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CONFLICT MINERALS

Over a Decade of Effort and Impacts

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ANALYSIS

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from the perspective of the Global South, regional economic integration, or global and regional mechanisms to strengthen the rule of law and human rights. At the micro level, the focus is on concrete development policies, e.g. promoting entrepreneurship and securing property rights, social innovation, the problem of the informal sector, or the enforcement of the rule of law and respect for human rights in the Global South.

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Famke Schaap

is a global trade expert with key focus on responsible sourcing and minerals supply chains. Through her Brussels-based advisory practice (Hyacinth Consult), she guides a variety of business and stakeholders in responsible sourcing ambitions and challenges, and sustainability due diligence from policy to practice. Her focus is especially on those minerals needed for automotive, electronics, steel and 'green transition' industries. Having worked in a broad range of developing countries through her work at UN/WTO agency ITC, as well as in corporate consulting (Deloitte Belgium), she is often consulted to bridge the global supply chain perspectives, from upstream risks and realities to downstream

business and sustainability ambitions. This entails insights and adjustments required in the context of industry standards as well as new (EU / US) legislative frameworks, including US Dodd-Frank Act, EU Conflict Minerals Regulation as well as new EU initiatives towards Corporate Sustainability Due Diligence.

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Acronym List

AGLR	Africa’s Great Lakes Region
ASM	Artisanal and small-scale mining
CAHRA	Conflict-Affected and High-Risk Area
CAP	Corrective Action Plan
CFSI	Conflict Free Sourcing Initiative (currently the Responsible Minerals Initiative (RMI))
CFSP	Conflict Free Sourcing Program (currently Responsible Minerals Assurance Process (RMAP))
CSDDD	EU Corporate Sustainability Due Diligence Directive
CSR	Corporate Social Responsibility
CSRD	Corporate Sustainability Reporting Directive
COI	Country of Origin Information
DMCC	Dubai Multi Commodities Centre
DRC	Democratic Republic of Congo
EICC	Electronic Industry Citizenship Coalition
ESRS	European Sustainability Reporting Standards
EU	European Union
FARDC	Forces Armées de la République Démocratique Du Congo
FDLR	Forces Démocratique de Libération du Rwanda
GAO	Government Accountability Office
GeSI	Global e-Sustainability Initiative
GLR	Great Lakes Region
ICGLR	International Conference of the Great Lakes Region
IPIS	International Peace Information Service
ITA	International Tin Association
ITSCI	ITRI Tin Supply Chain Initiative
LBMA	London Bullion Market Association
LkSG	Lieferkettensorgfaltspflichtengesetz
MNE	Multinational Enterprises
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
RCM	Regional Certification Mechanism of the International Conference of the Great Lakes Region (ICGLR)
RCOI	Reasonable Country of Origin Inquiry
RINR	Regional Initiative against the Illegal Exploitation of Natural Resources
RJC	Responsible Jewellery Council
RMAP	Responsible Minerals Assurance Process (formerly CFSP)
RMI	Responsible Minerals Initiative (formerly the CFSI)
SAKIMA	Société Aurifère du Kivu et du Maniema
SEC	Securities and Exchange Commission
SME	Small Medium-sized Enterprises
SoRs	Smelters or Refiners
TIC	Tantalum-Niobium International Study Centre
UNGP	United Nations Guiding Principles
USD	United States Dollars
3T	Tin, Tungsten, Tantalum
3TG	Tin, Tungsten, Tantalum, Gold

1. Executive Summary

Driven by the 'clean energy' transition, demand for the minerals that make it possible is set to grow exponentially. This demand poses challenges and opportunities for all source-countries, and especially for developing ones. Shedding light on efforts over the last decade to address sustainability risks in mineral sourcing and supply, this study provides insights into the complex realities of mineral supply chains and makes recommendations to policy makers and companies to support responsible supply chains.

This study focuses on so-called 'conflict minerals', tin, tungsten and tantalum (3Ts). They are essential in the production of paints and medicines, but above all in computers, solar cells and batteries. The market is worth billions of US dollars and demand is often supplied by developing or low-income countries. A large part of the global production of 3T minerals comes from the African Great Lakes Region (AGLR) comprising of eastern Congo, Rwanda, Burundi and Uganda. There, minerals come from a handful of semi-industrial operations and a vast number of small-scale, artisanal mines. Since 2010, there has been an international push to stop armed conflicts being financed via 3T trade, and to end human rights abuses on mine sites, such as the use of forced and child labour. In addition, there are increasing pressures on companies to identify and address wider ESG risks in their supply chains, not only in the African Great Lakes Region (AGLR) but also concerning minerals sourced from other Conflict-Affected and High-Risk Areas (CAHRAs).

The findings in the study lay bare the underlying dynamics and context that complicate the success of voluntary and mandatory regulatory interventions, such as the OECD Due Diligence Guidance, as well as US and EU Conflict Minerals regulations introduced from 2010 onwards.

Through careful analysis of the 3T minerals supply chains into the different stages of production the characteristics and key challenges become clear; from Upstream (extraction, transport, trade and export), to Midstream (smelters and refiners) to Downstream (processors and final producers). For each step in the supply chain, the study considers the essentials of governance, formulation and enforcement of legislation, relevant industry standards, institutional capacity and structural market forces at play.

The study shows that there are deficits at all levels. According to the authors, however, the weakest links in the control chain are in the upstream. To fight conflict financing and illegal sourcing of minerals regulators have in the last decade focused on creating obligations for downstream companies, making them responsible for their supply chains, and having them conduct due diligence on the materials they use. To help companies in this, industry-wide schemes have been created that seek to track the upstream supply chain on the companies' behalf and to report on conflict-financing issues. If the upstream initiatives and institutions are not robust,

then the reliance by the downstream on these systems, will not lead to the desired outcome. As the study indicates, there are significant weaknesses in these schemes and the desired impact has not been fully realized.

As an example, the ITRI Tin Supply Chain Initiative (ITSCI) is a scheme launched in 2009 by the tin industry. Largely implemented by The Africa Great Lakes Region (AGLR) government agencies, ITSCI is intended to track where exactly the minerals have been sourced from, to report on the minerals' movement through the supply chain and to identify possible instances of conflict financing and/or human rights abuses both at mine sites and along transport routes. There is a heavy reliance by the downstream on the credibility of this system, but it has historically been criticized and in October 2022, the downstream Responsible Minerals Initiative (RMI) withdrew its recognition of ITSCI as a scheme on which RMI members could rely for their supply chain due diligence. Beginning in January 2023, companies at the smelter can no longer rely on or invoke the certification of minerals by ITSCI, forcing them to reconsider how they fulfil their due diligence obligations.

All 3T have to be smelted or refined before they can be used in industrial applications. In contrast to the upstream, where there are thousands of small supply points, there are relatively few smelters or refiners. This makes them a 'pinch point'. Also, once minerals are refined, it is no longer possible to determine where they originated. Instead, downstream companies need refineries and smelters to reliably demonstrate that the minerals they use have been sourced responsibly. If refiners can do that, then downstream controls as designed can be effective. If refiners are relying on a system that is not robust the efforts of the downstream are much less effective. Therefore, regulators should have a strong oversight focus at the 'Pinch Point' (refiners and smelters) to assure credible information is being received by the downstream.

The OECD Due Diligence Guidance, first produced in 2011, provides a 5-step template for how upstream, smelters/refiners, and the downstream actors can meet their due diligence obligations, and has established itself as the international standard for responsible sourcing. This study looks closely at the OECD Due Diligence Guidance, and at US and EU legislation on responsible sourcing. The key US text is Section 1502 of the Dodd Frank Act of 2010, requiring US companies to disclose whether their products contain 3T or gold, and if they do, to describe the due diligence they have performed to determine the origin of these minerals and whether they have financed conflict. This regulatory effort has a strong focus on the downstream supply chain with minimal enforcement mechanisms. In January 2021, the EU's Conflict Minerals Regulation came into effect, requiring European companies that import minerals or metals to report on their sourcing of 3T and gold, not only from the AGLR, but from all CAHRAs globally. This regulatory effort focuses on the pinch point (mid-stream) of the supply chain with

inconsistent enforcement mechanisms by the EU member states. Other examples of EU legislations incorporating 'sustainability due diligence' are the EU Corporate Sustainability Reporting Directive (CSRD) which, from 2024 onwards requires companies to disclose the impacts of their business conduct on people and planet, including through sustainability due diligence efforts. Or the 'Corporate Sustainability Due Diligence Directive' (CSDDD) which is currently in final negotiating stages and would require businesses to conduct due diligence in their business practices. In Germany, the Supply Chain Act (Lieferkettengesetz), will come into force in January 2023, demanding businesses with more than 3000 employees to conduct sustainability due diligence.

The authors of the study conclude that the current push for mandatory regulatory initiatives on responsible value chains and sustainability due diligence in Europe, including German legislation, can contribute to an improvement of current sustainability challenges. The policy recommendations made provide insight into what these regulatory initiatives need to consider and implement to increase the probability of success. There are 22 recommendations made with 15 for governments and seven for companies. Below are the top six recommendations.

1. Regulations currently lack robust and/or consistent enforcement mechanisms for non-complying entities. Include robust enforcement mechanisms within legal frameworks with transparent set of consistent sanctions.
2. Serious problems with some industry initiatives have been reported. This impacts the credibility of the programme companies rely on. Regulatory frameworks need to have an industry initiative oversight component, such as licensing, or third-party evaluations when they allow for companies to leverage these programmes.
3. Companies and civil society stakeholders often do not engage in the regulatory development until late in the process leading to non-inclusive policy making and frameworks that are not easy for companies to implement and add significant cost. Governments should engage with industry and civil society stakeholders early in the legislative and regulatory process.
4. Many of the upstream entities lack the financial and technical capacity to bring them into compliance and make the necessary changes to assure downstream confidence in the upstream programmes. Donor and/or regulating countries should support the upstream supply chain operators and assist them in understanding and implementing the necessary systems and compliance requirements.
5. There is a need for multi-stakeholder cooperation to support due diligence across the supply chain. Public private alliance initiatives on responsible supply chains should be incentivised through government support mechanisms.
6. Some regulatory frameworks require significant activities to meet compliance across the supply chain with minimal impact at significant cost to some parts of the supply chain. Regulatory frameworks and ESG processes should focus their regulatory scope to the pinch-point in the mineral supply chain (smelters/refineries, traders, and importers) to maximise their impact and reduce, and in some cases eliminate, unnecessary due diligence costs for other sections of the supply chain.

Nevertheless, further effort is required to address upstream challenges too. Governments in the AGLR and other CAHRAs require continued international assistance from the public and private sector to improve their governance systems in general and their natural resource management in particular. Simultaneously, downstream companies urgently need to rethink how they conduct supply chain due diligence, particularly in the most challenging section – the upstream. Governments can play a supporting role here to ensure alignment and recognition of industry schemes. Nonetheless, companies must also accept they cannot simply rely on industry schemes to do their due diligence for them. They need to find other ways to fulfil their obligations. Even though refiners are the 3T supply chain pinch point, that does not mean the responsibility for effective due diligence is theirs alone. All supply chain actors have due diligence responsibility. Additionally, the US, EU and EU member states are critical in the due diligence process through legislation and proactive measures, including supporting governance reform in the upstream and investing in responsible mining production. Much has been accomplished over the last ten years, but there remains much to be done.

2. Introduction

2.1 Objective of this paper

This paper seeks to inform a political debate on mining and trade with conflict minerals in the Africa Great Lakes Region (AGLR) as well as in Europe and other regions. It can be used by policymakers to inform themselves when making changes to existing conflict minerals frameworks or new emerging supply chain due diligence frameworks surrounding other ESG related efforts. It can be used in the development of policy recommendations to improve the situation on the ground. The paper has two main components, Research and Policy Recommendations.

First, the research portion provides perspectives on the past fourteen years of the mining, trading, and processing of conflict minerals; tantalum, tin, and tungsten (3Ts) as a basis for assessing their impact on AGLR and supply chain actors. The research portion:

- Gives an overview of the development and the current situation of extraction and trade with 3T minerals in artisanal and small-scale mines in the AGLR.
- Provides information on the impact of illegal mining and trade on human rights, child labour, the environment, and conflicts in the AGLR, as well as government revenue (subject to information availability).
- Gives an overview of current, state-of-the-art technical solutions (and restrictions) to track and/or trace minerals when they are traded and processed.
- Reviews current concepts for certified, legal trade with 3T minerals.

- Gives an overview of investor trends and government regulations in the US, EU, and Great Lakes region, which make importers, buyers and/or processors responsible for due diligence of the raw materials they are sourcing or using in production processes.
- Analyses the reasons why the existing concepts and laws have or have not reduced illegal mining and illegal trade with 3Ts minerals more effectively.
- Against the backdrop of the trend towards responsible business conduct and sustainability due diligence, assesses the role of different supply chain actors (upstream, midstream, downstream) in preventing and assessing risk and contributing to positive impact in source countries.

Second, it is hoped that the policy recommendations initiate a political debate on mining and trade with conflict minerals in the AGLR and enhance the positive impact and sustainable economic development from minerals sourcing, trade and/or processing. The paper targets the following groups:

- Policy makers and international organisations in Germany and Europe
- Businesses in Germany and Europe that buy or process 3Ts minerals and their associations
- Media in Germany and Europe
- Interested general public in Germany and Europe
- Policy makers in the Africa Great Lake Region (AGLR)
- International organisations in the AGLR
- Media and the general public in the AGLR
- Businesses and private sector actors in the Africa Great Lake Region AGLR.

3. Methodology and background

3.1 Methodology

This paper draws on an extensive literature review, and the decades of work experiences of the experts who researched and wrote it. The insights provided by the experts draw upon expertise gathered in the broader minerals supply chain, in advising business, governments and other stakeholders in source-countries as well as importing and producing countries.

The team has assessed and analysed the various regulations, regional initiatives and industry programmes that have been implemented and seek to address the financing of conflict from mineral supply chains. The literature review has included reports by academia, non-governmental organisations (NGO)s, UN Group of Experts, media, industry initiatives and governments. The authors have developed their policy recommendations based upon all these elements.

3.1.1 Analytical Approach

The team utilised their personal experiences and the findings in various reports and case studies for analysis. This was supplemented by interviewing a range of industry experts to get additional perspective from qualified individuals.

Informal extraction and illicit trading of 3TG from the AGLR is a multi-billion-dollar business and causes severe problems in the region. Such trading often funds armed groups and non-state actors, which contribute to instability and conflict.

For over a decade, institutions, and governments in AGLR, international organisations, governments, and non-governmental organisations (NGOs) have invested in resources to develop technical solutions and political concepts that address the direct or indirect financing of conflict through illegal trade with the goal to develop a legal market for 3TG minerals from that region, which is considered a Conflict-Affected High-Risk Area (CAHRA).

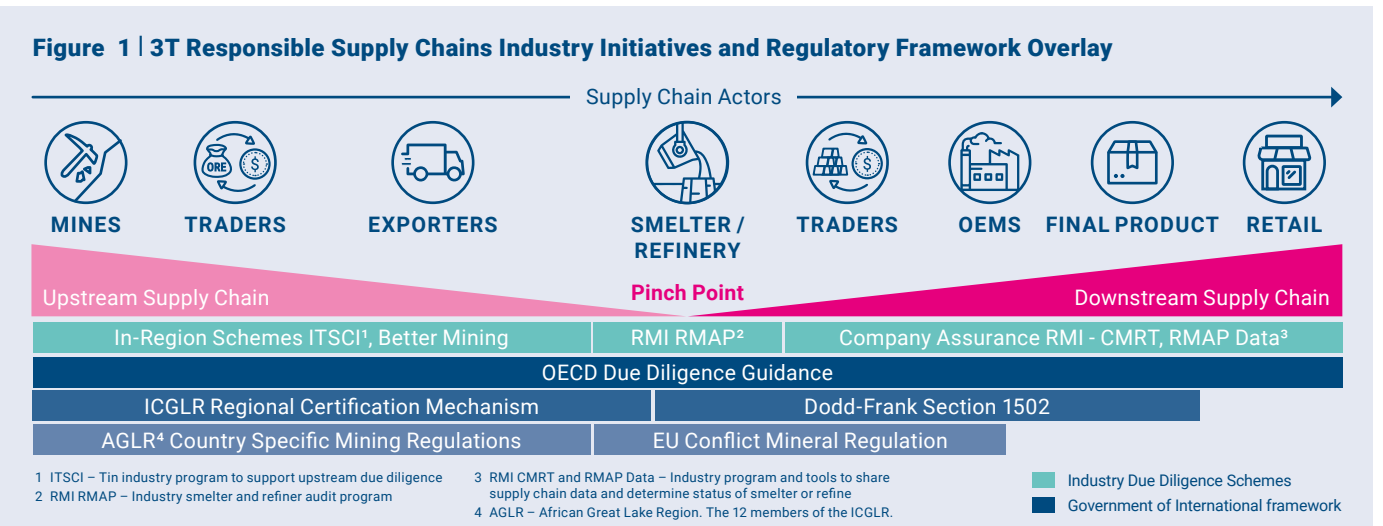
In Europe, the US and China, laws have been passed that aim to require corporations to disclose the elements of the value chain if their products include intermediate and/or raw materials that may originate from a CAHRA. Despite these efforts, artisanal and small-scale mining output continues to be exploited by the illicit traders/armed groups in AGLR.

The paper will focus only on 3Ts. Even though gold is the more significant conflict mineral by value, local employment and contribution to local conflict risks, its value and supply chains are significantly different. While most gold is used as bullion or in jewellery, the 3Ts are mainly used for industrial applications. In addition, most of the gold from AGLR ends up in Dubai/ United Arab Emirates while the 3Ts end up in smelters based in the industrialised world and ultimately in many consumer items.

3.2 Background

3.2.1 Relevant Concepts and Definitions

This research portion of this paper focuses on the international frameworks (Organisation for Economic Co-operation and Development (OECD) and International Conference of the Great Lakes Region (ICGLR) Regional Certification Mechanism (RCM), Conflict Minerals Regulations (US Dodd-Frank Act Section 1502 and the European Union (EU) Conflict Minerals Regulation) and the industry approach and schemes used to help companies meet their obligations. It also evaluates the effectiveness of the overall approach for the last ten-plus years of implementation. This paper will use the terminology and concepts and definitions as defined in the OECD Due Diligence Guidance, ICGLR RCM, US Dodd-Frank Section 1502 and the US Securities and Exchange Commission (SEC) Final Conflict Minerals Rule and the EU Conflict Minerals Rule. Figure 1 below illustrates how the various industry solutions and regulatory frameworks are applied across the mineral supply chain from mine to retail.



The OECD Due Diligence Guidance, which is considered by many as the overarching document for implementing natural resource extraction and trade due diligence, divides the supply chain into two distinct categories, Upstream and Downstream and has the following definitions regarding the location of the various supply chain actors:

“Upstream” comprises the mineral supply chain from the mine to smelters/refiners. “Upstream companies” include miners (artisanal and small-scale or large-scale producers), local traders or exporters from the country of mineral origin, international concentrate traders, mineral re-processors, and smelters/refiners.¹

“Downstream” comprises the minerals supply chain from smelters/refiners to retailers. “Downstream companies” include metal traders and exchanges, component manufacturers, product manufacturers, original equipment manufacturers (OEMs) and retailers.²

The “pinch point” is the point in the supply chain where there are the fewest number of actors. While there are many mines and retailers, the number of smelters/refiners associated with the 3T supply chain is small in comparison. As of November 5, 2022, the Responsible Minerals Initiative (RMI) has identified 36 tantalum smelters, 82 tin smelters and 54 tungsten smelters. The numbers do change as new smelters come online or others cease to operate. While not defined in the OECD Due Diligence Guidance, smelters/refiners are sometimes referred to as mid-stream, given they are located at the end of the upstream and just prior to the downstream. The smelters/refiners have been identified and the point in the 3T supply chain where independent audits need to be carried out (OECD Due Diligence Guidance Step 4).

Around 2008, the tin and electronics industries came together to develop an approach to responsibly managing their supply chains. The items in green in the figure are the schemes that were developed for the 3T industry to utilise. These are discussed in more detail below in the paper.

The items in blue are the regulatory requirements or international or regional frameworks that exist. These frameworks define the elements that the industry schemes need to conform to so that companies can meet their compliance obligations or acceptable industry norms. These frameworks are discussed in detail below.

3.2.2 ‘Conflict minerals’

The focus of this study is the so-called ‘conflict minerals’, which are defined in Section 1502 of the US Dodd-Frank Act and in the EU Conflict Minerals Regulation as tin, tungsten, tantalum (3Ts), and gold, which are known as ‘3TG’. It is to be noted that the OECD Due Diligence Guidance nowadays covers all minerals. Whilst the geographical focus of the US Dodd-Frank Act targets 3T from the Great Lakes Region, the EU maintains a global geographical coverage with a list of CAHRAs.

3T remain crucial inputs for EU and US companies and are used in a variety of production processes as described in Table 2 below.

Table 1 | Conflict Mineral Description

Conflict Minerals	Application
Tin	protective coatings and alloys for steel
Tungsten	primarily used to make wear-resistant metals
Tantalum	electronic components, mostly capacitors and in super alloys
Gold	used in smaller quantities in dentistry, jewellery, and other industries

With the current emphasis on minerals needed for the green energy transition, through their role in EV batteries, electronics, and steel alloys, it is to be noted that 3T do not coincide with the list of ‘critical raw materials’ held by the EU and US. A “critical mineral” in the US is defined as ‘a non-fuel mineral or mineral material essential to the economic or national security of the US and which has a supply chain vulnerable to disruption’³. For example, the latest EU CRM list (2020) is made up of 17 ‘critical’ minerals which includes tantalum and tungsten (as well as cobalt and lithium)⁴, and the US also has tungsten and tantalum on the last list of critical minerals⁵.

While the 3Ts are indirectly linked to the green energy transition through their role in electronics and steel alloys, as well as several experimental and theoretical applications, they have no direct role in major green energy technologies and therefore did not meet the review’s criteria. Nevertheless, the 3Ts are all US Critical Minerals because of their vital role in other applications.

1 OECD (2016), OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition

2 OECD (2016), OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: Third Edition

3 <https://www.mayerbrown.com/en/perspectives-events/publications/2022/09/strengthening-the-us-supply-chain-for-critical-minerals-and-the-inflation-reduction-act-opportunities-and-challenges#:~:text=The%20Energy%20Act%20of%202020,supply%20chain%20vulnerable%20to%20disruption.>

4 See: <https://rmis.jrc.ec.europa.eu/?page=crm-list-2020-e294f6>

5 <https://www.usgs.gov/news/national-news-release/us-geological-survey-releases-2022-list-critical-minerals>

3.3 Negative Issues Often Associated with Artisanal Mining

3.3.1 Environmental Impacts of Artisanal Small-Scale Mining (ASM)

The issue of artisanal small-scale mining (ASM) is a broad topic overlapping multiple anthropological areas. The purpose of this section is to deal specifically with the environmental impacts of ASM in developing countries, where the population is directly dependent on soil and its quality. Environmental impacts negatively impact the living conditions of the locals and their farming activities.

Africa's Great Lakes Region

Artisanal mining contributes to land degradation, loss of biodiversity and natural resources, deforestation, water pollution, and many other forms of environmental impact.⁶ Among the most significant environmental aspects related to ASM are deforestation, changes in landscape structure, influence over geomorphological processes and hydrological river regime, chemical pollution of soil and waterway and, influencing soil production capacity.⁷

As is common with resource extraction, the process of the material being mined and processed scars the earth and if left rampant can result in significant degradation. In developing countries, there is typically less adherence to mandated practices and rules than developed countries, where the impact of mining on the landscape structure is often more significant. As claimed by the International Labour Organization (ILO) report on artisanal mining, unlike conventional industrial mining, ASM is illegal in many cases, and thus degrades the environment.⁸ Illegal mining does not necessarily equal environmental degradation, but the lack of infrastructure at illegal mines sites can result in environmental degradation; however, these same problems can occur at legal mines sites.

Depending on the type and extent of ASM, the impact to the landscape/environment varies. Common types of ASM include shallow alluvial mining, deep alluvial mining, and hard rock mining.

→ Shallow Alluvial Mining includes mining from alluvial sediment where rich deposits are found in sediment loads of alluvium deposits. Minerals are usually deposited up to 3 meters deep. Material is typically washed with a shovel or prospecting pan. This significantly impacts the sediment load downstream and in-turn the erosion and deposition.⁹

→ Deep Alluvial Mining includes the extraction from deep alluvial deposits on the banks of large rivers. Minerals are usually deposited up to 3-meters deep.

→ Hard Rock Mining is the extraction of minerals in rock veins and can be either shallow or deep mining. Access to the mineral veins are through shafts that are not safe enough. The rock breaking is done by using simple tools, (shovels, pickaxes, hammers, and chisels, etc.).

Mining in alluvial sediments leads to the removal of large coarse-grained materials, rocks and other material that is carried down from the upper parts of the stream (parts of trees, branches, etc.). In lower parts of the stream, one can observe the accumulation of sediments and depositing of chemical substances used in mineral processing. In addition to the movement and depositing of sediments, mining in riverbeds has an impact on the flow and direction of the river stream which, in turn, affects flora and fauna reliant on the watercourse. ASM intensifies lateral and vertical erosion. Mineral sluicing and mining itself, where miners damage slopes and riverbanks, lead to erosion. In particular, in the case of mineral sluicing, vertical erosion as well as deepening and widening of artificial channels occur¹⁰.

Changes to the Landscape in Great Lakes Region

No other anthropogenic activities affect the Earth's surface as much as (raw material) mining.¹¹ ASM is not a very widespread method of mining in developed countries. Nonetheless, in developing countries it accounts for up to 90% of total mining output.¹²

Geomorphological Changes

The actual geomorphological processes are also happening on dumps, in waste rocks, or at the sites where wastewater is stored.¹³ Mining waste consists of waste rock, slag and other depreciated soil.¹⁴

The most mined minerals in the African Great Lakes Region (AGLR) that are extracted during ASM are 3T minerals.¹⁵ The 3T minerals extracted by ASM are used in the electronics industry for products such as smartphones, tablets, and laptops, which are mainly consumed in the developed world. On the one hand, because of mining there is a higher likelihood that communities in the mining areas have access to health care, they can pay tuition fees, insurance, etc. On the other hand, the lives of miners are endangered by respiratory diseases, accidents in mines, landslides in mining areas and other negative environmental impacts. The extraction of

6 A. K. Donkor, V. K. (2006). Artisanal Mining of Gold with Mercury in Ghana. West Africa Journal of Applied Ecology (WAJAE), 9, 8

7 Machacek, J. (2019). Typology of Environmental Impact of Artisanal and Small-Scale Mining in African Great Lakes Region. MDPI - Sustainability, 24.

8 International Labour Office Report for discussion at the Tripartite Meeting on Social and Labour Issues in Small-scale Mines; International Labour Organisation: Geneva, Switzerland, 1999; ISBN 9221114805.

9 Juez, C.; Hassan, M.A.; Franca, M.J. The Origin of Fine Sediment Determines the Observations of Suspended Sediment Fluxes Under Unsteady Flow Conditions. Water Resources. 2018, 54, 5654–5669.

10 Machacek, J. (2019). Typology of Environmental Impact of Artisanal and Small-Scale Mining in African Great Lakes Region. MDPI - Sustainability, 24.

11 Hooke, R. Spatial Distribution of Human Geomorphic Activity in the United States: Comparison with Rivers. Earth Surf. Process. Land. 1999, 692, 687–692.]

12 Lombe, W.C. Small Scale Mining and the Environment

13 Machacek, J. (2019). Typology of Environmental Impact of Artisanal and Small-Scale Mining in African Great Lakes Region. MDPI - Sustainability, 24.

14 Li, M. Ecological restoration of mineland with particular reference to the metalliferous mine wasteland in China: A review of research and practice. Sci. Total Environ. 2006, 357, 38–53.

15 J. Macháček, M. S. (2022). The Livelihood of Artisanal and Small-Scale Miners and awareness of the Use of 3T Minerals in Rwanda - A Case Study in the Rutsiro District: A Qualitative Assessment. International Journal of Environmental Research and Public Health, 19, 1-14

these minerals, however, may lead to a worse quality of life for the miners responsible for the extraction in developing countries.¹⁶

3.3.2 Safety

ASM is one of the world's most dangerous occupations.¹⁷ The Collegium Ramazzini statement on ASM presents updated information on its neglected health hazards that include multiple toxic hazards, most notably mercury, lead, cyanide, arsenic, cadmium, and cobalt, as well as physical hazards, most notably airborne dust and noise, and the high risk of infectious diseases.¹⁸

Artisanal mining typically occurs under harsh conditions that lack occupational health and safety standards. As the demand for metals is increasing due in part to their extensive use in 'green technologies' for climate change mitigation, the negative environmental and occupational consequences of mining practices are disproportionately felt in low- and middle-income countries.¹⁹

3.3.3 Child Labour and Artisanal Mining

In August 2016 and again in November 2017, Amnesty International issued reports highlighting labour abuses, particularly the prevalence of child labour, in cobalt mining in the Democratic Republic of Congo (DRC) – calling out companies like Apple, Dell, Microsoft and Tesla.²⁰ While it is in the cobalt space, it highlights child labour issues around artisanal mining in the DRC and is relevant to 3T artisanal mining. The basic conditions under which cobalt mining in the DRC is carried out lend themselves to the incorporation of materials produced by child labour into global supply chains. Artisanal mining and industrial mining take place in the same locations, and materials from different sources are typically blended at the refining stage.²¹ Child workers are frequently exposed to abuses and dangerous or unhealthy working conditions.²² Child labour has traditionally been associated with artisanal mining and without proper management can run rampant. The objective of the due diligence tracking and reporting is to increase transparency at every level of the supply chain to eradicate human rights and child labour abuses.

4. Regulatory and other frameworks

4.1 Overview

The past decade has witnessed a strong growth in voluntary and mandatory standards that integrate the principle of risk-based due diligence, guiding business to prevent negative impacts and to stimulate positive contributions to society. For governments, the due diligence 'requirement' on sustainability in global supply chains has rapidly become an important instrument of policymaking, serving over-arching policy goals including sustainability, trade, and geo-politics.

In 2010, US president Barack Obama signed into law the Dodd-Frank Act, following loud calls for action by a range of stakeholders, including US-based activists, concerning the risk of minerals production (specifically 3TG and their derivatives) financing armed groups in the AGLR. Since 2012, US reporting companies have been required to disclose whether any such minerals ('conflict minerals') are used in the production or functionality of any of their products. If so, companies need to conduct necessary efforts to identify the country of origin of those minerals, particularly with the aim to report whether these minerals were sourced in the Democratic Republic of Congo (DRC) or any adjoining country.

In parallel to the development of the US Dodd-Frank Act, the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidelines for Responsible Supply Chain of Minerals from Conflict-affected and High-risk areas (2011-2016) were developed and adopted. The efficacy of the Dodd-Frank Act will be explored in more detail in section 5.2.1. A few years after Dodd-Frank was signed into law, the European Union began work on their conflict minerals regulation which was published in May of 2017 and became effective January 1, 2021.

Both the US and the European Union (EU) require companies to identify the origin of minerals in order to prevent minerals financing armed groups and conflict in countries of origin. For companies, there are differences between US and EU rules concerning in-scope companies, geographies covered and compliance requirements. For example, whereas the US legislative framework (Dodd-Frank Act, Section 1502) specifically targets raw materials from the AGLR, the EU approach covers a geographically global scope via the concept of Conflict-Affected and High-Risk Areas (CAHRAs).

16 J. Macháček, M. S. (2022). The Livelihood of Artisanal and Small-Scale Miners and awareness of the Use of 3T Minerals in Rwanda - A Case Study in the Rutsiro District: A Qualitative Assessment. *International Journal of Environmental Research and Public Health*, 19, 1-14

17 P. Landrigan, S. B.-O. (2022). Reducing disease and death from Artisanal and Small-Scale Mining - the urgent need for responsible mining in the context of growing global demand for minerals and metals for climate change mitigation. *Environmental Health*, 21(78), 1-13

18 P. Landrigan, S. B.-O. (2022). Reducing disease and death from Artisanal and Small-Scale Mining - the urgent need for responsible mining in the context of growing global demand for minerals and metals for climate change mitigation. *Environmental Health*, 21(78), 1-13

19 P. Landrigan, S. B.-O. (2022). Reducing disease and death from Artisanal and Small-Scale Mining - the urgent need for responsible mining in the context of growing global demand for minerals and metals for climate change mitigation. *Environmental Health*, 21(78), 1-13

20 Amnesty International (AI). (2017a). Time to recharge: Corporate action and inaction to tackle abuses in the cobalt supply chain. Amnesty International.

21 RCS Global. (2016). The battery revolution: Balancing progress with supply chain risks. Resourcing Consulting Services.

22 Amnesty International (AI). (2016). 'This is what we die for': Human rights abuses in the Democratic Republic of the Congo power the global trade in cobalt. Amnesty International.

Over-all, the risk-based due diligence practice runs as a central concept throughout the growing number of initiatives spreading across the globe, but mostly initiated in OECD countries. They differ in forms and shapes; ranging from sector-broad standards (such as Responsible Minerals Initiative (RMI)), mineral-specific initiatives (such as the Responsible Gold Guidance of London Bullion Market Association (LBMA)), industry-specific (such as Responsible Jewellery Council) or legislative initiatives initiated by the German, French or EU Governments.

What unites all of the industry standards and mandatory due diligence frameworks is that they build on and reference to the two voluntary 'guidance documents' that provide recommendations for business:

- the UN Guiding Principles on Business and Human Rights;
- and OECD Multinational Enterprises (MNE) Guidelines, with their accompanying sector-specific OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

The five steps process, displayed in Figure 2, espoused by the OECD Due Diligence Guidance, remains a point of departure for businesses tasked with implementing due diligence efforts:

1. Establishing strong company management systems.
2. Identifying and assessing risks in the supply chain.
3. Designing and implementing a strategy to respond to identified risks.
4. Carrying out independent third-party audits of smelters/refiners' due diligence practices.
5. Reporting annually on supply chain due diligence.

For businesses in the EU and globally, the OECD inspired due diligence practices will soon need to be approached as 'standard business practice', which includes efforts to identify, assess, prevent, mitigate, and report on risks in the supply chain.

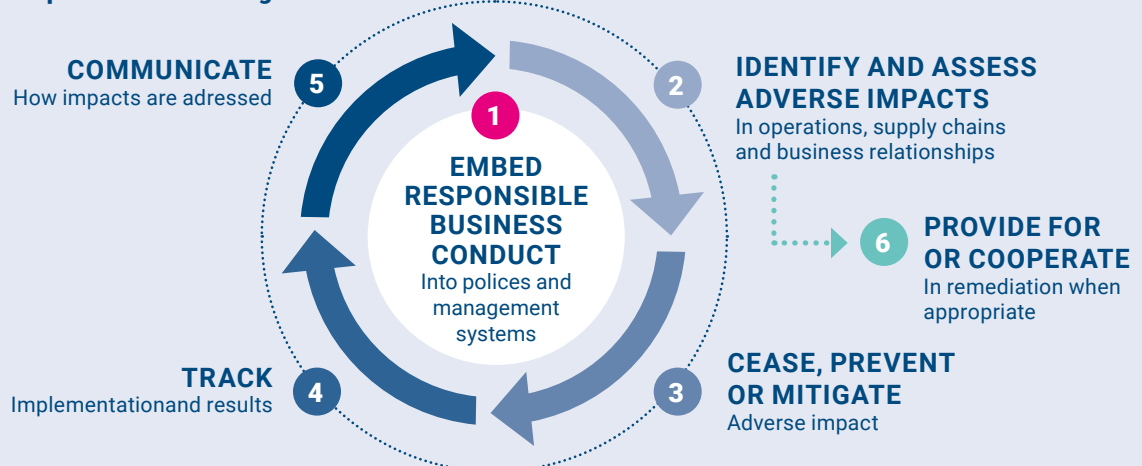
4.2 Perspectives on the implementation of OECD Guidelines

The OECD Guidelines have proved a strong basis for industry schemes and mandatory legislation on minerals supply chain due diligence, including in the EU and the US. A recent OECD report on 'Monitoring Corporate Disclosure' (April 2022) that examined companies' reporting on due diligence for the mineral supply chain globally, found that the percentage of companies whose disclosures demonstrate at least some implementation of the OECD Due Diligence Guidance increased from 30 percent in 2014 to 53 percent in 2018. However, findings on the actual implementation of steps 2 and steps 3 (risk based due diligence) remain limited; only 13% of companies report on identification of risks (step 2), and only 19% on responding to risks (step 3).

Another interesting finding of the OECD study on corporate disclosures, is that reporting levels by downstream companies are relatively high but less so at midstream and upstream. For example, for the tin sector, a total of 48% of downstream companies reported on due diligence, against only 31% at upstream, and 27% of companies at midstream (see OECD Report, page 17).

The success of the OECD Guidelines is also visible through the wide range of industry standards that are building on the OECD Guidelines, including beyond 3TG. These include inter alia the World Gold Council (WGC), the Initiative for Responsible Mining Assurance (IRMA) and the due diligence tool that the International Copper Association (ICA) developed. In addition, at upstream, the International Council on Mining and Metals (ICMM) has evolved to include the OECD Guidelines in their 10 Principles and associated performance expectations.

Figure 2 | Five-step Wheel of Due Diligence



Source: OECD Responsible Business Conduct Guidelines

With the broad range of industry standards developing, OECD 2018 Alignment Assessment and the expected incorporation of industry standards into the EU Conflict Minerals Regulation implementation (with a 'list of approved industry schemes' to be published) is leading to a general effort amongst industry schemes to ensure strong alignment with OECD Guidelines.

Over time, however, the scope and application of OECD Guidelines are beginning to show their limitations. With a review of the OECD Due Diligence Guidance underway, the expectation is for more specific guidance, such as but not limited to:

- how to conduct due diligence with a view to the complexity of gaining supply chain traceability and difficulty of conducting Reasonable Country of Origin Inquiry (RCOI);
- how to exercise leverage on the midstream role of smelters and refiners to reach beyond 'pinch points';
- a widening of sustainability risks, beyond 'conflict', to encompass a broader definition of 'materiality' in minerals supply chains (as reflected in RMI 'all materials standard' now encompassing a wide range of ESG risks);
- a move towards the United Nations Guiding Principles (UNGP) thinking and application of sustainability risks.

4.3 US Dodd-Frank Street Reform and Consumer Protection Action (Section 1502)

4.3.1 Introduction

Since the introduction of the US Dodd-Frank Act, particularly Section 1502, US-listed companies have been required to disclose annually whether they and their products they manufacture or contract to manufacture contain conflict minerals. The law was adopted in 2010, and entered into force in 2012, with the first reports filed by May 2014.

Under the US Dodd-Frank Act, 'conflict minerals' are defined as the 3TG regardless of the country of origin. US stock exchange-listed companies that manufacture, or contract to manufacture, products containing 3TG in their supply chain are to report on an annual basis whether these originated in the DRC or an adjoining country ("Covered Countries"). If so, reporting obligations apply, including a description of measures taken to exercise due diligence. The company was expected, as part of the measures taken to exercise due diligence, to include an independent private sector audit of the report. In addition, companies are liable for the accuracy of the information provided as well as accountable to the general public for their corporate behaviour.

In terms of enforcement, Section 1502 relies mostly on public scrutiny and 'naming and shaming' by key stakeholders to bring about change in due diligence compliance and responsible sourcing of 3TG in companies' supply chains. To date there have been no sanctions or fines imposed in relation to

the non-compliance with Section 1502, which has been raised by many observers as a severe shortcoming and as discouraging US companies from taking up the requirements more seriously, instead of just 'ticking the box'.

Across the US, approximately 6,000 US-listed companies are estimated in scope for implementation, with another 16,000 companies registered outside the US (but affected through supply chain relations), as estimated by the Securities and Exchange Commission. In the EU there are approximately 40 dual-listed (EU/US) companies that are subject to the US Dodd-Frank Act.

4.3.2 Perspectives on the functioning and implementation of 'The US Dodd-Frank Act'

Since 2014, in-scope companies have reported on their reasonable country of origin inquiry and due diligence measures taken. Companies must file their Conflict Minerals Disclosure utilising Form SD – Specialised Disclosure Report. The set-up of the reporting has been more or less standardised as a result of industry groups and lawyers suggesting approaches for comparable reporting formats.

The initial Securities and Exchange Commission (SEC) estimate included approximately 6,000 firms to be potentially in-scope, but only 1,280 firms filed a conflict minerals disclosure in 2015. In 2021, following a Government Accountability Office (GAO) report to the US Congress, it was found that roughly two thirds of companies made preliminary determinations about the origins of their conflict minerals. Furthermore, of those companies that went on to perform due diligence:

- An estimated 31 percent reported they could not determine whether the minerals used in their products originated in covered countries.
- An estimated 24 percent reported that they had determined, after their RCOI, that none of their conflict minerals originated in covered countries or they had no reason to believe that their minerals originated in covered countries.
- An estimated 81 percent of companies that submitted filings in 2021 reported that they had conducted due diligence after conducting an RCOI.
- An estimated 47 percent of companies that conducted due diligence ultimately could not determine whether any of the conflict minerals used in their products have originated in covered countries.
- Only 3 percent of the companies that reported conducting due diligence in 2021, reported that they could determine whether minerals in their products financed or benefitted armed groups in covered countries. These all reported that their conflict minerals did not finance, or benefit armed groups.

Until 2021, most of those companies continued their disclosures, but the coverage and depth of disclosures have not expanded or improved much over the years, and non-governmental organisations (NGOs) have highlighted this poor progress. Part of the reason may have been the uncertainties surrounding the Dodd-Frank Act, as under the Trump Administration signals had been given that the rules might be eliminated with Members of Congress introducing legislation that would have repealed Section 1502 of Dodd-Frank. As a result, the Securities and Exchange Commission (SEC) Division of Corporation Finance issued a statement that no enforcement actions would be started when companies filed incomplete Form SDs, only including the reasonable country of origin inquiry.

By contrast, the Biden Administration is giving strong attention to (critical) raw materials and minerals needed for the energy transition, which has given rise to expectations that additional guidance and re-formulation of the US conflict minerals rule may be provided by the SEC. These have, however, yet to materialise and as time goes on this seems less likely.

In September 2022, the US Government Accountability Office (GAO), published their annual 2022 Conflict Minerals report as mandated by the Dodd-Frank Act section 1502. The conclusion of the report is as follows: ‘Overall peace and security in the eastern part of the Democratic Republic of the Congo (DRC) has not improved since 2014 because of persistent, interdependent factors that fuel violence by non-state armed groups (armed groups). Armed groups continue to commit severe human rights abuses, including sexual violence, and profit from the exploitation of “conflict minerals,” according to the Department of State.’ (See: GAO report 22-105411, May 2022).²³ As argued below, this depressing conclusion says little about the success or failure of ‘conflict minerals’ initiatives.

4.4 EU Conflict Minerals Regulation

4.4.1 Introduction

Access to metallic ores, raw and processed metals is of key importance to the EU, its industries, citizens, and the implementation of the Union’s short, mid and long-term economic and social strategy. The EU is highly dependent on imports of 3TG (tin, tantalum, tungsten and gold), and in 2022 both tantalum and tungsten figure on the list of Critical Raw Materials list for the EU (whereas the US also adds tin, for national security and/or economic development reasons). Due to the nearly total reliance on third-country imports and the complex nature of global mineral supply chains, it is plausible that these metals have contributed to the financing of groups committing human rights abuses before entering the EU via multi-layered and complex supply chains.

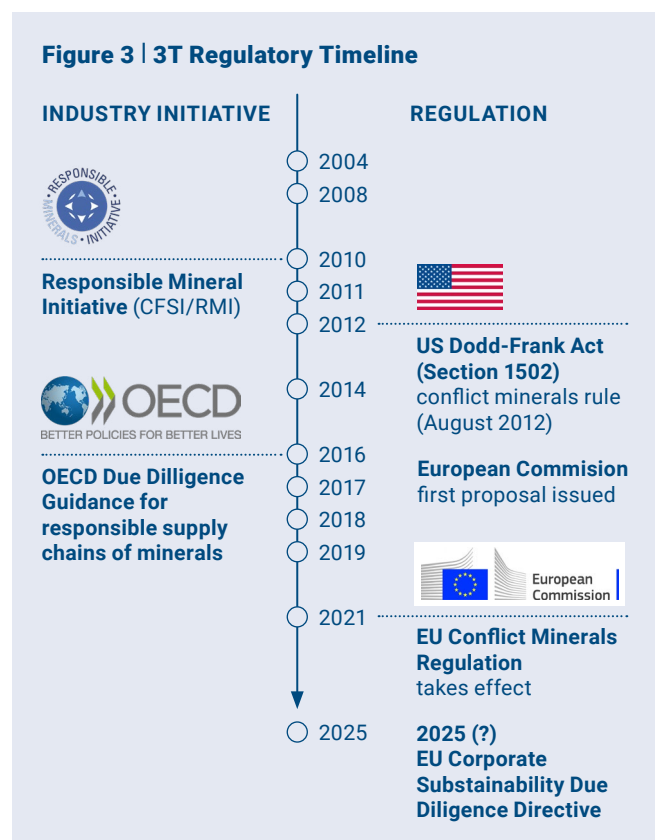
The production and sourcing of these minerals has regularly been linked to human rights abuses, particularly in third countries with weak institutions and a low governance capacity to ensure the protection of their citizenry. This association with adverse social impacts presents legal, reputation and diplomatic risks to the EU and the companies operating within its boundaries. This issue is particularly salient when minerals originate in CAHRAs.

The EU Conflict Minerals Regulation (Regulation 2017/821) was implemented in January 2021 in response to mounting pressure to follow the US’ example in passing the Dodd-Frank Act in 2010 and consequently implementing its Section 1502 regulations of conflict minerals trade. The Regulation aims to disrupt the linkages between minerals extraction and trading on the one hand, and human rights violations, conflict, and corruption in fragile environments on the other. The Regulation governs 3TG from CAHRAs. These minerals are imported by an estimated 600 to 1,000 EU companies, including small and medium size enterprises (SMEs) as well as larger companies.

Figure 3 below displays the timeline for the different conflict minerals regulations and when they were rolled out.

4.4.2 Negotiating process

Building on the UNGP’s, and the voluntary OECD Due Diligence Guidance, the EU Conflict Minerals Regulation enshrines the business responsibility to conduct due diligence, in order to clamp down on conflict minerals trade and prevent human rights violations.



23 <https://www.gao.gov/assets/gao-22-105411.pdf>

4.4.3 What the EU Conflict Minerals Regulation demands from business actors

The EU Conflict Minerals Regulation has similarities and differences with Section 1502 of the US Dodd-Frank Act:

- In terms of product scope, a limited number of minerals (tin, tantalum, tungsten, their ores, and gold) are currently included in the EU Regulation. However, to prevent unnecessary burdens on SMEs, the final text includes volume thresholds for each mineral.
- In terms of geographical focus, the EU Conflict Minerals Regulation has a global scope, compared to the Dodd-Frank Act's focus on the Great Lakes Region. However, the EU targets human rights violations in environments that are 'high risk', by requiring companies to assess whether their supply chains are connected to and/or transit in 'Conflict-Affected and High-Risk Areas' (CAHRAs).
- Looking at the thematic scope and covered risks, the EU Conflict Minerals Regulation has enshrined the OECD Due Diligence Guidance so-called 'Annex II' risks in its law by covering the same issues. This means the focus is on conflict financing by armed groups and security forces, human rights abuses, child labour, sexual violence, etc. The thematic scope of the Dodd-Frank 1502 covers the same range of risks, mentioning financing of armed groups, labour, or human rights violations.
- In terms of requirements the EU Conflict Minerals Regulation lays down supply chain due diligence obligations for importers from the EU. They are expected to comply with the OECD five-step due diligence framework, by tracing the origin of imported goods and putting in place processes to manage risks in complex minerals supply chains. As a continuous and ongoing process, companies are expected to identify, assess, prevent, mitigate, and report on risks in their supply chain 12.

Below, Table 3 compares requirements for business under the EU Conflict Minerals Regulation and the US Dodd-Frank Act.²⁴

Table 2 | Timeline of ownership changes of bTV and Nova Broadcasting Group 2019 to 2021

Element	US Securities and Exchange Commission (SEC) Conflict Minerals Rule	EU Conflict Minerals Regulation
Organisation for Economic Co-operation and Development (OECD) Conformance	The rule requires companies to implement due diligence 'that conforms to a nationally or internationally recognised due diligence framework.' OECD meets this requirement.	Yes, must conform to OECD Due Diligence Guidance.
Applicability	For US companies (registrants) whose products contain conflict minerals tin, tungsten, tantalum, and gold (3TG), that are necessary to the functionality or production of a product manufactured by the registrant or contracted by the registrant to be manufactured.	For EU importers of the minerals and metals 3TG.
Geography covered	DRC and Adjoining Countries; often referred to as Covered Countries.	Covers Conflict-Affected and High-Risk areas (CAHRAs).
Country of Origin Inquiry (RCOI)	Companies need to perform a Country of Origin Inquiry (RCOI).	Required for importers but not required for all other downstream companies.
List of Smelters of Refiners (SORs)	For situations where products are not identified as DRC Conflict-Free, SORs must be listed in the filing.	Required for importers but not required for all other downstream companies.
Country of Origin Information (COI)	For situations where products are not identified as DRC Conflict-Free, COIs must be listed in the filing.	Required for importers but not required for all other downstream companies.

Product Declaration	Not Required - Companies do not have to make a product declaration due to a court decision but may make a 'DRC Conflict-Free' declaration if they choose.	Not Required - The EU does not define products as 'conflict-free.'
Independent Private Sector Audit (IPSA)	Required if 'DRC Conflict-Free' product declaration is made.	Applicable EU importers are subject to audit unless all of their Smelters or Refiners (SORs) are on the White List. The regulation states 'Union importers of metals shall be exempted from the obligation to carry out third-party audits pursuant to paragraph 1 provided they make available substantive evidence, including third-party audit reports, demonstrating that all smelters and refiners in their supply chain comply with this Regulation.'

The five-step framework established by the OECD Due Diligence Guidance is to be followed by importers (see earlier chapter), including the need to identify and assess risk in the supply chain, design and implement a strategy to respond to identified risks and report yearly on supply chain due diligence.

Implementation and enforcement, responsibilities are shared between the European Commission and the Member States.

- EU Member States are responsible for ensuring that companies comply with their obligations. The imposition of penalties in case of non-compliance is also left to the Member States. In practice this means discrepancies between member states exist over the scale of fines imposed, thus creating 'loopholes' for non-compliant imports.
- The European Commission fulfils an important implementation role, which is to publish a 'White List' of responsible smelters and/or refiners supplying the EU, as well as a guide to the 'CAHRA list'.

The European Commission will review the package after two years of implementation (January 2023) and every three years thereafter.

4.4.4 Perspectives on functioning and implementation of 'EU Conflict Minerals Regulation'

An official review process of the functioning of the regulation is scheduled to take place in 2023. In the meantime, critical opinions have been expressed by civil society organisations. These include:

- Limited number of in-scope companies since only importers of raw materials are covered.

- The missing obligation within the Regulation towards sanctions and the divergent implementation of the law regarding control mechanisms or sanctions.
- Lack of transparency: there is no public list of European companies' imports and companies falling under the Regulation in most countries. Most member states do not publish lists of importers falling under the scope of the Regulation, with the arguments of corporate confidentiality or data protection. Whereas due diligence obligations under the Regulation are estimated to apply to 600 to 1,000 Union importers and approximately 500 smelters, it is not possible due to lack of transparency to check on actual implementation. In the EU, there are 40 dual-listed (EU/US) companies subject to the US Dodd-Frank Act.
- The effective implementation of the EU Conflict Minerals Regulation is not backed up by a robust enforcement mechanism. Currently, there is a fragmented approach to enforcement amongst EU Member States, with only corrective actions allowed under the Regulation, but no punitive sanctions. For example, whilst France goes as far as putting into place an import ban for non-compliant actors, the Netherlands, Swedish and Czech administrations publish a list of 'corrective actions' applied to companies (with the Czech sharing an actual 'black-list' of non-compliant actors). Also, most (but not all) countries proceed to issuing a procedural or conditional fine if a company fails to take corrective action, and these differ in amount. Whereas non-compliant actors can be (repetitively) fined 50.000 EUR in Germany, a conditional fine of 100.000 EUR is applied in Luxembourg, 20.000 EUR in Italy, and only 726 EUR in Austria. As was argued by research organisations²⁵, a harmonised minimum amount for the conditional fee is advised, such as 50.000 EUR (which amounts to approximately two times the fee for an audit).

²⁵ See for example IPIS research paper on the 'Review of the EU Conflict Minerals Regulation' (2021); <https://ipisresearch.be/wp-content/uploads/2021/06/Review-paper-on-EU-Conflict-Minerals-Regulation-1-1.pdf>

→ Overreliance on industry-led due diligence schemes (or: industry schemes) for companies to certify their due diligence practices through third party audits provided by such industry schemes. The European Commission is still to publish the so-called 'White List' with officially recognised industry schemes (expected for late 2022 or 2023), as well as the approved list of smelters and refiners. Where Union importers participate in recognised industry schemes, they are exempted from individual third-party audits that need to be submitted to the national authorities. Similarly, Union importers that purchase minerals from white-listed non-EU smelters and refiners, only need to provide the due diligence report of the white-listed smelter as disclosure proof.

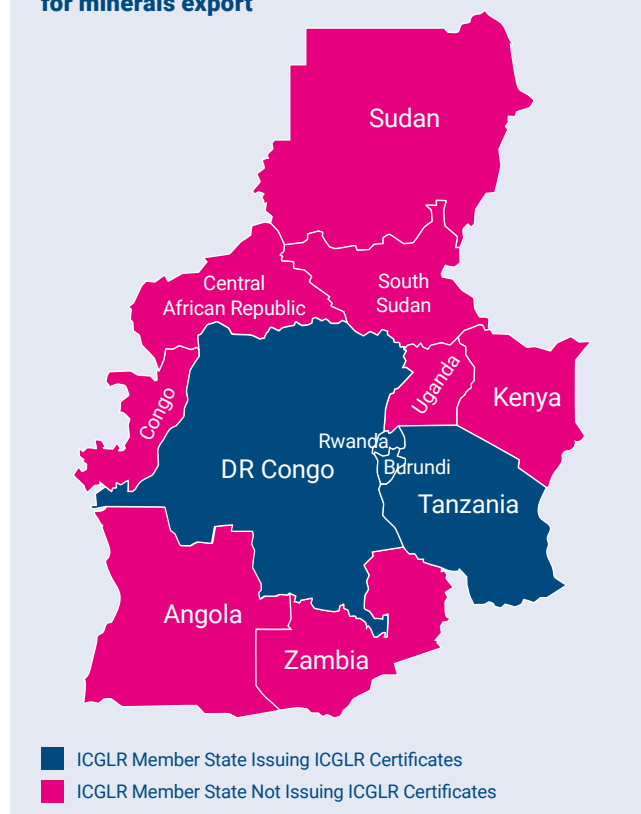
The big problem with reliance on industry schemes for due diligence certification is that this undermines the Regulation which states that companies themselves are responsible for their due diligence practices. Even more so, the alignment assessments undertaken by the OECD have shown that not all industry schemes provide sufficient guarantee that member practices are checked and audited in a structured, in-depth, and professional manner. This is because industry schemes often fail to comply with the OECD Due Diligence Guidance. Moreover, as mentioned in one of the reports; 'It cannot be assumed that they automatically meet the full requirements of the Regulation, especially since these schemes are a form of self-regulation by the private sector that cannot replace independent scrutiny by authorities.'

4.5 International Conference of the Great Lakes Region (ICGLR)

In December 2006, AGLR Member States²⁶ came together to create the International Conference on the Great Lakes Region (ICGLR), as displayed in Figure 4. In a Pact, signed by all ICGLR Member States, it was agreed to seek to translate the region's endowment of natural resources from sources of conflict into resources for development. As part of the Pact, Article 9 of the 'Protocol Against the Illegal Exploitation of Natural Resources' states that, 'The Member States agree, in accordance with the Protocol Against the Illegal Exploitation of Natural Resources, to put in place regional rules and mechanisms for combating the illegal exploitation of natural resources which constitute a violation of the States' right of permanent sovereignty over their natural resources and which represent a serious source of insecurity, instability, tension and conflicts.' The Protocol constitutes the legal framework for the International Conference of the Great Lakes Region (ICGLR)'s 'Regional Initiative against the Illegal Exploitation of Natural Resources' (RINR) launched at the Lusaka Special Summit held in December 2010. A key focus of the RINR is the establishment of 'the Regional Certification Mechanism (RCM)' for trade in 3TG minerals, involving audit and certification activities of the Member States under the guidance and coordination of the ICGLR Secretariat. As per the RCM Manual,

the RCM covers the 3TG (tin, tantalum, tungsten, and gold) – referred to as 'designated minerals' – which were selected due to their conflict-proneness and incidentally are also specifically designated as conflict minerals by the US Dodd-Frank Act, 2010 and the 2021 EU Minerals Regulation 2017/821. The purpose of the RCM is to provide for sustainable conflict-free mineral chains in and between the ICGLR Member States with the aim of eliminating financial channels supporting armed groups that sustain or prolong conflicts, and/or otherwise engage in serious human rights abuses.

Figure 4 | Map of ICGLR Member States and current status regarding the issuing of ICGLR Certificate for minerals export



The first edition of the RCM Manual was developed in 2011, aligned with the OECD Due Diligence Guidance and aimed at fulfilling regional and international market requirements on transparent mineral trade. Five years into implementation, the Manual was revised, incorporating lessons learnt and adapting agreed best practices. As a procedural guide, the requirements of the Manual aim at establishing responsible mineral supply chains from mine sites to export points, and including intermediaries such as mines/miners, traders, transporters, processing entities and exporters of the designated minerals.

The manual seeks to describe the minimum requirements of the ICGLR RCM and how they shall be implemented in Member States. ICGLR Member States may adopt more rigorous requirements than the minimum requirements in the RCM.²⁷

²⁶ Angola, Burundi, Central African Republic, Democratic Republic of Congo, Kenya, Republic of Congo, Rwanda, Uganda, Sudan, Tanzania, and Zambia; South Sudan became the 12th ICGLR Member State in 2012

²⁷ ICGLR Regional Certification Mechanism Manual 2nd edition

The three main components of the RCM are mine site inspections carried out by the government, Chain-of-Custody²⁸ (CoC) programme administered by the governments with CoC implementation being the responsibility of the supply chain actor, and finally third-party audits of exporters administered by the ICGLR Secretariat and Audit Committee. Once these three elements are in place and no 'Red Status Criteria'²⁹ are identified from the mine site through the exporter, then the designated minerals are allowed for export because the supply chain has been certified to that point.

ICGLR Member States have been slow to implement the minimum requirements. The DRC and Rwanda were the first two countries to implement. As of November 2022, Burundi, DRC, Rwanda, and Tanzania have implemented the RCM to the point of issuing ICGLR Certificates for the exported minerals. Several other Member States are in different phases of implementation. Progress has been made since the revision of the RCM in 2019 with over 20 third-party audits conducted in the last twelve months and the governments implementing other elements in the legal frameworks.

5. Industry and government efforts to reduce conflict in the Great Lakes Region from trade in 3Ts.

5.1 Minerals supply chains and key actors

To understand why and how government, industry and other stakeholders have intervened in mineral supply chains to reduce conflict and improve sustainable development, it is important to take note of the realities of minerals' supply chains and its wide range of actors and stakeholders. As stated above, unacceptable conflict levels and the resulting human rights violations in minerals producing countries, have driven the US and European Union (EU) to develop and put into place legislation containing mandatory due diligence requirements on businesses to stop the financing of conflict through trade in tin, tungsten, tantalum, and gold (3TG). In parallel, a wide range of industry standards appeared, to support business in the implementation of Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance, most notably through due diligence schemes on the upstream (such as ITRI Tin Supply Chain Initiative (ITSCI) for 3T) and midstream (such as Responsible Minerals Initiative (RMI)/Responsible Minerals Assurance Process (RMAP) audit-scheme for smelters and refiners) and the RMI tools and data for the downstream.

For instance, the upstream of the minerals supply chain is frequently situated in fragile and developing country context, which pose severe development challenges caused by weak institutions and capacity constraints. Especially in poorly governed countries, the raw materials sector such as mining has proved prone to risks that became visible over the last decades. Those risks are often interconnected, and may include conflicts, (and conflict-affected) human right abuse including forced and child labour, environmental degradation, risks related to water scarcity and quality, population displacement, abuses of indigenous peoples' rights.

Such minerals supply chain realities showcase a combination of socio-economic factors, with severe weaknesses in terms of sustainable development and functioning governments in the upstream source countries, as well as structural market-deficiencies and buying powers on the mid-and downstream side of the supply chain.

5.2 Upstream

Over a decade of implementation of government legislation as well as industry schemes has provided insights into the results, as well as effects (and unintended effects) on the upstream side of the supply chain, related to their 'raison d'être': conflict and related human rights violations (inter alia), as well as broader sustainable development.

Eastern Democratic Republic of Congo (DRC), and, to a lesser extent Burundi, Rwanda, and Uganda, contain some of the world's most significant deposits of 3T. The history of mining operations in the DRC and competition for the wealth contained within the excavation, trade, and export of 3T affects the viability of current regulatory schemes. In the DRC, these deposits were mostly mined by semi-industrial operations until the 1980s when, for reasons that include infrastructural decay in the DRC and steep falls in global commodity prices, one by one, almost all ceased working. The deposits were subsequently largely taken over by artisanal miners.³⁰ Meanwhile, beginning in the mid-1970s, in the context of worsening economic crisis and the Zairean state's growing failure to pay salaries, and resuming a practice that had been prevalent in the pre-colonial era, security force personnel and agents of various government services erected a growing number of barriers across transport routes, not only

28 CHAIN OF CUSTODY (CoC): A record of the sequence of individuals or entities which have custody of Designated Minerals as they move through the upstream supply chain, as well as associated records of the Lot(s) being moved, and the actions performed on the Lot(s) at any given point in the chain (production, combination, transportation, export, etc.) This process concludes with the issuance of an ICGLR Certificate for the export of Designated Minerals.

29 ICGLR Regional Certification Mechanism Manual 2nd edition Appendix A and E

30 Gregory Mthembu-Salter, Social and Economic Dynamics of Mining in Kalima, DRC, Institute for Security Studies Paper 185, April 2009, page 3.

in the east but across the whole country, to tax the movement of people and goods along them, including minerals.³¹

Regional governments and their armies, and particularly those of Rwanda and Uganda, played a critical military role in the ousting of Zairean president Mobutu Sese Seko in 1997 and his replacement by Laurent Desiré Kabila. The Rwandan and Ugandan armies re-invaded the DRC a year later in support of rebel movements seeking to oust Kabila, at a time when international prices for tin and coltan were rising rapidly. To help finance their military campaigns and to disguise the extent of them from donors, both governments first instructed their commanders in eastern DRC to requisition and ship across the border whatever stocks of minerals they could find. As the conflict progressed, these commanders increasingly directed their troops to take direct control of mine sites and their access routes, to take over and/or tax production.

Many of the armed groups active in eastern DRC have done and continue to do the same. The latest map by Belgian research group International Peace Information Service (IPIS) shows a foreign or Congolese armed group presence at or near multiple 3T and gold sites in eastern DRC. The armed groups include Raia Mutomboki, Mai Kifuafua, Mai Simba, Mai Nyatura, and the Forces Démocratique de Libération du Rwanda (FDLR).³²

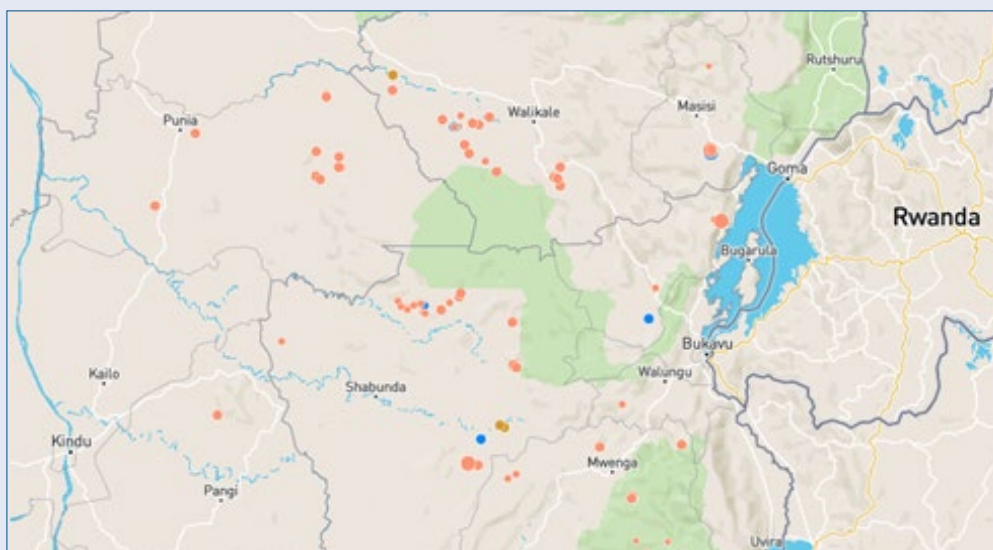
A faction of the FDLR is present in the Virunga National Park, where there are no known gold or 3T deposits, instead they systematically tax trade in charcoal, a commodity greatly in demand in nearby Goma but which is not internationally traded and is not subject to international regulatory intervention. This example illustrates that armed groups do not derive 'rents' from minerals alone, which is why the various

initiatives that make it harder for armed groups to profit from minerals cannot and do not stop these groups from continuing to finance their conflicts with other sources of revenue. These initiatives seek rather to ensure that the trade in minerals is not among these armed groups' sources of finance, and that international consumers of these minerals are not inadvertently financially contributing to their wars.

For this reason, evidence that conflict levels in eastern DRC have not noticeably declined despite over a decade of international efforts to stop 'conflict minerals', as has recently been concluded by the US Government Accountability Office (GAO)³³ is not in itself evidence that these efforts have failed. If it were found, however, that armed groups continue to derive as much of their financing from taxing the trade in minerals as they did before all the various 'conflict minerals' initiatives were launched, that would constitute prima facie evidence of these initiatives' failure. But it is not the case. In fact, militarisation in and around 3T artisanal mines has gone down since the implementation of responsible minerals initiatives in the sector, while militarisation levels in artisanal gold mines, where there are no such initiatives active, is, according to IPIS data, two to three times higher than in 3T mines (see below for more detail).³⁴

It is not only armed groups that collect 'rents' from the trade in minerals. As Figure 5 displays, the Forces Armées de la République Démocratique Du Congo (FARDC) also illegally taxes producers, traders, and transporters of minerals at mine sites and/or their transport routes. The orange sites on the map are cassiterite mines, while the blue ones are coltan mines. The FARDC is not the only Congolese state institution to derive illegal rents from minerals production and trade; the illicit taxing and smuggling by state agents of 3Ts (and gold) is also a significant challenge.

Figure 5 | Map of Tin and coltan mines in eastern DRC with an 'indisciplined' FARDC presence, 2022



Source: IPIS

31 Peer Schouten, *Roadblock Politics: The Origins of Violence in Central Africa*, Cambridge University Press, 2022, pages 98-103.

32 <https://www.ipisresearch.be/mapping/webmapping/drcongo/v6/#-2.151441260775144/27.62855297851562/6.546600453336909/4/1/2.63r2f4.4.ew>

33 US GAO, *Conflict Minerals: Overall Peace and Security in Eastern DRC have not improved since 2014*, September 14, 2022, <https://www.gao.gov/products/gao-22-105411>

34 <https://ipisresearch.be/wp-content/uploads/2022/08/Responsible-mining-scorecard.pdf> p. 15

5.2.1 The regional regulatory environment

Repeated reporting on conflict financing issues relating to mining and the trade in minerals in eastern DRC and its neighbours during the early 2000s by, *inter alia*, the UN Group of Experts on the DRC and UK non-governmental organisation (NGO) Global Witness, stimulated rising international concern. As we have seen, in 2011, the Group of Experts and the Organisation for Economic Cooperation and Development (OECD) published guidance for companies sourcing minerals from eastern DRC and its neighbours, and from other Conflict-Affected and High-Risk Areas (CAHRAs) on what steps were required to source these minerals responsibly.³⁵ And in July of 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act came into effect in the USA.³⁶

In September 2010, in apparent response to the OECD and UN Guidance, and even more so to Dodd-Frank, then-President Joseph Kabila announced that all artisanal mining activities must immediately cease in three provinces – North and South Kivu and Maniema.³⁷ Kabila's measure, which stayed in place for six months, during which time it was never fully effective, was immensely disruptive for the tens of thousands of people making a living from artisanal mining in eastern DRC. Many of them, and many Congolese and international commentators subsequently, blamed this disruption on Dodd-Frank.

In September 2011, the DRC government formally adopted the OECD responsible sourcing guidance in a decree from the Ministry of Mines.³⁸ In the same year, the DRC joined other ICGLR member states in establishing the RCM (see above).

5.2.2 Initiatives by Supply Chain Actors

The first and still the largest response of the global metals industry to Section 1502 of the Dodd-Frank Act and to the OECD and UN's responsible sourcing guidance was the establishment of ITSCI³⁹ in 2011 by the International Tin Association (ITA)⁴⁰, in collaboration with the Tantalum-Niobium International Study Center (TIC).⁴¹ ITSCI is active in DRC, Rwanda and Burundi, where it works with government services to implement mine site verification and a supply chain certification and traceability system, based on bagging and tagging minerals at mine sites. Tags are then checked along the supply chain through to regional processing and export centers.⁴² To supplement this process, ITSCI employs PACT,

a US NGO, which is supposed to conduct qualitative due diligence on the supply chains in which the programme works. The system is funded by industry levies at rates that vary from metal to metal and country to country but are not made public.

ITSCI has over 300 companies past and present as upstream members,⁴³ and exports the majority of artisanally mined 3Ts from the Africa Great Lakes Region (AGLR), especially to smelters that are members of the Responsible Minerals Assurance Process (RMAP) of the Responsible Minerals Initiative (RMI)⁴⁴

From piloting traceability of a few tonnes of mineral for a handful of companies in 2010, by the end of 2017 ITSCI completed scaling up across mining areas of central Africa to cover an area more than 3 times that of the UK and enabling the export of more than 21,000 tonnes of mineral concentrate each year; with the vast majority of the value of that mineral remaining in the country of origin.⁴⁵

For many years, ITSCI was the only operator of a traceability system in the region, and was widely accused of abusing its monopoly position, not only by potential competitors such as RCS Global, but also by Congolese and international civil society organisations, NGOs, and many upstream supply chain actors across the region.⁴⁶ RCS Global has since managed to introduce a degree of competition in the region with its Better Mining programme, which offers a comparable traceability and due diligence service.⁴⁷

ITSCI has continued to come in for criticism, some specifically targeted at the programme (see Case Study) and some that is more generically critical of efforts to reduce conflict financing from minerals supply chains. A recent book by academic and former UN Group of Experts member Christoph Vogel, entitled 'Conflict Minerals Inc: War, Profit and White Saviourism in Eastern DRC', is the most comprehensive of these critiques to date.⁴⁸ According to Vogel, Western consumers hoping to influence conditions in the countries from where the raw materials of the products they buy originate delude themselves that they are 'white saviours, ideologically colonising the most remote places...', erroneously believing that it is people's greed for natural resources in eastern DRC that drives conflict, while failing to grasp the complex realities of the region.⁴⁹ Vogel further argues that the initiatives that have been implemented in eastern DRC over the years to address these issues, including ITSCI, Section 1502

35 <https://www.oecd.org/corporate/mne/mining.htm>

36 <https://www.govinfo.gov/content/pkg/COMPS-9515/pdf/COMPS-9515.pdf> pp367-372

37 BBC, DRC bans mining in eastern provinces, September 11, 2010, <https://www.bbc.com/news/world-africa-11269360>

38 https://cdn.globalwitness.org/archive/files/library/note_circulaire_oecdguidelines_06092011.pdf

39 <https://www.ITSCI.org>

40 <https://www.internationaltin.org> formerly known as ITRI.

41 <https://www.tanb.org/index>

42 <https://www.ITSCI.org/about-ITSCI/> <https://www.ITSCI.org/traceability/>

43 <https://www.ITSCI.org/company-management-policies/> Upstream members list

44 <https://www.responsiblemineralsinitiative.org/news/in-region-sourcing/> Formerly the Conflict Free Smelter Programme

45 <https://www.ITSCI.org/purpose/#results>

46 Estelle Levin-Nally, Rupert Cook (2015): Comparative study of certification and traceability systems in the Democratic Republic of the Congo, PROMINES, p.86, table 7 (<https://www.levinresources.com/knowledge-centre/publications/comparative-study-of-certification-and-traceability-systems-in-the-drc>).

The ITSCI laundromat: how a due diligence scheme appears to launder conflict minerals. Global Witness. 2022. Pp30-37

47 <https://www.rcsglobal.com/bettermining/>

48 Christoph Vogel, Conflict Minerals Inc: War, Profit and White Saviourism in Eastern Congo, Hurst & Co., London, 2022.

49 Ibid, pages 1-4.

of Dodd-Frank, and the OECD Due Diligence Guidance all rely 'on contradictory Orientalist projections both imagining eastern Congo as an empty slate in terms of Western regulation and pinpointing savagery as the organising principle of politics and business'. While ITSCI might position itself as 'a solution', instead, says Vogel, it has become 'embroiled in pre-existing struggles over authority, fostered unemployment and high-school dropouts, reduced local revenue and helped perpetuate violent taxation and corruption amidst ongoing insecurity.⁵⁰ Overall, maintains Vogel, efforts at conflict-free sourcing have resulted in 'new modes of corruption, resistance to external regulation, the recycling of wartime elites and a rise in unemployment and socio-economic precarity that has benefitted armed group recruitment.'⁵¹

These are serious accusations, and if they were true, would pose serious questions regarding all the efforts made in the DRC and internationally over the past decade to stop mineral supply chains financing conflict. But are they true? The claim that Western consumers seeking to use their consumer choices consciously to try to support positive change are deluded 'white saviours' assumes that they are all white – they are not – and also points to an ethical nihilism in which there is simply no point in even trying to effect positive change through one's purchases.

Also questionable is Vogel's claim that schemes like ITSCI presuppose the DRC as 'an empty regulatory state'. It is true that the blend of international supply chain initiatives and the complex political economy of eastern DRC generates hybrid governance outcomes that are often some distance from those envisaged by the initiatives' originators. Also, Vogel is on firmer ground in his claim that initiatives like ITSCI have had multiple unintended negative consequences, including in many cases on artisanal miners' incomes. This is undoubtedly the case. It is unclear, however, what Vogel and the other critics think should be the way forward. Should all initiatives be dropped, and we return to the status quo ante, or indeed to the current status quo for many Chinese operators in eastern DRC, where traders buy minerals from anywhere with no due diligence, including from known warlords, smelters and their customers happily purchase and consumers pay up for the final products, secure in the belief that any attempt to change things would be unacceptable 'white saviourism'?

The fact is that conflict finance from 3Ts, whether for armed groups or state actors, is entwined with the livelihoods of artisanal miners. The more robust a system is in preventing conflict finance, the more it is likely to cost. Because the international price of tin and to a lesser extent tantalum is the same wherever the minerals come from, the cost of these systems largely fall on artisanal miners in the form of lower prices from the buyers who need to pay for the

systems' implementation. But if systems are made less robust to reduce their cost, then the chances rise of system weaknesses and failures of the sort detailed by Global Witness about ITSCI (see Case Study). The trick is to find a middle path which does not excessively diminish miner incomes but also enables sufficient rigor to meaningfully impact conflict financing from mineral supply chains. This is harder, but more constructive than simply pointing an accusatory finger at the negative livelihoods or human rights consequences of either path.

ITSCI *et al* may have negatively impacted artisanal miner incomes, but what about Vogel's claim that they have also stoked conflict by driving armed group recruitment and 'recycling' of wartime elites? A reasonable metric for the risk of conflict finance from mineral supply chains is the identification of artisanal mine sites and routes to them where an armed presence is to be found. In 2009, before ITSCI, Dodd-Frank and the OECD Due Diligence Guidance, IPIS found that 57% of the 3T sites it visited had an armed group presence. In 2015, when IPIS returned, this figure had fallen to 21%, while for gold mines, where no initiatives are in place, the figure was 61%.⁵² In a 2019 report, IPIS explicitly stated that: 'Responsible sourcing practices have had a positive impact, reducing of armed group interference by armed actors at mining sites'.⁵³

In 2022, based on new data from 5,971 mine sites, IPIS found that 3T mines scored a median of +3 for aggregated security data, while gold mines had a negative median score of -3, based on a broad set of data on security that includes roadblocks and human rights abuses in the vicinity of mining sites.⁵⁴

A reduced military and armed group presence in and around mine sites typically translates into lower costs for artisanal miners due to reduced taxation and extortion levels, offsetting to a significant degree the extra costs that come with traceability and due diligence schemes.

5.2.3 Trade Facts

ITSCI provides statistics for the level of production and export of 3Ts through its system between 2014 and 2021.⁵⁵ According to ITSCI, 120,535 tonnes of cassiterite, 27,634 tonnes of tantalite and 15,276 tonnes of wolframite (from which tungsten is derived) have been exported from the Africa Great Lakes Region (AGLR) through its system during this period. The DRC was reported by ITSCI as exporting 86,546 tonnes of cassiterite (71% of the total) through its system during this period, 13,969 tonnes of coltan (50.5% of the total) and 1,596 tonnes of wolframite (10.4% of the total). Rwanda officially exported far less cassiterite than the DRC during

50 Ibid, page 7.

51 Ibid, page 12.

52 IPIS (2015) 'Mineral Supply Chains and Conflict Links in Eastern Democratic Republic of Congo'.

Antwerp: IPIS. Available at ipisresearch.be/publication/mineral-supply-chains-and-conflict-links-in-eastern-democratic-republic-of-congo/.

53 <https://ipisresearch.be/wp-content/uploads/2020/10/1904-IOM-mapping-eastern-DRC.pdf> p.8 It should be noted that this association could in part be because the absence of armed group interference on mining sites is precisely what often attracts ITSCI to implement its system there.

54 <https://ipisresearch.be/wp-content/uploads/2022/08/Responsible-mining-scorecard.pdf> p.18

55 <https://www.ITSCI.org/mineral-tonnage-data/>

this period, but nearly the same amount of tantalite – 12,497 tonnes – despite having more meagre coltan reserves than its western neighbour, providing credible grounds to suspect systematic coltan smuggling from DRC into Rwanda. With coltan trading for around United States Dollars (USD) 150/kg during this period, this has been a highly lucrative business. Burundi meanwhile was recorded by ITSCI as exporting 1,583 tonnes of cassiterite, 1,151 tonnes of coltan and 1,561 tonnes of wolframite through its system during the same period. The ITSCI system has not been implemented in Uganda, but its trade statistics indicate fairly low levels of 3T mineral exports from the country, while gold is recorded as the country's biggest import and export. The low level of 3T in Uganda exports is related to what the locals call the 'export ban' of concentrates and the Ugandan government has taken a position that any export of 3Ts must have been processed, which is defined as going through the smelter process. In 2020, Uganda recorded imports of gold worth USD1.97bn and exports worth USD3.47bn. It is common knowledge that most of this gold originated from the DRC, but the official statistics give no indication of this, alleging improbably that the main origins of the yellow metal imports into Uganda were Tanzania and Zimbabwe, with the DRC not even listed as a minor source.⁵⁶

In addition to the artisanal mining production being exported via ITSCI and Better Sourcing, there has since 2019 been industrial/ large scale mining (LSM) tin mining at Alphamin in Bisie, Walikale territory, North Kivu, in what was once a major artisanal mining area. Alphamin is currently producing and exporting over 10,000 tonnes of contained tin per year, which is around 4% of world output. This is a world class industrial mine that has implemented their own Chain-of-Custody (CoC) system and was the first Exporter in the International Conference of the Great Lakes Region (ICGLR) Member States to get audited under the revised RCM. It is anticipated that in 2023 Alphamin will open another mine at their operations and almost double their current production.

CASE STUDY: Global Witness versus ITSCI

In April 2022, Global Witness published an explosive new report entitled 'The ITSCI laundromat'.⁵⁷ According to the report, there are multiple, large-scale instances in eastern DRC and Rwanda where minerals from uncertified mines are 'laundered' through certified ones and are given ITSCI tags.

In Nzibira, a trading centre in South Kivu, DRC, which accounts for 10% of the minerals traded in the province in 2020, Global Witness concluded that the

production of genuinely validated mines amounted to less than 20% of the minerals tagged there under the ITSCI system. The miners and traders the Global Witness team spoke to at Nzibira said that most of the tagged minerals were from unvalidated mines in neighbouring territories, including mines occupied by armed groups. The report said that minerals laundering in Nzibira had been flagged by a local NGO back in 2015 and was subsequently corroborated by a consultant commissioned by PACT, who had concluded that government officials and ITSCI agents knew all about it. The problem was, however, allegedly downplayed in ITSCI's public reporting, and has still not been sufficiently addressed, with Global Witness finding that the laundering of minerals at Nzibira was continuing in 2021.⁵⁸ The report further alleges that there are 'at least ten other mines controlled by armed groups where it appears that minerals are being or have recently been laundered into the system.'⁵⁹ Global Witness alleges that the ITA 'ignores' the high volume of illicitly tagged minerals because high overall volumes are in its interest, since ITSCI is funded by levies that are based on these volumes.

The Global Witness report also concentrates on Rubaya in North Kivu, which contains an estimated 15% of global coltan supplies, and has also been the subject of much critical research and analysis over the years by the UN Group of Experts on the DRC. The concession holder for the main Rubaya mining permit is the Societe Miniere de Bizunsu (SMB), which switched from ITSCI to Better Mining in 2018 for its traceability and due diligence. Global Witness says that minerals are trafficked on a massive scale by artisanal miners from SMB's concession to neighbouring concessions held by the Societe Aurifere du Kivu et du Maniema (SAKIMA), a state-owned company. The UN Group of Experts has earlier estimated that SAKIMA's declared output from these concessions is ten times their actual capacity, and in this report Global Witness said 'hundreds of tonnes' of coltan may have been stolen from SMB and declared as SAKIMA's in 2020 alone.⁶⁰

Also echoing a claim that has long been made by the UN Group of Experts the Global Witness report alleges that Congolese 3T has been laundered through Rwanda's ITSCI tagging system from the moment it was launched. The report quotes one informed source as saying that 'for some years only about 10% of the minerals the country exported were actually extracted there, with the rest being smuggled from the DRC.'⁶¹

⁵⁶ <https://oec.world/en/profile/bilateral-product/gold/reporter/uga>

⁵⁷ The ITSCI laundromat: how a due diligence scheme appears to launder conflict minerals. Global Witness. 2022

⁵⁸ Ibid, page 4.

⁵⁹ Ibid, page 5.

⁶⁰ Ibid, page 6.

⁶¹ Ibid, page 6.

Strikingly, the Global Witness report quotes industry sources who argue that ITSCI was initially set up to launder minerals, alleging that the CEO of one of Rwanda's main mineral processing companies collaborated with the ITA and James Kabarebe, then the defence minister of Rwanda and now its armed forces' chief-of-staff, to establish a system that would counter the risk posed by growing concerns and stricter regulations around 'conflict minerals'.⁶²

The report was met with angry denials from those implicated, and particularly the North Kivu provincial government and ITSCI. North Kivu military governor⁶³ Lieutenant-General Constant Ndima Kongba said that the national and provincial governments, together with the FARDC, had done their best to demilitarise 3T supply chains. He alleged that the report was intended to demonise the FARDC, damage the DRC and limit its access to international markets. On Rubaya, Ndima accused Global Witness of appointing itself a judge and siding with SMB, alleging without evidence that Global Witness was working on behalf of 'certain multinational actors' and the country's economic competitors.⁶⁴

ITSCI said it rejected any stated or implied allegations of wrongdoing in the report, accusing Global Witness of having failed to take due account of the information it had provided prior to the publication of the report. ITSCI said Global Witness' expectations of responsible minerals sourcing programmes were too high, and that its alleged demand for the prevention of all links between risk and minerals was unrealistic and could encourage an embargo on Congolese minerals. ITSCI defended its incidence reporting, which Global Witness had attacked in the report as inadequate for having failed, among other things, to have flagged how much of SMB's production was being spirited away to Societe Aurifere du Kivu et du Maniema (SAKIMA, saying it demonstrated the programme's commitment to "transparent reporting".

ITSCI denied there had ever been a deal between Kabarebe and the ITA and accused Global Witness of making 'sweeping claims' about Rwanda's low minerals output. ITSCI said that contrary to Global Witness' allegations, it had noted and responded to allegations of mineral laundering in Nzibira. Concerning Rubaya, ITSCI accused Global Witness of omitting the 'important and complex historical context' and of presenting SMB's view and omitting those of others.⁶⁵

Global Witness published a formal reply in early November 2022⁶⁶, in which the NGO stood by its report and accused ITSCI of 'failing adequately to address any of the problems raised'. A few days earlier, the RMI publicly stated that it would be 'de-recognising' ITSCI from January 2023, since ITSCI had not reapplied for recognition. ITSCI later commented that the RMI decision was a surprise but conceded that the two had yet to see eye-to-eye on RMI's wishing to 'access confidential business information' for its audits. ITSCI's position is nonsensical as the RMI process does not involve the release or sharing of business confidential information. Additionally, the third-party Alignment Assessment being requested by RMI assesses both the written standards and how the standards have been implemented. ITSCI did participate in the OECD alignments assessment and their standards were 100% aligned with OECD; however, their implementation which was evaluated in 2016 was only 75-85% aligned. There has been no additional third-party assessment of ITSCI since 2016, or for over 6 years. Given the issues identified in a number of NGO and Group of Experts reports, ITSCI is overdue for an assessment that looks at how they have implemented their standards. ITSCI said it remained 'committed to constructive and open dialogue' on the outstanding issues, but this appears to more of a delay tactic as they have known about the RMI requirement for over a year. The RMI decision will mean that smelters will no longer be able to rely on ITSCI alone but will either have to supplement or replace it with substantive due diligence of their own design, or de-risk by ceasing to source from the AGLR.

5.2.4 Analytical Mineral Determination (AMD)

The ICGLR RCM describes the possible need and use of an analytical methodology to help identify the origin of minerals and refers to this process as Analytical Mineral Determination (AMD). The RCM defines AMD as 'A combination of scientific techniques, which might be used as an additional tool to assist with the determination of the origin of Designated Minerals. AMD is applicable to all Designated Minerals, where technological solutions exist. Analytical Fingerprint (AFP) is a form of AMD for tantalum, tin, and tungsten'.⁶⁷ AMD can be used to verify if a mineral has originated from a specific mine and is most appropriately used during detailed investigation or as part of an audit. This concept built on the German Federal Institute for Geosciences and Natural Resources (BGR) Analytical Fingerprint (AFP) method which is a scientific tool that can be used to check the documented origin of

62 Ibid, page 7.

63 President Fatshi Tshisekedi has imposed a 'stage of siege' on North Kivu and Ituri since 2021, resulting in the replacement of elected civilian governors with military ones appointed by the President.

64 Paluku Kasereka, Nord-Kivu: le Gouverneur militaire denonce l'impartialite du rapport de Global Witness et accuse l'ONG de collusion avec SMB, 7sur7, June 1, 2022, <https://7sur7.cd/2022/06/20/nord-kivu-le-gouverneur-militaire-denonce-limpartialite-du-rapport-de-global-witness-et>

65 ITSCI, ITSCI Response to Global Witness 'The ITSCI Laundromat', June 28, 2022.

66 <https://www.globalwitness.org/en/press-releases/itsci-unwilling-address-failures-its-due-diligence-scheme-companies-must-now-pressure-it-take-strong-action/>

67 ICGLR Regional Certification Mechanism Manual Second Edition 2019

3T ore mineral shipments.⁶⁸ Analytical Mineral Determination (AMD) includes analytical methodologies for gold, whereas Analytical Fingerprint (AFP), while it is a form of Analytical Mineral Determination (AMD) only applies to 3T. The actual lab performing Analytical Fingerprint (AFP) is in Dar-es-Salaam, Tanzania.

The concept of AFP had been around for a while, and the laboratory is operational, but it has not been used extensively. This is not too surprising since, in our judgement, AFP is not appropriate for regular, day-to-day supply chain due diligence and mineral trading, because of:

- The high cost of performing the analytical procedure;
- The time it takes to collect, transport, and receive the results, which also adds to cost;
- Concerns around Chain-of-Custody of the samples (mine reference sample and mineral shipment sample in question).

For this reason, while it may have a role in enforcement, audits, spot checks and investigations, given current conditions, AMD/AFP is not typically an appropriate tool for companies to use in daily due diligence activities prior to shipping or receiving individual lots.

5.3 Midstream Supply Chain Smelters and Refiners

Representing the 'midstream' part of the supply chain, the important role of smelters and refiners in the minerals supply chains is two-fold. First, they allow raw materials to be processed into metals that can be further used in manufacturing processes. Secondly, smelters and refiners also serve as a 'pinch point' in the minerals supply chain, where substantial

insights into the origin of raw materials can be gathered, and where leverage can be exercised by the downstream actors to the upstream actors including mining companies.

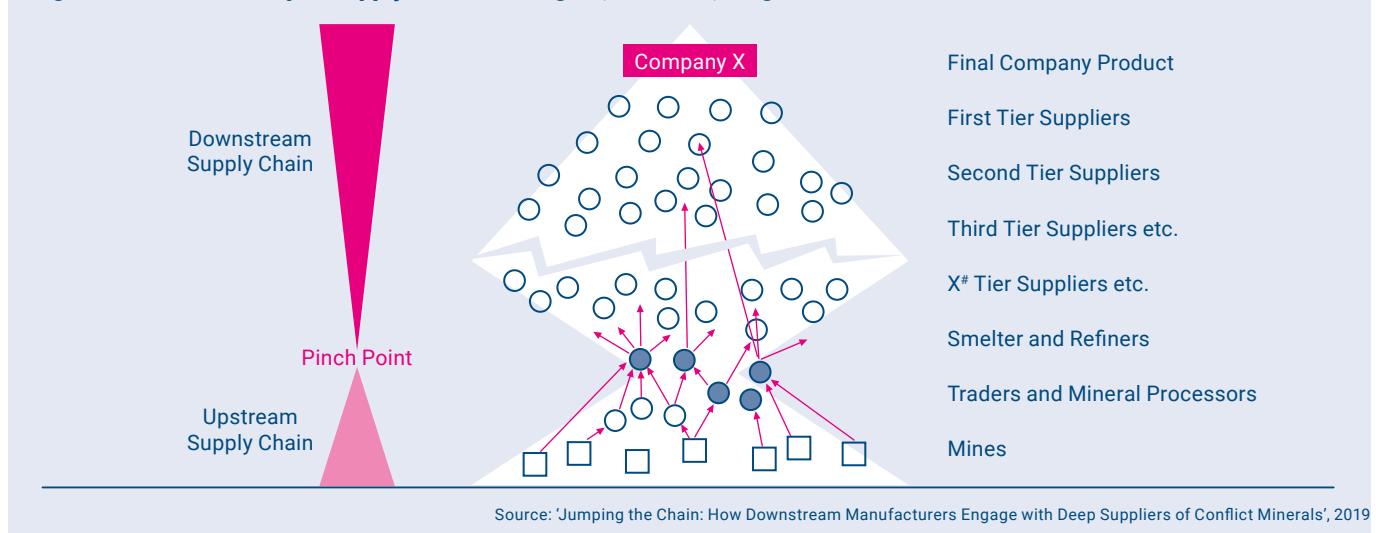
As smelters constitute the last stage in the supply chain where all minerals pass, this also puts them in a strong role to trace the origin of minerals and use their leverage particularly related to sustainability matters in producer countries. First, insights into provenance of the raw materials, an activity also referred to as 'reasonable country of origin inquiry' (RCOI), is important for companies to understand traceability and the conditions in the supply chain. Second, leverage can be exercised on prices, but equally on concerns related to sustainability matters such as sustainability risks or perceived negative impact in the areas of environmental damage and/or human right violations. Smelters are often in a strong position to obtain sustainability and/or origin information from the upstream actors and are hence considered as 'pinch points' in the assurance process towards responsible sourcing.

Due to the limited number of smelters and refiners, their important role is further exacerbated as crucial funnel between the upstream and the downstream, for conducting minerals due diligence.

Only smelters and refiners that import into the EU are currently in-scope under the EU Regulation. Non-EU smelters and refiners that export to the EU do not fall under the Regulation. Nonetheless, the importer of the refined metals does fall under the regulation. A European Commission study estimated that 'out of a total estimated number of 300 smelters for tin, tantalum and tungsten currently only 16-18% conduct due diligence' in 2017.⁶⁹

Figure 6 below illustrates the multiplexity of the mineral supply chain for a company with many or complex products and the important role smelters and refiners at the pinch point.

Figure 6 | Diamond-shaped supply chain showing tin, tantalum, tungsten flows of raw materials to smelters and refiners



Source: 'Jumping the Chain: How Downstream Manufacturers Engage with Deep Suppliers of Conflict Minerals', 2019

68 https://www.bgr.bund.de/EN/Themen/Min_rohstoffe/CTC/Analytical-Fingerprint/analytical_fingerprint_node_en.html

69 Source: European Commission, 'Impact Assessment for Conflict Minerals Regulation' (Document SWD (2014) 53 final), 2017, p. 19.

In line with the crucial role of smelters and refiners for conducting due diligence in the minerals supply chain, the OECD has developed specific requirements for these actors.

OECD: What is expected from midstream actors (Smelters and refiners)?

According to the OECD Due Diligence Guidance and 3T Supplement, smelters/refiners must conform to all requirements (1) specific to smelters/refiners and (2) for upstream companies. The OECD Due Diligence Guidance, Annex I Step 4 requires companies to carry out independent third-party audits of supply chain due diligence at identified points in the supply chain. The guidance has a specific supplement on how the 3T industry should implement due diligence. This supplement describes 3T smelters/refiners as this identified point in the supply chain, which means that to be compliant these smelters/refiners need third-party audits of their due diligence systems. The OECD also defines upstream to be the supply chain actors from the miners up to and including smelters/refiners and the downstream to be from the smelter to the end-product. This means that smelters/refiners need to conform to all upstream recommendations in the guidance as well as to those specific to smelters/refiners as identified in the OECD Due Diligence Guidance 3T Supplement.

In addition to upstream company and smelter/refiner-specific regulations, the OECD provides guidance on downstream companies' participation in industry programmes. Because of the large number of downstream companies that need to assess or audit a smelter/refiner, the OECD Due Diligence Guidance stated in the Step 4 B.1. d) i): *It is recommended that all downstream companies participate and contribute through industry organisations or other suitable means to appoint auditors and define the terms of the audit in line with the standards and processes set out in this Guidance. Small and medium enterprises are encouraged to join or build partnerships with such industry organisations.*

This recommendation thus encourages companies to participate in these industry programmes.

The OECD Due Diligence Guidance also provided recommendations on how industry initiatives or institutionalized mechanisms could potentially implement a programme for companies to use. The OECD Due Diligence Guidance recommends the following activities to be carried out by the institutionalised mechanism:

1. With regard to audits:
 - Accrediting auditors;
 - Overseeing and verifying audits;
 - Publishing audit reports with due regard to business confidentiality and competitive concerns.
2. Develop and implement modules to build capabilities of suppliers to conduct due diligence and for suppliers to mitigate risk.

3. Receive and follow-up on grievances of interested parties with the relevant company.

Smelters/refiners play a critical role in the due diligence efforts of the downstream companies. The OECD Due Diligence Guidance Step 2 for downstream companies' states: Downstream companies should identify the risks in their supply chain by assessing the due diligence practices of their smelters/refiners against this Guidance. Downstream companies who may find it difficult to identify actors upstream from their direct suppliers (due to their size or other factors), may engage and actively cooperate with other industry members with whom they share suppliers or downstream companies with whom they have a business relationship to carry out the recommendation in this section in order to identify the smelters/refiners in their supply chain and assess their due diligence practices or identify through industry validation schemes the refiners/ smelters that meet the requirements of this Guidance in order to source therefrom. Downstream companies retain individual responsibility for their due diligence and should ensure that all joint work duly takes into consideration circumstances specific to the individual company⁷⁰.

This is the option that the electronics industry actors considered when they began to develop their approach.

When the conflict minerals issue first arose in the 2007-2008 timeframe, the electronics industry was the main target of the various non-governmental organisation (NGOs) campaigns for being the apparent origin of 'conflict financing'. The electronics industry in 2008 came together through the Electronic Industry Citizenship Coalition (EICC) and Global e-Sustainability Initiative (GeSI) organisations and worked together to develop an understanding of the industry's impact on various metals. They produced a report, Social and Environmental Responsibility in Metals Supply to the Electronic Industry that identified the uses of targeted metals in electronics. They also commissioned in 2009 a report by RESOLVE, *Tracing a Path Forward: A Study of the Challenges of the Supply Chain for Target Metals Used in Electronics* that focused on the level and understanding of the supply chain to determine the number of layers of suppliers and whether there was transparency in the supply chain. This study indicated that smelters and refiners were the pinch-point in the supply chain (see figure 1). One of the recommendations made by RESOLVE was:

Smelter-based 'conflict-free' verification. A long-term approach is clearly needed to address conflict minerals through a supply chain transparency and tracking system that could eventually support 'conflict-free' sourcing for products. RESOLVE's tracing and tracking research indicated that major end-use companies such as GeSI and EICC members have sufficient leverage to reach smelters. Furthermore, a developing dialogue between electronics companies and smelters indicates that key smelters are willing to participate in designing a mechanism for verifying processed/refined metals.⁷²

70 <https://www.oecd.org/corporate/mne/DDguidanceTTTilotJan2013.pdf>

71 Social and Environmental Responsibility in Metals Supply to the Electronic Industry by Young, Steven; Dias, Goretty; Fonseca, Alberto; O'Keefe, Meghan 2008/06/20

72 Tracing a Path Forward: A Study of the Challenges of the Supply Chain for Target Metals Used in Electronics by RESOLVE

Current data from the RMI indicate that they have confirmed finite number of smelters for the 3Ts provide information on the current level of participation in RMI Responsible Mineral Assurance Process (RMAP).⁷³ The industry judged that this was a manageable number to focus on and created their Conflict Free Smelter Programme (CFSP).⁷⁴ In September of 2009 the EICC and GeSI hosted their first workshop for the tantalum industry. Tantalum was chosen because the electronics industry had more leverage over the tantalum sector than over tin and tungsten. By December 2009 the concept of the CFSP was agreed to by the electronics and tantalum industries and the Conflict Free Sourcing Initiative (CFSI) was born. This was the same month that the first workshop held by the OECD to develop the OECD Due Diligence Guidance also took place.

During 2010, the Programme CFSP developed the process and programme to conduct third-party audits of tantalum smelters with the first smelter completing the audit process and being found conformant to the protocols in December of 2010. Shortly after that several tantalum smelters began participating in the programme. The OECD published the first edition of the OECD Due Diligence Guidance Document in 2011. Over the course of the next three years tin and tungsten industries were included. The CFSI combined tin and tantalum into a single protocol and tungsten into a separate protocol. In mid-2011, the first validated conflict free material from the DRC was processed by a CFSI conformant smelter. There was still, however, multiple challenges in getting the tin and tungsten industries engaged, principally because the affected countries – essentially the DRC and its eastern neighbours did not provide as much material to the market.

As the CFSI was implementing their programme, they set an April 1st, 2011 date, by which time any smelter receiving material from any covered country would have to demonstrate that the material was sourced from a supply chain that conformed to OECD Due Diligence. The CFSI took a lot of criticism for this hard deadline and numerous NGOs lobbied for it to be pushed back. Others believed this led to the de facto embargo of minerals from the region. In fact, this was not an embargo, as the CFSI just defined the requirements needed to allow material to be used by conformant smelters and the date aligned with the publication of the OECD Due Diligence Guidance. This was also demonstrated with the successful export of conflict free tantalum from the DRC in June 2011 as part of the Solutions for Hope programme. This programme was initiated by AVX and Motorola Solutions and then expanded to include numerous other major multi-national corporations.

Over time there was a steady increase in the number of conformant smelters sourcing from the covered countries. Shortly after the first 'conflict free' tantalum was exported from the DRC there were several tantalum smelters that also started to source material from the DRC and numerous tantalum smelters continue to source from the DRC today. All the 3Tsourced from the covered countries DRC and the adjoining countries) initially came through the ITSCI programme. However, it needs to be pointed out that only Rwanda and DRC were producing minerals for export. When the CFSI tin protocol was first developed, there was only one smelter sourcing from the DRC. This was believed by industry experts to be due to the monopolistic aspect of the ITSCI programme. As of 2022, RMI data indicates only three conformant tin smelters directly source material from the covered countries.⁷⁵ One of those smelters is the LuNa smelter located in Kigali, Rwanda.

In 2016, the OECD commissioned an alignment assessment to determine whether the programmes of five industry organisations were aligned with their Due Diligence Guidance: the Dubai Multi Commodities Centre (DMCC), the London Bullion Market Association (LBMA), the Responsible Jewellery Council (RJC), the RMI and the ITSCI.⁷⁶ The DMCC, LBMA and RJC focus on gold and other precious metals and are not discussed in this paper. ITSCI was the only programme that covered the value chain from the mine site to the point of export for 3T concentrates. The RMI was the only 3T industry smelter/refinery programme assessed. The assessment consisted of two elements:

Standards: The extent to which the recommendations from the OECD Due Diligence Guidance have been incorporated into the programme's policies, standards, procedures, and operating requirements set out for companies.

Implementation: The extent to which it can be reasonably concluded that the criterion is implemented by the programme, including by deploying the necessary measures to ensure compliance and securing adequate remedial action in cases where companies participating in the programme and/or auditors do not adhere to the programme's policies and standards (when applicable to them).⁷⁷

The initial review of Standards and Implementation was conducted in 2016. After this review, organisations were given an opportunity to strengthen their programmes by revising their standards. Once the standards were revised then a second evaluation was performed in early 2018 on the standards only. No additional review on Implementation was conducted after the initial 2016 assessment. The results for the RMI programme are illustrated below in Figure 7.

73 <https://www.responsiblemineralsinitiative.org/smelters-refiners-lists>

74 This programme has become the RMI RMAP.

75 RMI RCOI Data dated March 25, 2022

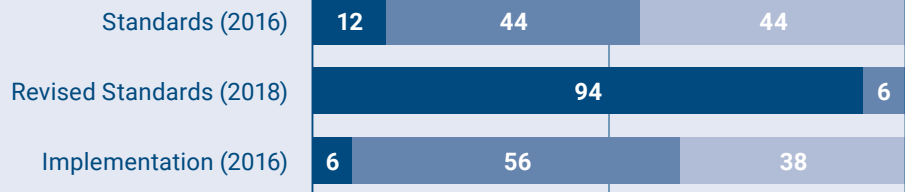
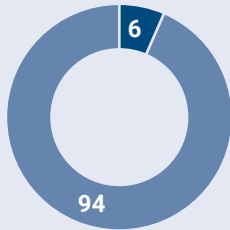
76 Alignment Assessment of Industry Programmes with the OECD Minerals Guidance © OECD 2018

77 Alignment Assessment of Industry Programmes with the OECD Minerals Guidance © OECD 2018

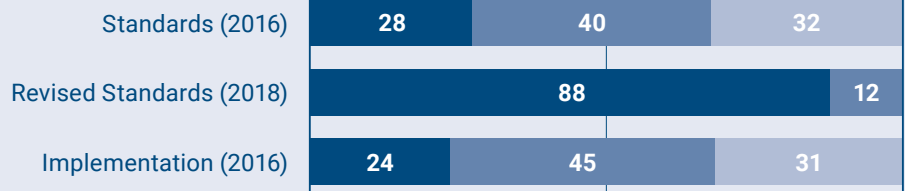
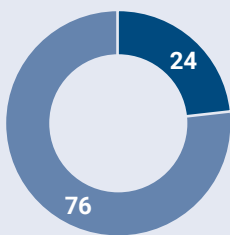
Figure 7 | Results of OECD Alignment Assessment of Industry Programmes with the OECD Due Diligence Guidance

OVERALL RATING 2018: PARTIALLY ALIGNED

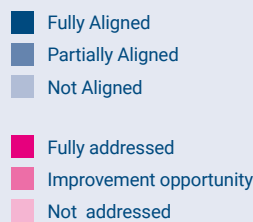
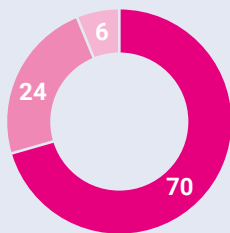
Overarching due diligence principles



Overall alignment with the five-step framework



Programme governance review



©2018⁷⁸

The assessment found the overall rating for 2018 to be Partially Aligned. While the initial RMI programme had a focus on Dodd-Frank compliance, the revised RMAP has a focus on OECD conformance and management systems approach. The results indicate there was improvement in Revised Standards when compared to the 2016 Standards. The assessment does not indicate how this impacted the Implementation rating or what improvements in implementation had occurred.

The European Union Conflict Minerals Regulation applies to 3TG and is global in nature, as opposed to Section 1502 of the US Dodd-Frank Act, whose scope is geographically defined as the DRC and the adjoining countries (Covered Countries). The EU regulation acknowledges that third-party auditing of an economic operator's supply chain due diligence practices ensures credibility for the benefit of downstream economic operators and contributes to the improvement of upstream due diligence practices.⁷⁹

Article 9 of the EU Conflict Minerals Rule states that the EU is to develop a list of global responsible smelters and refiners. Specifically, the Commission:

1. shall adopt implementing acts establishing or amending the list of the names and addresses of global responsible smelters and refiners. That list shall be drawn up taking into account global responsible smelters and refiners covered by supply chain due diligence schemes recognised by the Commission pursuant to Article 8 and the information submitted by Member States pursuant to Article 17(1).
2. shall use its best endeavors to identify those smelters and refiners included in the list referred to in paragraph 1 of this Article that source, at least partially, from conflict-affected and high-risk areas, in particular by drawing upon information provided by the owners of supply chain due diligence schemes recognized pursuant to Article 8.

⁷⁸ <https://mneguidelines.oecd.org/Alignment-assessment-of-industry-programmes-with-the-OECD-minerals-guidance.pdf>

⁷⁹ REGULATION (EU) 2017/821 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2017 laying down supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas

3. shall establish or amend the list using the template in Annex II and in accordance with the advisory procedure referred to in Article 15(2). The OECD Secretariat shall, as appropriate, be consulted prior to the adoption of that list.
4. shall, by means of an implementing act, remove from the list the names and addresses of the smelters and refiners that are no longer recognized as responsible on the basis of information received pursuant to Article 8 and Article 17(1). That implementing act shall be adopted in accordance with the advisory procedure referred to in Article 15(2).
5. shall, in a timely manner, update and make publicly available, including on the internet, the information included in the list of global responsible smelters and refiners.⁸⁰

As the time of writing, the European Commission has not published the list which is commonly referred to as the White List. The RMI has initiated the process to get recognised by the European Commission as a recognised supply chain due diligence scheme. This recognition process has been on-going for several years. The EU is utilising the OECD Alignment Assessment process to make the recognition determination. The RMI has indicated they plan to have the recognition by the end of 2022. It is not completely clear why the process has taken so long.

The cost of the RMI RMAP Audit for smelters must be paid for by the smelters. In discussions with the RMI the average cost per audit is approximately USD8000 (\$20K for big and complex sites and around \$6K for simple and small sites). The RMI has established a RMAP Audit Fund to cover the cost of the initial audit and to assist smaller smelters for their reassessments. RMI established these funds with donations from their members to encourage Smelters or Refiners (SORs) to become part of the RMAP programme. The actual cost is dependent on the type of smelter, location, volume and complexity of sourcing, and number of transactions over the audit period. The audit fee covers the auditor's time to conduct the on-site audit, develop draft and final reports, and travel expenses to the smelter. Additional audit costs may be incurred if the auditor has follow-up questions after the onsite audit, a corrective action plan (CAP) is required, or if an on-site visit is needed to validate CAP implementation. Smelters need to have an annual audit unless they meet low risk criteria which includes not sourcing from a CAHRA and only sourcing material from within the country they are located.

As of November 16, 2022 Table 4 illustrates the number of RMI identified smelters for the 3Ts and the number of them that have successfully passed the RMAP audit and found to be conformant; are active in pursuing conformance; and are not conformant.⁸¹

Table 3 | RMAP Conformance of RMI Smelters for 3Ts

Metal	Total	Conformant	Active	Not Conformant	Percent Conformant and Active
Tantalum	36	34	0	2	94%
Tin	82	54	10	18	78%
Tungsten	54	38	2	14	74%
Total 3T	172	126	12	34	80%

Case Study: LuNa Smelter

The LuNa tin smelter in Kigali Rwanda is the only RMI RMAP-conformant smelter in Africa. The smelter was constructed in 1980. Until 2018, the smelter had several owners and had only operated periodically. LuNa acquired the smelter operations in 2018 and soon began refurbishment to get the smelter operational. Production of refined tin began in 2019. In early 2020

LuNa successfully underwent an RMI RMAP audit. LuNa has continued to operate and maintain its conformant status. Initially its raw material only originated in Rwanda. The smelter utilised the two RMAP conformant Upstream Assurance Mechanisms for the products it received.

Operating in a defined CAHRA, LuNa has had additional challenges not experienced by other smelters. As a member of ITSCI, LuNa has certain procedures it needs

80 REGULATION (EU) 2017/821 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2017 laying down supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas

81 RMI Data November 16, 2022 <https://www.responsiblemineralsinitiative.org/smelters-refiners-lists/>

to follow to conform to the scheme's requirements. Additionally, as a RMI conformant smelter LuNa must conform to the RMI Responsible Minerals Assurance Process (RMAP) requirement. In several instances the ITSCI and RMI processes currently overlap. LuNa has been trying to work with ITSCI and RMI to resolve this issue to no avail. It is important and critical for LuNa operations to understand where ITSCI stops and RMI starts. When ITSCI was developed it was for the export of tin concentrate through exporters selling to international traders and smelters across the globe. The current situation is such that LuNa operations have additional restrictions on their operations that add cost and minimise operational flexibility. This is not the desired outcome if the efforts are to create value in the AGLR to help foster economic growth in a developing country. One of the downstream companies that has LuNa in their supply chain, Vodafone included the following statement:

To help understand the challenges and issues with a smelter located in a Covered Country we met with the LuNa smelter management team. This is the first RMAP conformant smelter in a Covered Country, Rwanda, which is identified in our supply chain. The team provided valuable insight into challenges they face. These challenges include: conforming to numerous international and regional regulatory schemes such as the US and EU Conflict Minerals and the ICGLR Regional Certification Mechanism; numerous third party audit requirements to assure market access for their refined tin; additional due diligence costs compared with other international smelters not located in a Covered Country; negative cost impacts and restricted operational flexibility due to the overlap and conflicting requirements of due diligence schemes between upstream assurance mechanisms and the RMAP; and an increased number of transactions as a direct purchaser of minerals from artisanal and small-scale sources as opposed to international traders.⁸²

Additionally, LuNa has started to receive legal shipments of tin concentrate from the DRC and Tanzania, which is a significant accomplishment given the geopolitical situation in the region and the amount of perceived smuggling between the regional countries. Due to these regional sources LuNa needs to work closely with the RMI to assure its Chain-of-Custody (CoC) systems it uses meet the requirements of RMAP, ICGLR and OECD. In some cases, specifically in Tanzania, the CoC system is a government run programme. Going forward LuNa is working to implement alternative CoC systems utilising block chain technology to help improve data quality, reduce due diligence cost, and include due diligence mine level data along with other ESG information.

5.4 Downstream supply chain actors

Progressive and consumer facing companies in Europe, the United States and other (mostly OECD) countries have begun to get used to the fact that sustainability due diligence is a 'standard business policy and process' as part of the company's responsible supply chains ambitions. Key reasons include increasing societal and investor pressure, customer demands, as well as voluntary and mandatory legislative requirements imposed upon them.

On the voluntary side, the wide range of industry standards have offered businesses the tools and instruments to collectively enhance traceability in the supply chain and leverage on shared resources to seek assurances on responsible supply from parts of the supply chain (especially smelters and refiners). But more and more, the downsides have become visible of overly relying on the industry schemes, which are often insufficiently effective, are fragmented, and overlap in terms of sustainability risks covered, part of the supply chain targeted and differing in the ways the schemes are monitored, and assurance of membership alignment is verified.

On the mandatory side, businesses are expected to conduct sustainability due diligence, under a widening body of mandatory legislation. In the EU, as highlighted in chapter 4, these mandatory legislative initiatives include the proposal for a Corporate Sustainability Due Diligence Directive (hereafter: 'CSDDD').

In addition, businesses are expected to report on sustainability performance as result of voluntary reporting guidelines, such as Global Reporting Initiative Standards (hereafter: 'GRI Standards'), as well as mandatory disclosure requirements, such as the European Corporate Sustainability Reporting Directive (hereafter: 'CSRD'), which requires companies starting from 250 employees to report on due diligence policy and actions from January 2024 onwards

OECD: What is expected from downstream actors?

The OECD directs downstream companies to map their supply chain back to the smelter and leverage institutionalised mechanisms or industry initiatives as part of their effort.

Section 1502 of the Dodd-Frank Act requires companies to use national or international due diligence frameworks to comply with the US Securities and Exchange Commission (SEC) Final Rule. Most, if not all companies utilise the OECD Due Diligence Guidance to meet this obligation. In addition, the majority of companies use the RMI industry standard developed Conflict Minerals Reporting Template (CMRT). The US GAO found that over 90 percent of 2021 filings stated that companies conducted a preliminary survey of suppliers to determine whether conflict minerals may have originated in covered countries. Of the companies that conducted a supplier survey, 70 percent reported using the Conflict Minerals

82 Vodafone 2021 Conflict Minerals Disclosure https://www.sec.gov/Archives/edgar/data/839923/000110465921073834/tm2117908d1_ex1-01.htm

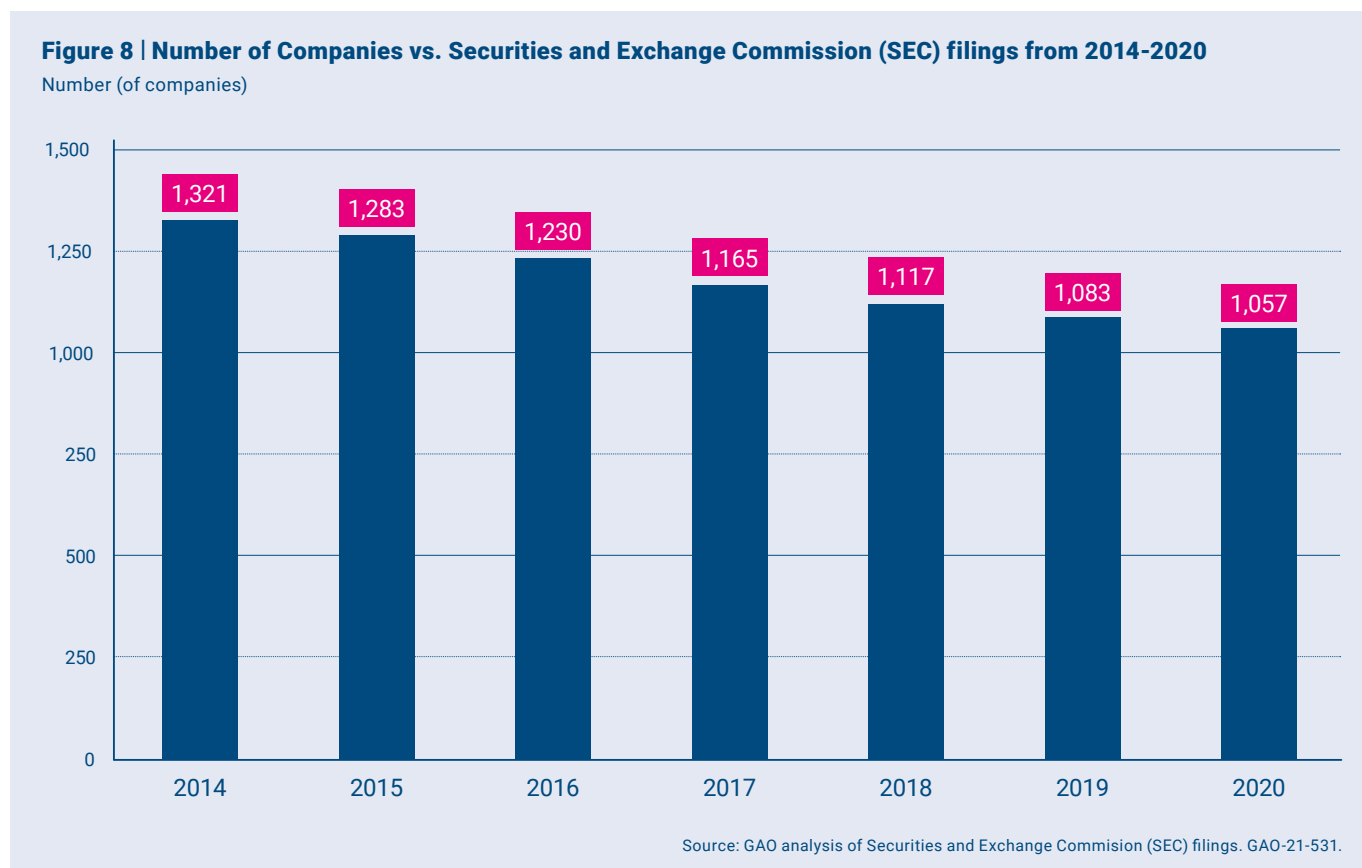
83 US GAO Conflict Minerals Report September 2022

Reporting Template.⁸³ It is expected that the actual percentage is higher as this number is only those who disclosed how they conducted the survey.

5.4.1 Securities and Exchange Commission (SEC) Guidance and statements

The number of companies filing conflict minerals disclosures has continued to decrease since 2014, as displayed in

Figure 8. According to the US GAO, in 2021, 1,021 companies filed conflict minerals disclosures with the SEC, reflecting a continued decrease in the number of companies that have filed conflict minerals disclosures since 2014, when 1,321 companies filed SEC disclosures (see chart below).⁸⁴ According to SEC officials, this decrease may be due to factors such as mergers and acquisitions among companies and changes in business practices by companies that previously filed disclosures.⁸⁵



The US GAO has found that over 90 percent of the SEC 2021 filings stated that companies conducted a preliminary survey of suppliers to determine whether conflict minerals may have originated in covered countries. Of the companies that conducted a supplier survey, 70 percent reported using the Conflict Minerals Reporting Template.

Some companies limited the information provided in their filings because of SEC Staff Guidance; Company filings and industry stakeholders indicate that guidance statements issued by SEC staff in 2014 and 2017 may have affected some companies' conflict minerals disclosures.⁸⁶ About 21 percent of companies referred to SEC guidance in their 2021 filings.⁸⁷ For example, one company noted that its conflict

minerals report did not undergo an IPISA because it was no longer required to do so under existing SEC staff guidance. According to the 2014 SEC staff guidance, companies are not required to obtain an IPISA unless they choose to disclose that their products are 'DRC conflict free' in a conflict minerals report. There are some companies that use the statement by the SEC Chairman regarding enforcement as a reason not to include a Conflict Minerals Report in their filing even though they are required by the Rule.

The SEC Guidance and Statements along with the court decision may have severely limited the anticipated impact and effectiveness of the SEC Rule.

84 US GAO Conflict Minerals Report September 2022

85 US GAO Conflict Minerals Report September 2022

86 US GAO Conflict Minerals Report September 2022

87 US GAO Conflict Minerals Report September 2022

5.4.2 Due Diligence Cost

There are a number of costs associated with due diligence for downstream. These costs include membership to industry associations, internal staffing and systems cost and external consulting/auditing cost. The costs associated with implementing due diligence are discussed below.

Many companies take advantage of the OECD's recommendation to leverage industry initiatives in performing due diligence. To this end, for the 3T supply chain, the RMI is the most recognised and leading programme for companies to leverage. Many of the tools, such as the Conflict Minerals Reporting Template (CMRT) are free, and most smelter related data is made public. Country of Origin data for smelters is not public but is made available to RMI members. Thus, it is available to all external stakeholders with most the downstream supply chain utilising these tools and information. For active participation in the RMI there is a membership fee is \$7500 per firms with annual revenue under \$9 billion and \$15,000 per year for companies with revenue over \$9 billion.⁸⁸

A study by the University of Sussex on 29 EU based companies, one of the few studies done on due diligence implementation, concluded that cost for full OECD Due Diligence implementation are relatively low when compared to company sales. Overall, firms estimate an average of approximately 270,000 EUR as investment cost in the first year, followed by recurring annual cost expenditures of 535,000 EUR for full implementation. Also, these costs can be further reduced significantly through industry and supply chain collaboration.⁸⁹

The Sussex study also found that, 'while larger firms are, on average, more aware of the topic due to stakeholder scrutiny or reporting requirements, small firms are often uncertain about costs and benefits of the implementation of OECD Due Diligence Guidance. Large firms have to a lesser extent to complement their existing supply chain risk management methodologies to meet the OECD Due Diligence standards than Small and Medium Size Enterprises (SMEs). Small and Medium Size Enterprises (SMEs), more than often, fail to have any form of formal supply chain risk management or sustainable supply chain management in place, thereby making it more costly for them to pursue all recommendations of the OECD Due Diligence Guidance.'⁹⁰

For these EU companies the study concluded that the 'Dodd-Frank legislation strongly impacts the level of OECD Due Diligence Guidance implementation. Specifically, those firms that are also listed at the US stock exchange seem to achieve higher levels of Due Diligence implementation since they are directly impacted by the Dodd-Frank legislation. Also, a similar positive effect can be observed for firms that have their major customers within the US. Several firms explicitly mentioned that their activities with respect to 3TG are triggered by these customer requests.'⁹¹

Table 5 below illustrates the cost of OECD Due Diligence guidance implementation for 29 surveyed companies. As the data indicates, costs are variable depending on the size of the company and position in the supply chain. Due Diligence cost will also depend on the complexity and number of products a company may have as this typically leads to a larger supply base.

Table 4 | Cost estimates for implementation of the oecd guidance in euro

COSTS	INVESTMENT TYPE	ALL FIRMS	FIRM SIZE			SUPPLY CHAIN POSITION	
		All firms	Small and Medium Size Enterprises (SME)	Large firms	Focal firms	Component manufacturers	Metal traders, refiners, smelters
Staff & Training	Initial invest	55k	8k	81k	85k	88k	4k
	Annual expenditure	302k	18k	306k	373k	67k	51k
Professional service fees	Initial invest	49k	0	49k	82k	3k	0k
	Annual expenditure	12k	1k	16k	18k	0k	9k
Computer systems & technology	Initial invest	32k	1k	22k	37k	0k	1k
	Annual expenditure	11k	0k	24k	28k	4k	8k
Legal advice	Initial invest	18k	10k	15k	25k	9k	0k
	Annual expenditure	0k	0k	0k	0k	0k	0k

88 <https://www.responsiblemineralsinitiative.org/membership/>

89 Stopping conflict minerals with the OECD Guidance for responsible mineral supply chains: Status Quo in Europe University of Sussex April 2016 Sponsored by Global Witness

90 Stopping conflict minerals with the OECD Guidance for responsible mineral supply chains: Status Quo in Europe University of Sussex April 2016 Sponsored by Global Witness

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COSTS	INVESTMENT TYPE	ALL FIRMS	FIRM SIZE			SUPPLY CHAIN POSITION	
			Small	Medium	Large	Upstream	Downstream
Reports	Initial invest	1k	0k	1k	2k	0k	0k
	Annual expenditure	126k	16k	139k	225k	11k	14k
Others	Initial invest	0k	0k	0k	0k	0k	0k
	Annual expenditure	2k	2k	1k	0k	1k	2k
Sums (without auditing costs)	Initial invest	155k	18k	168k	231k	99k	5k
	Annual expenditure	452k	37k	485k	644k	83k	84k
Auditing	Initial invest	116k	13k	102k	167k	15k	3k
	Annual expenditure	84k	20k	80k	131k	13k	10k
Sum (with auditing costs)	Initial invest	270k	32k	270k	397k	114k	8k
	Annual expenditure	536k	57k	565k	775k	97k	94k

5.4.3 Seeking efficiencies and enhancing outcomes: the value of multi-stakeholder platforms

Whereas companies retain an individual responsibility for identifying and addressing sustainability risks in minerals supply chains, this study has pointed towards the value of collective efforts which can prove useful for different purposes. First, to pool resources and leverage on shared capacity to address issues that cannot be solved by individual company or organisation. Such multi-stakeholder initiatives are often focused on direct engagement in CAHRAs, to tackle systemic issues such as child labour and human rights risks in the context of artisanal mining, support governance of the mineral sector or provide capacity building to communities to improve economic opportunities and poverty alleviation.

Second, companies increasingly engage in multi-stakeholder initiatives to support individual sustainability due diligence programmes and efforts. In the minerals-context, some good examples show-casing the value of knowledge sharing platforms between companies are already existing. For example, in the automotive industry, the Drive Sustainability platform provides insights on minerals 'risk' profiles (3T and beyond), a shared template for supplier assessment questionnaires (SAQ) and other tools. Industry schemes such as RMI equally provide a strong learning platform through monthly technical working group meetings to allow members exchanges on due diligence challenges encountered and/or approaches taken. Through collaborative platforms, there is potential to further support harmonisation of due diligence tools and approaches.

In order for multi-stakeholder initiatives to function, an inclusive approach is key, bringing together civil society organisations with local networks and insights, as well as governments in sourcing countries, and companies involved in the 3TG mineral supply chains. Civil society organisations are considered valuable partners for their local networks and knowledge, and for providing a certain legitimacy to the partnership, as they can be expected to do a 'sanity check' and avoid greenwashing. Governments can engage with sourcing country governments to support an enabling environment for responsible sourcing, for example through development cooperation and political dialogue. Companies along 3T mineral supply chain have an impact on the ground through their purchasing practices, as well as their due diligence process more broadly. Such multi-stakeholder collaboration, bringing together these different skill sets and roles, provides a platform to coordinate efforts to enhance impact and avoid duplication. The Public Private Alliance for Responsible Minerals Trade (PPA) and the European Partnership for Responsible Minerals are good examples of these partnerships (EPRM).

At the same time, there are new coordinating functions and platforms required to monitor and drive success, which leads to overlapping and fragmented initiatives in minerals supply chains. Bringing together different stakeholders that have complementary skill sets and roles are particularly valued.

Implementation of similar systems to satisfy regulatory demands from US clients in line with US regulatory demands under the US Dodd–Frank Wall Street Reform and Consumer Protection Act Section 1502 has shown that Small and Medium Size Enterprises (SMEs) in particular face challenges in implementing such systems.

6. Emerging Regulatory Frameworks

6.1 EU Corporate Sustainability Due Diligence Directive (CSDDD)

The legislation will broaden the coverage of European Union (EU) businesses using minerals in their trade and/or production processes. It does not only cover EU importers of raw metals and minerals (such as the EU Conflict Minerals Regulation) but would require all businesses using minerals in their supply chain to conduct due diligence.

The European Commission shared its proposal for a horizontal 'Corporate Sustainability Due Diligence Directive' on 23 February 2022. For companies active in high-risk sectors, such as minerals, due diligence requirements are imposed based on a lower threshold of company size and the number of employees. This first (horizontal and cross-sectoral) initiative consists of ESG Due Diligence requirements for all EU companies and non-EU companies, subject to certain conditions (including value and employee thresholds). Under this proposed legislative framework, in-scope European and non-European companies (above a certain threshold) will need to conduct human rights and environmental due diligence in their supply chains, including prevention, identification, and mitigation efforts.

As the EU advances in its legislative approach that aims to contribute to sustainable supply chains worldwide, the anticipated ESG due diligence obligation may raise additional trade barriers and unintended consequences for businesses producing and/or trading from countries and areas with more elevated risk profiles. The EU's (indicative, non-exhaustive, and regularly updated) list of Conflict-Affected and High-Risk Areas (CAHRAs) will become an important point of reference for companies seeking guidance not only for conducting due diligence on suppliers, but also (possibly) with regard to trade and/or investment decision-making.

Whereas the ongoing negotiations (possibly to be concluded in December 2022) between the European Parliament, EU Member States ('the council') and the European Commission may change the exact scoping and coverage, the proposed Commission proposal provides a relevant direction.

In terms of company size, the EU CSDDD is expected to apply to both EU and non-EU companies above certain thresholds.

Apply to EU-established companies with:

- More than 500 employees on average AND a net turnover of more than €150 million in the last FY;
- More than 250 employees on average AND a net turnover of more than €40 million in the last FY. However, in this case, at least 50% of this turnover was generated in one of the listed high-impact sectors (textile, clothing, extraction of minerals, manufacturing of metals, agriculture, forestry, and fisheries).

Apply to Non-European companies which:

- Generated a net turnover of more than €150 million in the Union in the last FY;
- Generated a net turnover of more than €40 million in the Union but not more than €150 million in the last FY, provided at least 50% of its net worldwide turnover was generated in one of the listed high-impact sectors.

In terms of the supply chain 'coverage':

- The due diligence will need to be conducted: at the level of own operations, operations of their subsidiaries and value chain operations of entities with which the company has an established business relationship.
- In terms of actual due diligence requirements, companies are expected to: put in place a due diligence policy; which describes the approach, as well as a code of conduct, and a description of due diligence processes in place.

In terms of risk management, companies' due diligence efforts need to comprise at a minimum:

- Identifying actual and potential adverse impacts;
- Preventing and minimising potential adverse impacts, including;
 - A preventive action plan, with reasonable and clearly defined timelines for action and qualitative and quantitative indicators for measuring improvement;
 - Seek contractual assurances from a business partner that it will abide by the company's code of conduct and, as necessary, a prevention action plan;
 - Make investments to comply with the above and support Small and Medium Size Enterprises (SMEs) where needed.
- Bringing actual adverse impacts to an end and mitigating their extent;
- As well as establishing a complaint procedure for external stakeholders.

In terms of reporting:

- It is expected that companies monitor effectiveness on yearly basis and publicly communicate on due diligence by publishing a statement each year.

In terms of verification and (third party) audits:

- The role of industry schemes and standards are promoted by the European Commission, for (third party) verification of compliance measures.

- Finally, the company directors' 'duty' is included, which means taking into account the human rights, climate and environmental consequences (including those in the long term) of their decisions.
- In terms of entry into force, this remains unclear; at the earliest January 2025 (assuming negotiations conclude end 2022). The proposed requirements relating to very large companies will apply two years from the Directive's entry into force (hence, as soon as transposition is completed). For large companies, instead, the requirements will apply four years from entry into force (i.e. two years after transposition).

6.2 Corporate Sustainability Reporting Directive (CSRD)

Another important EU directive is the Corporate Sustainability Reporting Directive (CSRD), adopted 10 November 2022. Member states have 18 months to implement it into their own legislation. It requires businesses to give insights into the impact they make instead of only providing insights about their financial positions. These reports have to be published simultaneously.

As a consequence, the reporting and transparency of businesses will go beyond their finances and will in future include their ESG policy and efforts. The eventual aim of the CSRD is to let capital flow to sustainable business. It applies to big businesses and organisations, medium and small listed companies, and some big non-EU companies. SMEs are currently left out of the Directive, but a trickle-down effect may occur. For the former companies, requirements are that they disclose on ESG. To help companies comply there are European Sustainability Reporting Standards (ESRS). Companies should start with reading through the first ESRS as it sets the broader framework. Then, companies are advised to start with ESRS 2 which requires businesses to report on their governance, strategy, impact/risk management and metrics and targets. Moreover, there are five environmental topics: climate change (required for all companies to disclose on; also, small companies), pollution, water, biodiversity and resources and circular economy. In addition, requirements cover social matters like the own workforce of companies, workers in the value chain, affected communities, customers, and end-users. The CSRD is primarily about reporting, less about the contents of the reporting. Nevertheless, all the ESRS from 2 focus on reporting on due diligence in accordance with the UNGPs and OECD Guidelines.

6.3 EU Battery Regulation

The EU Battery Regulation (proposal December 2020) is proposed to secure the sustainability and competitiveness of battery value chains in the EU. It would introduce mandatory requirements on sustainability (such as carbon footprint ru-

les, minimum recycled content, performance, and durability criteria), safety and labelling for the marketing and putting into service of batteries, and requirements for end-of-life management. The proposal also includes due diligence obligations for economic operators as regards the sourcing of raw materials.

It includes ESG due diligence requirements for companies producing certain types of batteries. Whereas key features of the proposed Battery Regulation were aligned with the EU Conflict Minerals Regulation, there are several aspects where the due diligence requirements proposed in the Battery Regulation divert from the Conflict Minerals Regulation in several ways. For example, in terms of objectives (innovation in the internal market, as well as protection of domestic industry production), coverage of minerals (currently proposed are beyond the 3TG including cobalt, natural graphite, lithium and nickel, but not copper), and geographical scope (civil society organisations request a geographical coverage beyond CAHRAs that are currently the basis for the EU Conflict Minerals Regulation).

6.4 Lieferkettensorgfaltspflichtengesetz (LkSG) German Mineral Resources Due Diligence Act

Passed by the German parliament in June 2021, the German Act on Corporate Due Diligence Obligations in Supply Chains (Lieferkettensorgfaltspflichtengesetz, LkSG) is the most recent piece of national due diligence legislation and will be in force from January 2023 onwards.

The law initially applies to large enterprises (businesses with 3,000 employees or more) headquartered in Germany and their overseas subsidiaries. The threshold will be lowered to 1,000 employees in 2024. From 2024, this will be expanded to companies with 1000 or more employees. The law also applies to German subsidiaries or affiliated companies and employees, including those dispatched abroad.

Lieferkettensorgfaltspflichtengesetz (LkSG) only imposes a duty to be informed and to act – but with no duty to succeed – to uphold environmental and human rights obligations throughout their supply chains, including their own production and direct suppliers. However, an indirect supplier is covered in cases of improper evasion or substantiated knowledge.

In terms of thematic scope (catalogued in LkSG section 2), the risks cover 'human rights risks' meaning slavery, economic and sexual exploitation, humiliation, forced or child labour provisions, occupational safety, health, freedom of association, discrimination, and an adequate living wage. The duties are also illustrated with an exhaustive list of ILO conventions under annex 2, including C/P029, C087, C098, C100, C105, C111, C138, and C192. Notably, the duties also extend to unlawful land acquisition, development, or use

(section 2 article 10), and violation of environmental requirements (including harmful soil change, pollution or consumption that impairs natural preservation, access to water, or otherwise harms the health of a person), use of chemicals, organic pollutants, and waste handling (including Minamata, Stockholm, and Basel conventions).

The due diligence duties are staged in three steps, between general situations (stage 1) to heightened risks of imminent violation (stage 3). Stage 1 due diligence obligations entail general monitoring and administrative requirements, e.g., establishing risk management systems and complaint procedures, the appointment of a corporate human rights officer, and carrying out regular risk assessments, documentation, and annual reporting. At heightened risks (stage 2), the company is required to issue a policy statement or implement preventive measures. In the final stage (in the case of imminent violation), the German company will be required to implement appropriate remedial measures in its own business, direct suppliers, and indirect suppliers in the case of evasion or awareness.

As for implementation and enforcement, companies can be sanctioned for non-compliance with fines up to 2% of the average annual turnover for companies with more than an annual turnover of EUR 400 million, while there is no civil liability for violations. For traders from the Great Lakes region, trading with German buyers will mean that proof of due diligence efforts will need to be collected. Trade will fall under the scope of LkSG, but the due diligence requirement is essentially a duty to care – but no duty to succeed. Triggers for a requirement to act (steps 2 and 3) have imprecise definitions, providing German buyers the ability to argue that they have fulfilled their obligations. There is also no personal liability (breach of the corporate veil) for company directors, providing enough flexibility for the buyers.

Under the LkSG, the administrative and reporting duties are onerous and likely to be a subject of regular government audits. In response to the new legislation, German and European buyers of minerals from the Great Lakes region (and other high-risk areas) may possibly explore ways to re-organise their corporate structures.

7. Conclusion

7.1 Regulatory Frameworks

Looking at the regulatory frameworks guiding minerals supply chains and responsible sourcing trend, the following conclusions can be drawn.

- Mandatory due diligence and disclosure requirements – especially if backed up by robust enforcement mechanisms – can go a long way in driving responsible minerals supply chains. Companies that are subject to a compliance risk through minerals due diligence legislative requirements are more inclined to implement due diligence in minerals supply chains compared to companies only subject to voluntary guidelines.
- The Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance continues to serve as the reference framework for responsible business conduct and sustainability due diligence in minerals supply chains, inspiring voluntary industry schemes and mandatory legislative frameworks in the European Union (EU) and the US, as well as at national level. Voluntary industry schemes and organisations (Responsible Minerals Initiative (RMI), London Bullion Market Association (LBMA), Responsible Jewellery Council (RJC), TI-CMC) have been implementing their various audit programmes with the OECD Due Diligence Guidance as the main framework.
- However, implementation of the OECD Due Diligence Guidelines at company level has not shown strong progress over the past years, with limited proof that companies ‘invest’ in identification and addressing of risks in minerals supply chains, as showcased in recent OECD report on corporate disclosures. Increased company efforts in terms of sustainability reporting point to the risk of ‘greenwashing’ results in minerals supply chain due diligence.
- Also, the lack of implementation of OECD Due Diligence Guidelines as upstream and midstream demands a stronger incentivizing, which will in itself support downstream companies to step up on their reporting with improved upstream data.
- Over time, however, the scope and application of the OECD Due Diligence Guidelines are beginning to show their limitations. With a review of the OECD Due Diligence Guidance underway, the expectation is for more concrete guidance, such as but not limited to:
 - how to conduct due diligence with a view to complexity of gaining supply chain traceability and difficulty of conducting Country of Origin Inquiry (RCOI);
 - how to exercise leverage on the midstream role of smelters and refiners to reach beyond ‘pinch points’;
 - a broadening of the definition of conflict minerals to ‘responsible minerals’;

- a widening of sustainability risks, beyond 'conflict', to encompass a broader definition of 'materiality' in minerals supply chains (as reflected in RMI 'all materials standard' now encompassing a wide range of ESG risks;
 - a move towards the United Nations Guiding Principles (UNGP) thinking and application of sustainability risks.
- With overlapping legislative initiatives and voluntary standards, there are inconsistencies in the scope and application of various schemes, leading to implementation challenges for business at all parts of the supply chain. For example, there are differences in the minerals scope, geographical coverage of OECD Due Diligence Guidance, Dodd-Frank, and EU Conflict Minerals Regulation. OECD is for all minerals, Dodd-Frank and EU are 3TG. Also, the OECD covers all companies from mine sites through retail and all actors in between, Dodd-Frank covers products that are manufactured or contract to be manufactured by US Publicly Traded companies, and the EU covers importers of minerals and/or metals. The geographical scopes are also inconsistent with the OECD and EU are global in scope the DF is only applicable to Democratic Republic of Congo (DRC) and the adjoining countries. These inconsistencies add confusion to the various actors in the supply chain and for the various assurance mechanisms as they try to make their programmes so that one shoe fits all.
- In addition, with new horizontal Corporate Sustainability Due Diligence ('EU CSDDD') legislation coming out of the EU, covering the wide range of ESG risks, there is a trend towards widening responsible minerals sourcing to depart from the OECD Due Diligence Guidance focus on 'conflict and human rights' to ESG.
- The strong role of industry schemes in 'assuring' midstream actors, smelters, and refiners, maintaining their own definitions of 'high risk' smelters and 'red flags', equally reduces companies' ability to conduct their own due diligence. This is clear in the challenges and varying understandings on what is a Conflict-Affected and High-Risk Area (CAHRA), what is a Red Flag (as identified in the 3T and Gold Supplements) and what a risk is (as identified in Annex II). This leads to inconsistencies in how smelters are assessed, which increases the cost and complexity for a smelter that is considered high risk yet does not source from a CAHRA.
- Within the current geopolitical context and strong incentives to reduce dependencies on fossil fuels, the demand for 3T and other minerals will continue to grow, as global economies are keen to steer into the direction of solar and wind energy and electrical cars to drive a green transition. With a recently updated EU's Trade Policy (February 2021), containing a clear focus on 'open strategic autonomy', the emphasis of the EU is on reducing dependence on foreign markets (especially China) for Europe's own innovation and transition. The recent proposals for a Corporate Sustainability Due Diligence law, and a Battery

law, both including strong due diligence requirements are strong examples.

However, the risks are there that the strong demand for minerals from Africa, including the AGLR, will equally lead to pressure on governance structures, supply chains and undoubtedly lead to a continuation (if not deterioration) of existing sustainability challenges. The International Conference of the Great Lakes Region (ICGLR) has been slow to implement the Regional Certification Mechanism (RCM) across their Member States, with only four Member States issuing the ICGLR Certificate. More Member States will soon be implementing the RCM. Within the currently implementing countries, there has been a significant uptick in the number of third-part audits of exporters that demonstrates the commitment by the government to influence participation.

7.2 Upstream

Global deposits of the 3T minerals are concentrated in a few countries, including those located in the AGLR, where development, governance and sustainability remain key challenges. This reality, combined with the current pressure for increased access to and supply of raw materials for industrial production as well as the green energy transition, has resulted in European governments and companies showing a strong interest in securing supply of those minerals, whilst ensuring sustainable sourcing conditions, including in the 3T types of minerals as well as upcoming minerals such as cobalt, lithium, mica that are needed for EV batteries in electrical cars.

The current upstream portion of the supply chain, mine to concentrate exporter has come under a lot of criticism. This includes the industries main due diligence and Chain-of-Custody programme, ITSCI. Given these criticisms industry will have to act to assure these UAMs are credible, reliable, and increasingly transparent.

There is a widespread perception that the logic behind conflict minerals initiatives runs as follows: armed groups in eastern DRC are fighting for control of natural resources, including minerals. Any trade in minerals which have been taxed in some way by armed groups finances these armed groups and, by so doing, finances conflict. Putting in place measures to prevent minerals whose trade has benefited armed groups from flowing along legal, legitimate supply chains cuts off this finance. By cutting off this finance, these measures reduce conflict.

Some of this alleged logic is correct, but much of it is not. For a start, as a growing number of academics have pointed out, it is not clear that armed groups in eastern DRC are fighting for natural resources. The causes of their conflict are usually more about competition for land and state resources and are often strongly ethnicised. It is, however, true, that armed groups do seek to finance themselves by taxing the production and trade of 3T, and that therefore, international purchases of 3T that armed groups have taxed help to fund their wars. It is also true that effective measures to prevent these minerals

reaching legitimate international markets cuts off this finance. But it is important to remember that armed groups do not live off taxes from mineral production and trade alone. Armed groups also tax the production and particularly the movement of charcoal and a range of agricultural commodities, and also tax markets where they are able. This means that if the armed groups' revenue streams from 3T are cut off, they are still able to finance themselves. This is one of the reasons why conflict levels have not been greatly impacted by international 3T conflict minerals initiatives. Another, as we have seen, is that in most cases the conflict is not about minerals and is thus likely to continue whether or not the warring parties are receiving funds from their trade.

This does not mean that all the national, regional, and international conflict mineral efforts reviewed in these pages are pointless. They are not. As we have seen, the evidence suggests that militarisation levels have gone down in 3T mine sites in eastern DRC since these initiatives began and are today much lower than in artisanal gold mines. Secondly, even if conflict levels may not have gone down it is still possible, and indeed it is probable, that the amount of funding provided to the protagonists by international 3T consumers has gone down.

Additionally, with the focus of many international initiatives that began with conflict minerals now steadily expanding to include broader ESG outcomes, this may also yield welcome outcomes in the region. This broadening of focus, however, carries with it the risk of a dilution of impacts to the point where it becomes harder and harder to discern them at all. This is especially true for the artisanal sector. But with the start-up of the Alphamin tin mine, the ability to assess/include ESG aspects should be easier to discern.

7.3 Smelters

The focus in the systems described above on the smelter 'pinch point' in the supply chain has been accepted by industry. This is evident by the high percentage of 3T smelters participating in the RMI's Responsible Minerals Assurance Process (RMAP). However, the RMI is the only organisation that has a programme for the 3T industries. This poses limitations on 3T smelters as it is currently the only game in town.

There is limited visibility on where smelters source from. While the smelters have gone through the audits, the actual mine site sources the smelters use is not made available to the downstream actors. In addition, the country-of-origin data that is provided to downstream by the RMI is aggregated, therefore the downstream does not know for certain where the metals used in their products comes from.

Additionally, due diligence costs and EU delays pose barriers for companies' adherence to regulations. The cost of due diligence along with the cost of an annual audit may be deemed as a barrier for smaller operations to deal in CAHRA and artisanal suppliers. The European Commission has not issued its White List of smelters or approval of industry ini-

tiatives that importers of minerals or metals can assist with an importer's due diligence. While the RMI has applied and is going through the process to become a recognised industry scheme by the European Commission, they have not yet been recognised.

Finally, RMI's requirement for smelters and refiners to identify CAHRAs using various methods and indices creates confusion. The EU has outsourced a service to identify CAHRAs for compliance to the EU conflict minerals regulation. Meanwhile, the US Dodd-Frank defines the DRC and adjoining countries as CAHRAs. There are Dodd-Frank countries identified as a CAHRA, but the EU does not. i.e. Rwanda, Uganda, Zambia to name a few. The RMI has conformant smelters in its process that have made different determinations for countries such as Brazil, Thailand, and China where one or more identified them as low-risk (not a CAHRA) and some as high-risk (CAHRA). The variability of these CAHRA definitions/list/determinations creates confusion in the supply chain and inconsistency across the various smelter audits depending on how a smelter may have identified an area as a CAHRA and others have not.

Since 2019, there has been an uptick in the DRC and Rwanda for the two new and one existing smelters to undergo an RMAP assessment. LuNa smelter completed their first audit in 2019 and during the last half of 2022 there have been two new smelters that are in the process of coming on-line that have submitted their request to be recognised by the RMI as a smelter and initiate the audit process. These smelters should be operational in the first half of 2023 if they meet their time schedules. The more value-added processing that can be created in the region will help create greater economic stability as more of the money should remain locally.

7.4 Downstream

At the business level, implementing sustainability due diligence in minerals supply chains demands a substantial (management) commitment, a long-term perspective towards impact, and a willingness to commit financial and other resources. More specifically, the on-going re-active and pro-active due diligence efforts mean that companies are stimulated towards putting in place a set of policies and practices. This means that the commitment expressed through a company's 'responsible sourcing policy' needs to be followed by a process of committed actions as well as budgetary investments. These include, in line with the OECD Due Diligence Guidance, inter alia: supply chain transparency, risk identification and mitigation and investments to adapt people (skills), and/or adjust internal ESG risk management processes, including for supplier management, and external stakeholder engagement.

Indeed, implementation of OECD Due Diligence Guidance aligned policies and practices is perceived as burdensome and adding a layer of complexity. At the same time, more and more businesses are taking the step towards implementation of ESG due diligence practices in mineral supply

chains and beyond. Key drivers include rising investor demands, growing customer sustainability and traceability expectations, and the new and changing legal compliance requirements at EU level as well as EU member state level.

The number of companies filing conflict minerals disclosures as required by the US Dodd-Frank Act has continued to decrease since 2014 to 2020 from 1321 down to 1057. The exact reason for this decline is not fully understood. Some companies limited the information provided in their filings because of SEC Staff Guidance; Company filings and industry stakeholders indicate that guidance statements issued by SEC staff in 2014 and 2017 may have affected some companies' conflict minerals disclosures.⁹³

There are numerous costs associated with due diligence for downstream. These costs include membership to industry associations, internal staffing and systems cost and external consulting/auditing cost. The cost to companies is extremely variable depending on their level of due diligence efforts and supply chain engagement.

Whereas companies retain an *individual responsibility* for identifying and addressing sustainability risks in minerals supply chains, this study has pointed towards the value of collective efforts which can prove useful for different purposes. Downstream due diligence is only as good as the upstream due diligence systems and processes that companies and industry initiatives rely on.

Through collaborative platforms, there is potential to further support harmonisation of due diligence tools and approaches.

In order for multi-stakeholder initiatives to function, an inclusive approach is key, bringing together civil society organisations with local networks and insights, as well as governments in sourcing countries, and companies involved in the 3T mineral supply chains.

Implementation of similar systems to satisfy regulatory demands from US clients in line with US regulatory demands under the US Dodd-Frank Wall Street Reform and Consumer Protection Act Section 1502 has shown that Small and Medium Size Enterprises (SMEs) in particular face challenges in implementing such systems.

7.5 Emerging Issues

The US Dodd-Frank 1502 and EU Conflict Minerals Regulation remain focused on 'Conflict-related' risks, as promulgated by the OECD Due Diligence Guidance (and UN Group of Experts recommendations). New generation initiatives that aim to work towards responsible minerals supply chains, voluntary and mandatory, encompass a broader range of thematic areas.

In terms of business challenges, the concept of sustainability due diligence remains challenging especially for Small and Medium Enterprises (SME's). With EU reporting obligations on sustainability due diligence starting at businesses with 250 employees (such as under the EU Corporate Sustainability Reporting Directive), it is clear that there is a strong need for business to step up insights and awareness, as well as access to best-practices and actionable tools to implement sustainability due diligence in minerals supply chains.

1) Awareness and actionable best practice insights on sustainability due diligence:

As emphasised by the underlying OECD and UNGP frameworks, sustainability due diligence is essentially a set of policies and processes that are unique to the specific minerals supply chain and their (geographical) context. Also, due diligence is to be customised to the role and 'weight' the specific company engaged in minerals supply chains – whether involved as investor in local mines, component manufacturing, trading, or end product retail. This means, whereas a range of tools and studies are available, it remains however difficult for business to come to grips with what exactly is expected in terms of setting up a robust sustainability due diligence programme towards responsible minerals supply chains, and how to prioritize actions for implementation.

2) Skills and expertise challenges: for companies, the potential 'breath' and 'depth' of sustainability due diligence responsibilities in minerals supply chains demands a new type of thinking and role, combining supply chain risk and sustainability skills and expertise, that is often not available within companies.

3) Management and financial commitment: for businesses implementing sustainability due diligence in minerals supply chains, there is a need to set aside financial means and other resources to work towards compliance and set up and implement a due diligence programme. As compliance risks for mineral using companies remain absent. Even now, businesses in the EU have not yet set aside structural funds to implement robust responsible minerals programmes. This may change with mandatory Corporate Sustainability Due Diligence legislation underway, and possible sanctions and fines (which will likely differ per EU Member State).

4) Due diligence as cross-functional effort: to report on responsible value chains, companies need to collect meaningful data on key performance indicators (KPI's) that often reach into different business functions, and into the supply chain. Supplier engagement remains an essential aspect of due diligence, and the role of industry standards (such as RMI) providing reporting templates (CMRT) has proven essential. However, to move beyond efforts to 'identify' smelter origin through the CMRT, there is a need to share best-practices on what robust and integrated ap-

proach to sustainability due diligence in minerals supply chains looks like in line with OECD Guidelines. This also should entail practical insights into how businesses can set-up a responsible sourcing programme, that integrates the 'sustainability' ambitions into existing business processes including procurement (cost-efficiency), supply chain management (disruptions and logistics) and sustainability (impact). It should also entail practical advice on how to build a due diligence programme across different business functions; with supply chain transparency, risk identification and mitigation and investments to adapt people (skills), and/or adjust internal ESG risk management processes, including for supplier management, and external stakeholder engagement.

Several elements make implementation challenging at business level, including the following six.

- First, gaining traceability insights on supply chain actors (smelters) and minerals origin, up to the mine site, remains a key challenge for business. As supply chains often span multiple continents, there is a wide array of actors and a multiplicity of layers (miners, local traders, transporters, aggregators, international traders, smelters, manufacturers of sub-parts and parts, and so on). As a result of this complexity and multiplicity of actors, companies cannot always ascertain the origin of minerals. The traceability challenge is further complicated when suppliers are disrupted or replaced, which means that due diligence efforts, including traceability, demand renewed investments. Also, confidentiality concerns regarding upstream business relations continue to stand in the way of gaining full supply chain insights. With mounting demand for 'clean energy and critical raw materials', companies are hesitant to provide full visibility into carefully established business relationships.
- Second, businesses face internal challenges in strategising for and setting up sustainability due diligence programmes. In some instances, political commitment to establish a solid responsible sourcing programme and work towards ESG due diligence in minerals supply chains is lacking. More specifically, as the current EU Regulation and US Dodd-Frank Act only apply to a select group of companies, the 'legal compliance' driver is lacking in a big group of companies as driver to invest. At the same time, the required expertise, and skills to implement due diligence is not always available, whilst external resources remain expensive and not always easy to find. Also, internal coordination with different business functions (from supply chain to sustainability, to legal and procurement) adds to the challenge of implementing due diligence.
- Third, whilst the role of industry schemes has proved supportive, at the same time over-reliance on downstream industry schemes (such as RMI,) risks shifting business responsibilities away from individual company responsibility. Upstream due diligence schemes face challenges of their own and have repeatedly faced criticism and allegations of misconduct, in particular with regard to conducting proper certification of mine sites and ensuring upstream traceability or Chain-of-Custody information. Still today, the industry schemes remain varied in scope, coverage, targeted portion of the supply chain, type and content of certification requirements. The continued array and partial overlap of certifications and due diligence schemes present challenges for many companies and may also drive some companies to abstain from taking up mineral supply chain due diligence at all. While the EU Regulation foresees the publication of a list of 'approved industry due diligence schemes (Article 14 of the EU Regulation), this exercise has not yet been finalised. At the same time, similar alignment assessments have been conducted by the OECD and are ongoing by the London Metals Exchange (LME). Implementers of the EU Regulation are required to understand the opportunities and limitations of industry schemes, in their role of supporting due diligence across minerals supply chains. To comply with the Regulation, both in letter and spirit, companies must live up to their individual responsibility to implement the OECD 5-Step Framework, including conducting their own risk assessment and disclosing their policies and practices.
- Fourth, companies struggle to find accessible and applicable information and tools that can be instrumental in developing and implementing ESG due diligence programmes in support of compliance with the EU Regulation (and/or other ESG due diligence requirements). Whilst there are a lot of information sources available, they are scattered and fragmented, and often covering a specific aspect of the otherwise complex and multi-faceted responsible sourcing 'project'. (See more under 'Government perspective'). In addition, tools and instruments commissioned by the European Commission to support implementation and enforcement may not be providing the required support to businesses in terms of scale and scope. Examples are:
 - The Due Diligence Hub (managed by EPRM) offers a one-stop-shop for minerals supply chain due diligence related information. Whereas it also provides case studies from various companies, these case-studies remain too generic for companies to translate into practice.
 - As SMEs in particular need capacity and improved awareness, the 'due diligence ready!' portal was commissioned by the European Commission. This portal brings together a set of tools and training materials on minerals and metals supply chain due diligence. It is available in seven languages. The system has not been active for long, hence the experiences cannot be reviewed during this assignment.
 - Another example is that it remains unclear to companies what type of documentation and/or proof is to be submitted to National Competent Authorities.

→ Finally, a lack of general awareness amongst European businesses regarding the compliance requirements of the EU Regulation at corporate level on the one hand, and understanding the implications of said requirements on the ground in CAHRA on the other hand, may present a challenge for achieving the objectives of the Regulation. One example is the lacking understanding on how to cope with minerals extraction by Artisanal and Small-Scale Mining (ASM) operators. Due to its organisational structure, sheer number of operators, lack of transparency and predominant informality, if not illegality (depending on national legislations), the ASM sector represents an entry point for conflict minerals. Yet this sector is estimated to produce 26% of tantalum, 25% of tin, more than 6% of tungsten, and 25% of gold global primary production.⁹⁴ However, contrary to the OECD Due Diligence Guidance, many upstream businesses continue to shy away from sourcing (publicly) from ASM mine sites. With a huge development potential, as well as steady volumes required for sourcing demands, sourcing from ASM mine sites would merit improved guidance including the support for businesses that pursue sourcing from ASM producers in a sustainable and impactful manner.

7.6 Concluding remarks

What are the EU Government's ambitions in minerals supply chains: sustainability, trade, or resilience? The clear focus on sustainability policies in the EU cannot be seen separately from the context of a tense geopolitical situation, the drive towards a green and climate change transition. With the re-

cently updated EU Trade Policy (February 2021), containing a clear focus on 'open strategic autonomy', the emphasis of the EU is on reducing dependence on foreign markets (especially China) for Europe's own innovation and transition. The recent proposals for a Corporate Sustainability Due Diligence law, and a Battery law, both including strong due diligence requirements are strong examples.

For due diligence to be effective and for these regulatory and other frameworks to succeed in meeting their desired outcome, consistent with the UNGP, it is imperative that governments provide for security and rule of law; companies source responsibly by implementing robust due diligence; and civil society actors continue to monitor and report on effectiveness of all actors. Working in concert to this end will create an enabling environment that will go a long way in achieving the desired outcome: Supply chains that do not contribute to conflict financing nor serious human rights abuses.

Politicians legislating on this issue in EU Member States need to stop thinking that minerals cause conflict, and that conflict-free mineral schemes stop conflict. Neither is true. What is true is that rents collected from the production, transport, and trade of minerals in CAHRAs can and often do finance conflict actors. It is also true that end users and refiners/smelters should not be paying for this. Responsible sourcing initiatives should work to minimise/end this financing and at the same time to promote responsible mining. We must understand, however, that conflict actors will find finance elsewhere. Their ability to do so should not be taken to mean that schemes are failing.

8. Policy Recommendations

The following policy recommendations are based on the experience and expertise of the writers. Each of the recommendations should help to advance the effectiveness of various policy initiatives. Depending on the desired outcome, not all recommendations will be appropriate for all situations. These recommendations are to serve as a bases for discussion to enhance the benefits based on the past ten plus years of trying to address conflict minerals in the Africa Great Lakes Region (AGLR). To this end we have structured this section to first state the specific recommendation for the identified stakeholder and then included the motivation for the recommendation. The recommendations are also in order of priority with highest being listed first for each of respective sections.

8.1 Government

1. Recommendation: Robust enforcement mechanisms are needed with transparent set of sanctions and fines for non-compliant actors. In the EU, there is a need to harmonise the current fragmented pattern of conditional fines, for example through an agreed and harmonised minimum fine.

Motivation: To drive meaningful implementation of and upstream impact through the mandatory EU Conflict Minerals Regulation and the US Dodd-Frank Act robust enforcement mechanisms are needed. Mandatory due diligence requirements provide a strong stimulus towards responsible sourcing practices at business levels. However, current conflict minerals legislation in the EU and US have shown that enforcement mechanisms are not strong enough to realise the potential of the legislative initiatives.

⁹⁴ <http://www.okinternational.org/mining#:~:text=Artisanal%20mining%20employs%20more%20than,of%20cobalt%20and%20other%20metals.>

2. Recommendation: When a regulatory framework allows for companies to utilise industry initiatives to meet the policy objectives, there needs to be an industry initiative oversight component, such as licensing, or third-party evaluations. This would include mandating an appropriate level of transparency regarding the initiative.

Motivation: Our report has shown evidence of serious problems with ITRI Tin Supply Chain Initiative (ITSCI), the main 3T certification scheme. The findings of the Global Witness report referenced in this study should be further examined by the EU and/or a member state government, with subsequent reporting to the Commission and Member States about the findings and their implications for 3T supply chains. The EUs Conflict Minerals Regulation Section 8 is an example of this type of oversight.

3. Recommendation: Governments should engage with industry and civil society actors early in the legislative and regulatory process to assure the regulatory solution can be reasonably implemented by industry to ensure a higher probability of success in addressing ESG supply chain due diligence issues without creating negative unintended consequences.

Motivation: Inclusive policy-making supports uptake of sustainability due diligence legislation. There are a number of emerging frameworks that are going to require companies to manage risks and impacts associated with their supply chains. For these frameworks to be effective, they will have to rely on industry to implement solutions and these solutions should be tailored to reasonably and effectively be implemented to minimise cost and disruption of the supply chain while avoiding negative unintended consequences. Companies should be involved in the design of programmes they will be required to implement.

4. Recommendation: Donor and/or regulating countries should support the upstream supply chain operators and assist them in understanding and implementing the necessary systems and compliance requirements. This can be in the form of technical and financial assistance to implement innovative solutions to assure long term viability of the solution or conducting capacity building sessions on requirements and reasonable/best practices.

Motivation: Many of the upstream entities lack the financial and technical capacity to bring them into compliance and make the necessary changes to assure downstream confidence in the upstream programmes.

5. Recommendation: Regulating Countries should support public private alliance initiatives similar to the US based Public Private Alliance (PPA) for Responsible Minerals Trade⁹⁵ and the European Partnership for Responsible Minerals (EPRM).⁹⁶ These initiatives on responsible supply chains should be incentivized through Government support mechanisms.

Motivation: There is a need for multi-stakeholder cooperation to support due diligence across the supply chain. This allows for multi-sector stakeholders to work together and support projects that will advance the necessary programmes needed to strengthen responsible supply chains.

6. Recommendation: Regulatory frameworks and ESG processes should focus their regulatory scope to the pinch-point in the mineral supply chain (smelters/refineries, traders, and importers) to maximise their impact and reduce, and in some cases eliminate, unnecessary due diligence costs for other sections of the supply chain.

Motivation: The industry approach and as identified in the OECD Due Diligence Guidance for supply chain due diligence (OECD Step 4), focuses on the pinch-point in the mineral supply chain. The EU has adopted this approach in their Conflict Minerals Regulation. This approach reduces redundancy in regulations and decreases overall costs, while maximising impact.

7. Recommendation: Governments and industry work together to develop a common list of metric/measure for ESG components that need to be collected from upstream to be used by smelters or refiners to perform due diligence.

Motivation: A common list provide consistency across supply chain actors which will allow smelters and downstream to better access the risks and impacts of the various upstream actors.

8. Recommendation: To support business due diligence efforts, policymakers in the EU and US should harmonise the definition and identification of Conflict-Affected High-Risk Areas (CAHRAs). This should be in the form of a list of countries or sub-sections of countries identified as CAHRAs.

Motivation: Currently there are different requirements imposed by the European Union, US Dodd-Frank, and the Responsible Minerals Initiative for the determination of CAHRAs and this creates confusion for auditors, smelters/refiners, and the supply chain. It also may impact how due diligence is carried out in areas that are viewed as a CAHRA by some but not by others.

9. Recommendation: Governments to study the business impact of regulations, in terms of supply chain de-risking, and implement ways to incentivise (continued) sourcing and/or new investments in Conflict Affected and High-Risk Areas (CAHRAs). This can be done through partnership agreements, government contracting preferences, or company recognition by governments.

Motivation: Current regulations drive companies to de-source or avoid sourcing from CAHRAs, which impacts negatively on economic growth and sustainable develop-

95 <https://www.resolve.ngo/site-ppa/default.htm>

96 <https://europeanpartnership-responsibleminerals.eu/>

ment of those countries governments and regulators need to create the enabling environment to support responsible business investment that aligns with the policy objectives and incentivises companies to invest, even given the increase risks. If the regulatory risk is too high, this drives companies away from the area and can lead to negative consequences. There needs to be incentives for companies to engage in CAHRAs and take on higher risks while complying with the increased requirements.

10. Recommendation: Governments, ICGLR Member States and RMI should support and accept the use of effective alternative Chain-of-Custody systems. These can be either government, company, or third-party systems.

Motivation: Recent NGO reports and on-going concern regarding some of the existing systems has created the need to have transparent reliable chain-of-custody systems. By allowing alternative licensed solutions, this will create a competitive environment that should drive innovation and cost reduction.

11. Recommendation: End users and smelters should be incentivised to invest in alternative approaches, including targeted, risk-based due diligence by specialised research teams.

Motivation: The GW findings and the RMI's recent decision on ITSCI show that end users/refiners will very soon no longer be able to rely solely on ITSCI, or indeed any formulaic scheme because of the tendency over time for actors to find on-the-ground 'work-arounds' that increasingly render these schemes futile, in order to fulfil their due diligence obligations.

12. Recommendation: Governments need to provide necessary programme support (identifying CAHRAs, Providing the Whitelist of smelters as examples) to assist companies in meeting regulations to facilitate uniformity across compliance points. These elements need to be implemented prior to compliance enforcement.

Motivation: There is a lack of solid understanding on sustainability due diligence concepts, guidelines and implementing approaches, as well as tools and capacity for supply chain actors to meet new emerging (EU) regulatory frameworks. The EU has as part of their conflict minerals regulation, Article 9, a requirement to create a list of responsible smelters. This would facilitate and support the importers and due diligence activities. As of this writing the EU has not developed the list.

13. Recommendation: Regulatory and international frameworks should strive to be harmonised so not to contradict each other.

Motivation: Regulatory frameworks lack uniformity leading to confusion and variable and inconsistent scoping definitions (geographic coverage, in-scope companies, thresholds etc.). Conflicting frameworks create challenges

in the supply chain by adding cost, risks, and complexities. If a company needs to conform to multiple regulations this creates more incentive for companies to avoid CAHRAs due to these issues.

14. Recommendation: Governments including ICGLR Member States should leverage the Analytical Mineral Determination process as part of their compliance and enforcement activities regarding the origin of minerals.

Motivation: There is a significant amount of illegal cross border trade occurring in the AGLR. Utilising Analytical Mineral Determination (AMD) by enforcement agencies will help identify the fraudulent minerals and the corrupt entities that continue to perpetuate this situation.

15. Recommendation: Governments and industry evaluate and develop ways to make the use of Analytical Mineral Determination (AMD) more viable, readily available and cost effective.

Motivation: There are number of barriers that have been identified including cost to perform the analytical procedure; timing issues such as time to collect, transport and receive the results; concerns around Chain-of-Custody of the samples (mine reference sample and mineral shipment sample in question) and analytical quantification in regard to orebody location. These barriers limit AMD's effectiveness as a tool for day-to-day application associated with each and every shipment.

8.2 Company Action

16. Recommendation: Downstream companies should provide oversight on industry initiatives they utilise as part of their due diligence process.

Motivation: Downstream companies are responsible the information they use in their reporting and filing. If the industry initiative they are relying on is not performing as designed, this put the company utilising these systems at risk.

17. Recommendation: Companies are advised to approach minerals due diligence from an individual as well as collective perspective.

Motivation: Whilst pursuing due diligence efforts as part of the individual responsibility, companies (big and small) can leverage untapped potentials through collective actions that pool knowledge, networks, and tools. Such collective actions may be explored horizontally as well as through vertical stakeholder collaborations, which allows to seek efficiencies, improve outcomes, and enhance (positive) impact in source-countries (especially CAHRAs). Collective approaches and efforts can support meaningful outcomes towards responsible minerals supply chains, with positive impact at community-level as well as improved quality and outcomes of the corporate due diligence

programme.

18. Recommendation: Industry initiatives that focus on the pinch point in the supply chain need to engage more directly with other upstream assurance mechanisms that they may be relying on for their programme and assure that the upstream systems are conforming to the OECD Due Diligence recommendations through direct engagement and spot checks.

Motivation: Given the recent report by Global Witness regarding ITSCI and the fact that these are potential identified risks that should be assessed, and corrective action implemented if the risk were validated. Until this report RMI has considered ITSCI a fully recognised Upstream Assurance Mechanism should implement greater oversight on these programmes to assure risks are properly identified and mitigated in a timely fashion.

19. Recommendation: Companies should approach sustainability due diligence in minerals supply chains not as a mere 'compliance' effort, but as business risk and opportunity to source responsibly whilst securing (strategic) access to raw materials.

Motivation: Responsible sourcing and strategic access to minerals are two sides of the same coin, but too often businesses approach minerals due diligence as a 'stand-alone' compliance effort. With rising sustainability due diligence legislation in the EU and the US, increased demand for 3T and other minerals due to climate-change driven 'green energy transition' as well as geopolitical tensions, business should pursue a coherent and integrated approach to responsible sourcing of minerals, towards compliance as well as with an eye to securing strategic access to minerals.

20. Recommendation: It is important that companies consider how to integrate sustainability due diligence 'indicators' into their procurement decisions when sourcing high-risk minerals or buying products or components from suppliers that used minerals in the production process.

Motivation: The energy transition is expected to massively boost demand for 3T and other minerals and metals, resulting in a pressure on minerals supply countries and actors including mines. Whilst some business fear that too stringent conditions on sustainability due diligence for suppliers (imposed through EU regulations) may change the level-playing field and leave them out-competed by non-EU buyers.

By integrating sustainability due diligence criteria into the procurement process, through KPI's and codes of conduct, companies have the ability to select suppliers that meet pricing as well as sustainability criteria. Integrating responsible sourcing criteria in procurement, through selection procedure for new suppliers to granting new orders to existing suppliers, companies equally invest in long-term supplier relations.

21. Recommendation: End users/smelters/refiners should also be incentivised to invest or co-invest with Governments in responsible 3T artisanal mining and to prioritise sourcing from these sites.

Motivation: The cost of due diligence is often born by the miner. This impacts the value of the mined material retained by the miner and thus the local mining community. Artisanal mining is also easy to exploit. By having support and oversight of the end users and smelters this would minimise the ability of the miners being exploited by bad actors.

22. Recommendation: Smelters, refiners, and certain downstream actors that directly engage in upstream procurement, should leverage the AMD process to verify/validate the origin of the minerals purchased from CAHRAs as part of their periodic spot checks and risk assessment.

Motivation: There has been cases that when companies inform their upstream supply chain that they will periodically conduct AMD or AFP on concentrate material they purchase, some of the sellers decide not to participate or sell their material to the buyer conducting the AMD. This will strengthen the buyer's due diligence programme.

Governments in the AGLR and other CAHRAs require continued international assistance from the public and private sector to improve their governance systems in general and their natural resource management in particular. Simultaneously, downstream companies urgently need to rethink how they conduct supply chain due diligence, particularly in the most challenging section – the upstream. Governments can play a supporting role here to ensure alignment and recognition of industry schemes. Nonetheless, companies must also accept they cannot simply rely on industry schemes to do their due diligence for them. They need to find other ways to fulfil their obligations. Even though refiners are the 3T supply chain pinch point, that does not mean the responsibility for effective due diligence is theirs alone. All supply chain actors have due diligence responsibility. Additionally, the US, EU and EU member states are critical in the due diligence process through legislation and proactive measures, including supporting governance reform in the upstream and investing in responsible mining and metal production. Much has been accomplished over the last ten years, but there remains much to be done.

