



Greening ICT supply chains – Survey on conflict minerals due diligence initiatives

Acknowledgements

This report was researched and written by a team of authors led by Estelle Levin (Estelle Levin Ltd) comprising Cristina Villegas and Ruby Weinberg (Estelle Levin Ltd), Cristina Bueti and Erica Campilongo (ITU), John Smiciklas (MJRD Assessment Inc.) and Ruediger Kuehr (United Nations University).

The report authors would like to thank all the people who gave up their time to assist with this research by responding to emails and those who were willing to be interviewed, including Lahra Liberti and Tyler Gillard of the Organization for Economic Co-operation and Development (OECD), Richard Burt of the Tantalum Niobium International Study Center (T.I.C.), Kay Nimmo of ITRI, Philip Schütte of the German Federal Institute for Geosciences and Natural Resources (BGR), Shawn Blore and Joanne Lebert of Partnership Africa Canada (PAC), Eddy Mbona of the International Conference on the Great Lakes Region (ICGLR), Terry Heymann of the World Gold Council (WGC), Bob Leet of the Electronics Industry Citizenship Coalition (EICC), Mike Loch of the the Global e-Sustainability Initiative (GeSI), Fiona Solomon of the Responsible Jewellery Council (RJC), Ruth Crowell of the London Bullion Market Association (LBMA), Lina Villa of the Alliance for Responsible Mining (ARM) and Gemma Cartwright of the Fairtrade Foundation.

Special thanks is due to David Jensen and Andrew Morton (UNEP), as well as Ahmed Zeddham and Didier Marquet (France Telecom/Orange), Mike Loch (GeSI) and Kirsten Hund (World Wide Fund for Nature's Central Africa Regional Programme Office – WWF-CARPO) for their helpful review of a prior draft. The authors' acknowledge the assistance of Gregory Mthembu-Salter, David Biggs, Paul Mitchell, Dr. Jennifer Hinton, Elaine Hsiao, Dr. Kevin Telmer, Kathryn Harris and Gisa Roesen for their assistance on specific technical points.

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Greening ICT supply chains

Survey on conflict minerals due diligence initiatives

Executive summary

Tin, tantalum, tungsten and gold (3TG) are key inputs for products of the Information and Communication Technology (ICT) industry. From smartphones to laptops, the 3TG are used in many ICT products with the ICT industry consuming over 50%-60% of tantalum, up to 26% of tin, and 9% of gold.¹ One of the most significant sources of these minerals (particularly tantalum, tin and tungsten) is the Democratic Republic of Congo (DRC) and the Great Lakes Region of Africa.² A key feature of this area is that much of the current output of 3TG is by artisanal and small scale mining (ASM). This means that the livelihood of much of the population depends on a thriving and sustainable 3TG supply chain. However, due to a global spotlight on the contributing role of artisanally-mined 3TG with the financing DRC's ongoing armed conflict, 3TG have become globally synonymous with one region and one phrase: 'Conflict Minerals' from the Democratic Republic of the Congo and the nine adjoining states.³

While much of today's Conflict Minerals narrative focuses on human rights concerns⁴ of 3TG supply chains from this region, early NGO campaigning had originally raised concern about the devastating effects that ASM was having on critical ecosystems and irreplaceable flora and fauna. A currently-overlooked issue is that both artisanal and industrial mining of 3TG is taking place in the heart of two of the most important ecosystems on Earth: the Congo Basin⁵ and the Albertine Rift.⁶ When creating and expanding 3TG supply chain assurance systems, it is short-sighted to overlook safeguards to protect ecological resilience. Efforts to manage today's armed conflicts may be creating the conditions that make tomorrow's conflicts more probable, such as sowing the seeds for resource scarcity conflicts.

Supply chains tools

Actions to understand regulate and elucidate the ICT industry's supply chain from mine to retail product, have been underway for years. There are many initiatives aimed at providing the ICT sector with guidance and assurance tools to conduct due diligence along their supply chains. Some of these are operational and others are still in development. Those studied in this report include **Chain of Custody Standards** that allow for the mineral's origin and chain of custody to be known, **Issue(s)-based Standards** that promote best practice in risk management on *specific* issues only, **Risk Management Standards** that promote best or good practice in risk management on a wider range of social and environmental issues than issue-based standards, and **Sustainability Standards** which seek to mitigate risks *and* optimize on the development opportunity that the mineral capital presents. The effectiveness and long-term workability of these initiatives remains to be assessed, as in most cases, implementation is in the early days.

The initiatives detailed in this report include the OECD's Due Diligence Guidance, ITRI and the Tantalum-Niobium Study Group's (T.I.C.) International Tin Supply Chain Initiative (ITSCI), the German Federal Institute for Geosciences and Natural Resources' (BGR) Certified Trading Chains, the International Conference of the

¹ Burt, 2011; Vodafone, 2012; GHGm, 2008.

² US Geological Survey, 2010; Bawa, 2010.

³ These include Angola, Burundi, Republic of Congo, Central African Republic, Rwanda, South Sudan, Tanzania, Uganda, and Zambia.

⁴ At the same time, there is much ongoing discussion about the recycling of critical metals

⁵ WWF, 2012.

⁶ Kujirakwinja, *et al.*, 2010.

Great Lakes Region's (ICGLR) Regional Certification Mechanism, the World Gold Council's (WGC) Conflict-free Gold Standard, the Electronic Industry Citizenship Coalition (EICC) and the Global e-sustainability Initiative's (GeSI) Conflict Free Smelter Scheme (CFS), the Responsible Jewellery Council's (RJC) Code of Practice (CoP) and Chain of Custody (CoC) Standards, the Alliance for Responsible Mining (ARM) and the Fairtrade Labelling Organization's (FLO) Standard for Artisanal and Small-scale Mining (ASM) including Associated Precious Metals and the London Bullion Market Association's (LBMA) Responsible Gold Guidance.

Government based efforts

Several international organisations and individual governments have sought to improve transparency and due diligence in ASM-dominated ICT industry supply chains, almost exclusively with a focus towards conflict-prevention. These include UN Security Council resolutions, efforts by the International Conference on the Great Lakes Region (ICGLR), and measures by the DRC Government. The most prominent amongst legislative actions taken by a government outside of the Great Lakes region is section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (United States Public Law 111-203). Donors, such as the World Bank and the UK Department for International Development (DFID), too, are trying to find workable solutions. An example of such an effort is that of DFID, the World Bank and the Government of DRC' project called *Growth with Governance in the Mineral Sector Project (PROMINES)*.

Risk management initiatives

Prior to and in conjunction with these government-based efforts, there is a large subset of initiatives to manage risk along mineral supply chains. These initiatives are expressly targeted at managing the risk of conflict minerals entering the supply chains and can be characterized by the portion of the supply chain they seek to address.

Industry-based approaches

Much of the ICT industry was aware of DRC supply chain challenges prior to formal legislative and regulatory action. Individual ICT company responses to the growing public and regulatory awareness can broadly be categorized into: (1) those corporations that are incrementally working to improve transparency in their supply chains; (2) those that are acting as leaders on conflict minerals for the industry; and (3) others who are resorting to the defensive but less sustainable response of disengagement. Of the last group, many companies are simply boycotting the Great Lakes Region, demanding that smelters avoid the region altogether as the simplest way to report that their minerals are 'conflict-free'.⁷

These supply chain initiatives would benefit from a more concerted effort to address environmental issues. While the conflict and human rights aspect of supply chains originating from the African Great Lakes region garners much of the current international attention, the environmental impact is both critical and overlooked. At present, only a few international mineral supply chain initiatives give any particular attention to managing environmental issues: BGR's CTC, the ICGLR's RCM, ARM/FLO's FT/FM Standard, and RJC's CoC/CoP. The more sustainable sourcing choice for ICT companies' buyers at present appears to be minerals carrying assurance by one of these initiatives. In general, however, ICT companies are not at this time looking at the environmental dimension of sustainability. This offers an opportunity for the United Nations University (UNU) and the International Telecommunication Union (ITU) in conjunction with other United Nations (UN) agencies and organizations to provide leadership in closing this gap.⁸

Should the ICT sector wish to expand the due diligence imperative to cover environmental sustainability issues in the ASM sector, existing initiatives – as they are currently operating – are inadequate in terms of

⁷ IPC 2012; OECD 2011d.

⁸ Such as UNEP, MONUSCO, UNDP and/or UNESCO.

geographical coverage and sustainability performance level; support to those that are willing to expand their scope is encouraged. In the context of a need for more general improvement in the cooperation and coordination of these initiatives, there is room to investigate the feasibility of greater integration of environmental sustainability into existing dimensions, and whether or not stakeholders and the conflict mineral initiatives would support such action.

1. Introduction

Tantalum, tungsten, tin and gold (3TG) are key inputs for products of the Information and Communication Technology (ICT) industry. From smartphones to laptops, the 3TG are used in many ICT products with the ICT industry consuming over 50%-60% of tantalum, up to 26% of tin, and 9% of gold.⁹

These special minerals (particularly, tin, tantalum and tungsten) are found in localized deposits globally; two of the largest sources of these minerals are located in the Democratic Republic of the Congo (DRC) and in the Great Lakes Region of Africa (GLR).¹⁰ Artisanal and small scale mining (ASM) is responsible for much of the current output of 3TG because, according to a 2010 PROMINES¹¹ study, *“most large-scale mining activity in the DRC remains in the prospecting, exploration, feasibility or development stages, industrial production [and] has yet to make a major contribution to the country’s mineral production.”*¹² This means that the livelihood of much of the population depends on a thriving and sustainable 3TG supply chain.

The lack of enforcement of existing regulation and the mismanagement of how the 3TG are produced, transported and/or traded, can trigger socio-economic and environmental instability. National and international mining prospectors and investors of all kinds compete to access and control these minerals. This competition can result in the financing of armed conflicts and/or the perpetration of human rights violations, creating instability as has been observed in the DRC and in the African Great Lakes Region before.

The supply chain for 3TG, when used within the ICT supply chain, can be complex because minerals change hands up to seven times as they are processed into metals and then ICT products. A key challenge in determining the source of these minerals is that 3TG are mined in areas of the GLR with little to no traceability. This leads to suspicions regarding the origin of all minerals in this area and leads to questions of who actually benefits from the proceeds of mining.

This complex situation of instability is the reason why the media and non-governmental organizations (NGOs) refer to 3TG from the GLR, in particular, as Conflict Minerals. This complicated situation has inspired consumer activism campaigns to urge governments and private companies to deal with this issue.

While the conflict and human rights aspects of supply chains originating from the GLR garners much of the current international attention, there is a critical and overlooked aspect of the situation: the environmental aspect. As currently practiced, sourcing of 3TG from the GLR, from both artisanal and industrial sources, is taking place in the heart of two of the most important ecosystems on the planet – the Congo Basin Ecosystem¹³ and the Albertine Rift.¹⁴ Unsustainable management of how these minerals are accessed, extracted, processed and transported will irreversibly endanger the surrounding ecosystem.

Mining itself is not inherently unsustainable if it is responsibly managed. For industrial mining companies, and other organised ICT supply chain actors, an approach to mining that addresses all aspects of sustainability, including biodiversity management, calculation and management of environmental risks at a given company’s operations, and maintaining positive and enduring relationships with government and community stakeholders in the country of operation¹⁵, could reduce some of the drivers of conflict, which

⁹ Burt, 2011; Vodafone, 2012; GHGm, 2008.

¹⁰ US Geological Survey, 2010.

¹¹ See section 2.3.4 for more details of the PROMINES programme.

¹² Bawa, 2010, p.20.

¹³ WWF, 2012.

¹⁴ Kujirakwinja, *et al.*, 2010.

¹⁵ UNEP, 2010.

would in turn reduce the risks of conducting business in the region.¹⁶ A recent United Nations Environmental Programme (UNEP) report on becoming a “green business leader” urges its readers to consider that, *“there is growing awareness of the impact and dependency that business operations have on biodiversity and ecosystem services, and the business risks that poor management of them can present.”*¹⁷ Ultimately, then, by suppliers taking greater account of the biodiversity and community needs in the area of operation, ICT companies (and their suppliers) can rest assured that they are delivering on their local sustainability commitments and not just those that elicit greater consumer attention, while maintaining the financial bottom line.

Governments globally are looking at instituting regulations around supply chain due diligence for Conflict Minerals that may place unusual burdens on ICT companies for compliance, if the ICT industry does not develop these standards proactively (e.g., United States Securities and Exchange Commission’s regulations on conflict minerals).

At the time of this report’s writing, legislation designed to improve transparency and due diligence in the supply chains of conflict minerals has generally dealt more with issues of human rights violations and/or benefits to illegal armed groups, and less, or not at all, with environmental sustainability.¹⁸ A notable example of the neglect for wider sustainability issues are the conflict minerals provisions to the US Congress’ Dodd-Frank Act (DFA), which is described in greater detail in this report.

Prior to and in conjunction with the DFA, there has been a subset of initiatives to manage risk along mineral supply chains that have emerged to improve the sustainability performance of mineral production and/or supply chains.¹⁹ These initiatives are expressly targeted at managing the risk of Conflict Minerals entering the supply chains.

This survey details and assesses the existing conflict minerals supply chain due diligence initiatives (incorporating national and international legislation, as well as industry-, government- and multi-stakeholder led schemes) that address the management of the broader spectrum of sustainability issues present in conflict minerals supply chains, with a particular focus on the management of environmental impacts.

¹⁶ Shembagh *et al.*, 2001.

¹⁷ UNEP, 2010, p. 4.

¹⁸ A notable exception to this is the ongoing discussion regarding recycling of major metals like gold.

¹⁹ The initiatives detailed in this report include the OECD’s Due Diligence Guidance, ITRI and T.I.C.’s iTSCI, BGR’s Certified Trading Chains, the International Conference of the Great Lakes Region’s (ICGLR) Regional Certification Mechanism, the World Gold Council’s (WGC) Conflict-free Gold Standard, the Electronic Industry Citizenship Coalition (EICC) and the Global e-sustainability Initiative’s (GeSI) Conflict Free Smelter Scheme (CFS), the Responsible Jewellery Council’s (RJC) Code of Practice (CoP) and Chain of Custody (CoC) Standards, the Alliance for Responsible Mining (ARM) and the Fairtrade Labelling Organization’s (FLO) Standard for Artisanal and Small-scale Mining (ASM) including Associated Precious Metals and the London Bullion Market Association’s (LBMA) Responsible Gold Guidance.

2. Legislation for supply chain transparency and due diligence

Existing legislation designed to improve transparency and due diligence in conflict minerals supply chains attends primarily to issues of human rights violations and/or benefits to illegal armed groups along the supply chain. Of the international and national instruments outlined herein, only the Regional Certification Mechanism of the International Conference for the Great Lakes Region, BGR's Certified Trading Chains (CTC), and the *Certification Nationale* of the DRC have made requirements of Parties to manage the environmental implications of these mineral supply chains.

2.1 UN Security Council Resolutions

The conflict in the DRC has been one of the most tragic of the last few decades. It has been estimated that total loss of life in the region has exceeded 5 million. There are a number of issues driving the conflict, but one of the most discussed is the role that the mineral trade, particularly with regards to the 3TG, plays in financing conflict.

As such, and following its resolution 1291 (2000), in June 2000 the UN Security Council (UNSC) first established the Panel of Experts to investigate the illegal exploitation of DRC's natural resources and identify any potential links between natural resources and the ongoing conflict in eastern DRC.²⁰ In 2003, the Panel issued its final report concluding that: *"The flow of arms, exploitation and the continuation of the conflict are inextricably linked."*²¹ The report further called for more disclosure by businesses in their transactions in the region, and listed some 125 individuals and companies as having directly or indirectly contributed to the armed conflict in DRC. It also made a call for international cooperation on the matter, stating: *"There should be no illusion that the Congolese people will be able to carry out this colossal task on their own... Without the active engagement of the international community, the chances of success will be minimal."*²²

In 2004, pursuant to its resolution 1533 (2004)²³, the UNSC created the Group of Experts (UNGoE) to investigate the links between eastern DRC's conflict and the exploitation of natural resources. UNGoE has been reporting annually and, in 2010, it issued recommended guidelines for the UNSC Sanctions Committee to use to further pursue the issue.²⁴

The UNSC has consistently highlighted the connection between armed groups, conflict and their impact on the environment since the Panel of Experts referred to the presence of armed groups in its first report in 2001.²⁵

2.2 International Conference on the Great Lakes Region

The International Conference on the Great Lakes Region (ICGLR), is an intergovernmental organization made up of the signatory states belonging to the Great Lakes Region (GLR) of Central Africa, including the DRC, Rwanda, Burundi, Uganda, Tanzania, Sudan, Republic of Congo, Central African Republic, Zambia, Kenya and Angola. The group was formed in 2000 demonstrating a commitment within the governments of the GLR to

²⁰ See United Nations Security Council, 2003-2005.

²¹ See Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth in the Democratic Republic of Congo, S/2003/1027, October 23, 2003. Paragraph 59, p. 19.

²² See Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth in the Democratic Republic of Congo, S/2003/1027, October 23, 2003. Paragraphs 49 and 50, p. 16.

²³ See United Nations Security Council, n.d.

²⁴ See [United Nations Security Council, 2001](#).

²⁵ United Nations Panel of Experts on the Democratic Republic of Congo, 2001. For example, the Group of Experts latest report, an armed group presence and engagement in illegal timber and charcoal extraction is mentioned in the vicinity of Virunga National Park. UN Group of Experts, 2011, p. 29.

work closely with one another to attain regional peace, security and development.²⁶ A major theme that the ICGLR covers is Democracy & Good Governance²⁷, particularly with respect to illegal cross-border smuggling of minerals, timber and other natural resources. On 15 December 2006, the heads of state of the member countries signed the Protocol on the Fight against the Illegal Exploitation of Natural Resources, with each State agreeing to specific actions it would take to that effect.²⁸ Four years later, Heads of State met again and, by signing the Lusaka Declaration, agreed to develop six tools to deal specifically with the illegal exploitation of natural resources, including,²⁹ 1) a Regional Certification Mechanism for conflict minerals (RCM), 2) harmonization of national legislation in and across Member States, 3) a Regional Database on Mineral Flows, 4) formalization of artisanal and small-scale mining, 5) promotion of the Extractive Industries Transparency Initiative (EITI) within the region and 6) a whistle-blowing mechanism. The RCM is presently being embedded in national law across member countries as part of the Legal Harmonization Component. As discussed in further detail in section 5, this tool does incorporate environmental management issues, albeit on an ongoing monitoring basis for now (referred to as Progress Criteria). Eventually, it is expected that this information will be used and regularly updated to record environmental mismanagement and to sanction economic actors accordingly.

2.3 Measures by the Government of DRC

As the issue of Conflict Minerals has taken on broader interest from the NGO sector and governments, many companies have disengaged from the mining sector in the DRC to avoid the potential that Conflict Minerals will enter their supply chains and trigger negative consumer or government actions.

In response, the Central and Provincial authorities of the DRC are pushing hard to create the conditions for a legal mineral trade, in order to encourage international buyers to re-engage in the sector. These efforts include the creation of new legislation, policies and coordinating bodies.

The Congolese Ministry of Mines hosts a number of working groups to coordinate traceability and certification efforts. There is a working group on statistics and another on certification, a commission to combat fraud and the *Groupe Thématique des Mines*. The latter coordinates efforts amongst the Government of DRC and international partners that are attempting to address the illegal exploitation of and trade in natural resources in DRC. Germany has detached a permanent representative from *Bundesanstalt für Geowissenschaften und Rohstoffe* (German Federal Institute for Geosciences and Natural Resources, BGR) to the Ministry of Mines, and the BGR Bukavu and Goma offices are functioning as a “*liaison bureau for other donors in Eastern DRC*”.

The Congolese *Code Minier* (2002) and accompanying *Reglement Minier* (2003) have been supplemented in the last two years with a number of legal tools designed to support traceability, certification and due diligence of mineral supply chains in DRC. These include the Traceability Procedures Manual for Mining Products (see section 2.3.1) and *Certification Nationale* (see section 2.3.2). The Ministry of Mines has also put in place agreements and acts of engagement with other institutions. For example, it has an ‘*Acte d’engagement solennel*’ in the Kivus and Maniema, which require private sector actors to contribute to formalization, traceability and certification initiatives by the government of DRC and ICGLR.³⁰

²⁶ International Conference on the Great Lakes Region, 2010.

²⁷ Other key issues, the ICGLR works on Peace and Security, Economic Development and Regional Integration, Humanitarian and Social Issues Cross Cutting Issues and Genocide Prevention.

²⁸ ICGLR, 2010.

²⁹ ICGLR, n.d.

³⁰ See OECD, 2011c for further details.

As for environmental legislation, the Government of DRC has expressed strong support for improving the framework; however, this is time consuming and requires resources.³¹ The most recent release of the *code environmental* includes stricter provisions for mining corporations when they carry out Environmental and Social Impact Assessments (ESIA). However, UNEP points out that the additions to the legislation³² are made in an uncoordinated fashion and do not, in fact, ensure that environmental officials have the mandate, infrastructure, coordination and resources to enforce those additional provisions.³³

Of the endeavours discussed in this section are the efforts of the Government of DRC, the World Bank and DFID which led the Growth with Governance in the Mining Sector (PROMINES – see section 2.3.4) project. This is the only project that deals directly with environmental issues and mining. Its aim is to provide technical assistance to the mining sector, as well as improve its governance, efficiency and future growth.³⁴ One of the offsetting goals of the programme is to “*Promote sustainable development based on mining.*”³⁵ It has a multi-million dollar component to tackle some of the key issues in DRC’s ASM sector, including improving environmental management.³⁶ In its concept document, it identifies “*the need to address environmental and social issues,*” owing to inadequate processes for environmental impact assessment and management planning by private operators (mining companies).³⁷

2.3.1 Traceability procedures manual for mining products

This manual is for use by artisanal and small-scale operators, “*negociants, approved comptoirs, treatment or conversion entities, the holder of mining permits, customs users, approved analytical laboratories and the relevant Government Departments and Organisations.*”³⁸ The manual provides a basis of rules, required documentation and regulations in the Mining Code that apply to different actors in the downstream supply chain, which, if complied with, enables them to be nationally certified and legally taxed operators. It is designed in such a way that operators know what they need to do in order to be fully compliant with Congolese law and ensure the traceability of their mineral supply chains.

2.3.2 Certification Nationale

This programme is intended to operationalize the ICGLR’s Regional Certification Mechanism (RCM, see section 5.2.3) in DRC. Starting in South and North Kivu, this will certify mineral trading chains as being in compliance with the RCM and Congolese law. Certification has begun and is expected to be achieved by the end of 2012. Mines will be audited every three years, with supplementary checks annually by the Ministry of Mines and on an ongoing basis through the whistle-blowing mechanism of the RCM.³⁹ As of writing this report in late February 2012, and according to sources closely involved in the design of the RCM, certificates of compliance with the RCM and Congolese law for mines in the Kivus are about a month away, pending the sign-off of the Ministry of Mines.

The minerals exported with a *Certification Nationale*, which should include all minerals exported legally from the DRC, will have undergone some environmental due diligence. This is due to the fact that the

³¹ UNEP, 2011a.

³² Such as the new and improved “*framework law on the environment, sectoral laws on mining and forestry, and a series of environmental laws (water resources, nature conservation and biosafety)*” that are awaiting approval in Parliament. UNEP, 2011a, p. 62.

³³ UNEP, 2011a.

³⁴ Further details can be found at World Bank 2010a and b.

³⁵ See Bawa, 2010.

³⁶ World Bank, 2010b.

³⁷ World Bank, 2010a.

³⁸ Government of the DRC, 2011.

³⁹ OECD, 2011c.

Certification is implementing the RCM, which has some environmental components (see section 5.2.3), specifically, requiring artisanal, small-scale and large-scale mine operators to have a cohesive environmental management plan for tailings and other environmental waste.

2.3.3 Programme for the Stabilization and Reconstruction of Zones Coming Out of Armed Conflict (STAREC)

The **STAREC** Programme (*Programme de Stabilisation et de Reconstruction des Zones sortant des conflits armés*; in English: “Programme for the Stabilization and Reconstruction of Zones Coming Out of Armed Conflict”) is jointly executed by the Government of DRC and the “Mission de l’Organisation des Nations Unies pour la stabilisation en République démocratique du Congo”; in English: “United Nations Organization Stabilization Mission in the DRC” (MONUSCO). It is a three-pronged plan to launch socio-economic recovery efforts in eastern DRC based on the presumption that military campaigns have made the region safer.⁴⁰ Its three aspects include components to address regional security, humanitarian and social needs, and economic needs. The security element will initially focus on reasserting state authority in the timber⁴¹ and minerals sector, with the Congolese security forces providing security and controlling the roads and airstrips that service the mining areas.⁴² Security forces will have to adhere to a new code of conduct, which is reportedly being carried out within a sexual violence reduction programme. STAREC will reportedly receive USD 30 million for implementation in the province of North Kivu.⁴³

A key component of STAREC is the **Centres de Négoce (Mining Business Centres)** project, which was launched in 2009. The *centres de négoce* are trading posts where the government envisages to price, trade, analyse and tax the minerals, subject to a tracking or traceability system. There will be a fixed air or terrestrial transport route to link the trading posts to regional hubs, like Bukavu and Goma. In support of the *centres de négoce* project, multi-stakeholder teams comprising Congolese government agencies, MONUSCO, civil society and BGR will be mapping mine sites in order to validate those that qualify for participating in a legal supply chain. Mines will be assessed every three months. This is being done in line with the procedures and principles in the DRC Certification manual.⁴⁴

As of late 2011, four of five centres had been built, but there are concerns about the siting of the *centres de négoce*, the locations of which seem to be based on what land the government owned rather than optimal sites per existing trading patterns.⁴⁵

2.3.4 Growth with governance in the Mineral Sector Project (PROMINES)

Another example of a donor and government-led effort is that of DFID, the World Bank and the Government of DRC, known as **Growth with governance in the Mineral Sector Project (PROMINES)**. This was initiated in 2005; a five-year Technical Assistance Grant of USD 90 million was approved in 2010 and funds had only just begun to be dispersed in 4Q11.⁴⁶ PROMINES is designed around an EITI++ framework and aims “to strengthen the capacity of key institutions to manage the minerals sector, improve the conditions for

⁴⁰ Verbruggen, Francq & Cuvelier, 2011.

⁴¹ A rehabilitation programme for two of the country’s national parks – Virunga and Kahuzi-Biega – will apparently be a part of this programme, according to an announcement at the UNESCO World Heritage Committee in Kinshasa in January 2011. (Verbruggen, Francq & Cuvelier, 2011).

⁴² Verbruggen, Francq & Cuvelier, 2011.

⁴³ Verbruggen, Francq & Cuvelier, 2011.

⁴⁴ OECD 2011c.

⁴⁵ OECD, 2011c. See footnote 23.

⁴⁶ World Bank 2010a and 2010b.

increased investments in and revenues from mining, and help increase the socio-economic benefits from industrial and artisanal mining in Project areas.”⁴⁷ In line with EITI++, its five components are:

1. Access to resources (e.g., through improving the national geological database and the legal environment);
2. Strengthen government capacity to manage the sector (e.g., by building institutional capacity and reducing costs);
3. Improve tax transparency and collection;
4. Improve mining revenue distribution; and
5. Promote sustainable development based on mining.⁴⁸

PROMINES treats ASM and management of social and environmental issues as cross-cutting issues. The ASM part of the programme was designed by US-based NGO Pact, whose team works with the Congolese government authorities to build capacity in the mining sector. Pact created a framework for its recommendations by organizing stakeholder consultations in Ituri, North Kivu, South Kivu and Katanga, individual interviews and mine-site visits. The design phase was completed in 2010 and the implementation mechanisms are in development.⁴⁹

The EU is supporting the Government of DRC through **the International Task Force (ITF)**. Established in 2009, the ITF is housed at the Office of the EU Special Representative (EUSR) in Brussels. An informal working group comprising governments and multilateral development institutions, its purpose is to coordinate and harmonize activities between the international and national initiatives that are tackling the issue of illegal exploitation and trade of natural resources in the Great Lakes Region. It liaises closely with the **Groupe Thématique des Mines (GTM)** in Kinshasa.

The US government is supporting responsible sourcing initiatives in the east. USAID’s **“Responsible Minerals Trade (RMT) Program”** (2010)⁵⁰ is a USD 10 million programme to “coordinate and implement USG conflict minerals programming in the Great Lakes and Eastern DRC... [of which] \$8 million of this to create a pilot conflict-free supply chain, promote civilian control of the sector through regulatory reform and to assure vulnerable populations are protected.”⁵¹ The validated mineral supply chain will be compliant with the OECD Due Diligence guidance.⁵² Activities include the construction of an administrative building and trading centre, the rehabilitation of a trading centre and the construction of a road. Alongside the RMT is **the Public-Private Alliance for Responsible Mineral Trade (PPA)**, which was launched in November 2011. This initiative aims to support the goals of Section 1502 of the USA’s Dodd-Frank Act, and currently comprises a number of internationally listed automobile associations, four industry associations and six non-governmental organizations. “It seeks to respond practically to the challenges posed by conflict minerals” by “supporting [traceable and validated supply chain] pilot programs ... The PPA will also be a hub for those seeking information and ways to take action on responsible minerals trade.”⁵³

⁴⁷ World Bank 2010a.

⁴⁸ See Bawa, 2010.

⁴⁹ See PACT, 2010.

⁵⁰ See USAID, 2011a.

⁵¹ See USAID, 2011a, p. 1.

⁵² See US Institute for Peace, 2011.

⁵³ See Otero, Maria and Hormats, Robert, 2011, p. 1.

2.3.5 Dodd-Frank Act, Section 1502

On 21 July 2010, the US Government's Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act, or 'DFA') came into Law.⁵⁴ The DFA is very much a vehicle for the reform of the US financial system, with Title XV comprising of six miscellaneous provisions that cover a variety of items, including reporting on mine safety, disclosure of payments by resource extraction users and conflict minerals amongst other things.⁵⁵ The Act does not address the broader sustainability issues in natural resources supply chains. Section 1502 of the DFA requires companies to declare whether any "*columbite-tantalite (coltan), cassiterite, gold, wolframite, or their derivatives; or any other mineral or its derivatives determined by the Secretary of State to be financing conflict in the conflict in the Democratic Republic of the Congo or an adjoining country.*"⁵⁶ Companies must report to the US Securities and Exchange Commission (SEC) on the due diligence conducted on the source and chain of custody of these 'conflict minerals', provide an independent audit of this report, and make further information available such as "*description of the facilities used to process the minerals, country of origin and the efforts to determine the mine or location of origin with the greatest possible specificity.*"⁵⁷ All requested information must be published on the company's website. The SEC's rules on how to apply section 1502 of the DFA⁵⁸ were finalized on 22nd August 2012.

Notwithstanding the good intent of Section 1502 of the Dodd-Frank Act, it has garnered significant criticisms, which mainly come under the following themes:

- **Industry interpretation of the DFA has decimated legitimate trade in DRC and neighbouring countries.** Criticism from within and outside DRC of the burden the DFA places on the industry and the fact that it could be counter-productive in so far as industry's response has manifested as a *de facto* embargo on minerals mined in the Kivus and Maniema provinces, as well as neighbouring countries where there are no functional auditing and certification schemes in place.⁵⁹ Downstream companies are either aggressively attempting to verify their supply chains as conflict-free (which, for most companies, means a *de facto* ban on sourcing from the Great Lakes Region), or taking a 'wait-and-see' approach intending to take action on the conflict minerals issue once SEC rules are agreed.⁶⁰ One company quoted in the OECD Due Diligence Guidance (DDG) report thoughtfully states that, "*It has been a challenge to give clear directions to suppliers because while we want to avoid conflict minerals, we do not want to place an embargo on Central Africa.*"⁶¹ The Chamber of Commerce of Tanzania has raised its concerns regarding DFA's impacts on Tanzania's important gold sector.⁶²
- **There has been a lack of socio-economic impact assessment and risk management planning on the legislation's effects within DRC and GLR.** The *de facto* embargo has devastated markets for artisanally mined tin, tantalum and tungsten, removing ASM as a viable livelihood option for tens of thousands of miners and their families, forcing them to relocate in search of work opportunities, move into gold mining and also other, less preferable livelihoods to them as individuals but also to society, e.g., bushmeat hunting and charcoal making which pose serious threats to local and international ecological resilience. David Aronson, Journalist, calls the socio-economic impacts of DFA a "*catastrophe*"⁶³, while

⁵⁴ USG 2010.

⁵⁵ USG 2010.

⁵⁶ USG 2010, p. 843. Other minerals might be added to this list in the future.

⁵⁷ USG 2010, p. 839.

⁵⁸ For proposed rules for DFA, see SEC, 2012

⁵⁹ See Aronson, 2011.

⁶⁰ OECD, 2011c.

⁶¹ OECD, 2011c, p. 14.

⁶² Vergbruggen *et al.*, 2011.

⁶³ See Aronson, 2011.

commentator Laura Seay asserts that the effects were predictable and DFA pushes policies that reflect a poor understanding of the dynamics of conflict in the region, leaving formerly employed miners out of work. According to Seay, DFA is making life worse for the Congolese who live in the mining regions while doing almost nothing to substantially improve the situation.⁶⁴

In 2006, when UNGoE recommended to UNSC to “declare all illegal exploration, exploitation, and commerce with the natural resources of the Democratic Republic of the Congo to be a sanctionable act”, a subsequent study presented to UNSC warned that such a move would negatively impact the livelihoods of up to two million artisanal miners⁶⁵ and potentially between a “fifth and a quarter of the national population”⁶⁶, and trigger potentially violent social unrest in key provinces. For example, in Ituri, it states: “Any measures that reduce the incomes of artisanal mining, however modestly, could be met with social protest triggering a return to some of the fighting that much effort has sought to dispel.”⁶⁷

Consequently, there has been criticism levied at the US Government, and the Enough Project and Global Witness, the two main civil society organizations that have pushed for DFA, for insufficiently anticipating and preparing for the negative socio-economic impacts upon legitimate mineral industry players in DRC.

- **There has yet to be an environmental impact assessment and risk management planning on the legislation’s effects within DRC and GLR.** There has been no environmental sustainability assessment of DFA and its impacts, in spite of the fact that the Congo Basin, of which the eastern DRC forms a major part, is heralded as one of the most important ecosystems on the planet,⁶⁸ and that the alternative livelihoods being pursued by ASM are also natural-resource dependent and a threat to biodiversity (see above).
- **DFA disadvantages SEC-listed companies⁶⁹ in the global marketplace by imposing additional business costs.**⁷⁰ Businesses argue that it puts SEC-listed companies, both US and foreign-held, at a competitive disadvantage⁷¹ because they are forced to invest additional effort, time, and significant financial resources into investigating their supply chains while their non-SEC listed competitors are not.
- **DFA imposes indirect penalties.** DFA specifies new audit and disclosure requirements on publicly traded companies regarding the actions they have taken to conduct due diligence of their supply chains and “a description of the products ... that are not DRC conflict-free.”⁷² Whilst it does not impose any direct penalty on any company that reports that products are not DRC conflict-free, a potential penalty is created whereby consumer campaigns would be highly likely to publicize which companies cannot claim that their supply chains are ‘DRC conflict-free’ and so are marketing products that *may* contain minerals whose production, trade or transportation has somehow resulted in serious human rights abuses or benefited illegal armed groups.⁷³ Short of avoiding conflict zones altogether or seeking evidence that 100% of inputs are DRC conflict-free, companies could be putting themselves into a brand-threatening position.

⁶⁴ See Seay, 2011.

⁶⁵ See United Nations Security Council, 2007

⁶⁶ See United Nations Security Council, 2007.

⁶⁷ See United Nations Security Council, 2007.

⁶⁸ Weinberg and Chishugi, 2012.

⁶⁹ SEC listed companies are registered with US Securities and Exchange Commission, meaning that they are publicly traded US companies.

⁷⁰ US Chamber of Commerce, 2011.

⁷¹ Brookings, 2011a.

⁷² OECD, 2011e, p. 4.

⁷³ See Aronson, 2011.

- ***There has not been a definitive economic cost-benefit analysis of the adoption of Section 1502 requirements for SEC listed companies.***⁷⁴ According to federal rule-making procedures, SEC is required to weigh the economic consequences of its regulations.⁷⁵ There are widely different estimations of the compliance costs of Section 1502 of DFA. Industry, via the National Association of Manufacturers, estimates compliance costs will be between USD 9-16 billion, compared to USD 3-4 billion estimated by the US government's SEC.⁷⁶

2.4 European Commission proposed revision of the Transparency and Accounting Directives Legislation

On 25 October 2011, the European Commission adopted a revision of the Transparency and Accounting Directives to *"insert some [proposals] regarding disclosure of all payments done by EU extractive and forestry industry in Africa... it will oblige all multinationals active in oil, gas, mining and forestry in Africa to be more transparent."*⁷⁷ The text of the revision has yet to be made public. However, in a January 2012 communication on trade development and growth, the European Commission pledged its support for the OECD DDG and stated that it will advocate for the Guidelines with non-OECD member countries.⁷⁸ There are speculations from diverse sources that the legislation will attempt to emulate the US Dodd-Frank Act, but with some more cautious provisions to the demands it makes on European companies sourcing conflict minerals.⁷⁹ There are those within the EU policy world who are wary of the direction this legislation could take, in particular, how adding new layers of bureaucracy may stimulate, rather than quell opportunities for corruption.⁸⁰

2.5 Proposed Canadian Legislation

Canada, too, has introduced a bill aimed at stemming the conflict minerals trade in the DRC. The "Trade in Conflict Minerals Act" (Bill C-571), first introduced to Parliament in 2010, requires Canadian companies to perform due diligence prior to purchasing any minerals sourced from DRC to ensure they have not benefitted an armed group. It also requires the Canadian Extractive Sector Corporate Social Responsibility Counsellor to issue an annual report in which she/he identifies Canadian companies that may not be practising good corporate social responsibility in the region.⁸¹ According to Partnership Africa Canada (PAC), however, the latest version of the proposed Bill no longer attends to due diligence of conflict minerals supply chains, focusing instead on the issue of reporting of payments to governments in line with the EITI.

There is a second bill on extractives transparency called the "Corporate Accountability of Mining, Oil and Gas Corporations in Developing Countries Act (Bill C-300) which had its first reading in February of 2009. According to KPMG, *"the purpose of this act is to promote environmental best practices and ensure the protection and promotion of international human rights standards in respect to the mining, oil, or gas activities of Canadian corporations in developing countries."*⁸²

⁷⁴ Global Witness sponsored a study of the costs and benefits of DFA Section 1502, but the findings have yet to be validated by a more neutral party. See Schatsky, 2011; Claign Environmental a Canadian based consultancy, produced a cost-benefit analysis of Section 1502 at the request of the US Congress (see Claign Environmental, 2011), but this has been disputed by the IPC. See IPC, 2012. This topic is a heated debate and there are other comments on Section 1502 on SEC website, but they only extend to December 2010.

⁷⁵ See Lynch, 2011.

⁷⁶ SEC, 2012.

⁷⁷ Peibalgs, November 2011.

⁷⁸ European Commission, 2012.

⁷⁹ Willis, 2011.

⁸⁰ Anon, in Willis, 2011.

⁸¹ KPMG, 2011.

⁸² KPMG, 2012.

2.6 The California Transparency in Supply Chain Act (SB 657)

The California Transparency in Supply Chains Act of 2010, which took effect in January 2012, requires that companies that conduct business in California exercise due diligence to prevent slavery and human trafficking being used at any point in their supply chains.⁸³ The companies will need to publish on their website the measures they have taken to “*assess and address risks of human trafficking in their supply chains, conduct audits of suppliers to evaluate compliance with company standards, train employees, certify that materials incorporated into the product comply with trafficking laws, and maintain internal accountability standards and procedures for employees or contractors failing to meeting company standards.*”⁸⁴

The reporting requirements of the Act are similar to the conflict minerals provisions of the Dodd-Frank legislation even though the two deal with different kinds of supply chains. Similar to DFA, the California legislation does not deal with environmental issues.

3. Timeline of major NGO campaigns, law-making events and publications of the UN Group of Experts on Conflict Minerals

NGOs began to turn their attention to the nature of artisanal mining in the east of Congo in the early 2000s. Though this attention began with environmental organizations, by 2007 the prominent narratives had moved to issues of human rights. The table below shows a timeline of the major NGO campaigns, law-making events and publications of the UN Group of Experts.⁸⁵

2001	UN Panel of Experts on the DRC report that militias, both based in Congo and in the Great Lakes Region, monopolize artisanal coltan mines in North Kivu and smuggle minerals over the border into Rwanda.
Mid 2001	Companies operating in DRC began receiving letters concerning the dramatic fall in population of the eastern lowland gorilla, ⁸⁶ particularly in DRC’s Kahuzi-Biéga National Park (KBNP). Linked to the ASM activity occurring there, a call was issued for high-tech companies to stop using tantalum from sensitive ecosystems. This was followed shortly afterwards by actor Leonardo DiCaprio touting ‘gorilla-friendly’ mobiles as part of a campaign by the Dian Fossey Gorilla Fund (Europe) (now the Gorilla Organization). ⁸⁷
June 2001	A group of 18 Belgian NGOs launched the first ‘conflict minerals’ campaign focused on DRC. ⁸⁸ They chose to highlight the coltan trade because of tantalum’s widespread use in mobile phones. The group’s slogan was, “ <i>No blood on my mobile! Stop the plundering of Congo!</i> ” and they demanded that steps be taken to ensure DRC’s minerals were benefitting the people of Congo and not warlords.
May 2002	UN Panel of Experts publishes its second annual report on the plunder of natural resources in DRC, highlighting the humanitarian consequences: “ <i>Local populations, including children, are being constricted and used as forced labour in the extraction of resources in different regions.</i> ” ⁸⁹
2003	The Dian Fossey Gorilla Fund (Europe) launched the Durban Process to engage stakeholders,

⁸³ California Senate, 2010.

⁸⁴ Interfaith Center on Corporate Responsibility, 2011.

⁸⁵ Created in part with a timeline created by Intel and shared with permission.

⁸⁶ See NPR 2001, and Kirby 2001.

⁸⁷ See [Mining Weekly, 2002](#).

⁸⁸ See the IPIS, 2002.

⁸⁹ UN News Centre, 2002.

	miners, local authorities, and industry, to attempt to manage the issue of illegal mining of coltan in the KBNP. ⁹⁰
August 2003	Through the UN Security Council's resolution 1493 (2003), UNSC orders an arms embargo on all armed groups, foreign and other, operating in North and South Kivu and Ituri provinces and additionally on those groups not party to the 28 July 2003 Global and All-inclusive agreement in DRC. ⁹¹ This embargo is later extended to include all of DRC, coupled with travel bans and asset freezes. ⁹²
October 2003	UN Panel of Experts on the plunder of resources in DRC publishes a list of 125 companies that refused to cooperate with the Panel's research. The Panel maintains that <i>"illegal exploitation remains one of the main sources of funding for groups involved in perpetuating conflict...the flow of arms, exploitation and the continuation of the conflict are inextricably linked."</i> ⁹³
February 2007	UK-based Global Witness files a complaint under the OECD Guidelines for Multinational Enterprises charging that British mineral trading company Afrimex, via its payments to RCD-Goma, had <i>"perpetuated the conflict and strengthened the rebels' capacity to inflict extreme suffering on the civilian population."</i> ⁹⁴ The UK's OECD National Contact Point (NCP) subsequently investigated and found that <i>"Afrimex failed to contribute to the sustainable development in the region; to respect human rights; or to influence business partners and suppliers to adhere to the Guidelines. The NCP concluded that Afrimex did not apply sufficient due diligence to the supply chain and failed to take adequate steps to contribute to the abolition of child and forced labour in the mines or to take steps to influence the conditions of the mines."</i> ⁹⁵ Afrimex since stopped trading minerals from DRC.
2007	The "makeITfair" project is launched by the Dutch organization SOMO (Centre for Research on Multinational Corporations) along with several Europe-wide coalition partners. The project focuses on the electronics industry and the labour and environmental issues associated with sourcing practices, especially investing in raising the awareness of younger European consumers. ⁹⁶ It began by drawing attention at the level of mining, publishing reports that documented problems in the DRC tin, ⁹⁷ tantalum, copper and cobalt supply chains. ⁹⁸ The organization is one of the advocacy organizations involved in the debate on conflict minerals in DRC; it also seeks to involve Congolese stakeholders in any international legislation and initiatives involving their country. The organization has also documented problems in copper and cobalt supply chains in Zambia, platinum mining in South Africa, and tin mining in Indonesia. ⁹⁹
Late 2008	The US-based Enough Project begins its Raise Hope for Congo project ¹⁰⁰ and a campaign on minerals in DRC and conflict. The early parts of the campaign focused on the epidemic of sexual violence and its roots in Congo's natural resource war.
Mid 2009	The first conflict minerals act is drafted in the USA.
2009	Students Taking Action Now (STAND), a US-based NGO working with the Enough Project, begins to organize a "Conflict-Free Campus" project ¹⁰¹ aimed at harnessing universities' multi-billion dollar endowments and associated shareholder power to pressure companies to act on conflict minerals issues.

⁹⁰ Gorilla Organization, n.d.

⁹¹ UK Foreign & Commonwealth office, 2011.

⁹² UK Foreign & Commonwealth office, 2011.

⁹³ UN News Centre, 2003

⁹⁴ See Global Witness, 2007. Also Cernic, 2009.

⁹⁵ See UK NCT, 2008.

⁹⁶ See MakeITfair, n.d.

⁹⁷ See its Finnwatch, 2007.

⁹⁸ See Make IT Fair, 2008.

⁹⁹ See Make IT Fair, 2008.

¹⁰⁰ See Enough Project, 2008.

¹⁰¹ See Enough Project, n.d.

Early 2010	Stanford University becomes the first university to adopt a conflict minerals policy that uses proxy voting strategies in any company where it holds stock. ¹⁰² STAND is also encouraging universities to only purchase electronics shown to be conflict-free.
April 2010	RESOLVE, a US-based NGO, publishes its transparency report ¹⁰³ outlining key gaps in the tin, tantalum and cobalt supply chains originating from DRC and noting that many suppliers failed to cooperate.
July 2010	President Obama signs the Dodd-Frank Act, with Sections 1502 and 1504 being directly relevant to SEC-listed companies involved in the extractives sector sourcing from foreign countries.
November 2010	Resolution 1952 (2010) extends the arms embargo, travel bans, and asset freezes until 30 November 2011 ¹⁰⁴ and <i>“call[s] upon all States... to urge importers, processing industries and consumers of Congolese mineral products to exercise due diligence by applying the [UN DRC Group of Experts’ due diligence] guidelines, or equivalent guidelines.”</i> ¹⁰⁵ The UNSC’s Sanctions Committee will be considering whether individuals or companies have, in fact, exercised due diligence. ¹⁰⁶
Late 2010	The European Parliament requests the European Commission to consider a European-version of the conflict-minerals provisions of the Dodd-Frank Act, ^{107 108} but later tabled this action. ¹⁰⁹ The European Commission is to focus instead on measures for financial reporting by extractives sector, similar to Section 1504 of the Dodd-Frank Act. It will also consider sanctions on those supporting illegal armed groups in DRC, and on ways to support the OECD Due Diligence Guidelines.
October 2011	The State of California passes SB 861, a law that requires public companies to comply with Section 1502 of the Dodd-Frank Act in order to become a vendor to the state government of California.
September-December 2011	The United Nations Group of Experts on the Democratic Republic of Congo attempted to find out from the Government of China whether and how they are encouraging companies to implement due diligence. The Chinese government would not allow the Group to make a visit to China and enquire on these matters with Ministry officials and thus there is not much information on this matter forthcoming. ¹¹⁰ The Group met with officials of the Malaysian Ministry of Foreign Affairs and the Ministry of Natural Resources and Environment who expressed their support for the OECD DDG and that they expected Malaysian companies to work toward compliance. ¹¹¹
November-December 2011	UNSC passes Resolution 2021 (2011) and extends the arms embargo and related sanctions by another year, as well as calling for a sixth expert on natural resources to be appointed to the UNGoE. The Security Council provides a global endorsement of due diligence guidelines, by welcoming <i>“the support of the due diligence guidelines for importers, processing industries and consumers of Congolese mineral products by the Democratic Republic of the Congo,”</i> and <i>“call[s] on all States to assist the country and others in the Great Lakes region in the implementation of those guidelines.”</i> As part of a broader effort to mitigate the financing of illegal armed groups and criminal networks, <i>“it encourage[s] raising awareness of the due diligence guidelines, in particular in the gold sector.”</i> ¹¹²

¹⁰² See Stanford News Service, 2010.

¹⁰³ See Resolve, 2010a. For reflection on the report, see Resolve, 2010b.

¹⁰⁴ UK Foreign & Commonwealth office, 2011.

¹⁰⁵ UK Foreign & Commonwealth office, 2011.

¹⁰⁶ UK Foreign & Commonwealth office, 2011.

¹⁰⁷ Vircoulon, 2011a.

¹⁰⁸ Make IT Fair, 2008.

¹⁰⁹ Valvodova, 2011.

¹¹⁰ UN Group of Experts on the DRC, 2011b.

¹¹¹ UN Group of Experts on the DRC, 2011b.

¹¹² UN, 2011.

4. Corporate responses to conflict minerals

The conflict minerals issue has been on the desk of ICT sector sustainability managers for a decade. Until the U.S. Congress conflict minerals provision of the Dodd-Frank Act (DFA) came onto the horizon and became an issue of legal compliance, most first-movers had been motivated to action on the source of 3TG primarily owing to the potential threat to their brand from the various consumers and NGO campaigns. Responses can broadly be categorized into those that are incrementally working to improve transparency in their mineral supply chains, those that are acting as leaders on conflict minerals for the industry and others who are resorting to the defensive but less sustainable response of disengagement. In general, however, ICT companies are not at this time looking at the environmental dimension of sustainability. This offers an opportunity for ITU in conjunction with other UN agencies and organizations to provide leadership in closing this gap.¹¹³

Box 1: ITU-T Study Group 5 “Environment and Climate Change”

ITU-T Study Group 5 within its Question 21/5 “Environmental protection and recycling of ICT equipment/facilities” is developing a Study on Due Diligence Guidelines for Metals Supply.

Items to be considered should include, but should not be limited to:

- What are the current work streams (e.g. OECD) and other forums (e.g. EICC-GeSI) that are addressing the issue of due diligence requirements around conflict minerals?
- How can the work produced by these work streams become standardized?
- Identify all stakeholders and whether they are involved. How can stakeholders not currently involved within these work streams / forums (e.g. developing countries) be brought into the due diligence process?
- The study should comprehend the complexity of metals supply chains and management of environmental risks. The areas of focus should include but not limited to the following; the supply chain, the extraction, the site restoration, administrative interventions (taxes/royalties), media and publicity and mitigation of fraud and conflicts.

Source: ITU-T Study Group 5

Progressive supply chain improvements involve the following actions: a) investigating the supply chains by visiting the smelters (e.g., Dell, HP, Intel, Motorola, and Nokia; LG has apparently looked into its tantalum supply chain, but the steps it has taken are unclear);¹¹⁴ b) working with suppliers to improve transparency in their supply chains, e.g., Hitachi¹¹⁵; and c) publishing lists of the suppliers, e.g., HP and Intel.¹¹⁶ The Enough Project has reported that some companies are taking extra steps. For example, Intel has “demonstrated leadership on supply chain investigations by conducting 11 smelter visits in six countries and publishing information on its top 50 suppliers” and by being a “leader and co-chair within the electronics

¹¹³ Such as UNEP, MONUSCO, UNDP and/or UNESCO.

¹¹⁴ Enough Project, 2011d. It should be noted, however, that the Elm Consulting Group, an international auditing firm, carried out an evaluation of the financial impact of consumer sentiment about conflict minerals and found the Enough Project’s rankings of electronic companies conflict mineral programs to “*Reflect outdated and incomplete information; appear to contain bias, and are inconsistent in applying their scoring system.*” Elm Consulting Group International, 2012.

¹¹⁵ Hitachi, 2011.

¹¹⁶ Enough Project, 2011c.

industry group developing processes to trace and audit supply chains of 3Ts and gold”.¹¹⁷ Microsoft is tracing “its own suppliers of the 3Ts and gold, and is now piloting a system to identify their smelters” and is “pioneering an internal audit system on conflict minerals, this would be the first in the electronics industry”.¹¹⁸ Nokia has required “its principle [sic.] suppliers to map their supply chains for the 3Ts and gold to the smelter, and ultimately to the mine of origin.”¹¹⁹ Acer has “conducted a survey tracing the supply chains of the 3Ts and gold to their country of origin, and now also requires its suppliers to trace minerals back to their origin”.¹²⁰

Many companies are simply boycotting the Great Lakes Region, demanding smelters to avoid the region altogether as the simplest way of being able to report that their minerals are ‘conflict-free’.¹²¹ To the average consumer, ‘conflict-free’ seems the more ethical choice than ‘conflict-managed’. The superior ethical choice could be rather ‘conflict-free from DRC’; instead of just ‘DRC conflict-free’ as this has the potential to provide the basis for an ethical and sustainable mining industry in DRC that would benefit large portions of the population. Indeed, this is something that Motorola Solutions is attempting to show through its “Solutions for Hope” Project, which embodies a closed supply chain of minerals from within DRC.¹²² For the pilot project, Motorola Solutions effectively shortened its supply chain for tantalum so that it only includes the mine operator (a mining co-op in the initial phase), a smelter, a component manufacturer (called AVX) and the company itself.¹²³ In this sense, Motorola Solutions, Inc. is acting innovatively, perhaps using DFA as an opportunity for market differentiation as the ethical brand offering consumers the ‘conflict-free’ option. In March 2012, AVX published a press release saying that it had “delivered its first conflict-free capacitors to Motorola”.¹²⁴ Intel, too, has emerged as a leader on the issue. While the company admits it cannot verify the origin of all the minerals in its products, it is progressively implementing controls focused on three main areas: (1) “driving accountability and ownership within our own supply chain through smelter reviews and validation audits”; (2) partnering with EICC-GeSI initiatives; and (3) “working with both governments and NGOs to support in-region sourcing.” The company states that it has completed “on-site reviews of over 40 smelters in many countries, representing all four conflict minerals”; “Conducted an on-the-ground review of the extractives and minerals trade in the DRC”; is partnering with the Solutions for Hope project, AVX, and also the US State Department’s PPA programme; and is working with EICC & GeSI to identify Conflict-Free Smelter Program (CFS) compliant smelters.¹²⁵

5. Supply chain initiatives for managing conflict minerals and their coverage of environmental management

Since the new Millennium, there has been a proliferation of initiatives to manage risk along mineral supply chains. This section reviews these initiatives to assess how they differ and if/how they deal with environmental sustainability.

¹¹⁷ Enough Project, 2011c.

¹¹⁸ Enough Project, 2011g.

¹¹⁹ Enough Project, 2011g.

¹²⁰ Bardelline, 2011.

¹²¹ IPC 2012; OECD 2011d.

¹²² Nokia joined the Solutions for Hope project in February, 2012. AVX, 2012a.

¹²³ Bardelline, 2011.

¹²⁴ AVX, 2012b.

¹²⁵ Intel Corporation, 2011.

It is helpful to categorize these initiatives by their sustainability performance to understand where they place their 'ethical bar'. There are four categories of standards that help deliver some 'level' of ethical mineral to the market.¹²⁶ In order of increasing level of sustainability performance, these are:

1. **Chain of custody standards** that allow for the mineral's origin and chain of custody to be known, e.g., The Responsible Jewellery Council's (RJC) Chain-of- Custody standard.
2. **Issue(s)-based standards** that promote best practice in risk management on *specific* issues only, e.g., the International Cyanide Management Code (ICMC), the Extractive Industries Transparency Initiative (EITI), and Conflict Minerals Standards.
3. **Risk management standards** that promote best or good practice in risk management on a wider range of social and environmental issues than issue-based standards, e.g., the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises.
4. **Sustainability standards** seek to mitigate risks *and* optimize on the development opportunity that the mineral capital presents. This mineral can be called 'sustainable', e.g., RJC's Code of Practices, the International Finance Corporation's (IFC) Sustainability Framework, the Alliance for Responsible Mining and Fairtrade Labelling Organization's (ARM/FLO) Standard for Fairtrade/Fairmined Gold.

These categories can be broadly mapped into a typology of sustainability performance. Figure 1 categorizes gold, as an example, into different ethical levels.

Figure 1: Conceptualizing key terms in the 'Conflict Minerals' discourse.¹²⁷

Type	Description	Hypothetical Examples
Sustainable gold	Ethical gold which includes a deliberate effort to ensure the mineral capital contributes to sustainable development at all levels of the supply chain.	Gold produced in compliance with the Responsible Jewellery Council's Code of Practices or the ARM/FLO Fairtrade/Fairmined Standard for Artisanal Gold.
Ethical gold	Gold which has been produced and traded in ways that ensure that <i>all</i> social and environmental risks have been managed, but there is no conscious effort to ensure that the mineral capital contributes to sustainable development.	Gold produced by a corporate mine where the producer is fully compliant with national law and has instituted management systems for mitigating social and environmental risks associated with its operations. The corporate mine may take development actions but these would be judged to be ineffectual by an audit of performance against sustainability indicators.
Conflict-free gold ¹²⁸	The same as for conflict-managed gold, but with a guarantee that the gold is 100% guaranteed for not having contributed to the financing of illegal armed groups.	Gold from Colombia that can be proven to have provided no benefit to the FARC. Gold assured by the EICC-GeSI 'conflict-free' smelter programme or the World Gold Council's Conflict-Free Gold programme.

¹²⁶ Based on Levin, 2011.

¹²⁷ Copyright © Estelle Levin Ltd.

¹²⁸ Note that it is a question of values as to whether conflict-managed or conflict-free gold is more ethical. Conflict-managed implies continued engagement to support suppliers move towards conflict-free status; conflict-free may involve disengagement from suppliers who might otherwise benefit from continued support. In this sense, conflict-managed may result in a larger number of conflict-free suppliers. Unfortunately as section 4 clearly shows, the legislative environment incentivizes companies to seek to offer conflict-free rather than conflict-managed gold, even if the latter is more developmental.

Type	Description	Hypothetical Examples
Conflict-managed gold	Gold where the origin is known, and on which adequate due diligence and <i>mitigation</i> of those risks specified in the OECD Due Diligence Guidance (DDG) (relating to human rights abuses and armed conflict only) have been conducted. This is the basic minimum for some type of 'better' gold over and above conventional or 'bad' gold.	Gold from a conflict-zone, e.g., South Kivu in DRC, where the buyer has discovered that a consignment has been illegally taxed by an armed group but continues to engage with the conflict-affected supplier and institutes methods to prevent a reoccurrence of the violation.
Conventional gold	All gold the origin of which is unknown. This gold may or may not have been produced and traded in ways that cause irreversible damage to the environment and society at large, have involved human rights abuses and/or have financed armed conflict. This gold would have to be reported as "not DRC conflict-free" under the requirements of Section 1502 of DFA.	Most gold is in this category as gold is a commodity.
'Bad' gold	Gold known to be produced, traded and transformed in ways that cause irreversible or serious damage to the environment and society at large, have involved human rights abuses, and/or have financed armed conflict.	Gold mining that has been subject to illegal taxation by armed groups in DRC. Gold mined in Peru by children doing hazardous labour in contravention of ILO Convention 182. Gold smuggled across international borders. Gold mined by miners who rely on meat of an endangered species (e.g., chimpanzee) as their main protein. Etc. etc.!

As shown in Figure 1, a subset of these initiatives to improve the sustainability performance of mineral production and/or supply chains is expressly targeted at managing the risk of conflict minerals entering supply chains. A variety of standards, guidance and systems have been developed for use by the industry and/or governments. All these standards ultimately aim to provide some type of assurance of the origin (chain of custody) and that due diligence and risk management is being conducted in line with international expectations of best practice, in a manner that would remove the possibility of illegal armed groups benefiting from the production, trade and transport of minerals. Some of these standards and regulations are specific to particular geographical areas (e.g., the Great Lakes Region) or minerals (e.g., tin, tantalum, tungsten). The following sections summarize the suite of initiatives that exist to manage conflict minerals in supply chains with a view to assessing to what extent their scope takes into consideration the management of environmental issues in minerals supplies chains. These are broadly categorized into those that take a total supply chain approach (from mine to retailer) to those that cover segments of the supply chain.

5.1 Entire supply chain approach

5.1.1 OECD's Due Diligence Guidance (DDG)

The OECD DDG is a framework and guidance that provides management recommendations that have been endorsed by the OECD Council, its member governments and the 11 Heads of State of the ICGLR with the intention of incentivizing "global responsible supply chains of minerals in order for companies to respect human rights and avoid contributing to conflict through their mineral or metal purchasing decisions and

practices.¹²⁹ It covers the three Ts (tin, tantalum and tungsten) and gold.¹³⁰ The Five-Step Framework was also incorporated into UNSC1952/2010 on DRC. It is applicable for any upstream and downstream company *“sourcing minerals or metals from conflict-affected and high-risk areas, and is intended to cultivate transparent, conflict-free supply chains and sustainable corporate engagement in the minerals sector”*.¹³¹ Integration of the OECD DDG in companies supply chain management systems will enable downstream users (e.g., ICT sector companies) to source from conflict-affected and high risk areas (and in particular the African Great Lakes Region) knowing that due diligence¹³² has been conducted in line with recommendations developed through a multi-stakeholder process.¹³³ Downstream companies are not required to map the factual circumstances of the upstream supply chain, but the Guidance does ask them to identify the smelters in their supply chain and evaluate their due diligence practices to ensure they are in line with the recommendations in the OECD Guidance.

Conformance with the OECD DDG means that operators sourcing from conflict-affected and high-risk areas have instituted management systems, identified and mitigated conflict and (the most serious) human rights risks and that smelters have been audited on their performance and reported on this regularly. While environmental issues are not mentioned at all in the 3Ts supplement, with the primary focus of the Guidance being on risks such as human rights abuses and conflict, the Gold Supplement also encourages upstream companies¹³⁴ that are carrying out Step 2 (identifying and assessing risks in the supply chain) to *“map the factual circumstances”*¹³⁵ of present and possible risks. The Guidance suggests to companies to do this mapping in part by consulting *“research reports from governments, international organisations, NGOs, and media, maps, UN reports and UN Security Council sanctions, industry literature relating to mineral extraction and its impact on conflict, human rights or environmental harm in the country of potential origin.”*¹³⁶ Upstream companies thus have the choice to include environmental degradation or other environmental issues as an additional red flag indicator beyond risks of conflict financing, though the DDG provides no guidance as to what types of environmental performance or indicators should be applied (in contrast with conflict financing and human rights issues, to which an entire Annex is dedicated). Nevertheless, the OECD due diligence process could be used to include evaluation against any set of standards related to the production and trade of minerals.

Key findings on implementation by downstream companies, such as those in the ICT sector, include:¹³⁷

- Downstream companies are requesting greater clarification of the roles they should play with regards to the risk of support to non-state armed groups, and public or private security forces.

¹²⁹ OECD 2011, p. 52.

¹³⁰ The OECD DDG Supplement for tin, tantalum and tungsten has been available since the end of 2010; the supplement for gold was finalized at the end of 2011 and is due to be approved by the official OECD bodies in May 2012.

¹³¹ OECD 2011, p. 52.

¹³² Supply Chain Due Diligence, as defined by the OECD (2012, publication forthcoming) is *“the steps companies should take to identify, prevent and mitigate actual and potential adverse impacts and ensure that they respect human rights and do not contribute to conflict through their activities in the supply chain”* (p. 9).

¹³³ See OECD, n.d.. The OECD DDG is a result of a *“multi-stakeholder process with in-depth engagement from OECD and African countries, industry, civil society, as well as the United Nations.”* From December 2009 to April 2010, three consultations were held, including a joint consultation with the International Conference of the Great Lakes Region (ICGLR). The multi-stakeholder working group process encompassed engagement from eleven countries of ICGLR, the UN, civil society, NGOs, industry and governments, as well as representatives from other initiatives attempting to address conflict minerals in the Great Lakes Region. See ITRI, 2012a (forthcoming).

¹³⁴ Including gold producers (artisanal, small and large-scale); local exporters and recyclers. International traders of mined and recyclable gold and refiners.

¹³⁵ OECD, 2012, p. 23.

¹³⁶ OECD, 2012, p. 18..

¹³⁷ OECD, 2011d.

- Communication between companies and their suppliers on the issue of mineral sourcing is taking place for all respondents.
- Obtaining information is a challenge, especially where there may be up to nine layers between the smelter and the participating downstream user participating in the system.
- ICT sector participants, in particular, are relying on the Conflict-Free Smelter Program (CFS) (see section 5.3.1) to validate and audit their smelters.

Table 1: OECD DDG: Main aspects.

Aspects	
Main features	Guidance consisting of five steps: <ol style="list-style-type: none"> 1. Management systems, 2. Risk assessment, 3. Risk mitigation, 4. Independent third-party audits, and 5. Annual reporting.
Main implementers	Companies (upstream and downstream)
Objective	<i>“Help companies contribute to sustainable development and source responsibly from conflict-affected and high-risk areas, while creating the enabling conditions for constructive engagement with suppliers.”</i> (OECD 2011: 12)
Implementation status	The guidance and the supplement for tin, tantalum and tungsten are in final form, following a multi-stakeholder process (2009-2010). Piloting of implementation began in August 2011. The gold supplement was adopted by the OECD’s council in July of 2012 to be incorporated into the overall DDG. In its final rules, SEC states that the due diligence measures companies perform should be aligned to <i>“a nationally or internationally recognized due diligence framework”</i> such as the due diligence guidance approved by the Organisation for Economic Co-operation and Development (OECD). ¹³⁸
Sustainability issues covered	Serious human rights violations, including war crimes, child labour, torture, forced labour and widespread sexual violence. Financing of illegal armed groups, by, for example, sourcing from mines controlled by illegal armed groups Bribery, money laundering and <i>“misrepresentation of origin of minerals”</i> ¹³⁹ Scope for coverage of environmental issues in risk identification (Step 2) of Gold Supplement only as part of the broad evaluation of the context and the risks involved in which each given company operates.

The OECD DDG is a non-binding OECD *recommendation* that has been endorsed, by 34 OECD countries plus Brazil, Argentina, Peru, Lithuania, Latvia, Morocco and Romania, the 11 ICGLR countries and the UN Security Council in two Resolutions on DRC.¹⁴⁰ In addition to being endorsed by the ICGLR Heads of State, the Due Diligence Guidance Recommendations have been integrated into the Government of DRC’s legal framework and the other ICGLR States are set to follow DRC’s lead.¹⁴¹ Country adherents to the downstream recommendations commit to *“actively promote the observance of the Guidance by companies operating in or from their territories and sourcing minerals from conflict-affected or high-risk areas”*, and *“take measures*

¹³⁸ SEC, 2012, p.27.

¹³⁹ OECD, 2011, p. 24

¹⁴⁰ See UNSC 1952/2010 and UNSC 2021/2011.

¹⁴¹ iTSCi, 2012a.

to actively support the integration into corporate management systems” of the OECD DDG.¹⁴² However, the implementation of OECD DDG is conducted on a voluntary basis for most countries, and companies are not obliged to implement it.¹⁴³ Adhering countries are expected to promote its observance in companies operating in or from their territories and sourcing minerals from conflict-affected and high-risk areas. In addition, companies operating in countries which are *not* signatories are also choosing to implement it, according to the OECD; for example, about 15% of the downstream participating companies are based outside of OECD member countries, including companies headquartered in China.¹⁴⁴

The OECD DDG is designed to be flexible.¹⁴⁵ First, it is not strictly a ‘Standard’ or a certification system, though it has been adapted or cross-referenced by other certification systems, which seek to enable members to comply with it (e.g., iTSCi and the RJC Chain of Custody (CoC), ICGLR’s Regional Certification Mechanism, the London Bullion Market Association (LBMA)’s forthcoming audits, etc.). Second, it focuses on processes rather than on outcome, pushing for progressive improvement rather than absolute results. For example, it encourages implementers to mitigate the less serious risks through capacity building and continued engagement with suppliers, provided that improvement is demonstrated within a specified period (normally, six months) rather than recommending immediate disengagement. In this regard, it is more prone to encouraging transformation of bad practices into good ones through collaboration with suppliers, rather than sanctioning them. Third, the Guidance also emphasises what to do, but is flexible on how to do it. For example, it requires information collection and storage as part of CoC systems,¹⁴⁶ but does not prescribe a specific method for collecting that data (i.e., through bagging and tagging or other means).

The OECD DDG can be operationalized by individual companies that wish to improve supply chain controls through due diligence, or by initiatives designed to support companies and governments in doing this.¹⁴⁷ Examples of such initiatives, discussed in further detail in the following sections, are ITRI and TIC’s Supply Chain Initiative (iTSCi), the Responsible Jewellery Council’s Chain of Custody Standard (forthcoming), and the Fairtrade and Fairmined Standard of the Alliance for Responsible Mining and the Fairtrade Labelling Organization (2010).¹⁴⁸

The structure and logic of the OECD DDG process lends itself to the inclusion of environmental issues as risks to be assessed, managed and reported on through the procedures required by the Guidance. However, such issues have not been incorporated and it is presently up to companies to decide whether to consider such additional risks and how to define them. For instance, companies can label environmental risks as a red-flag in their risk assessments but they are not required to do so. Likewise, the refiner/smelter audits in Step 4 of the OECD DDG do not designate anything having to do with the environment as a red-flag indicator.

The implementation of the OECD DDG is taking place along mineral supply chains emanating from DRC primarily, but also from Rwanda. Since August 2011, and for one year, over 85 companies (upstream and downstream), industry associations and the iTSCi and CFS initiatives are participating in the implementation phase of the Guidance.

¹⁴² OECD 2011a, p. 8.

¹⁴³ OECD 2011a, p. 15.

¹⁴⁴ OECD 2011c. In addition, Brazil, Malaysia and the 11 countries of the Great Lakes Region actively participated in the OECD-ICGLR joint consultation. The ICGLR endorsed the Guidance after the Nairobi meeting in September 2010. Please see OECD, 2010 for more details.

¹⁴⁵ ITRI, 2012a (forthcoming).

¹⁴⁶ OECD 2011a, p. 31.

¹⁴⁷ OECD 2011a, p. 15.

¹⁴⁸ OECD, 2012 (forthcoming).

5.2 Upstream (mine to smelter)

5.2.1 ITRI and TIC's iTSCI

As it stands, and based on requirements of the ITRI Tin Supply Chain Initiative (iTSCI), iTSCI minerals can be called 'conflict-managed' with some additional few social and environmental performance criteria achieved as well.

iTSCI is a joint initiative between ITRI and the Tantalum-Niobium International Study Centre (TIC). It assists upstream companies or individuals (e.g., artisanal miners) of all scales and at all supply chain tiers from mine to smelter to "institute the actions, structures, and processes necessary to comply with [all five steps of] the OECD DDG". It encompasses large, medium and small enterprises, co-operatives and artisanal mine sites. "It is designed for use by industry, but with oversight and clear roles for government officials."¹⁴⁹ It "takes into account the recommendations of the UN Security Council (UNSC), in particular the Group of Experts of the DRC (UNGoE) to expand due diligence to include criminal networks, as well as armed groups and to include violations of the asset freeze and travel ban on sanctioned individuals and entities."¹⁵⁰ iTSCI covers tin, tantalum and tungsten, but *not gold* and treats the OECD DDG as one of its normative documents.

"iTSCI is a chain of custody and due diligence system that includes independent and third party risk assessment and independent third party audits for protection against human rights abuses including the worst forms of child labour." iTSCI envisages including "additional social and environmental standards relating to the process and production methods for pre-smelter mineral extraction processing and trade ... at a later stage."¹⁵¹ It is iTSCI's policy that minerals mined in protected areas cannot be included in the scheme, although how this fact can be verified is unclear. The scheme has met a positive reception from some stakeholders, with government agents who are participating in iTSCI implementation voicing greater ability to do their job overall thanks to the capacity and relationship building that is done in the context of iTSCI.¹⁵²

The positive impact of iTSCI is documented in the 2011 report of the UN GoE: "The Initiative has also helped to build Democratic Republic of the Congo Government capacity in the mining sector, to safeguard the livelihoods of miners at tagged mining sites and, according to some North Katanga civil society activists, to reduce corruption among State officials in the mining sector."¹⁵³

iTSCI works through the operationalization of three components: (1) Chain of custody tagging and monitoring of mineral origin, (2) Independent third-party risk assessment of mine sites, transportation routes, companies and the macro-level situation¹⁵⁴ to identify and manage conflict-related risks, and (3) Independent third-party audit of all operators joining iTSCI, operators such as ASM who cannot become iTSCI members, and also the system data.¹⁵⁵

¹⁴⁹ iTSCI 2011a.

¹⁵⁰ iTSCI 2011a.

¹⁵¹ iTSCI, 2011a.

¹⁵² iTSCI, 2011b.

¹⁵³ UN Group of Experts, 2011, p. 101.

¹⁵⁴ The scope of the macro-level risk assessments depends on the geographical scale. As an example, the macro-level risk assessment for Rwanda addresses the whole country; for DRC it is done at the provincial level.

¹⁵⁵ iTSCI, 2011a, p. 2.

Table 2: iTSCi: Main aspects.¹⁵⁶

Aspects	
Main features	<ol style="list-style-type: none"> 1. Combined tracking/tracing (through bag tagging, documentation, and data management and analysis), 2. Independent third-party risk assessment, 3. Independent third-party audits, 4. Publication of findings of risk assessments and audits.
Main implementers	Upstream companies (from mine to smelter) and national governments supported by iTSCi Programme Operators. Primary ¹⁵⁷ smelters only.
Objective	<i>Enable responsible mining and responsible sourcing from GLR through progressive improvement.</i>
Implementation status	Implementation phase ¹⁵⁸ completed in Rwanda and in DRC (Katanga). iTSCi and DRC's Ministry of Mines signed a Memorandum of Understanding in March 2012 to expand iTSCi's operations into the Kivus and the Maniema Province. ¹⁵⁹
Sustainability issues covered	<p>Legal production and trade.</p> <p>Prevention of corruption.</p> <p>Serious human rights violations, including child labour and sexual violence.</p> <p>No tagging of minerals known to be mined in protected areas.</p>

There is a gap between demand for iTSCi and the initiative's capacity to rapidly scale up its operations. iTSCi identified in early 2011 that "*limited funding, huge capacity building needs, the geographical and logistical challenge posed by the location of mine sites, the inadequacy of local infrastructure (e.g. electricity and telephone black-outs) in DRC*" as the major constraints.¹⁶⁰ iTSCi is the programme preferred by upstream supply chain actors in that it provides a Chain of Custody assurance of the 3Ts in line with what is required under the OECD DDG and initiatives such as the CFS for the ASM sector.¹⁶¹ However, until iTSCi is able to expand throughout the entire region, or the ICGLR's Regional Certification Mechanism (RCM)¹⁶² is properly rolled out, tin, tantalum and tungsten miners around the Great Lakes Region will have few options but to market their minerals either for far inferior prices to buyers whose downstream supply chain is not oriented at countries requiring supply chain due diligence, or through fraud and smuggling.¹⁶³

ITRI and TIC's Tin Supply Chain Initiative (iTSCi) was initiated in 2009 and first piloted in DRC (North and South Kivu) in 2010. iTSCi pilot projects were put on hold during the government mining suspension from September 2010 to March 2011: in early 2011 the programme was set up in Rwanda, and later in the Katanga province in DRC. It is planned to roll the programme out in North Kivu, South Kivu and Maniema in the near future, and possibly also other countries in the Great Lakes Region, such as Burundi and Uganda.¹⁶⁴

¹⁵⁶ Adapted from ITRI, 2012a (forthcoming).

¹⁵⁷ Primary smelters transform mineral inputs from mined sources; secondary smelters transform recycled or scrap metals. See EICC and GeSI 2011d, p. 1.

¹⁵⁸ All aspects of the iTSCi programme are currently being road tested, and none of them is exactly final.

¹⁵⁹ ITRI, 2012a (forthcoming).

¹⁶⁰ ITRI, 2012a (forthcoming).

¹⁶¹ The other CoC initiative is in its early stages in Rwanda and was deemed "promising" by Partnership Africa Canada in February 2012. See PAC, 2012, for more information about how this system could be extended to the DRC.

¹⁶² Detailed in section 5.2.3.

¹⁶³ OECD, 2011c.

¹⁶⁴ iTSCi, 2012.

iTSCi's development has been overseen by international actors, but local actors such as *comptoir* and *negociant* associations and local, provincial and national authorities have had important roles in determining how it would work. Local organizations are responsible for implementation in DRC and in Rwanda with Pact (an iNGO) and Channel Research (iTSCi's independent third-party Risk Assessor and Auditor) providing support. Government officials have an important role in the process in that they are the ones carrying out the tagging, and logging of the data. Local and provincial level stakeholder committees (*comités de pilotage*) also have major roles to ensure that the initiative is implemented in a way that is sustainable and realistic taking into consideration the operating environment.

iTSCi is legally underpinned by a *Protocole d'Accord* between the Mines Ministry and ITRI, which was concluded in June 2010. iTSCi also holds an MoU with the Government of the DRC¹⁶⁵ ICGLR and cooperates with the CTC projects in Rwanda and DRC.

5.2.2 BGR's Certified Trading Chains and analytical fingerprint technology

Mine sites certified as "CTC-compliant" under the Certified Trading Chains (CTC) scheme of the German Federal Institute for Geosciences and Natural Resources (*Bundesanstalt für Geowissenschaften und Rohstoffe*) (BGR) – in cooperation with national authorities (e.g., in Rwanda and DRC) – can be judged as 'ethical' and towards 'sustainable.' It is more in keeping with triple bottom line expectations because it incorporates more social and environmental considerations than the OECD DDG or iTSCi.

The CTC system is government led. It has been initiated and developed by BGR, in partnership with the governments of Rwanda and DRC. The process has involved input from multiple stakeholder groups, bringing perspectives from different geographies, scales, supply chain tiers and sectors. CTC can be applied to tin, tantalum, tungsten and gold supply chains and is presently being implemented only in Rwanda and DRC under a co-operation agreement between each of these governments and the government of Germany.

CTC aims to improve "supply chain due diligence and good governance in the artisanal and small-scale mining sector" in Rwanda and DRC.¹⁶⁶ CTC contains "twenty certification standards on mineral origin and traceability, mining conditions, and supply chain due diligence elements based on OECD and other integrity instruments, adapted to practical applicability within the central African ASM".¹⁶⁷ Whereas iTSCi, the OECD DDG and CFS are concerned with chain of custody and risk management of the most serious human rights abuses and benefits to illegal armed groups, CTC also considers labour and working conditions, the behaviour of security forces, community consultation and development and environmental protection. CTC's environmental requirements are captured in Principle 5 of the CTC Standard and include:¹⁶⁸

1. Documentary existence of an Environmental Impact Assessment (EIA) as the basis for a realistic Environmental Management Plan (EMP); realistic being actions that can be feasibly taken in the ASM sector, i.e., an Environmental Impact Declaration¹⁶⁹;
2. Properly treat hazardous material and waste.
3. Consideration and provisions for mine closure and site rehabilitation.

The CTC scheme rates the company's performance at a given mine site with respect to the above listed requirements on a scale of five level descriptors per standards (0-4). An average level of 4 (= level descriptor 3) for all standards is required for a mine site to be certified as "CTC-compliant".

¹⁶⁵ ITRI, 2012b.

¹⁶⁶ BGR 2011a, p. 2.

¹⁶⁷ BGR, 2011a, p. 1.

¹⁶⁸ BGR, 2011b, p. 18.

¹⁶⁹ A Tool that BGR piloted in Chile and implemented in Rwanda. See Ehlers, 2010, for more information.

Table 3: BGR's CTC: main aspects.¹⁷⁰

Aspects	
Main features	Third party assurance of <i>“trading chain traceability, transparency, and the ethical quality of mineral production ... against a set of standards derived from international regulations such as the OECD Guidelines for Multinational Enterprises, Risk Awareness Tool,”</i> and the DDG. The CTC standards are organized into five universal principles but are intended to be customized to the particularities of different national contexts. ¹⁷¹
Main implementers	Mining companies with government support.
Objective	Enable responsible mining and responsible sourcing from GLR through progressive improvement.
Implementation status	Operational in Rwanda and DRC (North Kivu and Katanga) and rolling out to other parts of DRC and the Great Lakes Region in 2012.
Sustainability issues covered	The 5 principles are: <ol style="list-style-type: none"> 1. Traceability: Origin and volumes of produced goods as well as company payments to host government are transparent. 2. Fair Working Conditions: The company does not use child labour and ensures fair remuneration and work conditions as well as continual improvement of health and safety measures for all employees. 3. Security and human rights: The company ensures security on company sites whilst respecting human rights. 4. Community Development: The company consults communities in which it operates and contributes to their social, economic and institutional development taking into account gender sensitivity. 5. Environment: The company seeks continual improvement of its environmental performance.

BGR has also developed an analytical fingerprint (AFP) technology that is *“a combination of analytical evaluation methods to independently track the origin of tantalum (coltan) ore concentrates produced in Central Africa.”*¹⁷² This analytical fingerprint is an optional exercise to verify chain of custody and is envisaged to be integrated into the International Conference on the Great Lakes' Region's (ICGLR) Regional Certification Mechanism (RCM). The beauty of the AFP for downstream users who wish to confirm that their minerals are conflict-free is that it allows for positive mineralogical confirmation of origin for mines where BGR has been able to gain a sample. However, the cost of using the technology means its application is intended for extraordinary circumstances, rather than as a normal course of action.¹⁷³

BGR has also worked closely with ICGLR to incorporate CTC and AFP into their Regional Certification Mechanism. This means that all mineral supply chains across the Great Lakes Region for the 3TG will need to conform to CTC standards embedded in RCM and classified as red or yellow flag indicators by ICGLR, if they are to receive ICGLR export certificate.¹⁷⁴ However, other CTC standards (on environment, working conditions and community development) have been classified as “Progress Criteria” by ICGLR and will hence

¹⁷⁰ Adapted from ITRI, 2012a (forthcoming).

¹⁷¹ BGR 2011a.

¹⁷² BGR 2011a, p.2.

¹⁷³ BGR, 2010.

¹⁷⁴ Red and yellow flag indicators include, for example, instances of child labour, traceability, the Analytical Fingerprint method, tax conformity, payment transparency (for LSM sites) and some CSR standards.

simply be monitored, rather than enforced through ICGLR RCM. According to BGR, three CTC compliant mines in Rwanda will be part of an ICGLR pilot in 2012.

The CTC concept was developed in 2008 and then piloted at a number of larger mines in Rwanda in September 2009 by BGR and the Rwanda Geology and Mines Authority (OGMR).¹⁷⁵ Preparatory steps for piloting in DRC began shortly after, and a full baseline audit was conducted at the Kailimbi mine in Nyabibwe in 4Q11. Other Congolese mine sites were due to be audited in Lulingu (North Kivu) and Katanga in 1Q12.

5.2.3 International Conference on the Great Lakes Region's (ICGLR) Regional Certification Mechanism (RCM)

The Regional Certification Mechanism of the International Conference on the Great Lakes Region aims to break the link between mineral returns and rebel financing in order to deprive armed groups of their sources of income, thus increasing political stability in the GLR. The RCM incorporates BGR's CTC and the OECD DDG.¹⁷⁶ Where properly enforced, minerals certified by RCM of the ICGLR can be judged as partially 'ethical' and towards 'sustainable' in some aspects. This means that 3TG minerals coming from the Great Lakes Region will become some of the most ethical options for 'ethical' minerals in the world, though the weakness of its environmental requirements prevent it from being judged as fully ethical.

The ICGLR Regional Certification Mechanism forms part of ICGLR's Regional Initiative on Natural Resources (RINR).¹⁷⁷ As with OECD DDG, it covers tin, tantalum, tungsten and gold. Its main principles are: (1) transparency, (2) Burden of proof falls primarily on exporters, secondly on Governments, (3) Mandatory third-party audits, (4) Adapt current systems and design for adaptability.¹⁷⁸ Its implementation will rely on four main system elements: 1) Chain of custody tracking from mine site to export, 2) Regional tracking of mineral flows via ICGLR database, 3) Regular independent third-party audits, and 4) Independent mineral chain audit.¹⁷⁹

It is intended that RCM will be integrated into the legal systems of all eleven ICGLR member states.¹⁸⁰

ICGLR RCM Manual, which sets out the standards and procedures for chain of custody systems and certification in-region, was informed by BGR's CTC and the OECD DDG, and also integrates lessons learned from industry-led chain of custody systems, including iTSCi. It *"seeks to promote the mineral sector's role in the peaceful economic and social development within the Member States of the Great Lakes Region by establishing common regional standards for transparency... working conditions, environmental performance and community consultation."*¹⁸¹ RCM works by designating certain circumstances and/or outcomes of production as red-, yellow- or green-flags. A red-flag *"means a violation of one of the system critical criteria of either the standards or procedures for mine site inspection and approval ... or a violation of one of the*

¹⁷⁵ BGR, 2011c.

¹⁷⁶ BGR, 2012

¹⁷⁷ Other elements of the RINR are: Harmonization of mining legislation, Regional mineral tracking database, EITI promotion in region, Whistle-blowing, and Formalization of artisanal and small-scale mining.

¹⁷⁸ BGR, 2012

¹⁷⁹ Blore and Smillie, 2011, pp. 8-9.

¹⁸⁰ ICGLR, 2011, p. 3: *"an ICGLR Mineral Tracking and Certification Scheme for minerals will only be credible if all Member States have established procedures for credible mine site auditing systems designed to confirm that mine sites meet ICGLR regional standards, internal chain of custody tracking systems designed to eliminate the presence of designated minerals in the chain of production, trade, transport and export of designated minerals within their own territories, and certification procedures designed to confirm each certified export was produced, traded, processed and exported in compliance with regionally established ICGLR standards, while taking into account that differences in production methods, trading practices, and institutional controls may require different approaches to meet the accepted ICGLR regional standards"*.

¹⁸¹ ICGLR, 2011.

system-critical criteria for Third Party Audits.”¹⁸² It is the view of Partnership Africa Canada (PAC), which co-conceived RCM, that individual Member States might be persuaded to ascribe yellow- or red-flag status to environmental violations if there was consumer and end-user appetite or pressure for this.¹⁸³ Within countries of the GLR, civil society and a number of governmental actors have also been calling for stricter monitoring and adherence to environmental regulations. If Member States could be pressured to elevate environmental considerations from ‘Progress Criteria’ to ‘Status or Flagging Criteria’, the ICGLR RCM could provide a political and legal framework for meaningful action on the environment.

Table 4: ICGLR’s RCM: main aspects.

Aspects	
Main features	<ol style="list-style-type: none"> 1. Chain of custody tracking from mine site to export. 2. Regional tracking of mineral flows via ICGLR database. 3. Regular independent third-party audits. 4. Independent mineral chain auditor.¹⁸⁴
Main implementers	<p>According to the ICGLR’s RCM Manual¹⁸⁵ ICGLR member countries through integration into each of their legal frameworks;</p> <p>Member States (MS) are responsible for inspecting and verifying/flagging mine sites, according to the status criteria (i.e., conflict and child labour) and progress criteria (including environmental criteria) in the RCM manual. These MS findings are later double checked by independent audits, but primary responsibility for mine site inspection lies with Member States.</p> <ol style="list-style-type: none"> 1. Chain of custody tracking is the responsibility of MS; 2. ICGLR database is the responsibility of the ICGLR and harmonized with national-level databases; 3. An ICGLR-supported/sanctioned tripartite Audit Committee oversees the region’s audits (pool of accredited auditors; ToRs for audits; receives and reviews audit reports, etc.); 4. IMCA has the political backing of ICGLR and may rely on ICGLR for administrative support, but is independent from ICGLR. As of this writing in March 2012, this had yet to be established.
Objective	<ol style="list-style-type: none"> 1) Transparency so that the mechanism is seen as <i>legitimate</i>¹⁸⁶ by all parties involved; 2) Burden of proof falls primarily on exporters, secondly on Governments, in order to place less demands on resource-stretched governments in the GLR; 3) Mandatory third-party audits, applying the <i>trust, but check</i>¹⁸⁷ principle; 4) Adapt current systems instead of redesigning them every time there is a modification in the process; and 5) Design for adaptability, so that the mechanism stays present with time and incorporates relevant and best practice standards as much as possible.¹⁸⁸
Implementation status	<p>Implementation is taking place in DRC and Rwanda in 2012. Additional implementation of the ICGLR RCM is envisaged in Burundi and Uganda in the near term (next two years). Eventually, the system is intended to be applied to all ICGLR member states.</p>

¹⁸² ICGLR, 2011, p. 8.

¹⁸³ Note in ICGLR, 2011 b, in Appendix 3b, clause 15 specifies that member states can make criteria more rigorous at their discretion.

¹⁸⁴ Blore and Smillie, 2011, pp. 8-9.

¹⁸⁵ ICGLR, 2011.

¹⁸⁶ PAC, 2011, p. 34.

¹⁸⁷ PAC, 2011, p. 35.

¹⁸⁸ Blore and Smillie, 2011, p. 8.

Aspects	
Sustainability issues covered	Prevention of conflict financing through minerals. Ensure taxes are paid on minerals trade. Serious human rights violations, including child labour (standards in process). ¹⁸⁹ Environmental requirements, e.g., it is obligatory for a Large-Scale Mining (LSM) site operator to implement an environmental management plan for mine site waste (standard in process). ¹⁹⁰

At present, there is no environmental issue that is flagged as being of sufficient concern to jeopardize the conformance of an artisanal mine site with RCM.¹⁹¹ There are, however, a number of progress criteria, though these are action- rather than performance-based; it would be helpful to have guidance developed to support auditors and monitors in understanding what are ‘good’ and ‘adequate’ actions. For example, one of the progress criteria states that *‘the mine site manager has a system in place to manage mine waste and tailings.’* What would such a system entail to be environmentally effective? Will the ICGLR issue any guidance on this? Even at the level of industrial mines, the criteria are very lax and discretionary. In addition, the red-flag issue is that the *“Mine site operator is in critical non-conformity with the Member State laws regarding environmental performance.”*¹⁹² What does critical non-conformity constitute? The yellow-flag issue is serious non-conformity on this point.

Environmental requirements flagged for industrial-scale mining go a step further than ASM and include having the mine site owner be compliant with the *“Member State’s laws regarding environmental performance.”*¹⁹³ If the mine site inspection finds that any aspects of the mining operation in question violate the laws of the country where the mine is located, then that site will have a red status and will not be eligible for RCM certification until it rectifies the areas of non-compliance. However, inevitably the legal regimes of the eleven member states vary in their treatment of minimizing environmental harm.

The RCM, which is not yet implemented, has been mainly developed through processes internal to ICGLR headquarters in Bujumbura, Burundi, with external guidance from PAC¹⁹⁴ and the German Technical Cooperation (GIZ, formerly GTZ).¹⁹⁵ ICGLR conducted consultations with the international community and international and regional civil society, which also included the dissemination of RINR, both to the media as well as the populations and digger-communities.¹⁹⁶ RINR was approved at the ICGLR Summit of Heads of State in the Lusaka declaration in December 2010.

5.2.4 The World Gold Council’s (WGC) Conflict-free Gold (CFG) standard

The World Gold Council is the market development organization for the gold industry. Working within the investment, jewellery and technology sectors, as well as engaging in government affairs, WGC’s purpose is to provide industry leadership, whilst stimulating and sustaining demand for gold. Based in the UK with operations in India, the Far East, Europe and the US, the World Gold Council is an association whose

¹⁸⁹ PAC, 2011.

¹⁹⁰ PAC, 2011.

¹⁹¹ ICGLR, 2011. See clauses 2.3 and 3.3 in Appendix 3b-1.

¹⁹² ICGLR, 2011. See clause 2.3.1 in Appendix 3b-2.

¹⁹³ ICGLR, 2011, p. 22.

¹⁹⁴ For further information on PAC, see PAC, n.d. regarding PAC’s input on RCM see Blore and Smilie, 2011.

¹⁹⁵ See GTZ, n.d.

¹⁹⁶ A regional civil society platform (linked to the tools of certification, formalization and whistle blowing) is under construction with the support of GIZ and PAC to serve a dual purpose (dialogue for dissemination as well as returning information and leads on illegal exploitation).

24 members comprise the world’s leading gold mining companies, representing about 70% of global corporate gold production.

WGC wishes to contribute to the exclusion of gold that fuels conflict from the market whilst working from the premise that *“disinvestment or withdrawal by responsible operators may make it more difficult to stabilise a conflict situation or to achieve post-conflict reconstruction”*.¹⁹⁷ The framework is designed to be applicable to armed conflicts globally and responds both to the requirements of Section 1502 of the US Dodd-Frank Act and of the emerging OECD gold supplement to their Guidance on the Responsible Sourcing of Minerals from Conflict-Affected and High Risk Areas.

Following a period of testing by member companies, a draft of the framework was published for consultation on 17 June 2011 (see below). Written comments were then received from a wide range of stakeholders, including governments, international organizations, civil society organizations, expert groups, ethical investors, gold supply chain participants and members of the public. An updated version of the framework was released in March 2012.

Table 5: WGC’s Conflict-free Gold standard: main aspects

Aspects	
Main features	<ol style="list-style-type: none"> 1. Supports responsible mining practices.¹⁹⁸ 2. Oriented at complying with Section 1502 of DFA. 3. In line with the OECD DDG, standards in development on how companies should commission a third-party audit and handle recycled gold.
Main implementers	WGC members and other companies involved in the extraction of gold.
Objective	To establish a common approach by which gold producers can demonstrate that their gold has been extracted in a manner that does not fuel conflict or the abuse of human rights typically associated with such conflicts. ¹⁹⁹
Implementation status	The Conflict-free Gold and CoC Standards were released in draft form (versions 5.3 and 3.5, respectively) for consultation and several roundtable discussions hosted in New York, London and Johannesburg by ‘respected organisations,’ namely the Fund for Peace, Chatham House and the South African Institute for International Affairs. ²⁰⁰ An updated version of the Conflict-free gold standard was released in March 2012.
Sustainability issues covered	<p>Managing risks on sourcing and trade of gold contributing to armed conflict, directly or indirectly financing or benefitting armed groups and human rights abuses.²⁰¹</p> <p>Public disclosure of payments made to governments.²⁰²</p> <p>Money laundering.²⁰³</p>

¹⁹⁷ Chatham House, 2011.

¹⁹⁸ World Gold Council, 2012c.

¹⁹⁹ World Gold Council, 2012c.

²⁰⁰ World Gold Council, 2011b.

²⁰¹ World Gold Council, 2011b.

²⁰² World Gold Council, 2011b.

²⁰³ World Gold Council, 2011b.

The standard seeks to manage risk only, with scope limited to *“activities which, directly or indirectly, finance or benefit armed conflict and the extreme levels of violence which contribute to abuses of human rights.”*²⁰⁴ Its scope goes beyond the OECD DDG slightly in that it includes assessment of *“the interaction between the mine and the community through the ability of the community to raise concerns or worries about the operational activities”* by ensuring that the mine *“operates a process through which the public can raise legitimate concerns”*; however, it makes no mention of the quality of the process for how a company consequently handles those grievances.²⁰⁵

While the WGC’s Gold standards do not mention environmental management, the WGC and its members endorse the International Cyanide Management Code.²⁰⁶

The WGC standards are presently undergoing ‘stress testing’ by ‘leading’ gold mining companies and refiners.²⁰⁷ The standards were released for public comment on 17 June 2011, and three roundtables were hosted in New York, London and Johannesburg by ‘respected organizations,’ namely the Fund for Peace, Chatham House, and the South African Institute for International Affairs.²⁰⁸ The WGC is pursuing an integrated approach by *“speaking to the sponsors of certification initiatives in the electronics and jewellery sectors.”*²⁰⁹

5.3 Smelter only

5.3.1 Electronic Industry Citizenship Coalition (EICC) and Global e-Sustainability Initiative’s (GeSI) Conflict-Free Smelter Program (CFS)

The Conflict-Free Smelter Program (CFS) *“is a voluntary program in which an independent third party evaluates a smelter’s procurement activities and determines if the smelter demonstrated that all the materials they processed originated from [DRC] conflict-free sources.”*²¹⁰ It is primarily an audit that verifies the origin of a smelter’s input streams and includes a mass balance calculation to ensure inputs, outputs and stocks balance (taking into account a 10% margin for loss/gain of mass). Where the minerals have been sourced from or passed through specific countries (e.g., those of the Great Lakes Region or where there is evidence of smuggling or transit of conflict mineral), the CFS auditor must verify that the smelter or refiner demonstrates they conform to the OECD DDG, and that the smelter has suitably responded to any identified risk that the minerals may have contributed to conflict in DRC.²¹¹ Smelters can show conformance with the OECD DDG either by individually having their sources assessed against the Guidance by an independent third party or by using an assessed-conformance scheme, such as iTSCi, to do this for them.²¹²

The CFS was developed by the Electronic Industry Citizenship Coalition (EICC)²¹³ and the Global e-Sustainability Initiative (GeSI)²¹⁴ in 2009. The CFS is global in scope, and can be applied to smelters and refiners all over the world. The CFS is being progressively implemented across tin, tantalum, tungsten and

²⁰⁴ World Gold Council, 2011c.

²⁰⁵ World Gold Council, 2011c.

²⁰⁶ World Gold Council, 2012a.

²⁰⁷ World Gold Council, 2011a.

²⁰⁸ World Gold Council, 2011b.

²⁰⁹ World Gold Council, 2011a.

²¹⁰ EICC and GeSI 2011f, p. 4.

²¹¹ EICC and GeSI 2010.

²¹² ITRI, 2012a (forthcoming).

²¹³ For more information, see EICC, 2009.

²¹⁴ For further information on the GeSI, see Global e-Sustainability Initiative, 2011.

gold smelters and refiners, and some supportive documents are in development. CFS audits have already been conducted.²¹⁵

The CFS seeks to provide companies with a method to comply with the DFA. The CFS interprets DFA requirements in a conservative manner to work with the scenario that the SEC is working in absolute to deliver ‘conflict-free’ minerals rather than ‘conflict-managed’ ones. Consequently, in so far as the OECD is not yet aligned with the DFA, there remain issues of compliance to the DFA that are not compatible with the OECD DDG, thus preventing full harmony.

Table 6: CFS: main aspects.²¹⁶

Aspects	
Main features	CFS is an audit that does: 1) Material analysis (mass balance calculation of inputs, outputs, stocks). 2) Business process review (demonstration of management systems, e.g., conflict minerals policy, 100% documentation of chain of custody; and reasonable identification of origin).
Main implementers	Primary and Secondary Smelters and Refiners. ²¹⁷
Objective	Enable companies to demonstrate conflict-free minerals sourcing and meet DFA obligations.
Implementation status	The audits have started and continue; Au refiners and Sn smelters have started; and audits for W will begin as soon as interested smelters come forward. ²¹⁸ The CFS is working with member companies to advise them on how they can best comply with audits.
Sustainability issues covered	Conflict financing only.

The incompatibility between the DFA and OECD is creating some complications for the implementation of CFS. First, the CFS is oriented at the DFA to enable companies to report that their minerals are 100% DRC conflict-free. The Scheme is meant to identify the mine of origin when the mineral originates from regions where conflict or transit of conflict minerals is plausible, such as DRC or adjoining countries. This, according to EICC-GeSI, is the preferred reporting position for companies so that they can source responsibly while meeting their obligation to the DFA. Consequently, it is not possible for the OECD DDG’s intent of ‘conflict-managed’ minerals (which, according to the DFA would be ‘not DRC conflict free’ and cause companies to label their products as such) to achieve CFS certification. Second, the CFS must rely on chain of custody systems to demonstrate in-region traceability on behalf of artisanal miners or mining organizations. CFS smelters will be compelled to avoid producers, traders and places where traceability/chain of custody programmes are not operational or which cannot provide proof of chain of custody right back to the mine and management of risks in line with the OECD DDG or through another system²¹⁹. In the near term, this will reduce marketing options for these upstream businesses and may lead to the cessation of activities altogether in the Great Lakes Region. It remains to be seen to what extent this may impact the global market for artisanal gold, given that the majority of artisanal gold is informally mined and traded.²²⁰

The CFS is complemented by the multi-sector Conflict Minerals Reporting Template (CMRT). The CMRT was developed by EICC and GeSI as a “*common means for the collection of sourcing information related to*

²¹⁵ Results can be requested at EICC and GeSI, 2011c

²¹⁶ Adapted from ITRI, 2012a(forthcoming).

²¹⁷ Primary smelters transform mineral inputs from mined sources; secondary smelters transform recycled or scrap metals. See EICC and GeSI 2011d, p. 1.

²¹⁸ For further information, see indicators at EICC and GeSI, 2011c.

²¹⁹ For example, Source 44’s Conflict Mineral Program for supply chain tracing. See Source 44, 2012.

²²⁰ Bawa, 2010.

'conflict minerals'".²²¹ Downstream companies are using it to comply with Step 2 of the OECD DDG for assessing risks relating to conflict minerals in their supply chains,²²² and to enable them to meet the reporting requirements of the DFA. It was released publicly on 29 July 2011.²²³ The CMRT has been designed to be consistent with the CFS and support the commercial needs of downstream users by enabling them to share information while preserving confidentiality, on the one hand, and reducing, on the other hand, the burden of due diligence measures on suppliers and customers by providing a standardized template that is accepted and understood by multiple actors.²²⁴ It is free and accessible to anyone, and comes with instructions and training tools to aid its use.

The CFS may be modified as other documents and laws emerge. For the time being, it will remain focused on assuring that companies can comply with their legal obligations in line with Section 1502 of the DFA.

5.4 Downstream sector efforts

5.4.1 Jewellery

5.4.1.1 *The Responsible Jewellery Council's (RJC) Code of Practices (CoP) and Chain of Custody (CoC) standards*²²⁵

In 2005, 14 organizations from the diamond and gold jewellery supply chain formed the Council for Responsible Jewellery Practices. The Council adopted the trading name of Responsible Jewellery Council in 2008. By 14 March, the Council had 368 members of which 153 had been certified. Of these 368 members, there are seven mining companies and 10 in the metals trader, refiner, and hedger forum.

RJC's mission is *"to promote responsible ethical, human rights, social and environmental practices, which respect human rights, throughout the diamond and gold jewellery supply chain."*²²⁶ RJC's Code of Practices (CoP) is effectively a meta-standard²²⁷ that seeks to assure best practice in managing social and environmental liabilities for all scales of mines except artisanal and micro (where micro is organized artisanal).²²⁸ This is primarily because RJC recognizes that those standards may be more relevant to ASM (e.g., FT-FM, with whom RJC has MoU). The RJC CoP was established through reference to 21 other Standards, including the the EITI, ICMC, and the IFC Performance Standards.²²⁹

The Chain of Custody (CoC) Standard for Precious Metals was published in March 2012 and applies to Gold and Platinum Metals only.²³⁰ The Standard requires implementation of the CoP to support responsible practices through the precious metals supply chain. The Standard also cross-references other conflict minerals chain of custody and due diligence initiatives such as the WGC Conflict-free Gold Standard, CFS,

²²¹ EICC and GeSI, 2011d.

²²² OECD 2011c.

²²³ EICC and GeSI, 2011d.

²²⁴ EICC and GeSI, 2011e.

²²⁵ Adapted from Stark and Levin, 2011.

²²⁶ RJC, 2012.

²²⁷ A 'meta-standard' builds on existing Standards. See Dehue et al., 2007.

²²⁸ In 2011, RJC signed a Memorandum of Understanding with ARM to *"work cooperatively on advancing their shared objectives," which are "improving social, environmental and labour practices in artisanal and small-scale mining (ASM), facilitating constructive dialogue and where appropriate, collaboration between large-scale mining operations and ASM to create sustainable and fair local opportunities for communities in mineral rich regions, and increasing market access for jewellery raw materials produced by ASM communities."* They will do this through standards cross-recognition, developing projects to support ASM more responsibly, and through industry outreach. ARM and RJC, 2011.

²²⁹ RJC, 2009. The IFC Performance Standards were the precursor to the new IFC Sustainability Framework.

²³⁰ RJC, 2012b.

OECD DDG, Dodd-Frank Act and the LBMA Responsible Gold Guidance, with the aim of inter-operability to keep implementation practicable and cost-effective for supply chain operators (especially refiners). The Standard has incorporated a requirement that mined materials cannot benefit armed groups to ensure those implementing the CoC can be in line with the Dodd Frank Act and OECD DDG.²³¹

A version of the RJC's CoC Standard could be adapted for the chain of custody tracking of gold to the ICT sector. Many elements of the Code of Practices Standard could form the basis for assuring the overall sustainability or environmental performance of corporate operators in upstream tiers of the gold supply chain, most notably because the Standards build upon other robust initiatives that cover environmentally sustainable mining and other supply chain practices within their scope.²³²

The process for developing the RJC's Mining Supplement began in May 2007 and concluded with its publication in December 2009. The Mining Supplement was integrated in the Code of Practices and is now being used to certify members.

The RJC published its chain-of-custody certification for precious metals (namely, gold, platinum, palladium and rhodium) in March 2012. Consultations for the diamond component of the certification are ongoing.²³³ The RJC's chain-of-custody certification is *"a voluntary, complementary element to the RJC certification process"* as it cannot be compulsory owing to competition and anti-trust laws.²³⁴ While only RJC members can be certified, the Standard is publicly available so that non-members can use it to develop a *"robust chain-of-custody system for disclosure or reporting purposes."*²³⁵ Furthermore, it would be possible for mines that are not RJC members to be part of an RJC-assured Chain of Custody provided that the mine is certified against another Standard recognized by the RJC.

Membership in the RJC is open to any business or association that participates in the diamond, gold or platinum jewellery supply chain or engages in activities that impact consumer confidence in these industries. Compliance with the RJC Code of Practices (CoP) is compulsory for companies seeking membership. New members are able to become CoC Certified before they are certified against the CoP so that they can begin the process of responsible sourcing as soon as possible.²³⁶

5.4.1.2 *The ARM/FLO Fairtrade and Fairmined (FT/FM) Standard for Gold from Artisanal and Small-scale Mining (ASM), including Associated Precious Metals*

The Fairtrade/Fairmined Standard (FT/FM) for artisanal gold allows gold to be judged as 'sustainable'. The vision for FT/FM, in harmonization with that of the Alliance for Responsible Mining, is for *"ASM to [be] a formalised, organised and profitable activity that is [sic] technologically efficient, socially and environmentally responsible; the sector's development takes place within a framework of good governance, legality, participation and respect for diversity; it seeks to make an increasing contribution to improved workplace conditions, local development, poverty reduction and social justice within ... countries, stimulated by growing consumer demand for sustainable minerals and ethical jewellery."*²³⁷

²³¹ RJC, 2011d.

²³² For example, IFC's Performance Standards, the Alliance for Responsible Mining's Vision and Principles for Responsible Artisanal and Small-scale Mining, ICMM's Sustainable Development Principles, the World Heritage Convention and the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species, among others.

²³³ RJC, 2012b.

²³⁴ RJC, n.d.

²³⁵ RJC, 2011d.

²³⁶ RJC, 2011d.

²³⁷ The FairTrade Labelling Organization and the Alliance for Responsible Mining, 2010, p. 4.

The FT/FM Standard is for use by artisanal and small-scale gold producers only and is presently only applicable to Latin America; however, programmes are being developed in Sub-Saharan Africa.²³⁸ Currently, mines in Peru, Colombia and Bolivia are certified with the FT/FM Standard. This includes sourcing from conflict-affected zones in Colombia. The FT/FM gold Standard *“is designed to cover only existing, conflict free, community based, permanent and seasonal ASM.”* While it was not expressly designed for carrying out chain of custody of *conflict* minerals supply chains, it does allow operators to work in conflict-affected areas provided they comply with minimum performance criteria relating to the principle that *“the Standard will not support organizations involved with armed conflict in any way, including financing conflict or the use of revenue to engage in activities that facilitate the purchasing of arms.”*²³⁹

The FT/FM standard was first published by the Alliance for Responsible Mining (ARM) and the Fairtrade Labelling Organization (FLO) in March 2010.²⁴⁰ It is expressly oriented at improving the development gains for communities where gold is mined artisanally.²⁴¹ Certified miners are guaranteed a minimum price of 95% of the London Bullion Market Association’s (LBMA) fix for their rough gold.²⁴² They earn a 10% premium on top of this for investment in development projects and may also earn another 5% ‘ecological premium’ if they ensure that they did not use chemicals and in any other way *“ensure minimum ecological disruption and forest restoration from the outset of new operations.”*²⁴³

ARM’s environmental standards cover the management of toxic substances (11 minimum requirements and two progress requirements), ecological restoration and ecosystem health (five minimum requirements and five progress requirements), and three requirements for achievement of the ecological premium.²⁴⁴ The minimum requirements largely cover mercury management and the use of nitric acid, legal compliance, slope height and gradient (open-pit mines), disposal of fuel residues and containers and environmental mitigation planning. Progress requirements cover more sophisticated measures for mercury management, cyanide management, mine closure, ecological regeneration and rehabilitation of mined out areas, methods for minimizing acid mine drainage and *“good Waste Management practices.”*²⁴⁵ Consequently, the ARM/FLO environmental standards are more rigorous than those of any other Standard oriented at ASM.

There are some critiques of the ARM environmental standards. The first is that the ARM/FLO certification allows for the use of mercury and cyanide, but provides standards for the amalgamation process.²⁴⁶ Critics argue that the FT/FM standards are not as detailed or comprehensive as those outlined by the Global Mercury Project, and that there are mercury-free technologies available, and therefore the standard is below what should be considered best practice.²⁴⁷ However, ARM/FLO states upfront that, *“These Fairtrade requirements prioritize environmental challenges for artisanal miners, which can be realistically achieved in the short or medium term, given their human and capital resources. The aim of the STANDARD is to drive*

²³⁸ See FairTrade Foundation, 2012.

²³⁹ ARM/FLO 2010.

²⁴⁰ FLO is a non-profit international organization with 24 member organizations in producer and consumer countries. ARM is an international multi-stakeholder initiative that works to achieve *“the transformation of ASM into a socially and environmentally responsible activity, and to the improvement of the quality of life of marginalized artisanal miners, their families and communities.”* Alliance for Responsible Mining, 2011.

²⁴¹ ARM-FLO, Fairtrade and Fairmined Standard for gold from artisanal and small-scale mining including associated precious metals, March 2010, in The Fair Trade Foundation and ARM, 2011.

²⁴² The Fair Trade Foundation and the Alliance for Responsible Mining, 2010.

²⁴³ The Fair Trade Foundation and Alliance for Responsible Mining, 2010, p. 12.

²⁴⁴ ARM/FLO 2010.

²⁴⁵ ARM/FLO 2010.

²⁴⁶ See Cardiff, 2010. There is debate amongst environmental and ASM campaigners, with the former pushing for a no mercury policy, and the latter emphasising how it is far more realistic, and ultimately developmental, to allow miners to use mercury, but in a way that is managed.

²⁴⁷ See Cardiff, 2010.

ASM towards environmental responsibility and progressive environmental improvement. Furthermore the standards reflect that responsible mining is also a vision of artisanal mining without environmental contamination and with full ecological restoration.”²⁴⁸

A second critique is that ARM-FLO’s standards for tailings and siltation management could be improved, though this criticism is also waged against other Standards seeking to improve the sustainability of ASM.²⁴⁹ Lastly, the ARM/FLO standard does not prohibit mining in protected areas and critical ecosystems completely, but it only allows for a continuation of ASM operations which have a proven track record of having operated at last 10 years under the monitoring and legal permit of local authorities, and does require reclamation or restoration after mining in the area ceases.²⁵⁰ Ultimately, this is pragmatic given the scale of ASM occurring in protected areas and critical ecosystems.²⁵¹

Despite these critiques, it is vitally important to note that the FT/FM standard goes beyond any other standard that seeks to support artisanal and small-scale miners to mine in ways that is not only responsible but developmental. However, it is unlikely that a majority of artisanal gold miners will ever be able to achieve FT/FM certification as it sets a very high standard which requires formalization and enabling market and legal frameworks. That said efforts are emerging to support the Artisanal and Small-scale Gold Mining (ASGM) sector’s move towards models of production and trade that are closer to FT/FM’s performance criteria in a quest for continual improvement of the ASGM sector.

ARM and FLO have ambitious plans to increase the supply of Fairtrade gold to 300 kg by the end of 2011, partly through trebling the number of certified producer organizations to nine. One day soon, gold miners in the DRC and the Great Lakes Region could be FT/FM certified, as ARM, Solidaridad and Fairtrade are working to bring miners in Kenya, Tanzania, Ghana and Uganda to compliance and exploring opportunities in Mongolia and West Africa. Whilst FT/FM gold is primarily available in the jewellery market, it is entirely conceivable that ICT sector companies that wished to promote the ethical credentials of a product might be permitted by FLO and ARM to use FT/FM gold in products and label them as such.

Depending on the partnership resource, market demand and opportunities to work with artisanal and small scale miners producing other products, ARM/FLO would consider development of additional standards beyond gold. Pending interest from the tin, tantalum and tungsten industry and the ICT sector, the development of FT/FM standards – and eventually mines and trading chains - for the 3Ts could be possible, especially further to ARM and the Fair Trade International Standards Unit’s recent announcement that the ARM/FLO standard will be undergoing review in 2012 with a specific objective of developing “*a more generic system to facilitate standards development of ASM of other minerals in the future.*”²⁵² Leadership from the ICT sector and close coordination with ARM/FLO would be essential.

5.4.2 Banking: The London Bullion Market Association (LBMA) responsible gold guidance

The LBMA’s responsible gold guidance is oriented at the management of specific risks related to conflict, human rights abuses, terrorist financing and money laundering.²⁵³ Gold produced in line with the guidance could be said to be conflict-managed.

²⁴⁸ ARM/FLO 2010, p. 21.

²⁴⁹ See for example, the ASM management standards of CRED Jewellery, EcoAndina, Fair Trade in Gems and Jewellery, Mammoth Tusk Gold (MTG), Oro Verde™, and URTH Solution in Cardiff, 2010.

²⁵⁰ EcoAndina is currently the only working ASM standard that specifically includes demarcation of ecologically sensitive areas that are to be avoided, but EcoAndina’s Standard is only applied at its operations in Argentina. See Cardiff, 2010.

²⁵¹ Villegas *et al.*, 2012 (forthcoming).

²⁵² Fairtrade Labelling Organization and the Alliance for Responsible Mining, 2012.

²⁵³ LBMA, n.d.

The guidance is “for good delivery refiners in order to²⁵⁴ combat serious abuses of human rights, to avoid contributing to conflict, to comply with high standard of anti-money laundering and combating terrorist financing practice.”²⁵⁵ It is compulsory for all LBMA Good Delivery gold refiners “in order to remain on the LBMA Good Delivery List.” Removal from the LBMA list would mean that a refiner’s bars would no longer be accepted in the London Bullion Market or any professional gold market worldwide. It is intended to enable them to conform to the OECD DDG by following the DDG’s five-step framework for responsible sourcing.²⁵⁶ It goes beyond the requirements of the OECD DDG by requiring an audit for all refiners, even those not operating in high-risk or conflict-affected areas. The Guidance applies to both Mined and Recycled gold. The LBMA guidance makes no mention of environmental issues at this stage.

²⁵⁴ LBMA, 2011.

²⁵⁵ Crowell, R., in RJC & LBMA, 2012.

²⁵⁶ In addition, the LBMA’s Commercial Director was part of the OECD Gold Guidance Drafting Committee. LBMA, n.d.

6. Conclusions

The ecological resilience of the DRC and its neighbouring countries is not only important from the perspective of longer-term food and water security for the citizens of the Great Lakes Region, but also matters if peace and human security are to become reality in the region. It is also critical at a planetary level, particularly as we try to deal with a changing climate and associated impacts on ecosystems. With conflict mineral initiatives emphasizing the human security aspects of sustainability, most Conflict Minerals regimes give minimal consideration to ecological resilience. On the one hand, efforts to manage today's armed conflicts may be creating the conditions that make tomorrow's conflicts more probable, such as sowing the seeds for resource scarcity conflicts. On the other hand, businesses' own resilience is tied to that of the populations that comprise its labour forces and markets, and the environments that sustain these and the production and waste management processes that constitute their operations.

For reasons of brand protection, pressure from regulators, commitments to international guidelines and financiers and keeping the cost of metals as low as possible in the longer term, there are also clear commercial reasons for managing the risks of negative environmental impacts in the supply chains of metals used by the ICT sector.

As outlined in this report, there are many initiatives that are aimed at providing the ICT sector with the guidance and assurance tools to conduct due diligence on the contribution of tin, tantalum, tungsten and gold inputs to conflict and human rights violations along their supply chains. Some are operational; some are still in development. Some of the initiatives described in this report and its annexes already cross-reference and move towards inter-operability, which is a positive step. These initiatives appear to be credible on the whole, though their actual effectiveness and workability over time remains to be assessed as implementation is just in the early days.²⁵⁷

However, the treatment by these initiatives of environmental issues is weak. Initiatives in the African Great Lakes Region are largely taking a partial approach to risk management in conflict minerals supply chains. At present, only BGR's CTC and the ICGLR's RCM (in the Great Lakes Region), ARM/FLO's FT/FM Standard (globally, and soon to come to GLR countries), and RJC's CoC/CoP, give any particular attention to managing environmental issues, as well as the conflict financing and human rights abuses that all the others cover. Consequently, and based on this rapid scope of the initiatives, the more sustainable sourcing choice for ICT buyers at present appears to be minerals carrying assurance by one of these three initiatives.²⁵⁸ Should the ICT sector wish to expand the due diligence imperative to cover sustainability issues in the ASM sector, then existing initiatives – as they are currently operating – are inadequate in terms of geographical coverage and environmental sustainability performance levels and support to those that are willing to expand their scope is called for.

In the context of a need for more general improvement in the cooperation and coordination of these initiatives, there is room to investigate the feasibility of greater integration of environmental sustainability into existing dimensions, and whether or not stakeholders and the conflict mineral initiatives would support such action.

²⁵⁷ In time, it would be useful to assess the impacts of these Standards and initiatives and their achievement of their missions by applying and/or adapting the ISEAL Impacts Assessment Code. ISEAL, 2010.

²⁵⁸ Companies certified by the CTC and/or the RCM may use iTSCi for their chain of custody system and to demonstrate OECD DDG compliance.

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8. Acronyms

3TG	Tin, Tantalum, Tungsten and Gold (metal and/or ores)
ARM/FLO	Alliance for Responsible Mining /Fairtrade Labelling Organization
ASM	Artisanal and Small-scale Mining
Au	Gold
BGR	<i>Bundesanstalt für Geowissenschaften und Rohstoffe</i> (Federal Institute for Geosciences and Natural Resources)
BSR	Business for Social Responsibility
CAMI	<i>Cadastre Minier</i> (Mining registry)
CEEC	<i>Centre d'Expertise, d'Evaluation et de Certification</i> (Centre of Expertise, Evaluation and Certification of the Democratic Republic of Congo)
CFS	Conflict-Free Smelter Program
CMRT	Conflict Minerals Reporting Templates
CoC	Chain of Custody
CoP	Code of Practices
CTC	Certified Trading Chains
CTCPM	<i>Cellule Technique de Coordination et de Planification Minière</i> (Technical Unit for Coordination and Planning of Mining in the Democratic Republic of Congo)
DDG	Due Diligence Guidance
DDRRR	Disarmament Demobilization, Repatriation Reintegration and Resettlement
DFA	Dodd-Frank Act
DFID	UK Department For International Development
DRC	Democratic Republic of the Congo
EIA/EMP	Environmental Impact Assessment/Environmental Management Plan
EICC	Electronic Industry Citizenship Coalition
EITI	Extractive Industries Transparency Initiative
ESIA	Environmental and Social Impact Assessment
EU	European Union
FARDC	<i>Forces Armées de la République Démocratique du Congo</i> (Congolese Army)
FT/FM	FairTrade/FairMined
GeSI	Global e-Sustainability Initiative
GLR	Great Lakes Region
GTM	<i>Groupe Thématique des Mines</i> of the Democratic Republic of Congo
ICGLR	International Conference of the Great Lakes Region
ICT	Information and Communication Technology
ISIC	International Standard Industrial Classification
IT	Information Technology
ITF	International Task Force
ITRI	ITRI Ltd. (formerly International Tin Research Institute)
iTSCI	International Tin Supply Chain Initiative
ITU	International Telecommunication Union
KBNP	Kahuzi-Biéga National Park
LBMA	London Bullion Market Association

LSM	Large-Scale Mining
MONUSCO	<i>Mission de l'Organisation des Nations Unies pour la stabilisation en République Démocratique du Congo</i> (United Nation's Organization Stabilization Mission in the DRC)
MS	Member States
NCP	National Contact Point
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
OGMR	Rwanda Geology and Mines Authority
PAC	Partnership Africa Canada
PAG	<i>Programme d'Appui à la Gouvernance</i>
PPA	Public-Private Alliance for Responsible Mineral Trade
RCM	Regional Certification Mechanism
RJC	Responsible Jewellery Council
RMT	Responsible Minerals Trade
SAESSCAM	<i>Service d'Assistance et d'Encadrement d'Artisanal du Small Scale Mining</i> (Service for Assistance and Organisation of Artisanal and Small-scale Mining)
SEC	Securities and Exchange Commission
STAND	Students Taking Action Now
STAREC	<i>Programme de Stabilisation et de Reconstruction des Zones sortant des conflits armés</i> (Programme for the Stabilization and Reconstruction of zones coming out of armed conflict)
StEP	Solving the E-waste Problem (StEP) Initiative
TIC	Tantalum-Niobium International Study Centre
UN	United Nations
UNEP	United Nations Environment Program
UNGoE	UN Group of Experts of the DRC
UNSC	UN Security Council
UNU	United Nations University
USAID	US Agency for International Development
WGC	World Gold Council

Annex I: Information on the ICT Sector

At its May 2006 meeting, the Working Party on Indicators for the Information Society (WPIIS) of OECD invited volunteers to join an Expert Group to assist with development work on the ICT classifications, including the sector definitions on the ICT sector and the content and media sector.

The sector definitions provided by the WPIIS are based on the International Standard Industry Classification (ISIC) and the codes and titles were checked against the final (November 2008) version of ISIC Rev. 4. The WPIIS classified the ICT sector into four industries and some elements for them are provided below.

The original text is available in "Guide to Measuring the Information Society 2009" which can be found at www.oecd.org/sti/measuring-infoeconomy/guide.

ICT manufacturing industries

- Manufacture of electronic components and boards
- Manufacture of computers and peripheral equipment
- Manufacture of communication equipment
- Manufacture of consumer electronics
- Manufacture of magnetic and optical media.

ICT trade industries

- ICT wholesale
- Wholesale of computers, computer peripheral equipment and software
- Wholesale of electronic and telecommunications equipment and parts.

ICT services industries

- Software publishing (only systems software and relevant application software)
- Telecommunications
- Wired telecommunications activities
- Wireless telecommunications activities
- Satellite telecommunications activities
- Other telecommunications activities
- Computer programming, consultancy and related activities
- Computer programming activities
- Computer consultancy and computer facilities management activities
- Other information technology and computer service activities.
- Data processing, hosting and related activities; web portals
- Data processing, hosting and related activities
- Web portals.

ICT repair industries

- Repair of computers and communication equipment;
- Repair of computers and peripheral equipment
- Repair of communication equipment.

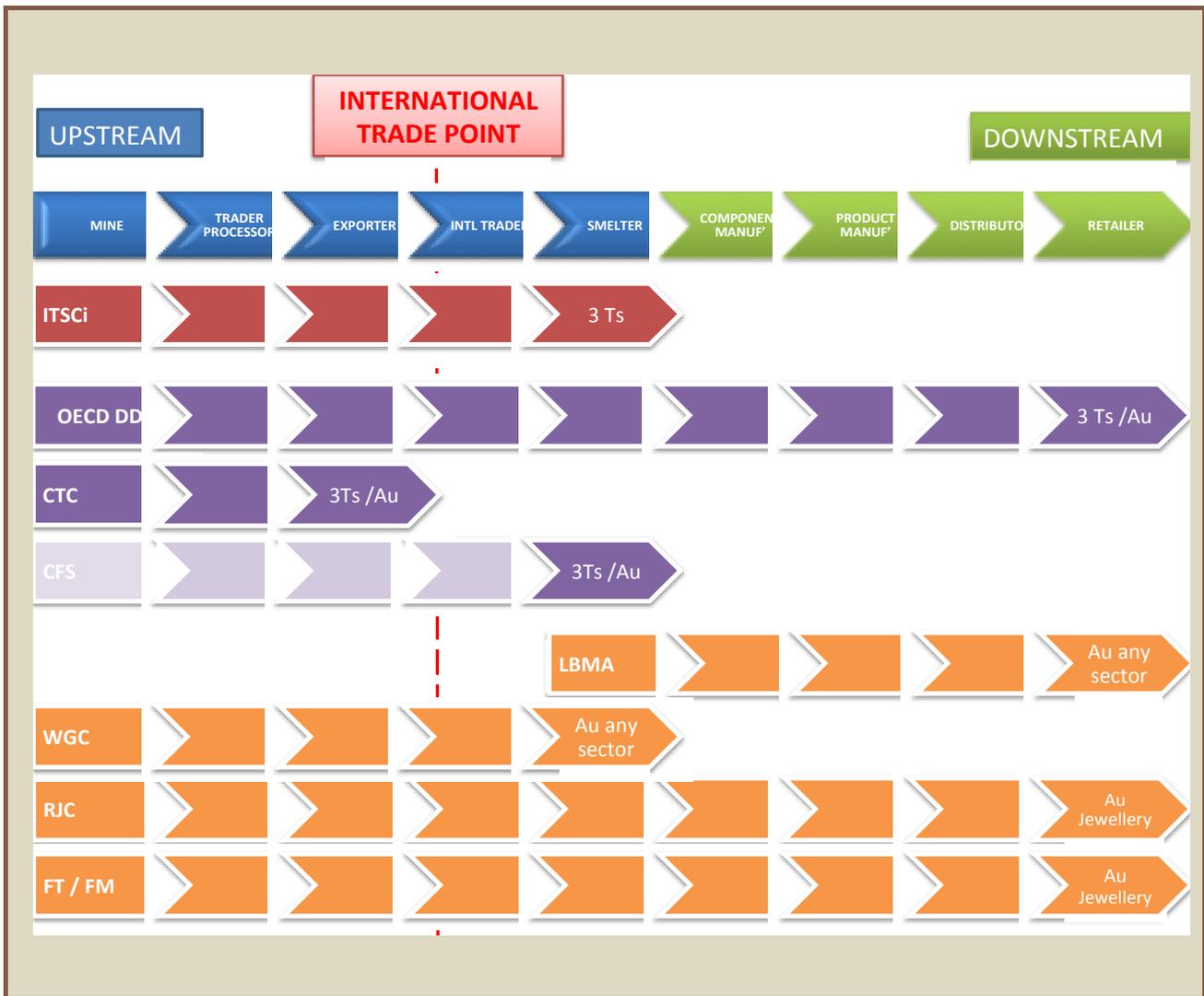
The WPIIS classified the content and media sector into five industries and some elements are as follows:

- Publishing of books, periodicals and other publishing activities
- Book publishing
- Publishing of directories and mailing lists
- Publishing of newspapers, journals and periodicals
- Other publishing activities.

Motion picture, video and television programme activities

- Motion picture, video and television programme production activities
- Motion picture, video and television programme post-production activities
- Motion picture, video and television programme distribution activities
- Motion picture projection activities.
- Sound recording and music publishing activities
- Programming and broadcasting activities
- Radio broadcasting
- Television programming and broadcasting activities.
- Other information service activities
- News agency activities
- Other

Annex II: Supply chain coverage of the principal 3TG due diligence initiatives



An energy-aware survey on ICT device power supplies
Boosting energy efficiency through Smart Grids
Information and Communication Technologies (ICTs) and climate change adaptation and mitigation:
the case of Ghana
Review of mobile handset eco-rating schemes
Guidance on green ICT procurement
Greening ICT supply chains – Survey on conflict minerals due diligence initiatives
Toolkit on environmental sustainability for the ICT sector

September 2012

About ITU-T and Climate Change: itu.int/ITU-T/climatechange/
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Printed in Switzerland
Geneva, 2012
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