several tools to curb the exploitation of mineral resources in the region.

The ICGLR's core tool is a Regional Certification Mechanism (RCM) which aims at tracking the chain of custody of four natural resources selected for their conflict-proneness, namely columbite-tantalite (coltan), cassiterite, gold and wolframite; the very same minerals Dodd-Frank section 1502 defines as conflict minerals. The purpose of the certification is to ensure that neither mine sites, nor channels of trade in the region are in control of armed groups or criminal networks.

The foundations of the RCM were laid by the NGO Partnership Africa Canada (PAC). The model⁸ is based on four key elements:

⁴ Federal Register, Part III, Securities and Exchange Commission, 17 CFR, Volume 75, No 246, 23 December 2010, Conflict Minerals, Proposed Rules, p. 80957.

⁵ The ICGLR members comprise all the 10 African States which form the DRC countries under Dodd-Frank section 1502.

⁶ Verbruggen D., Francq E. & Cuvelier J., "Guide to Current Mining Reform in Eastern DRC", *IPIS*, April 2011, p. 18.

⁷ Verbruggen D., Francq E. & Cuvelier J., "op. cit.", *IPIS*, April 2011, p. 17.

⁸ Blore S. & Smillie I., "An ICGLR-Based Tracking and Certification System for Minerals from the Great Lakes Region", Partnership Africa Canada, March 2010.

B.1. Chain of custody tracking from mine site to export:

Minerals originate in artisanal pit and are then transported to a regional trading centre. From the regional trading centre they are sent to a *comptoir* in a larger city, such as Goma or Bukavu. Some minerals skip the trading centre and are transported directly to a *comptoir*. At the *comptoir*, minerals undergo some form of basic treatment and are generally exported to a reprocessing centre in an adjoining country, before being shipped to a smelter situated overseas.

In that context, the ICLGR recommends tracking and documenting the path taken by each sack or load of minerals along every step from the mine site or dig site through to the point of export. This will ensure that the minerals do not originate from conflict areas and have not been illegally transferred from one country to another.

According to the ICGLR, the tracking system developed by the Congolese authorities looks very promising⁹. SAEESCAM, the DRC artisanal mining agency, registers and tracks the bags of ore as they exit the mine and travel to the trading centre. From there, the Division of Mines and SAEESCAM use a more comprehensive system of paper form to track the bags of ore as they travel to the *comptoir*. During the export process, several DRC agencies examine the *comptoir's* chain of documents to make sure that all the minerals being exported can be tracked down to a known and approved mine site. The DRC authorities signify their approval of these documents by issuing an export permit and a certificate of origin.

Transit countries, such as Rwanda or Uganda, should also issue a certificate in cases where an incoming shipment has been opened and reprocessed or mixed with domestic production or imported minerals from another shipment. For shipments that only transit the country and are not opened, the certificate from the producing country will suffice. The intention is to replace local certificates by an ICGLR Certificate once the ICGLR system is in place. The ICGLR Certificate will serve as a guarantee region-wide that minerals were mined under acceptable conditions in areas free of conflict and will be the sole acceptable document for legal intra-regional mineral shipments.

B.2. Regional database to track mineral flows:

All sales, purchases, exports and imports of conflict minerals in the region must be stored in a publicly accessible database. The data can be used to balance and reconcile mineral flows. The quantity of minerals exiting a mine is balanced with the minerals arriving at the nearest trading centre. The quantity of minerals exiting all the trading centres is balanced against the quantity of minerals entering all the *comptoirs*. For each *comptoir*, the volume of minerals purchased by that *comptoir* is balanced with the volume of minerals exported by the *comptoir*.

⁹ This view is not shared by the UN GoE: ... "traders who buy the material from diggers do not appear to receive copies of the certificates of origin of the minerals, and the authorization to transport minerals issued to traders by the Division of Mines indicates only the general origin of the minerals. Some *comptoirs* in Bukavu, in addition, informed the Group that for minerals flown into the city, mineral traders present them only with receipts from the air travel company, which provide even less information on the origin of minerals" (UN Group of Experts on the Republic of Congo, *Final Report*, 26 October 2010, S/2010/596, p. 79).

For reprocessing centres, the volume of minerals imported and purchased is balanced against the volume of minerals exported. Finally, on a region wide scale, the volume of minerals extracted in the region is balanced against the quantity that arrives at smelters, either within or outside Africa. Discrepancies in the balances should reveal leaks in the system and, over time, allow governments to put an end to undocumented mineral flows.

B.3. Regular independent audits:

Comptoirs and exporters cannot export without proving chain of custody. Otherwise they will not receive the ICGLR certificate. To become a “certified exporter”, they must also pass third-party audits on a regular basis. Those who do not pass the audit will have their exports flagged as non-compliant.

Clear rules ought to be developed for dealing with situations where information is lacking. For example, in the beginning, it may well be impossible to track all minerals to source. A rule may therefore be developed that a *comptoir* may have up to 10% of its minerals from untraceable sources, but if the percentage exceeds 10%, the *comptoir* will be deemed non-compliant.

In addition, there might be situations where armed groups do not formally control a mine site, but manage to levy illegal taxes that allow them to profit from a mining area. In such a case, only if illegal taxes levied by an armed group exceed 10% of all taxes due on a load of minerals, would these minerals and the site concerned be considered non-compliant.

The audits must be comprehensive enough to match the minerals entering and exiting a *comptoir*, but it must also be verifiable that they originate from the mine site indicated in the paperwork. A field component will therefore be an essential component of the audit. A *comptoir* audit will have to reconcile the minerals exported with the minerals purchased and follow the chain of custody documents to track the minerals to source.

This will be performed to ensure that the minerals are, as claimed, coming from a certified mine site. The audit of a reprocessing centre situated abroad will likewise match exported minerals with purchased or imported minerals and track any domestic production back to its source. A full chain smelter audit will follow the documents chain to track minerals from reprocessing centres, *comptoirs* and from each of those back to the mine site, in order to verify that all materials entering a smelter comes from a legitimate certified source.

B.4. Independent Mineral Chain Auditor:

The Auditor’s function should be to analyse the data streaming into the ICGLR database and look for anomalies and then initiate an investigation on situations which are not covered by the existing set of controls.

For instance, the laundering of conflict minerals by countries that are not part of the ICGLR could easily become an issue should these minerals be sent to an outside country and claimed as domestic production before being sold into the world market with no need for certification. In such a case, the Auditor would be able to investigate gaps in the production data in order to uncover and close the loopholes.

Recognising that mineral tracking and certification scheme for conflict minerals will only be credible if procedures are established to confirm that mine sites meet regional standards, the ICGLR is in the process of adopting a series of rules¹⁰, in particular:

- i. After December 15, 2012, an ICGLR Certificate¹¹ must accompany each exported shipment of conflict minerals. Exports of conflicts minerals lacking this certificate will no longer be permitted.
- ii. All mine sites, artisanal and industrial, must be inspected annually by the authorities and certified to ensure that conflict minerals are sourced only from mine sites that are conflict free and meet minimum social standards (for example, no child labour). During the inspection, the authorities shall assess the mine site and surrounding area and determine whether the mine site is Certified (Green Flagged), Un-certified (Red Flagged)¹² or Yellow Flagged. Minerals extracted from Un-certified (Red Flagged) mine sites are ineligible for certification and cannot be exported with an ICGLR Certificate. The inspections will be cross-checked by annual independent third party audits carried out by ICGLR accredited auditors.
- iii. Each ICGLR Member State must develop and maintain a comprehensive database of the mine sites (including their location, ID number and status) that produce conflict minerals on their territory.
- iv. Each ICGLR Member State must have a chain of custody tracking system for conflict minerals to ensure that mineral consignments only come from Certified (Green Flagged) mine sites and are fully traceable through their accompanying documentation from the mine of origin up to the point of export. Mine operators must seal and document each outgoing lot of conflict minerals¹³.

¹⁰ The Mineral Certification Scheme of the International Conference on the Great Lakes Region, Draft, 01 May 2011.

¹¹ The ICGLR Certificate will include, among other things, the name, legal address and physical site address of the exporter; the name, legal address and physical site address of the importer and a description of the conflict mineral, including the type of ore or concentrate, weight and grade of the lot.

¹² A Certified mine (Green Flagged) is one where no Red or Yellow Flag criteria have been found within the preceding year. For instance, are Red Flags the facts that non-state armed groups or their affiliates "illegally control mine sites or otherwise control transportation routes, points where minerals are traded and any upstream actor in the supply chain" or "illegally tax or extort money or minerals at points of access to mine sites along transportation routes or at points where minerals are traded"; children below the minimum working age are employed in exploitation in the mine site; forced labour is practiced on the mine site; workers are required to work for no compensation or are required on certain days of the week to surrender the fruits of their labour to the mine site boss. Examples of Yellow Flags are non-state armed groups operating in close proximity to a mine site; public or private security forces or their affiliates illegally controlling mine sites or otherwise controlling transportation routes, points where minerals are traded and any upstream actor in the supply chain or extorting money or minerals at points of access to mine sites along transportation routes or at points where minerals are traded; mineral shipments exiting the mine site without having been registered or recorded by a chain of custody system that can track the minerals to their next destination beyond the mine site; government officials (mines officials, secret service, municipal or provincial governments, military unit, etc.) extracting significant taxation or other payments that are disproportionate to any service provided from the workers or production of a mine site, in a manner not authorized by the mineral code or mineral regulations; material from another unknown mine site entering into the mine site or being mixed with the material produced at the mine site.

¹³ The documentation for each outgoing lot of conflict minerals will include the identification of the mine operator, the identification of customer or recipient, a description of the material (ore type, weight and grade), the location of the mine, the value and details of all taxes, fees or royalties paid in respect of the lot, the dates the lot was sealed and shipped and the name of the person who verified the documentation associated with the lot. The documentation will be transmitted to the ICGLR Secretariat on a monthly basis and included in its database.

- v. Mineral consignments originating from Certified (Green Flagged) mine sites may not be physically mixed with consignments from other mines. Mixed lots will be duly recorded. Artisanal production must be checked by a government representative before it may leave the site. Where a local mineral processor, comptoir or smelter obtains conflict minerals from a mine operator, the recipient must ensure that the material originates from a Certified (Green Flagged) mine site prior to recording the transaction¹⁴. The *comptoir's* accounting system must be able to track the purchased, exported and stockpiled material, and demonstrate that its exports and stockpiles match at all times its purchases from Certified (Green Flagged) mine sites.
- vi. An appointed government agency must examine each export of conflict minerals before issuing the ICGLR Certificate which will serve as a guarantee to the purchaser that the export is conflict free.

C. Assessment

C.1 Approach:

The ICGLR provides a thorough upstream traceability model (mine to export) which prescribes (1) tracking and documenting the path taken by each lot of minerals along every step from the mine site through to the point of export, (2) storing all sales, purchases, exports and imports of conflict minerals in the region in a publicly accessible database, and (3) auditing and investigating the chain of custody of a regular basis or when an anomaly occurs.

C.2 Reasonable country of origin enquiry:

The ICGLR model will collect data about the origin of the conflict minerals, the facilities where they were processed and their itineraries to the smelter where they were refined. The data will be stored in a database and regularly audited.

The model relies on the documentation provided by national authorities and the data provided by the tracking system and the export verification mechanisms implemented by the ICGLR Member States. As a result, the ICGLR model will necessarily show that the conflict minerals originate from the DRC countries and, therefore, will not exempt the issuers from compiling a Conflict Minerals Report.

C.3 Conflict Minerals Report:

The ICGLR model, once in place, is expected to provide valuable information to determine the country of origin of the conflict minerals. This will support the efforts undertaken by the issuer to determine the mine or the location of origin of the conflict minerals. It will also help to identify the local facilities where they were processed and to design the measures which the issuer must adopt to exercise due diligence on the chain of custody of these minerals. However, the model will not guarantee that the smelters, located outside the DRC countries, did not procure conflict minerals from an Un-certified (Red Flagged) source.

¹⁴ The records will include the transportation route, the locations where the conflict minerals were consolidated, traded, processed or upgraded, the identification of all upstream intermediaries, consolidators or other actors in the upstream supply chain. When a lot is of mixed origin, the records will also include the mine sites where the mineral in the lot was sourced and the weight of ore sourced from each mine site.

2. STAREC

A. Presentation

STAREC¹⁵ is an initiative of the Congolese government. It aims at restoring the authority of the State in Eastern Congo.

B. Model

The program has clear objectives as far as the mining sector is concerned. The aim is to allow the Congolese national police forces to exercise permanent monitoring over mine sites exploited by armed groups, to deploy a number of State agencies at the provincial level¹⁶ and to organize controls on airstrips and roads leading to mining areas.

As part of STAREC, a plan was launched at the end of 2009 to set up five mineral trading centres in Eastern DRC. The objective is to allow miners and traders to do business without interference from armed groups¹⁷. State agents would exert control and levy taxes; the necessary documentation would be issued and minerals would be labelled. To allow miners to reach the trading centres on foot, each centre is intended to handle products which have been mined within a 25 km radius. A fixed transport route, by air or by road, would then link the trading centres to regional hubs, such as Bukavu or Goma.

C. Assessment

C.1 Approach:

STAREC is a straightforward upstream traceability model (mine to *comptoir*). It is based on the documentation issued by the Congolese State agencies.

C.2 Reasonable country of origin enquiry:

Issued by the Congolese authorities, the documentation provided in terms of the STAREC model will necessarily indicate that the conflict minerals originate from the DRC countries and, as a result, will not exempt the issuers from compiling a Conflict Minerals Report.

C.3 Conflict Minerals Report:

The model relies heavily on the Congolese police forces and State agencies. They are known not to have sufficient capacity to exert effective control on the trade of conflict minerals in Eastern DRC. The UN GoE has also reported the involvement of government officials, including the military, in the exploitation and illegal taxation of conflict minerals in the region.¹⁸

¹⁵ STAREC is the French acronym of for the "Programme de Stabilisation et de Reconstruction des Zones sortant des conflits armés".

¹⁶ These agencies include the Mining Registry, the CEEC and the anti-fraud unit of the Ministry of Mines.

¹⁷ Verbruggen D., Francq E. & Cuvelier J., "op. cit.", *IPIS*, April 2011, p. 20.

¹⁸ The involvement of criminal networks within the army in the illegal exploitation of natural resources has been publicly recognised by President Joseph Kabila (UN Group of Experts on the Republic of Congo, op. cit., p. 3). Out of the 3,723 violent incidents reported in the first half of 2010 by UNHCR in North Kivu, 1,302 (35%) were caused by the FARDC, the Congolese national army (Ibidem, p. 13).

Therefore, the information yielded by the model may not be considered sufficiently *reliable* by the SEC and could therefore compromise the validity of the Conflict Minerals Report. Besides, the model is purely local and does not provide downstream data on reprocessing centres, nor smelters situated outside the DRC. It will therefore not assist the issuers in providing information on the facilities where the conflict minerals were processed.

3. German Federal Institute for Geosciences and Natural Resources

A. Presentation

The German Federal Institute for Geosciences and Natural Resources (BGR) is a neutral public body committed to the sustainable use of natural resources and protection of the human habitat.

B. Model

As part of a global industrial effort to ensure a steady supply of raw materials, BGR has designed a method to certify the origin of artisanally mined minerals. This method has been endorsed by the G8 Summit of June 2007 and is named CTC, for *Certified Trading Chains*. Traceability, transparency and ethical quality of mineral production are assessed by auditing mining performance against a set of certification standards. A key certification standard addresses the origin and the production volume of minerals from the mine site throughout the trading chain. This standard (CTC 1.1) uses 5 level descriptors:

4 = Producer and buyer plausibly declare amount, type, and origin of mineral shipments clearly, correctly and verifiably at the mine, at points where material is aggregated, as well as at export and import sites. Producer and buyer take appropriate measures to ensure the integrity of mineral shipments and allow for an independent third party to take any mineral sample at anytime for Analytical Fingerprint (AFP) analysis.

3 = The producer plausibly declares amount, type and origin of mineral shipments clearly, correctly and verifiably at the mine and at points where material is aggregated. The producer takes appropriate measures to ensure the integrity of mineral shipments and allows for an independent third party to take any mineral sample at any time for AFP analysis.

2 = The producer's declaration of amount, type and origin of mineral shipments is not clear, but the producer takes appropriate measures to ensure the integrity of mineral shipments and allows for an independent third party verification and to take mineral samples at any time for AFP analysis.

1 = The producer's declaration of amount, type and origin of mineral shipments is not clear and not verifiable; the producer does not take appropriate measures to ensure the integrity of mineral shipments and/or does not allow for an independent third party to take any mineral sample at any time for AFP analysis.

0 = The producer does not document any mineral shipments.

In addition, the declarations and the documentation provided by the parties are cross-checked with information sourced from service providers or subcontractors and with other relevant data, such as the number of workers on the pay roll, the receipts for money issued, the miners observed at work, the level of activity on site, the training provided and the equipment used.

In November 2010, an independent audit¹⁹ was carried out, using CTC standards, on the Gifurwe Mine of Wolfram Mining and Processing Ltd (WMP), which operates a wolframite concession in Burera District (Rwanda). The company has a technical cooperation agreement with Wolfram Bergbau und Hutten AG (WBH), Austria. The mining operation is largely artisanal. As to the origin of the minerals, the auditor found that WMP rating for this standard was 4, the highest possible, because “the trading chain is well illustrated for Gifurwe wolframite production. It is based on information that covers the period from March-October 2010. It is plausible that all the wolframite being sold by WMP to WBH as Gifurwe production is produced from the Gifurwe Mine. This is supported by documentary evidence of level activity, production and assurance of the trading chain”.

Another component, Analytical Fingerprinting (AFP), is embedded in the CTC model as an optional checking instrument for traceability beyond the standard documentary system. The AFP method aims at identifying the origin of a mineral concentrate by comparing its mineralogical and geochemical characteristic features to samples of known provenance that are stored in the BGR reference database.

Running at full capacity, a certification laboratory could analyse up to 1000 concentrate samples per year. A single AFP sample ideally consists of 50-100g pre-concentrate material. One sample must be taken at each individual production site of a concession to establish its AFP profile. Verification of the exact location of the sites is essential to ensure result reproducibility and long-term monitoring. The AFP method uses mineralogical and chemical parameters to identify the origin of a concentrate²⁰. Although, there are some unequivocal parameters that easily detect mixing, e.g. the crystallization age of the grains, it is sometimes difficult to attribute exact locations to mixes of various origins.

C. Assessment

C.1 Approach:

BGR provides a model from producer to buyer based on a set of certification standards. As far as the origin of the minerals is concerned, the model is twofold: on the one hand, it relies on the declarations and the documentation provided by the parties and, on the other hand, it uses a series of factual criteria to cross-check the representations of the parties.

C.2 Reasonable country of origin enquiry:

The BGR dual approach fulfils what should be expected from a reasonable country of origin enquiry for issuers which do not know the origin of the conflict minerals necessary for the functionality of the production of their product(s). In addition, the trustworthiness of the supplier's representations can be significantly strengthened if they are supported by an Analytical Fingerprinting report pointing to the exact location where the conflict minerals were extracted from.

¹⁹ Mutemeri N., “Compliance audits of mining companies in Rwanda to the CTC-Standard Set”, BGR, 26 February 2011.

²⁰ AFP has been developed for Ta-Nb (coltan), Sn (cassiterite) and W (wolframite) ores. BGR uses Mineral Liberation Analysis (MLA) to identify the mineralogy of a representative sample (polished block of 3x3 cm). Then, laser ablation-ICP-MS analyses are performed on selected grains identified by MLA. About 50 measurements per mineral and per sample provide enough information for a statistical test that evaluates the best match of the unknown ore with a sample in the database.

In that case, the AFP report could constitute a reasonable country of origin enquiry on its own and would allow the issuer to rely on its supplier's scientifically-backed declarations to conclude that the conflict minerals did not originate from the DRC countries. The issuer would then have no further obligation, but to disclose this negative determination in its annual report and on its website, and maintain renewable records thereof.

C.3 Conflict Minerals Report:

Should the reasonable country of origin indicate that the conflict minerals do originate from the DRC or if the issuer is unable to determine that they don't, that issuer will have to compile a Conflict Minerals Report. The BGR model would then be of assistance to determine the country of origin of the conflict minerals, to describe the efforts undertaken by the issuer to determine the mine or the location of origin of the conflict minerals, to identify the facilities where they were processed or to design the measures the issuer must adopt to exercise due diligence on the chain of custody of those minerals.

4. International Tin Research Institute

A. Presentation

ITRI is a UK-based trade association that supports the tin sector and focuses on market analysis, sustainability and general industry promotion for the sector. Cassiterite, a conflict mineral, is an important source of tin. The DRC accounts for 5% of the world production of tin²¹.

B. Model

In July 2009, the association launched the iTSCi²² project (ITRI Tin Supply Chain Initiative). The first phase of the project focused on the supply chain from the DRC exporters/*comptoirs* to the smelter and introduces due diligence procedures to make sure that the official documentation is in order:

- ✓ **Licensing**: Ensuring that *comptoirs* are formally licensed pursuant to the Congolese Mining Code to deal in and export cassiterite from the DRC.
- ✓ **Legitimacy**: Confirming that *comptoirs* are properly registered in the DRC and account for all necessary taxes.
- ✓ **Authorisation**: Ensuring that each shipment is authorised and certified by the relevant official department.
- ✓ **Provenance**: Confirming²³ that the minerals are from a legitimate source and that there has not been, to the best knowledge and belief of the supplier, any non-state armed group involvement in the supply chain.

²¹ Tantalum: 17%, Tungsten (wolframite): 3%, Gold: 2% (USGS, 2008).

²² A phased and Constructive Approach Towards Improved Due Diligence, Governance and Traceability, ITRI, 2009.

²³ The *comptoir* is to issue a "certificate of origin" which records the physical description of the mineral, together with the declared mine of origin and transport route via the intermediate supplier, known as *négociant*.

The second phase of the iTSCi project involves the development and the implementation of a due diligence system to ensure mineral traceability from the mine site to the *comptoirs*. The system, known as *bag and tag*, is designed to work as follows:

- ✓ All minerals are transported from the mines into bags.
- ✓ Each bag is given a unique code in the form of a security tag or seal attached to the bag.
- ✓ The minerals are transported from the mine to a local transport node. At that point, they may be processed or consolidated²⁴. The security tags are surrendered and their numbers recorded on the *négociant's* Certificate of Provenance. The material would then be dispatched to the *comptoir* with a numerically coded security label on which all the unique codes for each bag have been recorded.
- ✓ The *comptoir* would record other important facts, such as the transport route and the physical characteristics of the minerals.
- ✓ All data would be centralised and a database established to monitor the flow of ore from all mining sites.

From mid-June 2010, the project was piloted at the Kalimbi mine in Nyabibwe, South Kivu, with the assistance of SAESSCAM and the Division of Mines. However, the project was halted due to the mining ban imposed by President Kabila in September 2010.

Phase 3 of the project is currently under development. ITRI members will undertake to purchase exclusively from suppliers who do not, directly or indirectly finance armed groups in the DRC. If non-compliance cannot be rectified within a reasonable timeframe, all purchases and business arrangements with these suppliers will be terminated.

C. Assessment

C.1 Approach:

At this stage, the iTSCi project is a twofold upstream model: on the one hand, it aims at identifying the legitimate exporters (*comptoirs*); on the other hand, it is designed to trace the itinerary of the minerals every step of the way from their place of extraction to the exporters.

²⁴ In order to mitigate the risk of untagged material being mixed with tagged minerals by traders, the project requires that the weight of the tagged material not exceed the weight of the tagged material they purchased from the mine site. Mineral traders can, however, remove soil and rocks from bags tagged at the mine site and replace them with other material, but this can be monitored by comparing the average mineral content in the ore from the mine site with the ore content in the mineral traders' tagged bags. A further risk is tag theft and diversion. The risk has been mitigated by the project's recording which tags are allocated to which sites, making it possible to identify when tagged material comes from unexpected areas. In addition, each tag issued to miners and mineral traders records their name and other details, including those of the Government agent(s) involved, making it possible to trace the circumstances of suspicious consignments. Some mineral traders have tried to reuse tags, but this has reportedly been easy to detect and prevent. At the same time, a unique numbering system for tags is designed to prevent the risk of fraudulent tag manufacture and use. Systems are also in place to prevent government agents from stealing, selling or losing tags. Attempts by government agents to sell tags have been reported to the project by the local implementation committee.

C.2 Reasonable country of origin enquiry:

The “bag and tag” approach has undeniable merits. It provides a clear and practical way to trace minerals (tin) from the mine up to the *comptoirs* in the DRC. As such, the ICGLR model will necessarily indicate that the conflict minerals originate from the DRC countries and, therefore, will not exempt the issuers from compiling a Conflict Minerals Report.

C.3 Conflict Minerals Report:

The model may be extended to conflict minerals other than tin and provide reliable data to design the due diligence measures the issuer must exercise on the source and chain of custody of the conflict minerals and to compile the Conflict Minerals Report. The model should also indicate where the minerals were exported to, in particular which smelter purchased them.

5. Global e-Sustainability Initiative & Electronic Industry Citizenship Coalition

A. Presentation

The Global e-Sustainability Initiative (GeSI) is an international non-profit association which brings together ICT companies²⁵ - including telecommunications service providers and manufacturers as well as industry associations - and non-governmental organisations committed to achieving sustainability objectives. Members include high-profile companies, such as Microsoft, Motorola, Nokia, Ericsson and HP. The Electronic Industry Citizenship Coalition (EICC) was established in 2004 to improve social, economic and environmental conditions in the global electronic supply chain through the use of a standardized code of conduct. The EICC was incorporated in 2007 to ensure greater awareness of the Code and to expand its adoption across the industry. The EICC includes over 50 global electronics companies, such as Apple, IBM and Intel.

B. Model

The GeSI advocates a two-pronged approach to improve transparency and traceability of mineral sourcing, focusing on key stages in the supply chain:

- ✓ Tracing minerals from the mine to the smelter by supporting the ‘bag and tag’ in-region sourcing program run by the ITRI Tin Supply Chain Initiative (iTSCi).
- ✓ Identifying and validating conflict-free smelters for suppliers to source metals from via a conflict-free smelter program.

A study²⁶ commissioned by the GeSI and EICC in 2008, suggested that the metals market can be understood by analogy to a pool of water that is being fed by many streams: metals are sourced from the earth, through mining, and from the existing economy, via recycled production. Both sources may be mixed together within the global pool of a metal commodity. Besides, metals are shipped around the world in a variety of forms, including ore, mineral concentrates, crude metal, refined metal, alloys, semi-fabricated metal, manufactured products and scrap metal. Each producer at each stage of the production cycle may mix different flows from different sources, depending on economics and availability.

²⁵ The electronic industry is estimated to use up to 36% of the global tin supply and 9% of gold.

²⁶ Social and Environmental Responsibility in Metals Supply to the Electronic Industry, GHGm, June 2008.

In this context, it is “extremely difficult to clearly track the physical flows and trade of metals through the market”. The origin of metal is “further complicated in cases where the proportion of artisanal and small scale mining (ASM) is high, as for gold (20 to 25% of global production) and tin (approximately 50%)”.

In 2010, the GeSI and EICC commissioned another study²⁷, this time to “assess the challenges and ability to create a transparency model” within the supply chain. A two-track model was suggested:

- ✓ **Smelter-based “conflict-free” verification:** a long term approach is clearly needed to address conflict minerals through a supply chain transparency and tracking system that could eventually support “conflict-free” sourcing for products. Research indicated that (1) major end-user companies, such as the GeSI members, have sufficient leverage to reach smelters and (2) key smelters are willing to participate in designing a mechanism for verifying processed/refined metals.

- ✓ **Pilot(s) based in regions of conflict:** while undertaking larger systems design, companies and other stakeholders should undertake a pilot or a series of pilots to test a number of different potential solutions. Ideally, these pilots will take place in conflict regions, such as the DRC, to demonstrate the existence of legitimate sources (including ASM) and mitigate likely initial reactions by some companies to halt sourcing from Central Africa. The pilots can test different transparency and chain of custody mechanisms, such as *bagging and tagging* from a mine site, batching ores at the smelter, establishing dedicated mining and refining facilities or creating unique source-to-product relationships. These pilots can also build the capacity of actors in conflict regions to participate in and benefit from conflict-free supply chains.

In December 2010, the GeSI and EICC launched a *Conflict-Free Smelter (CFS) Assessment Program*²⁸ which aims, via an independent audit, at certifying smelters that do not procure conflict minerals from the DRC or an adjoining country. These smelters are immediately eligible for certification under the CFS protocol. Smelters, who do source conflict minerals in the DRC countries, are not *per se* excluded from the CFS protocol, but they must first:

- Implement the OECD Guidance for these minerals.

- Demonstrate compliance with the OECD Guidance, including an independent third-party audit thereof.

- Provide 100 % supporting documentation regarding the mine of origin and subsequent trading partners to the smelter through the establishment of a chain of custody and/ or traceability system

Although the details of the CFS program have not been made public yet²⁹, it mainly consists of two reviews:

²⁷ Tracing a Path Forward: A Study of the Challenges of the Supply Chain for Target Metals Used in Electronics, Resolve, April 2010.

²⁸ EICC-GeSI Conflict-Free Smelter (CFS) Assessment Program, FAQ, Revision 4 May 2011.

²⁹ The CFS protocol has been developed for tantalum. Specific protocols are being developed for other conflict minerals.

- i. Business Process Review
 - Evaluate company policies and/or codes of conduct relating to conflict minerals
- ii. Material Analysis Review
 - Conduct a thorough material analysis to show that all sources of minerals procured by the smelting company are conflict-free.
 - Evaluate whether source locations are consistent with known mining locations.
 - Establish whether material identified as “recycled” meets the definition of recycled material.

The CFS is a voluntary program. All industries using tin, tantalum, tungsten and gold may join the program. For upstream compliance (mine to smelter), the GeSI and EICC support the development of in-region programs, such as the iTSCi project. Once validated by an independent third party, iTSCi minerals, or other in-region sourcing programs, will be considered eligible to be assessed to the CFS protocol.

C. Assessment

C.1 Approach:

The GeSI/EICC model is essentially a downstream model. It focuses on the ability of the smelter company to ensure either that its chain of supply is free of conflict minerals originating from the DRC countries or, if it is not, to ensure that the smelter opts to implement the OECD due diligence guidance³⁰ for conflict minerals sourced in conflict areas.

C.2 Reasonable country of origin enquiry:

The first category of smelters, the ones that simply do not source conflict minerals in the DRC countries, should ultimately appear on a list of certified conflict-free smelters once they have been audited according to the CFS protocol.

In that case, issuers, that can demonstrate that they, as well as their contractors, only procure their necessary conflict minerals from these smelters, will be entitled to conclude, without further investigation³¹ or reporting obligation, that these conflict minerals did not originate from the DRC countries. These issuers will have to disclose that negative determination in their annual report, as well as on their website, and maintain reviewable records of that determination. In addition, these issuers will be entitled to describe their products as “DRC conflict free”.

³⁰ Bauwens M., “Dodd-Frank Conflict Minerals Provision: Legal, reputational and practical implications”, 2011, p. 5.

³¹ Although, according to the SEC, reliance on certified smelters or suppliers declarations may be sufficient at this stage to determine the source of necessary conflict minerals, the facts and circumstances surrounding what is now to be considered a reasonable country of origin enquiry may change. As systems improve, along with the SEC’s understanding thereof, smelter certifications and supplier declarations may not satisfy a reasonable country of origin enquiry in the future (Federal Register, op. cit., p. 80957).

C.3 Conflict Minerals Report:

Other issuers, the ones that directly or indirectly procure from smelters that keep on sourcing conflict minerals in the DRC countries or cannot demonstrate that they no longer do, will have to provide a Conflict Minerals Report even though the smelters where they procure from have joined the CFS assessment program and implemented the OECD due diligence guidance.

6. Conclusion and recommendations

None of the models that have been examined provides the absolute guarantee that the conflict minerals do not originate from a mine site which is not, directly or indirectly, controlled by an armed group, nor that these minerals have not been illegally taxed during their transport, even if they were later exported by a duly licensed and tax-abiding *comptoir*.

Since all conflict mineral ores must be smelted or refined to produce the relevant metal that they contain, the certification of smelters - the chokepoints in the chain of supply - appears a robust solution capable of fulfilling most of the disclosure and reporting obligations imposed on issuers by Dodd-Frank section 1502. Indeed, issuers who can rely on a certified conflict-free smelter should be able, without further investigation or reporting obligation, to disclose that negative determination in their annual report and on their website, and maintain reviewable records of this determination on a yearly basis. However, putting too much pressure on smelters will have adverse consequences on the lives of miners and their families; especially should smelter companies simply decide to stop procuring minerals originating from Central Africa, saving themselves the administrative burden and the costs required for the purposes of due diligence.

We therefore recommend the following method, bearing in mind that the onus to provide reliable information to the SEC is ultimately weighing on issuers and not on the authors of the models we have examined:

Step 1. Certified conflict-free smelter:

- If conflict minerals are only procured from a certified conflict-free smelter that do not source conflict minerals in the DRC countries, then the issuer may disclose, in its annual report and on its website, that its necessary conflict minerals do not originate from the DRC countries and maintain reviewable records thereof. No further investigation or reporting will be required from that issuer.
- If this is not the case, then the issuer must move to step 2.

Step 2. Suppliers representations:

- If an issuer can, based on the facts and circumstances, reasonably believe and rely on its suppliers representations according to which their products do not contain conflict minerals originating from the DRC, then that issuer may disclose³², in its annual report and on its website, that its necessary conflict minerals do not originate from the DRC countries and maintain reviewable records thereof. No further investigation or reporting will be required from that issuer.

³² The issuer concerned may opt to audit its suppliers' representations prior to disclosing that its conflict minerals do not originate from the DRC countries.

- If this is not the case, then the issuer must move to step 3.

Step 3. Reasonable upstream enquiry into the physical origin of the minerals:

- If an issuer does not know the origin of the conflict minerals necessary for the functionality or the production of its products, that issuer will have to conduct a reasonable upstream enquiry into the physical origin of the minerals imported by the smelter in order to determine the country where they were extracted from:
 - i. the ICGLR database, once it becomes operational, may be used to find out if these minerals did originate from the DRC countries. Depending on how efficient that database will be. The issuer may be able to conclude that these minerals did not originate from the DRC countries and disclose that negative determination in its annual report and on its website, and maintain reviewable records thereof. No further investigation or reporting will then be required from the issuer.
 - ii. the ITRI database, once in place, may also be used for the same purpose as far as cassiterite is concerned.
- If these desk researches are inconclusive, the issuer will have to conduct on-the-ground investigations to determine the origin of the minerals imported by the smelter. The model and the criteria developed by BGR will provide assistance in that regard. The issuer may perform that enquiry in conjunction with random and regular Analytical Fingerprinting tests on the minerals procured by the smelter.
- If the results of these investigations and the AFP tests do not enable the issuer to conclude that its conflict minerals did not originate from the DRC countries, that issuer will have to move to step 4. Based on its own circumstances, that issuer may also opt to skip step 3 and move directly to step 4.

Step 4. Conflict Minerals Report:

If the issuer is aware that its conflict minerals originate from the DRC countries, finds it impractical or redundant to conduct an enquiry in the country of origin or is simply unable to conclude that these minerals do not come from the DRC countries, that issuer will have to furnish an independently audited Conflict Minerals Report to the SEC and make this report available in its annual report, as well as on its website.

Once in place, the various traceability models examined are expected to provide useful information in that regard. The ICGLR database may yield relevant data on the location of the mine, the itinerary of the conflict minerals and the processing facility where they were exported to. The STAREC initiative may provide documentary evidence on the location where the conflict minerals were extracted, transported and sold within the DRC. The iTSCi model can assist in identifying legitimate exporters within the chain of custody and via the data collected from its “bad and tag” model, provide relevant information as to the origin, the itinerary, the sales and the exports of the cassiterite originating from Eastern DRC.

However, these different models, as well as the information they are expected to provide will never fully exonerate the issuers from developing their own due diligence model based on the characteristics of their chain of supply.

The legal and practical implications arising from the implementation of Dodd-Frank section 1502 are still surrounded by a significant number of grey areas. The SEC has announced the publication of its final rules between August and December 2011. Further guidance is also expected from the OECD as far as due diligence on conflict gold is concerned.

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