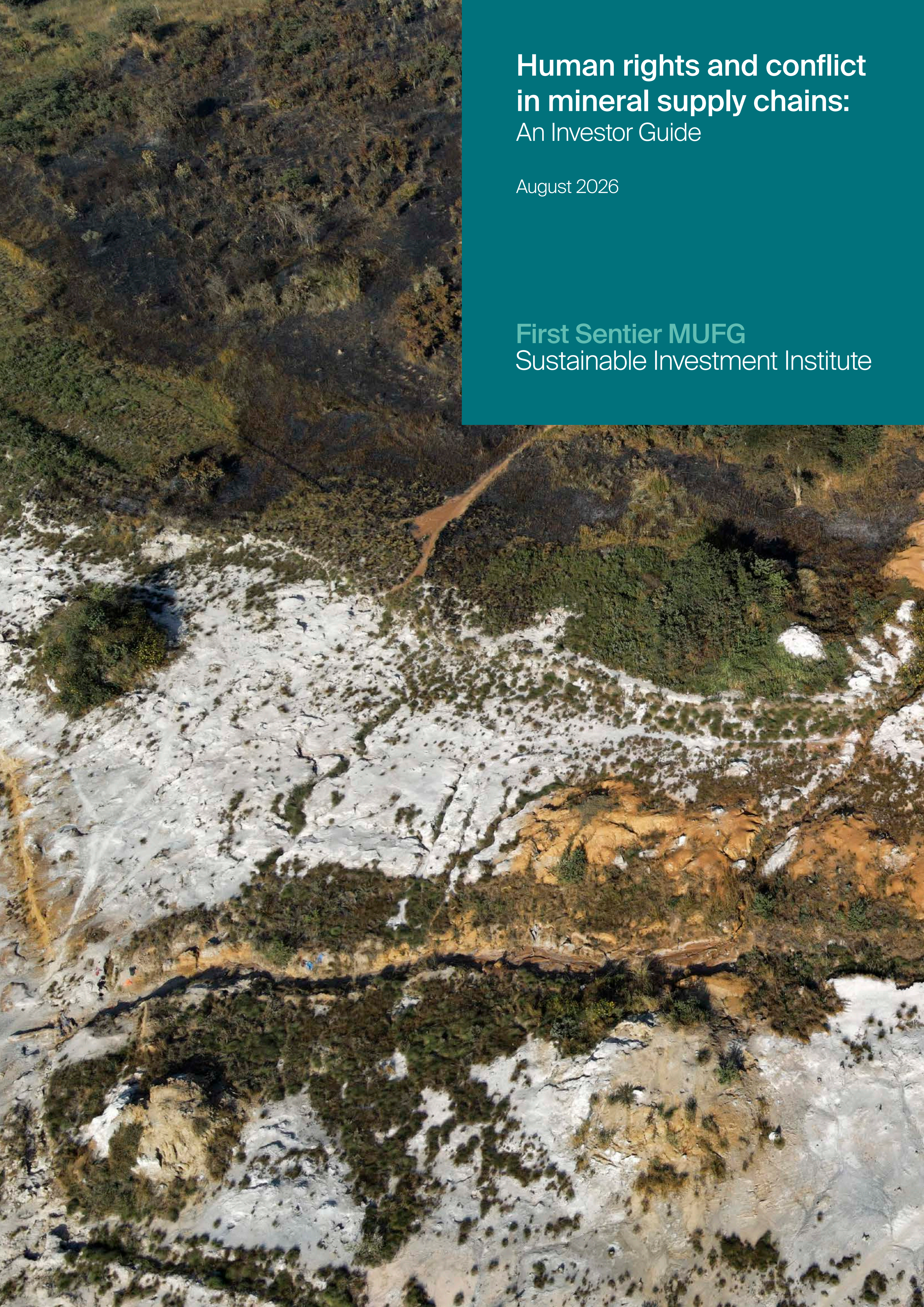
Human rights and conflict in mineral supply chains:
An Investor Guide

August 2026

First Sentier MUFG
Sustainable Investment Institute



About the Institute

The First Sentier MUFG Sustainable Investment Institute (the Institute) provides research on topics that can advance sustainable investing. As investors, both First Sentier Group and MUFG recognise our collective responsibility to society and that investment decisions should be made with consideration to our communities both now and in the future.

The Institute commissions research on Environmental, Societal and Governance (ESG) issues, looking in detail at a specific topic from different viewpoints. The Institute recognises that investors are now looking in far greater depth, and with far greater focus, at issues relating to sustainability and sustainable investing. These issues are often complex and require deep analysis to break down the contributing factors. If as investors we can better understand these factors, we will be better placed to consider our investment decisions and use our influence to drive positive change for the benefit of the environment and society.

The Institute is jointly supported by First Sentier Group (FSG) and Mitsubishi UFJ Trust and Banking Corporation, a consolidated subsidiary of MUFG. Representatives of both organisations will provide input to the activities of the Institute.

An Academic Advisory Board advises the Institute on sustainability and sustainable investment research initiatives. The Academic Advisory Board comprises prominent leaders from academia, industry and nongovernmental organisations in the fields of Responsible Investment, climate science and related ESG endeavours. The Board provides independent oversight to ensure that research output meets the highest standards of academic rigour.

Contact

institute@firstsentier.com
www.firstsentier-mufg-sustainability.com
www.mufg-firstsentier-sustainability.jp

Acknowledgements

The authors of this publication are Sudip Hazra and Elena Zharikova (SII). The Insitute is grateful to the following individuals for their contribution to this research:

Dr Emi Sugawara (Osaka University of Economics and Law)
Louis Marechal (OECD)
Josie Lianna Kaye (TrustWorks Global)
Stephen Barrie (Church of England Pensions Board)
Assheton Stewart Carter (TDi Sustainability)
Sebastien Akbik (Chronos Sustainability)
Gemma James (Chronos Sustainability)
James Megoran (Global Centre for Peacebuilding and Business)
Ken Mitsutani (MUTB)
Benjamin Briceno (MUAM UK)
Hiroshi Ishida (Caux Round Table Japan)

The Institute's sponsors and partners

About First Sentier Group

First Sentier Group

First Sentier Group (formerly First State Investments) is a global asset management group focused on providing high quality, long-term investment capabilities to clients. We bring together independent teams of active, specialist investors who share a common commitment to responsible investment and stewardship principles. These principles are integral to our overall business management and the culture of the firm.

All our investment teams – whether in-house or individually branded – operate with discrete investment autonomy, according to their investment philosophies.

www.firstsentierinvestors.com

About MUFG

Mitsubishi UFJ Financial Group, Inc. (MUFG) is one of the world's leading financial groups. Headquartered in Tokyo and with over 360 years of history, MUFG has a global network with approximately 2,000 locations in more than 40 countries. The Group has about 150,000 employees and offers services including commercial banking, trust banking, securities, credit cards, consumer finance, asset management, and leasing. The Group aims to "be the world's most trusted financial group" through close collaboration among our operating companies and flexibly respond to all of the financial needs of our clients, serving society, and fostering shared and sustainable growth for a better world. MUFG's shares trade on the Tokyo, Nagoya, and New York stock exchanges.

www.mufg.jp/english

About the Trust Bank

Mitsubishi UFJ Trust and Banking Corporation, as a core member of MUFG, provides its customers with a wide range of comprehensive financial solutions leveraging unique and highly professional functions as a leading trust bank. Such financial solutions include real estate, stock transfer agency, asset management and investor services, and inheritance related services, in addition to banking operations. The Trust Bank aims to realize its vision to be the trust bank that can create a safe and enriching society and future alongside customers through trust; as such, its key concept is "Create a Better Tomorrow".

https://www.tr.mufg.jp/english

Executive summary

Background

Energy transition, the continuing digitalisation of the global economy, rise of AI and geopolitical tensions elevate the importance of mineral value chains, placing the extractive sector and sourcing of raw materials at the centre of stakeholder attention. One part of a complex set of considerations facing stakeholders is the sustainability impact of mineral extraction, which can include deforestation, biodiversity loss, water and soil pollution, human and labour rights violations, conflict and corruption, infringement of Indigenous rights and others[1]. This report aims to cover current sustainability-related challenges linked to a specific subset of mining activities – artisanal and small-scale mining (ASM), primarily focusing on human rights.

ASM describes activities usually performed by individual or small groups of miners engaged in informal labour (or small-scale commercial mining), without the equipment and legal protections offered by formalised mining. ASM employs over 225 million people globally, according to World Bank[2], and supplies a substantial proportion of critical minerals, including tin, tantalum, tungsten and gold (3TG), cobalt, copper and others; and has potential to play an even greater role in meeting increased demand for critical minerals. 3TG minerals are commonly used in technologies such as semiconductors, EVs, renewables, medical appliances, defence and aerospace. ASM mining of these minerals is concentrated in the Great Lakes Region of Africa (especially the DRC, Rwanda, Tanzania), Indonesia and China.

The problem

Stakeholder concerns over the human rights impact of artisanal 3TG mining are not new. The links between 3TG mining and armed conflicts in the DRC have been subject to broad scrutiny in recent decades, manifesting in the widespread term 'conflict minerals'. This most commonly references 3TG and is used in landmark regulations and international frameworks, including Section 1502 of the Dodd-Frank Act, the EU Conflict Minerals Regulation, OECD Due Diligence Guidance, as well as numerous industry and multi-stakeholder initiatives[3]. These ongoing efforts aim to prevent armed groups from exploiting mineral mining and promote sustainable development, by cultivating transparency, traceability and responsible sourcing practices in mineral supply chains. Although they have brought some positive change, we believe considerable challenges persist and extend to a much wider scope of materials than just 3TG.

ASM can represent an important livelihood and poverty reduction opportunity for many (provided appropriate safeguards, formalisation pathways and market access are available). However, it is also often linked to conflict, human rights violations and environmental harm.

While ASM provides a livelihood for millions globally and has significant positive socioeconomic potential, in several geographies (including the African Great Lakes Region, Nigeria, Zimbabwe, South America), the interference of armed groups (especially in relation to the recent escalation of conflict in eastern DRC), conflict, forced labour, unsafe working conditions and gender-based violence are pervasive. ASM-related human rights risks are also prominent in many other jurisdictions, including Tanzania, Indonesia, India, Colombia and Papua New Guinea.

International stakeholders' efforts to facilitate formalisation of ASM activities, prevent conflict funding and instil responsible mineral sourcing practices throughout value chains have had limited effect on the ground. While the evidence regarding their effect on armed interference and violence in the DRC is inconclusive, there are indications that artisanal miners can be placed in worse socioeconomic situations as a result of conflict minerals-related regulation and due diligence schemes.

The limited effectiveness of global stakeholder efforts means that companies and investors continue to face risks linked to mineral sourcing (including conflict minerals), while the rightsholders[4] in the countries of origin continue to be exposed to negative human rights impacts linked to conflict and mineral extraction.

For companies and investors, particularly those with material exposure to mineral-intensive sectors, CAHRA sourcing or complex global supply chains, conflict minerals and broader mineral sourcing issues may present significant legal, regulatory, operational, reputational and financial risks. In the context of growing global tensions and conflicts, these concerns are becoming even more prominent.

Furthermore, international standards, such as the UNGPs and OECD guidance, and in some jurisdictions domestic legislation, establish expectations or requirements for businesses to identify and address human rights and conflict-related risks. A proactive, risk-based due diligence approach may help companies meet applicable obligations and stakeholder expectations (as well as addressing the above risks).

Key relevant international norms and regulatory frameworks	
International norms	United Nations Guiding Principles on Business & Human Rights
	OECD Due Diligence Guidance for Responsible Business Conduct
	OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
Regulatory frameworks and legislation	US Dodd-Frank Act 1502
	EU Conflict Minerals Regulation
	EU Battery Regulation
	EU Corporate Sustainability Reporting Directive
	EU Corporate Sustainability Due Diligence Directive
	French Duty of Vigilance law

Source: SII

Importantly, many key frameworks, including the OECD Due Diligence Guidance,* **do not aim to prevent companies from sourcing minerals from CAHRAs (or ASM) as their involvement has the potential to foster local development. Instead, they seek to ensure appropriate due diligence and risk mitigation measures are taken.**

* OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, 2016

Businesses throughout the mineral supply chain continue to encounter challenges in their efforts to mitigate these risks in line with their regulatory responsibilities and stakeholder expectations.

Upstream:

- *Ongoing conflicts and weak state governance in the DRC* continue to undermine the effectiveness of local implementation of domestic and international frameworks.

- *Traceability and due diligence mechanisms* can also be compromised due to local challenges (e.g. conflict preventing traceability schemes from operating; state or non-state actors responsible for implementing the traceability schemes engaging in corruption or lacking technical training; breakdown of trust between government actors and local communities).

- *Unintended consequences and misaligned incentives* that responsible sourcing programmes impose on artisanal miners, such as unduly high fees, administrative burdens and negative socioeconomic effects (with women particularly disadvantaged), undermining the formalisation drive.

- *International responsible sourcing efforts have been primarily focused on addressing consumer concerns* down the supply chain (minimising the risk of being linked to conflict or human right harms) rather than improving mining practices upstream. International stakeholders increasingly recognise the need for better alignment between market objectives and the needs of domestic actors and rightsholders (such as formalisation and sustainable development)[5].

Downstream:

- *The opacity of supply chains is a significant challenge;* most 3TGs are processed in countries lacking strong transparency frameworks and enter other markets as semi-finished products or alloys, making mapping out the supply chain difficult for consumers.

- *Companies tend to rely on industry due diligence and certification schemes* while lacking robust internal due diligence processes; while these schemes play a critical role, reliance on them can be detrimental, as evidenced by the prominent controversies involving some of these schemes[6].

- *Many downstream companies continue to demonstrate a narrow compliance-focused approach to responsible mineral sourcing:* an example of this includes solely following Dodd-Frank requirements and overlooking minerals other than 3TG, while many other critical minerals (such as lithium, copper, cobalt, mica and others) are also associated with human rights harms and other sustainability impacts[7].

- **Overall, implementation of the heightened due diligence requirements needed in conflict-affected and high-risk area (CAHRA) contexts appears limited, despite some companies stating they have a policy to assess those risks in relation to mineral sourcing. This can be partly attributed to many market actors having a low level of understanding of conflict-related due diligence requirements and their differences with broader human rights due diligence expectations[8].**

- *The cost and complexity of due diligence requirements* can discourage companies from continuing to engage with suppliers in CAHRA areas and/or ASM. At the same time, shifting mineral supply chains presents considerable challenges. For many large companies with complex mineral-dependent supply chains, ASM and conflict-related risks may remain difficult to eliminate entirely. In such cases, a proactive, risk-based approach may provide stronger risk mitigation than relying on reactive measures.

Some companies are making progress in establishing robust responsible mineral sourcing frameworks. The table below illustrates a range of advanced and emerging measures that are being integrated by companies across key aspects of the OECD due diligence process.

Strong company management systems	
Good practice: Responsible mineral sourcing policy aligned with the OECD and UNGP guidelines, incorporating conflict-related risks/ heightened human rights due diligence (hHRDD) concerns.	**Best practice:** • Responsible mineral sourcing policy aligned with the OECD and UNGP guidelines that cover 3TGs and other relevant materials • Specific policy addressing hHRDD/conflict-related risks • Board level oversight of responsible mineral sourcing process, including CAHRA risks • Collaborative approach to implementing conflict risk management across several departments (e.g. legal, compliance, finance, human capital, sustainability, procurement)
Identification and assessment of supply chain risks	
Good practice: Identifying smelters or refiners in the supply chain and assessing their sourcing and due diligence practices, usually by relying on the Responsible Minerals Initiative (RMI) process.	**Best practice:** • Conducting a risk assessment to prioritise high-risk materials in the supply chain • Supplementing information obtained through the RMI processes by conducting independent research into not covered/non-conforming suppliers • Escalation process for non-responsive/non-compliant suppliers • Traceability beyond first-tier suppliers by tracing parts or components • Conducting additional audits/due diligence on suppliers in high-risk (CAHRA) areas, including through partnerships with organisations/non-profits operating in these locations

Risk mitigation

Good practice:
Conducting country of origin inquiries, identifying the number of Responsible Minerals Assurance Process (RMAP) validated smelters or refiners in the supply chain and setting targets to increase this number.

Best practice:
- Reporting identified risks to senior management
- Responsible engagement with ASM/CAHRA suppliers supported by enhanced due diligence and risk mitigation (depending on relevant legal and sanction contexts, as well as risk levels)
- Developing CAHRA-specific sourcing policies and processes that address conflict risks
- Providing technical support and training to ASM miners (e.g. through multi-stakeholder initiatives)
- Strengthening supply chain due diligence and traceability beyond industry initiatives (e.g. through online research, NGO reports, audits, direct supplier communication, onsite visits)
- Monitoring and tracking risk mitigation measures through specific metrics (e.g. supplier audits, audit outcomes, corrective measures)
- Facilitating stronger responsible sourcing practices throughout the supply chain by integrating policy requirements into supplier contracts, assisting suppliers with capacity building, developing and following up on measurable improvement plans, encouraging participation in industry and multi-stakeholder initiatives addressing systemic issues in mineral supply chains

Independent third-party audit of supply chain due diligence

Good practice:
Use of third-party audits and certification systems, such as RMI RMAP, Initiative for Responsible Mining Assurance (IRMA), Copper Mark and others.

Best practice:
- Building awareness of the risks assessed by third-party frameworks used by the company (to minimise potential gaps)
- Supplementing information obtained/verified through these frameworks with additional due diligence (e.g. risk-based supplier audits, including onsite audits involving local stakeholders, company research and verification, direct communication with suppliers, civil society organisations or NGOs).

Supply chain due diligence reporting

Good practice:
While companies tend to report on the process of identification of conflict mineral risks, risk management measures are relatively underreported.

Best practice:
- Annual disclosure aligned with UNGP and OECD requirements, including information on governance, supply chain risk assessment, risk management processes and audits.
- Disclosures including measurable indicators, such as proportion of suppliers covered by third-party audit schemes, response rates, audits, incident rates and others.
- Disclosures covering a broad scope of materials beyond the 3TGs (e.g. mica, cobalt, nickel, lithium, copper, aluminium and others as relevant); and disclosing suppliers beyond the first tier.

Industry initiatives

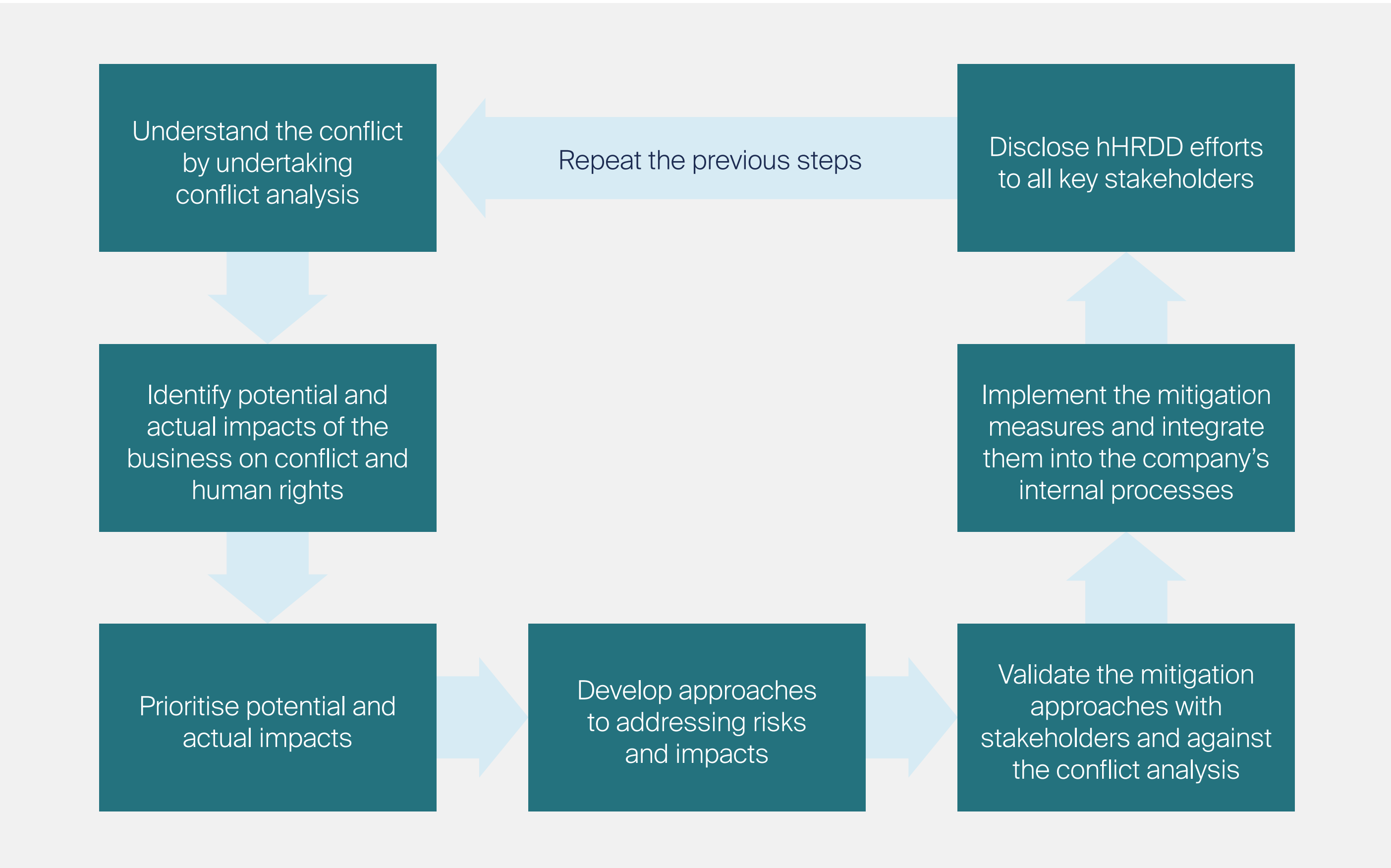
Best practice:
Participation in multi-stakeholder and/or industry initiatives addressing systemic human rights and conflict-related risks within mineral supply chains, such as RMI, IRMA, EPRM, ARM, Better Mining, Global Centre for Peacebuilding & Business (GCPB) and others.

Heightened human rights due diligence (hHRDD) for businesses in conflict-affected contexts

hHRDD requirements are currently not well understood by the market. Examples of emerging implementation practice include:

- Standalone policy addressing CAHRA mineral sourcing-related risks/integration into existing conflict minerals policy
- CAHRA risks being integrated into the governance structures with board and senior level oversight across company functions (legal, compliance, finance, HR) and collaborative approach between compliance, CSR, legal, sales and procurement to respond to risk at an operational level
- Inclusion of hHRDD elements into existing risk management processes, such as human rights impact assessments, supply chain due diligence, procurement and regulatory compliance
- Company disclosures, including CAHRA-related human rights risks and their potential impacts on key stakeholder groups

To comprehensively address conflict-related human rights risks in their operations and supply chains, companies would need to identify their value chain exposure to CAHRAs and follow the process below:



Source: SII, United Nations Development Programme, Training Facilitation Guide: Heightened Human Rights Due Diligence (2025)

What can investors do to help companies address human rights risks linked to mineral sourcing?

Investors and asset owners, particularly where they have material exposure, long-term investment horizons, relevant stewardship objectives and/or meaningful leverage, may be able to promote more responsible mineral sourcing practices through engagement, collaboration and portfolio monitoring. To that end, investors and asset owners can take the following actions:

Internal capacity building

Building internal expertise on international norms, regulations, guidelines and legislation related to responsible mineral supply chains and CAHRA sourcing and their practical application will enable investors to effectively evaluate and manage portfolio risk.

Portfolio human rights and conflict due diligence and monitoring

Understanding mineral sourcing-related human rights risks, including CAHRA-related risks in the value chains of portfolio companies, will help investors assess and manage potential negative impacts on their portfolios, financial returns and wider stakeholders and rightsholders.

Policy engagement

Where consistent with their investment objectives, fiduciary duties and stewardship policies, investors may consider policy engagement on responsible mineral sourcing, including by supporting regulatory clarity, local stakeholder participation in the regulatory/policymaking process, greater consideration of gender-specific implications and attention to potential unintended consequences.

External capacity building through corporate, industry, multi-stakeholder and local community engagement

Investors can seek to use their influence through engagement with portfolio companies to encourage implementation of responsible mineral sourcing principles and more robust conflict-related due diligence practices. Participating in collective investor initiatives is likely to increase the effectiveness of their engagement efforts.

Establishing dialogue and participating in multi-stakeholder industry initiatives (such as RMI and IRMA), as well as encouraging portfolio companies to participate, can also be a powerful opportunity to drive change.

Engagement via multi-stakeholder initiatives, NGOs and civil society bodies operating in countries of origin can help investors develop a deeper understanding of upstream risks and local context, particularly where investors have material exposure or are participating in collaborative initiatives. In particular, investors can take part in (and encourage portfolio company participation) initiatives directly, engaging with ASM communities and facilitating ASM formalisation through specific projects, including widening access to finance.

Source: SII

This report aims to support investors by providing engagement guidance, covering portfolio companies (including best practice examples), industry bodies, NGOs, policymakers and regulators.

Important information