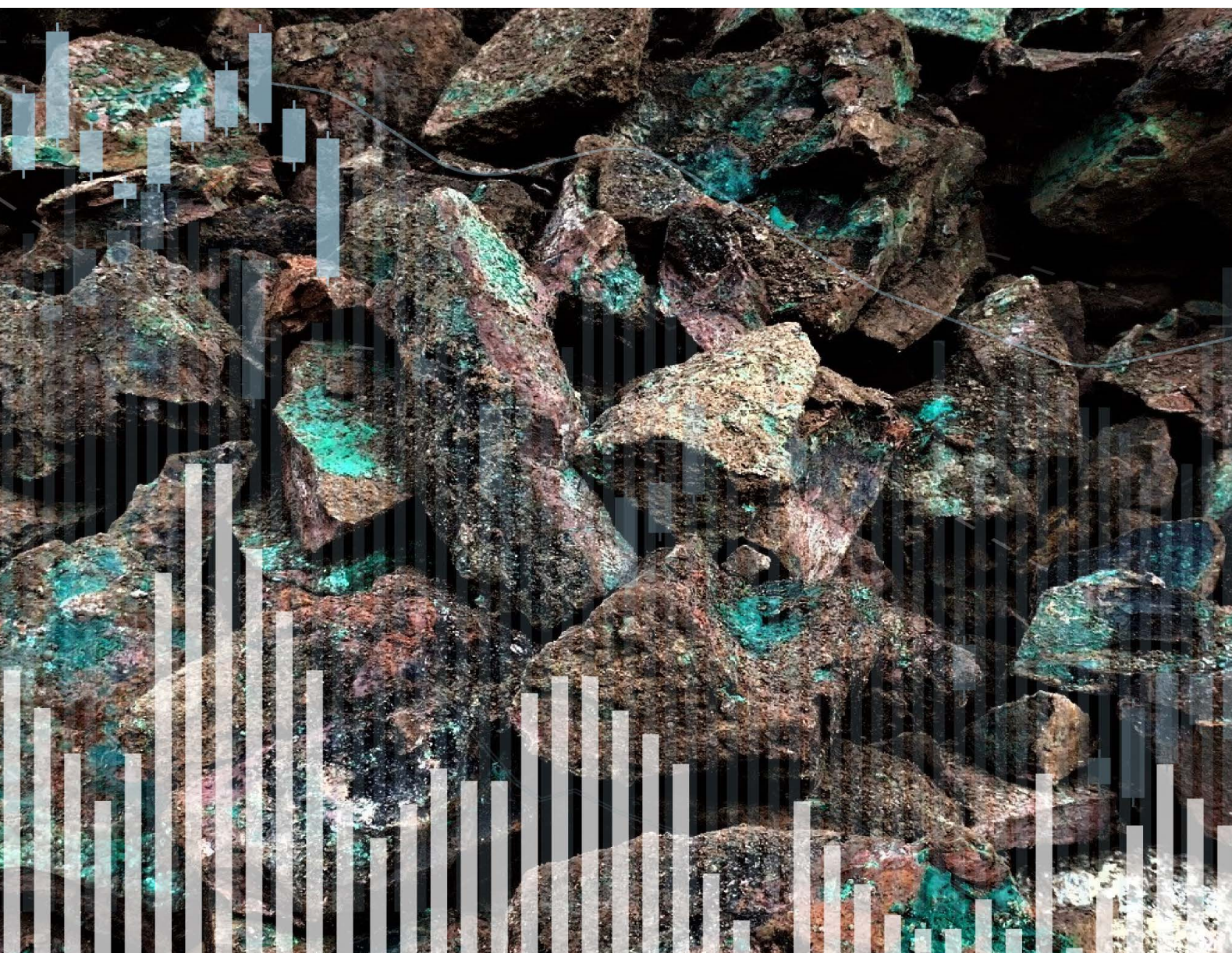




# Monitoring and Evaluation Framework

**OECD DUE DILIGENCE GUIDANCE  
FOR RESPONSIBLE SUPPLY CHAINS OF MINERALS  
FROM CONFLICT-AFFECTED AND HIGH-RISK AREAS**



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## Organisation for Economic Co-operation and Development (OECD)

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD's work on responsible business conduct (RBC) is delivered through the OECD Centre for Responsible Business Conduct (RBC Centre). The RBC Centre, which is part of the OECD Directorate for Financial and Enterprise Affairs, works with governments, business, workers and civil society to promote the implementation of the OECD Guidelines for Multinational Enterprises and related RBC standards.

## The OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas

The OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (hereinafter the "DDG") provides step-by-step recommendations endorsed by governments for globally responsible supply chains of minerals in order for companies to respect human rights and avoid contributing to conflict through their mineral or metal purchasing decisions and practices. The OECD DDG may be used by any company potentially sourcing minerals or metals from conflict-affected and high-risk areas, and is intended to cultivate transparent, conflict-free supply chains and sustainable corporate engagement in the minerals sector. The OECD Council adopted the Recommendation on Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas on 25 May 2011 based on a proposal from the Development Assistance Committee (DAC) and the Investment Committee. More information on the OECD's work in the mining sector can be found at: <http://www.oecd.org/corporate/mne/mining.htm>

## Notes on the Development of the Monitoring & Evaluation Framework

The development of this Monitoring & Evaluation Framework (M&E Framework) was premised on the OECD's terms of reference, which had involved extensive prior stakeholder input over a period of 18 months. Further input and guidance was received by the OECD's Secretariat at each step of the M&E Framework's development. The M&E Framework was critiqued by an Informal Advisory Group of academic and civil society representatives. Leading theory was applied to the problem at hand, including systems theory, game theory, and literature specific to the problematic of minerals associated with conflict and adverse impacts.

The basic characteristics of minerals markets were considered, as well as precedents involving the measurement of policy implementation. Upon being operationalised, the guiding specifications and parameters in the form of particular research methods and indicators were tested through example case studies, providing a perspective of how this M&E Framework is to be applied. For this reason, several examples spanning indicators and data sources were drawn from experience implementing the DDG in the Democratic Republic of the Congo. These should be considered indicative as specific national and sub-national data sources will be considered for the deployment of the M&E Framework in selected countries.

# Acknowledgements

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On behalf of DI, the Framework was critiqued by Dr. Derrill Watson (Tarleton State University), Dr. William Bertrand (Tulane University), Lawrence Heim (CCRcorp), Bryanna Frazier (DI), Jesse Hudson (DI), Juan Ignacio Ibañez (DI), and Eliana Gonzalez Torres (DI). For IMPACT, Joanne Lebert and Kady Seguin served as expert contributors, Carmen Teichgraber as the project manager, with contributions also made by Dr. Anthony Goerzen and Luke Fiske of Queen's University.

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# Acronyms and Abbreviations

<b>3T</b>	Tin, Tungsten, Tantalum
<b>3TG</b>	Tin, Tungsten, Tantalum and Gold
<b>ACLED</b>	Armed Conflict Location & Event Data Project
<b>AO</b>	Areas of Operation
<b>ARM</b>	Alliance for Responsible Mining
<b>ASM</b>	Artisanal and Small-scale Mining
<b>CAHRAs</b>	Conflict-Affected and High-Risk Areas
<b>CCA</b>	Causal Contribution Analysis
<b>CFSP</b>	Common Foreign and Security Policy
<b>CMRT</b>	Conflict Minerals Reporting Template (RMI)
<b>COO</b>	Country of Origin
<b>CRAFT</b>	Code of Risk-Mitigation for Artisanal and Small-Scale Mining Engaging in Formal Trade
<b>CSO</b>	Civil Society Organisation
<b>DAC</b>	Responsible Business Conduct
<b>DALY</b>	Disability-Adjusted Life Year
<b>DD</b>	Due Diligence
<b>DDG</b>	OECD Due Diligence Guidance on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
<b>DDM</b>	Due Diligence Minerals
<b>DDP</b>	Due Diligence Programme
<b>DI</b>	Development International e.V.
<b>DMCC</b>	Dubai Multi Commodities Centre
<b>DRC</b>	Democratic Republic of the Congo



<b>EITI</b>	Extractive Industries Transparency Initiative
<b>e.g.</b>	Exempli gratia
<b>FCPA</b>	Foreign Corrupt Practices Act (U.S.)
<b>GAO</b>	Government Accountability Office (U.S.)
<b>GEM</b>	General Elimination Methodology
<b>GDP</b>	Gross Domestic Product
<b>GNI</b>	Gross National Income
<b>HHI</b>	Harvard Humanitarian Initiative
<b>HIK</b>	Heidelberg Institute for International Conflict Research
<b>HRW</b>	Human Rights Watch
<b>IAG</b>	Informal Advisory Group
<b>ICF</b>	Inner City Fund
<b>i.e.</b>	Id est
<b>IEP</b>	Institute for Economics & Peace
<b>ILO</b>	International Labour Organization
<b>IPIS</b>	International Peace Information Service
<b>KST</b>	Kivu Security Tracker
<b>KYC</b>	Know Your Counterparty
<b>LBMA</b>	London Bullion Market Association
<b>LME</b>	London Metal Exchange
<b>LSM</b>	Medium and Large-scale Mining
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MONUSCO</b>	United Nations Organization Stabilization Mission (in the DRC)
<b>NCPs</b>	National Contact Points (OECD)
<b>n.d.</b>	not dated
<b>NGO</b>	Non-Governmental Organisation
<b>non-DDM</b>	non-Due Diligence Minerals

<b>NONIE</b>	The Network of Networks on Impact Evaluation
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>OEM</b>	Original Equipment Manufacturer
<b>OFAC</b>	Office of Foreign Asset Control (U.S.)
<b>OHS</b>	Occupational Health & Safety
<b>RBC</b>	Responsible Business Conduct
<b>RCOI</b>	Reasonable Country of Origin Inquiry
<b>RCT</b>	Randomised Control Trial
<b>RJC</b>	Responsible Jewellery Council
<b>RMI</b>	Responsible Minerals Initiative
<b>SC</b>	Supply Chain
<b>SD</b>	Specialized Disclosure
<b>SEC</b>	Socio-Economic Conditions
<b>SIC</b>	Standard Industrial Classification
<b>SOR</b>	Smelter or Refiner
<b>S&amp;P</b>	Standard & Poor's
<b>TOC</b>	Theory of Change
<b>TOR</b>	Terms of Reference
<b>UAE</b>	United Arab Emirates
<b>U.K.</b>	United Kingdom
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Programme
<b>UNICEF</b>	United Nations Children's Fund
<b>UNITAR</b>	United Nations Institute for Training and Research
<b>U.S.</b>	United States of America
<b>WGC</b>	World Gold Council
<b>WGI</b>	Worldwide Governance Indicators

# Overview

The OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (DDG) recognises the private sector as a critical force and change agent that can influence the well-being of societies, and as bearing a particular responsibility when operating in or sourcing from conflict-affected and high-risk areas (CAHRAs). By conducting due diligence and making informed purchasing decisions, the private sector can avoid contributing to serious human rights abuses, curtail revenue to armed groups and organised crime, and avoid links with financial crime. It can also help countries and communities benefit from their natural resources.

As due diligence matures and grows to cover mineral supply chains across the globe, policymakers, stakeholders, and industry are looking for data to inform their decision-making. **The application of this Monitoring and Evaluation Framework (M&E Framework) will improve understanding of how due diligence is being implemented and if it is helping to achieve the aims of the DDG — and, if not, why.** Like most policy interventions, to date the results of due diligence in mineral supply chains appear mixed, with progress, shortcomings and ambiguous outcomes spread across multiple dimensions. This is where the real value of the M&E Framework lies; to make sense of the mechanisms by which the policy environment and uptake of due diligence bring about impacts, particularly in mineral producing countries and communities. **The aim, in turn, is to generate actionable data that can help stakeholders scale up what's working and address what isn't.**

## How does the M&E approach work?

**The M&E Framework uses a theory of change to articulate the process through which corporate uptake of the DDG affects the market for responsibly sourced minerals and, in turn, influences the prevalence of adverse impacts and socio-economic conditions in mining communities.** The theory of change also includes contextual factors that may drive, hinder or otherwise influence the implementation of due diligence.

Figure 1. Thematic scope of M&E Framework



Source: Author's own work

**The framework relies on several studies to collect data for each part, or node, of the theory of change.** For example:

- studies on *context* will collect information on regulatory developments or the level of informality in supply chains;
- studies on *uptake* will examine companies' implementation of specific due diligence practices;
- studies on the *market for responsible trade in minerals* will look at the performance of due diligence programmes and relative volumes of responsibly traded minerals;
- studies on *impacts* will aggregate data on the incidence of serious human rights abuses or armed conflict in producing countries, among many other indicators.

**Comparing the results at each node will then enable investigation of the relationships between them.** Each study outlines methodologies, indicators, and data sources to generate evidence-based conclusions.

It may not be possible to isolate and estimate the effect of the DDG on specific outcome dimensions with quantitative precision. **The framework will, however, collect a significant amount of data that can affirm (or call into question) the theory of change and its underlying assumptions.** The usefulness of the framework will emerge most saliently from the picture it will build of specific due diligence topics across the dimensions of the theory of change. Consider the issue of tax payments: The framework collects data on this topic at every node along the theory of change, starting with public financial management performance, through to companies' and due diligence programmes' transparency on tax payments, and finally to receipts by governments. Similarly, the framework helps infer relationships between different parts of the theory of change on issues as diverse as de-risking, opportunities in the formal economy and decent work deficits. The studies will therefore not only help identify where there are shortcomings with implementation, but also the most impactful points of entry for addressing such shortcomings and enhancing existing positive outcomes.

**More promising, the level of detail of the framework's findings is projected to significantly improve over time, due both to the increased quality of corporate self-reporting necessitated by regulation and market requirements as well as the increased confidence made possible by data collected over multiple cycles.** The framework will also allow for interesting comparisons to be made of implementation between different regions, for example, between producing countries with significant experience in implementation and those where companies are just beginning to conduct due diligence. Ultimately, through these distinct analytical lenses, the framework aims to provide actionable information for stakeholders:

- for policymakers to continue stitching together a global rules-based system for responsible mineral supply chains;
- for industry, market makers and exchanges to improve uptake of the DDG, and strengthen the incentives for doing so;
- and to empower civil society organisations with data that allows them to hold companies and governments accountable, ensure that due diligence is context-sensitive and help mineral-producing communities reap the benefits of improved governance of the sector.

### How will the rollout work practically?

The OECD will supervise deployment of the framework in several selected countries and supply chains. Pursuant to its purpose of monitoring and evaluating implementation of the DDG, **the M&E Framework has a global geographic scope and is applicable to all minerals.** A means to select country-supply

chain pairs in which to deploy the framework is provided by the M&E framework's forthcoming companion handbook<sup>1</sup>. The OECD will continue to liaise with stakeholders, in particular partner organisations, independent researchers, companies and industry associations collecting data on mineral supply chains, to promote a harmonized approach to impact measurement and address identified data gaps through bespoke studies as necessary.

## Notes

<sup>1</sup> Deploying the Monitoring and Evaluation Framework for the OECD Due Diligence Guidance on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas: A Handbook.

# Glossary

The following operational definitions and typologies are applied in this document.

**Armed groups:** As per the definition of the OECD (2016: 66) DDG: “non-state armed groups or their affiliates who:

- illegally control mine sites or otherwise control transportation routes, points where minerals are traded and upstream actors in the supply chain; and/or
- illegally tax or extort money or minerals at points of access to mine sites, along transportation routes or at points where minerals are traded; and/or
- illegally tax or extort intermediaries, export companies or international traders.”

**Artisanal and Small-scale Mining (ASM):** “Formal or informal mining operations with predominantly simplified forms of exploration, extraction, processing, and transportation. ASM is normally low capital intensive and uses high labour-intensive technology” (OECD, 2016: 65).

**Attribution:** The isolation and accurate assessment of “the particular contribution of an intervention, and ensuring that causality runs from the intervention to the outcome” (Leeuw and Vaessen, 2009: 21).

**Chain-of-custody:** A record of the sequence of entities which have custody of minerals as they move through a supply chain.

**Conflict-affected and high-risk areas (CAHRAs):** The OECD (2016: 66) characterises CAHRAs as “Areas identified by the presence of armed conflict, widespread violence, including violence generated by criminal networks, or other risks of serious and widespread harm to people. Armed conflict may take a variety of forms, such as a conflict of international or non-international character, which may involve two or more states, or may consist of wars of liberation, or insurgencies, civil wars. *High-risk areas* are those where there is a high risk of conflict or of widespread or serious abuses as defined in paragraph 1 of Annex II of the DDG. Such areas are often characterised by political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure, widespread violence and violations of national or international law.”

**Contribution:** Where it is not possible to isolate and accurately determine *attribution* between the outcome and an intervention (i.e. where it is not possible to quantitatively determine the degree/extent of causal attribution”), but one can make “chains of logical arguments that are verified” through a causal contribution analysis, one may use the term *contribution* (Leeuw and Vaessen, 2009: 19, 31).

**Credible, independent 3<sup>rd</sup> party verifier:** A qualified entity (which is not the producer nor the buyer), which validates that a given event, condition, or practice has or has not taken place in accordance with set standards.

**Direct or indirect support to armed groups:** “‘Direct or indirect support’ to non-state armed groups or public or private security forces through the extraction, transport, trade, handling or export of [minerals] includes, but is not limited to, procuring minerals from, making payments to or otherwise

providing logistical assistance or equipment to, non-state armed groups, public or private security forces or their affiliates who:

- illegally control mine sites or otherwise control transportation routes, points where gold is traded and upstream actors in the supply chain; and/or
- illegally tax or extort money or gold at points of access to mine sites, along transportation routes or at points where gold is traded; and/or
- illegally tax or extort intermediaries, export companies or international traders” (OECD, 2016: 66).

**Downstream:** The actors positioned in supply chain segments following the smelter/refiner tier of the supply chain, up to and including original equipment manufacturers (OEMs), consumer-facing companies and retailers.

**Due Diligence (DD):** OECD-premised due diligence constitutes: “an on-going, proactive and reactive process through which companies can identify, prevent, mitigate and account for how they address their actual and potential adverse impacts as an integral part of business decision-making and risk management systems. Due diligence can help companies ensure they observe the principles of international law and comply with domestic laws, including those governing the illicit trade in minerals and United Nations sanctions” (OECD, 2016: 66-68).

A sub-category of DD is “*Supply Chain Due Diligence*,” which the OECD defines as follows: “With specific regard to supply chain due diligence for responsible mineral sourcing, risk-based due diligence refers to the steps companies should take to identify, prevent and mitigate actual and potential adverse impacts and ensure that they respect human rights and do not contribute to conflict through their activities in the supply chain” (OECD, 2016: 70).

**Due Diligence Minerals (DDM):** Minerals that are a product of a DDP (as defined below).

**Due Diligence Programme (DDP)<sup>2</sup>:** At a minimum, a DDP is an initiative that invests in risk identification, mitigation and/or harm remediation and meets all of the criteria in the table below. Individual upstream company due diligence initiatives are in-scope as DDPs for the purposes of this Framework if they feature the criteria set out in this typology. Measuring the quality of these in-scope DDPs is performed in Chapter 7.4, Section D.

**Table 1.1. Due Diligence Programme (DDP) criteria for M&E Framework studies**

#	DDP in-scoping criteria	Explanation
1.	Is comprised of at least one upstream mineral producing or trading actor.*	Engagement of the upstream, and mineral exploitation in particular, is a DDP focus.
2.	Leverages collective/collaborative action between actors party to the initiative.	Collective action creates synergies otherwise not exploited and is important for influencing supply chains.
3.	Makes and/or abides by a public commitment to conduct due diligence-related activities on at least one Annex II Adverse Impact.	Alignment with the DDG, and targeting at least one of its Annex II adverse impacts is basic to in-scope DDPs.
4.	Tracks events and/or grievances (“incidents”) at the mineral origin until point of export linked to one or more ANNEX II Adverse Impacts.	The identification of incidents at their point of origin is a prerequisite for effectively responding to risks.
5.	Manages and responds to risks by conducting corresponding mitigation measures and/or procedures as per the OECD DDG.	A commensurate reaction, premised on the DDG, informs the degree of DDG alignment.
6.	Consults stakeholders as part of the process to identify and follow up/mitigate incidents.	Stakeholder consultations enhances the ownership and accountability of the operation.

7.	Has a system of controls and transparency over the mineral supply chain in place, including of mineral trade and transactions, i.e. traceability or chain-of-custody systems.*	The best means of control and transparency within supply chains is a chain-of-custody system (see definition in Glossary). Without a robust chain-of custody system in place, the DDP is vulnerable to fraudulent misrepresentation of the origin of minerals among supply chain actors party to the initiative (fraud being a primary risk as per point 4 of Annex II).
8.	Has in-scope practices and outputs assessed through credible, independent 3rd party verification on a regular basis.*	Independent 3rd party verification enhances the credibility and legitimacy of the operation.

Note: \*DDPs that are *not* involved in the sourcing or purchasing of minerals are exempted from criteria 1, 7, and 8.

Source: Author's own work

**Evaluation:** The systematic collection, examination and analysis of information that pertains to the Theory of Change and the implementation outcomes (immediate, intermediate and ultimate). The results of an evaluation provide stakeholders with the information they need to determine whether the initiative is meeting its anticipated objectives.

**Grievance mechanism:** A “mechanism allowing any interested party (affected persons or whistle-blowers) to voice concerns regarding the circumstances of mineral extraction, trade, handling and export in a conflict-affected and high-risk area. This will allow a company to be alerted of risks in its supply chain as to the problems in addition to the company fact and risk assessments” (OECD, 2016: 40 and 74).

**Illegal practices:** Conduct in contravention of the national laws in which entities are operating.

**Leakage-in:** The flow of non-DDM into supply chains designated as DDM.

**Market actor:** A commercial enterprise that extracts, produces, trades, or consumes in-scope minerals.

**Medium and Large-scale Mining (LSM):** “[M]ining operations that are not considered to be artisanal or small-scale mining” (OECD, 2016: 69).

**Monitoring:** “The continuous assessment of the intervention and its environment” (FORMIN, 2006: 31).

**Non-Due Diligence Minerals (non-DDM):** Minerals extracted from CAHRAs that have not been verified whether or to what extent they contributed to human rights violations (Annex II Adverse Impacts, paragraph 1) and/or funded armed groups (Annex II Adverse Impacts, remaining paragraphs), i.e. do not have *Due Diligence Minerals* status.

**Upstream:** The supply chain links from point of extraction (ASM, LSM) to and including the smelter or refiner (SOR). This includes miners (artisanal and small-scale enterprises or medium and large-scale mining companies), local traders or exporters from the country of origin, transporters, international traders of mined or recyclable metals and refiners.

**Traceability:** The ability to query and verify the history, location, or application of an item by means of documented, recorded identification. According to the DDG, at a minimum, the following information is required:

- mine of mineral origin;
- quantity and dates of extraction;
- locations where minerals are consolidated, traded or processed;
- all taxes, fees, royalties or other payments made to governmental officials for the purposes of extraction, trade, transport and export of minerals;
- all taxes and other payments made to public or private security forces or other
- armed groups;
- identification of all actors in the upstream supply chain;
- transportation routes.



## Notes

<sup>2</sup> The typology of Due Diligence Programmes in this Glossary is offered for the exclusive purpose of this M&E Framework, and does not supersede or alter in any way the OECD methodology to assess the alignment of institutionalised mechanisms and industry programmes with the OECD DDG (2018c). Programmes that have been independently assessed to be partially or fully aligned with the DDG in line with the Alignment Assessment methodology of the OECD would automatically be considered a DDP for the purposes of this M&E Framework.

# 1. Objectives and Development of the M&E Framework

## 1.1. M&E Framework Objectives

This M&E Framework puts forward a hypothetical mechanism through which the uptake of the DDG could affect change in mineral markets and influence producer conditions in CAHRAs. Further, the Framework offers methods to measure the underlying phenomena in order to substantiate or reject the proposed hypotheses. To this end, it defines relevant concepts and key terms, identifies indicators to be applied, as well as existing datasets from which to draw. It also addresses the question of impact attributable to the DDG.

This M&E Framework is accompanied by a handbook (“Deploying the OECD Due Diligence Guidance Monitoring and Evaluation Framework: A practical handbook”), which provides details on how this Framework is best implemented. The Handbook notably features a means to select CAHRAs, minerals, and industry sectors, in order to operationalise this Framework.

## 1.2. M&E Framework Development

The steps pursued in the development of this M&E Framework were four-fold:

1. **TOR:** The development of this M&E Framework was premised on the OECD’s Terms of Reference (TOR), which involved extensive stakeholder input over a period of 18 months. Further guidance was received by the OECD’s Secretariat along each critical step of the M&E Framework’s development.

**Advisory group consultations and dialectic:** From the outset and along the main milestones, the specifications and parameters of this M&E Framework were discussed and critiqued by the *Informal Advisory Group*, a group of academic and civil society representatives, as well as OECD representatives. Their input was incorporated at each main iteration.

**Literature review (precedents):** Leading (economic) theory was applied to the matter at hand, including system theory, game theory, and literature specific to the issue of minerals associated with conflict and adverse impacts. Also, the basic characteristics home to minerals markets were considered. In addition, other precedents involving the measurement of policy implementation were considered. Relevant literature is discussed throughout this Framework.

**Design and application:** Last, upon being operationalised, the research methods, guiding specifications, parameters and indicators were tested through a case study (see Handbook), providing an example of how this M&E Framework is to be applied.

## 2. OECD Due Diligence Guidance

Ten years have passed since the OECD Due Diligence Guidance on Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (“DDG”) was first adopted in May 2011 by OECD members and non-member Adherents to the OECD Guidelines for Multinational Guidelines.

The DDG is addressed to companies active in mineral supply chains, and calls on them to carry out comprehensive due diligence through a 5-step framework to avoid contributing to serious human rights abuses, conflict financing and other forms of financial crimes through their extractive and sourcing practices. The DDG is intended to be used by any company (potentially) sourcing minerals from conflict-affected and high-risk areas (CAHRAs). The DDG emphasises a progressive approach and encourages companies to stay engaged and mitigate risks instead of avoiding them, except in specific circumstances outlined by the DDG in which the severity of the risk precludes remaining engaged, or in which risk mitigation is not feasible or has failed.

### 2.1. Five steps of Due Diligence

The DDG (OECD, 2016) sets out the following five-step framework for carrying out due diligence:

**Step 1:** Establish strong company management systems

**Step 2:** Identify and assess risks in the supply chain

**Step 3:** Design and implement a strategy to respond to identified risks

**Step 4:** Carry out independent third-party audit of smelter/refiner’s due diligence practices

**Step 5:** Report annually on supply chain due diligence

### ***Annex II Adverse Impacts***

Annex II includes a model policy a company would adopt if it sources minerals from, or itself operates in, “conflict-affected and high-risk areas.” At its core are “significant adverse impacts”, “associated with extracting, trading, handling and exporting minerals from conflict-affected and high-risk areas” (OECD, 2016: 20):

#### *1. Serious abuses associated with extraction, transport or trade of minerals:*

- torture, cruel, inhuman and degrading treatment;
- forced or compulsory labour;
- worst forms of child labour;
- gross human rights violations / widespread sexual violence;

- war crimes / serious violations of international humanitarian law / crimes against humanity / genocide.

*2. Direct or indirect support to non-state armed groups, that:*

- illegally control mine sites, transportation routes, trading hubs;
- illegally tax or extort money or minerals at points of access to mine sites, transportation routes and/or trading hubs;
- illegally tax or extort intermediaries, export companies or international traders.

*3. Public or private security forces*

- Direct or indirect support to public or private security forces who illegally control mine sites, transportation routes, trading hubs;
- Use of public or private security forces other than to protect and maintain rule of law for mine sites, transportation routes, trading hubs;
- Public or private security forces not engaged in accordance with the Voluntary Principles on Security and Human Rights;
- Adverse impacts on vulnerable groups related the presence of public and/or private security forces.

*4. Bribery and fraudulent misrepresentation of the origin of minerals*

- Bribery or disguise of mineral origin, misrepresentation of taxes, fees, and royalties related to any form of mineral extraction, handling, transport and export.

*5. Money laundering*

- Reasonable risk of the presence of money laundering related to extraction, trade, handling, transport and export of minerals.

*6. Non-payment of taxes, fees and royalties due to governments*

- Taxes, fees and royalties related to mineral extraction, trade and export are not paid appropriately and disclosed.

For the first and second set of adverse impacts, the company commits itself, as soon as the company's due diligence identifies such a risk, to "neither tolerate nor by any means profit from, contribute to, assist with or facilitate the commission by any party of" and to an immediate cessation of sourcing activities (OECD, 2016: 20). For the remainder of the impacts, a company commits itself to immediate mitigation strategies in a time-bound manner while supply chain commerce continues.

### ***DDG scope and the Supplements***

The 3<sup>rd</sup> edition of the DDG (v. 2016) clarifies that the DDG indeed is applicable to all extracted minerals. In the absence of a dedicated Supplement for a specific mineral/metal, companies should apply the recommendations of the relevant Supplement of the DDG, as per Annex I. For industrial and minor metals, companies should refer to the Supplement on 3Ts. For precious and platinum group metals, companies should refer to the Supplement on Gold. Where one or more Supplement recommendations are not applicable to a company's supply chain because of the way the mineral/metal is produced or traded, companies should explain and publicly disclose why.

**Table 2.1. Classification of metals and relevant DDG supplement**

<b>Minerals/metals</b>	<b>DDG supplement</b>
Precious and platinum group metals, precious stones (e.g. gold, iridium, osmium, palladium, platinum, rhodium, ruthenium, silver, diamonds, jade, rubies)	Supplement on Gold
Industrial and minor metals (e.g. tin, tungsten, tantalum, bauxite, copper, lead, zinc, nickel, iron, molybdenum, cobalt, manganese, antimony, vanadium, titanium, lithium, chromium, lanthanum)	Supplement on Tin, Tantalum and Tungsten

Note: This table is not exhaustive as to the scope of minerals covered. The DDG is applicable to all minerals, including energetic mineral.

Source: Author's own work

## 3. Typology of peacebuilding interventions

Addressing the private sector, the DDG provides a due diligence sourcing standard. To place this policy “intervention” in context, a peacebuilding framework “Evaluating Peacebuilding Activities in Settings of Conflict and Fragility,” is offered by the OECD (2012). It allows the DDG’s aims to be placed in the relevant typology on the various types of peacebuilding interventions.

In particular, three “theories of change” highlighted in the typology have direct relevance to the approach taken by the DDG and the Theory of Change of this M&E Framework.

**Table 3.1. Peacebuilding in settings of conflict and fragility – common theories of change**

<b>Theory of Change</b>	<b>Examples of methods</b>
Individual change: If we transform the consciousness, attitudes, behaviours and skills of many individuals, we will create a critical mass of people who will advocate peace effectively.	Individual change through training, personal transformation or consciousness-raising workshops or processes; dialogues and encounter groups; trauma healing.
Healthy relationships and connections: Strong relationships are a necessary ingredient for peacebuilding. If we can break down isolation, polarisation, division, prejudice and stereotypes between/among groups, we will enable progress on key issues.	Processes of intergroup dialogue; networking; relationship-building processes; joint efforts and practical programmes on substantive problems.
Withdrawal of the resources for war: Wars require vast amounts of material (weapons, supplies, transport, etc.) and human capital. If we can interrupt the supply of people and goods to the war-making system, it will collapse and peace will become possible.	Campaigns aimed at cutting off funds and national budgets for war; conscientious objection and/or resistance to military service; international arms control; arms (and other) embargoes and boycotts.
Reduction of violence: If we reduce the levels of violence perpetrated by combatants and/or their representatives, we will increase the chances of bringing security and peace.	Ceasefires; creation of zones of peace; withdrawal or retreat from direct engagement; introduction of peacekeeping forces and interposition; observation missions; accompaniment efforts; promotion of non-violent methods for achieving political, social and economic ends; reform of security sector institutions (military, police, justice system/ courts, prisons).
Social justice: If we address the underlying issues of injustice, oppression/exploitation, threats to identity and security, and peoples’ sense of injury/victimisation, it will reduce the drivers of conflict and open up space for peace.	Long-term campaigns for social and structural change; truth and reconciliation processes; changes in social institutions, laws, regulations, and economic systems.
Good governance: Peace is secured by establishing stable and reliable social institutions that guarantee democracy, equity, justice, and the fair allocation of resources.	New constitutional and governance arrangements and entities; power-sharing structures; development of human rights, rule of law, anti-corruption; establishment of democratic, equitable economic structures; economic development; democratisation; elections and election monitoring; increased participation and access to decision making.
Political elites: If we change the political calculus and perception of interests of key political (and other) leaders, they will take the necessary steps to bring peace.	Raise the costs and reduce the benefits for political elites of continuing war and increase the incentives for peace; engage active and influential constituencies in favour of

	peace; withdraw international support/ funding for warring parties.
Grassroots mobilisation: “When the people lead, the leaders will follow.” If we mobilise enough opposition to war, political leaders will be forced to bring peace.	Mobilise grassroots groups to either oppose war or to advocate positive action; use of the media; non-violent direct action campaigns; education and mobilisation effort; organising advocacy groups; dramatic or public events to raise consciousness.
Peace agreements/accords: Some form of political settlement is a prerequisite to peace – we must support a negotiation process among key parties to the violence.	Official negotiations among representatives; civil society dialogues to support negotiations; track 1½ or 2 dialogue among influential persons.
Economic action: People make personal decisions, and decision makers make policy decisions based on a system of rewards and incentives and punishment and sanctions that are essentially economic in nature. If we can change the economies associated with war making, we can bring peace.	Use of government or financial institutions to change supply and demand dynamics; control incentive and reward systems; boycotts and embargoes.
Public attitudes: War and violence are partly motivated by prejudice, misperceptions, and intolerance of difference. We can promote peace by using the media (television and radio) to change public attitudes and build greater tolerance in society.	TV and radio programmes that promote tolerance; modelling tolerant behaviour; symbolic acts of solidarity/unity; dialogue among groups in conflict, with subsequent publicity.
Transitional justice: Societies that have experienced deep trauma and social dislocation need a process for handling grievances, identifying what happened, and holding perpetrators accountable. Addressing these issues will enable people to move on to reconstruct a peaceful and prosperous society.	Truth and reconciliation commissions; criminal prosecutions and war crimes tribunals; reparations; community reconciliation processes; traditional rites and ceremonies; institutional reforms.
Community reintegration: If we enable displaced people (IDPs/refugees) to return to their homes and live in relative harmony with their neighbours, we will contribute to security and economic recovery.	Negotiation and problem solving to enable returns; intergroup dialogue; ex-combatant community engagement; processes for handling land claims; trauma healing.
Culture of peace: If we transform cultural and societal norms, values and behaviours to reject violence, support dialogue and negotiation, and address the fundamental causes of the conflict, we can develop the long-term conditions for peace.	Peace education; poverty eradication; reduction of social inequalities; promotion of human rights; ensuring gender equality; fostering democratic participation; advancing tolerance; enhancing the free flow of information and knowledge; reducing the production of and traffic in arms.

Source: OECD (2012)

### 3.1. Withdrawal of the resources for war

Cutting off funds for war is an effective peacebuilding intervention. Noting that the duration of conflict was, at the turn of the millennium, “more than double that of conflicts that started prior to 1980,” Collier et al. (2003) offer a number of explanations, inter alia:

- “Rebel groups can generate revenues and purchase armaments.”
- “Rebellions have gradually changed their character, becoming less political and more commercial.”
- “Violence entrepreneurs, whether primarily political or primarily commercial, may gain from war to such an extent that they cannot credibly be compensated sufficiently to accept peace.”
- “Those who see themselves as extortionists benefit from the absence of the rule of law in areas they control.”

Illustrating point 3 in particular, and partially explaining how internal armed conflict is perpetuated, Vogel and Stearns (2018: 2) observe that national “political and military elites have become increasingly invested in conflict, rendering it an end in itself.” Further, “for a narrow elite” internal conflict became “deeply functional,” to the extent that instead of “promoting cohesion and discipline, the government

has perceived its security apparatus primarily as a means for distributing patronage, only occasionally prioritizing stability” (ibid).

The scenario of exogenously withdrawing the resources for war in a given CAHRA, to apply game theory, may be best characterised through a public-goods game. A public good, e.g. national defence or police service, is characterised by two conditions: (1) non-rivalry (a good, once consumed, does not reduce the amount available for others), (2) non-excludability (in which it is not possible to provide a good without it being possible for others to benefit). Firms signing onto due diligence generate positive externalities and, thus, is undersupplied in equilibrium. By punishing and rewarding actors through a carrot and stick approach towards due diligence (that amplifies the benefits of participation or, equivalently, the costs of non-compliance), national and international standard-setting regimes can change behaviour that results in a “shift” to a more virtuous equilibrium.

Considering that an estimated 5,000 mining and trading companies – representing 3.4% of the Group of 8 (G8) firms – account for 94.6% of the total number of traders in minerals on which no due diligence has been conducted (non-DDM) in the G8, a relatively finite group of companies would need to be persuaded to comply.<sup>3</sup> If these ca. 5,000 firms, located upstream in the minerals supply chain, could be prevented from trading in so-called “conflict minerals” (Mizuno, Ohnishi and Watanabe, 2016: 13), the flow of such minerals could almost be eliminated within the G8. Mizuno et al. conclude: “When these firms refuse to buy conflict minerals from their suppliers, the supply chains of many intermediaries which are positioned upstream suffer.”

Conversely, if even a fraction of the world’s trading and consuming companies were to act as opportunistic minerals buyers without conducting due diligence (DD), the business model of those selling non-DDM would continue to be viable, and business transactions with armed groups and organised crime would continue to occur. In that sense, an overwhelming majority of firms would need to be stag hunters in order for the trade in non-DDM to become non-viable and non-lucrative (Skyrms, 2001).

As per the DDG, pre-competitive or implicit cooperation is necessary to identify and economically “isolate” non-DDM before or after entering the market. Yet, as direct communication between perfect or near-perfect competitors would in most jurisdictions equate to anti-trust violations, such “cooperation” would exist only if either coordinated through third parties or in the form of common policies, e.g. agreements not to procure minerals that have not undergone sufficient due diligence. The supply chain knock-on effects are considerable and not to be underestimated.

### 3.2. Economic action

Changing supply and demand dynamics fostered through companies’ sourcing decisions is furthermore noted by the OECD as an effective peacebuilding intervention. Indeed, the DDG expects companies to use their leverage with suppliers to improve conditions of extraction and trade, and ultimately to disengage in the most harmful circumstances, or once other mitigation options are exhausted as per Annex II of the DDG.<sup>4</sup>

One discretionary lever the DDG ascribes to companies concerns the terms of supplier contracts. Contract theory is used to find theoretical ways to motivate agents to take appropriate actions, and this Framework is mindful of typical situations, e.g. adverse selection and signalling scenarios. Applied to the context of minerals, due diligence data collection and supplier engagement are ways to counteract the common information asymmetry germane to markets, and in doing so reduce the potential for adverse selection (in which the principal is not informed about a certain characteristic of the agent at the time the contract is written). With the act of “signalling,” one party credibly conveys information about itself to the other party. In the context of non-DDM, an actor operating in traditionally opaque markets



might employ signalling, notably by obtaining a 3rd party audit or certificates that provide some form of assurance in the veracity of the company's claim.

Most mineral supply chain structures are shaped like an hourglass, with the number of actors progressively decreasing from mine to SOR, only to increase again after the SOR level and moving further downstream. As the SOR level represents a control point with bundled purchasing power, downstream due diligence efforts and assurance programmes such as the London Bullion Market Association (LBMA) and the Responsible Minerals Initiative (RMI) have honed in on this supply chain tier. These assurance programmes then issue whitelists of SORs that pass audits and belong to the program. The existence of blacklists would be equally important from a standpoint of impact, and containing the flow of non-Due Diligence/non-audited minerals.

### 3.3. Culture of peace

As set out in the Foreword of the DDG, the Guidance is intended to cultivate transparent mineral supply chains and sustainable corporate engagement in the mineral sector with a view to enabling countries to benefit from their mineral resources in addition to preventing the extraction and trade of minerals from becoming a source of insecurity.

Justification for such interventions is provided by empirical studies investigating the determinants of political violence, that generally find a positive association between poverty and the probability of conflict (Collier and Hoeffler, 2004; Fearon and Laitin, 2003; Hegre and Sambanis, 2006). Findings have shown that in countries with abundant natural resources and relatively low rates of economic growth, social development and political stability, violent conflict erupts or persists, described as the “paradox of plenty” (Bruch, 2016). The presence of valuable minerals in a context of conflict effectively fans the flames: Empirical research conducted for the African region found that the higher the mineral value, the more likely it will attract the attention of armed groups. Conducting a meta-analysis of natural experiments that use difference-in-difference designs to estimate the causal effect of international commodity price changes on armed conflict,” Blair, Christensen and Rudkin (2020) find that price increases in lootable commodities provoke conflict. This finding is notably echoed by Stoop, Verpoorten and van der Windt, (2019), who find that an “exogenous rise in the value of ASM sites leads to increases in battles, attacks against civilians and looting, indicating competition between rapacious armed groups.”

Besides armed conflict, serious hostility, tension and abuses can also emerge from the displacement of artisanal and small-scale mining (ASM) by large-scale—or industrial—mining (LSM) (Stoop, Verpoorten and van der Windt, 2019). Given the empirical linkages between scarcity and conflict, it is concerning that some due diligence programmes have produced “ambiguous” outcomes that “threaten an informal ASM sector already in jeopardy” (Vogel, Musamba and Radley, 2018: 1). Similarly, an investigation honing in on mining reindustrialisation involving a gold mine in the South Kivu Province of the DRC, found that “despite generating a 25-fold increase in productivity,” there was no “significant wage growth for most industrial workers, compared to the wages earned in artisanal mining” (Radley, 2020; 1). Furthermore, due to the “displacement of artisanal mining to more marginal deposits,” ASM employment had fallen 50%, and mining wages had decreased by around 40% (ibid).

The above examples highlight how fostering a culture of peace is linked to the social and economic context of producing communities. Indeed, doing so effectively in the mining sector may include interventions that explicitly aim to promote inclusive economic outcomes and actively promote human rights and gender equality.

On gender equality in particular, stakeholders spanning governments, the private sector and civil society acknowledge that empowering women and girls is the best way to achieve positive economic and

inclusive social development outcomes. The Stakeholder Statement on Implementing Gender-Responsive Due Diligence and ensuring the human rights of women in Mineral Supply Chains adopted at the OECD Forum on Responsible Mineral Supply Chains commits stakeholders to implement and support gender-responsive due diligence, and to provide equitable opportunity for women to participate in and benefit from the sector (OECD, 2019).

Aside from the benefits of greater peace and stability for economic welfare, some due diligence interventions are designed to provide enhanced economic opportunity in the formal sector and, as a result, may improve governments' ability to mobilise revenue. Depending on their approach, DDPs may also affect the terms and conditions on which minerals are traded, and can therefore have economic consequences for mining communities. Policies – whether governmental or by DDPs or individual companies – that produce scarcity, poverty and inequality, run counter to the objectives of the DDG, and justify the inclusion of socio-economic conditions in the ultimate outcome level of this Framework.

## Notes

<sup>3</sup> Using Standard & Poor's (S&P) Capital IQ data, and crunching 60 billion pairs of firms, Mizuno et al. mapped the entire supply chains of 423,024 of the world's major incorporated firms. They found that 80% of the world's firms are connected to any other business via six customers or suppliers (Mizuno, Ohnishi and Watanabe, 2016).

<sup>4</sup> To cite an example of a company taking such action, Apple (2020) reported that it had removed 123 smelters or refiners located in its extant supply chains since 2009.

## 4. Theory of change

A Theory of Change (TOC) is a “*theory of how and why an initiative works*” (The Center for Theory of Change Inc, 2019). At the onset of an M&E endeavour, however, a TOC comprises a set of hypotheses, which, once tested and accepted, may deserve the label “theory” in the scientific sense.

This TOC thus details the hypothesised mechanism through which corporate uptake of the DDG may have an on-the-ground effect. Grounding the TOC in an analysis of both the context of the intervention and the role of the target audience of the DDG ensures the plausibility of achieving the impact outlined in the TOC, and the extent to which this hypothesised impact is realistic.

### 4.1. Assumptions

Each stage of the anticipated change pathway is associated with a series of assumptions that were identified during the development of the TOC. Since assumptions can change over time, the illustration of the TOC does not include any specific identified assumption. The initial list of assumptions includes the following.

**Assumption #1:** Corporate purchasing power in supply chains may encourage the formation of legal, formal, inclusive markets if exercised responsibly, or conversely can produce the opposite if wielded indiscriminately.

**Assumption #2:** In the context of CAHRAs, conflict is not caused, per se, by the trade in minerals<sup>5</sup>. Rather, such conflict is sustained or exacerbated by indiscriminate purchasing of minerals originating from CAHRAs.

**Assumption #3:** Minerals sourced from a CAHRA will likely be exposed to one or more of the risks identified in Annex II.

**Assumption #4:** In the context of the Information Age and the 4th industrial revolution, the accurate verification of mineral provenance and extraction conditions and context is technologically feasible.

**Assumption #5:** Buyers for non-DDM will be present. For many minerals, there is also a domestic market. The difficulty of curtailing the flow of illegal goods is illustrated by drug smuggling. One can therefore not realistically reduce the possibility of the sale of minerals funding armed groups to 0%. However, one can, through collaborative efforts, bring down (international) demand for non-DDM on the part of formal, legal commerce and thus also drive down the price of non-DDM relative to DDM (through less demand).

**Assumption #6:** The degree to which due diligence is executed in line with the DDG, at the individual market actor level, will be reflected in that market actor’s public documents, including relevant policies and DDG-informed reporting.

**Assumption #7:** To varying degrees, upstream and downstream actors exercise responsibility in the market by differentiating between suppliers based on their DDG-premised due diligence performance. In doing so (“responsible purchasing”), they influence, at an aggregate level, demand for the various mineral sources.

**Assumption #8:** If companies do not empirically demonstrate that they are taking necessary action concerning their purchasing decisions, they are presumed to be effectively avoiding their responsibility with regard to Annex II Adverse Impacts.

**Assumption #9:** Through multi-stakeholder action, in line with DDG Step 3 (OECD 2016): “Design and implement a strategy to respond to identified risks,” through multi-stakeholder action market actors can effectively pool information, resources and systems, and so achieve efficiency effects (e.g. by joining associations and supporting initiatives that address the issues at hand)<sup>6</sup>.

**Assumption #10:** The more DDM flowing out of CAHRAs, the less opportunity there is for mining operations to fund armed groups and organized crime (causing Annex II Adverse Impacts). Improved production and trade practices – reflected through the geographic expansion of due diligence programmes in the upstream – will translate into fewer minerals being sold with the potential to benefit armed groups.

**Assumption #11:** Private sector action, properly implementing the DDG, is able to curtail revenue flowing to armed groups. According to supply and demand dynamics, a reduced demand for non-DDM would depress their prices, and thus reduce the revenue potentially benefitting armed groups.

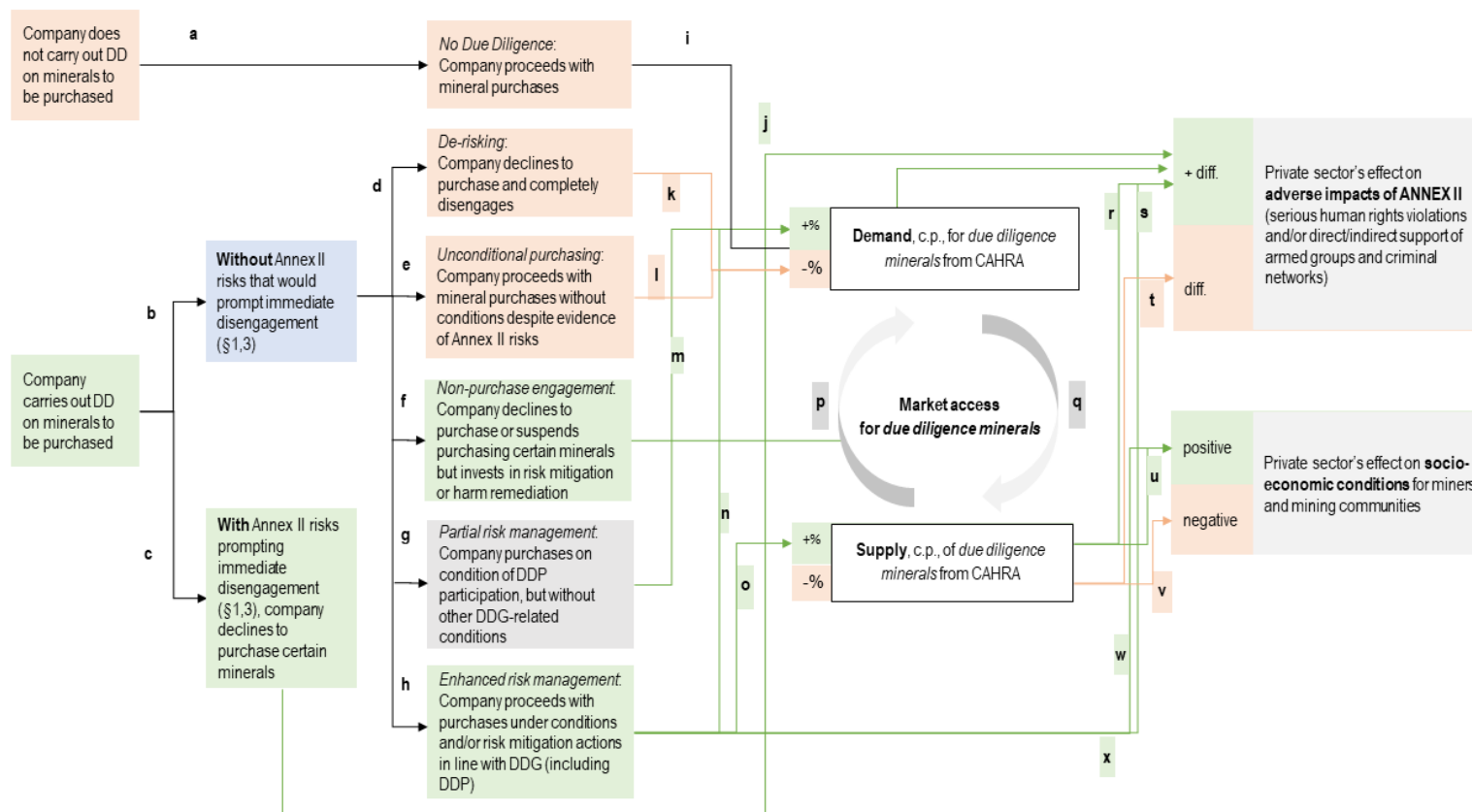
**Assumption #12:** Both DDM and non-DDM are currently traded (the trade in DDM does not equal 0). Viable DDPs exist.

**Assumption #13:** For the sake of the TOC model, we assume that the total amount of minerals produced is constant – i.e. any increase/decrease in DDM is 100% offset by a decrease/increase in non-DDM. In reality, however, that is not necessarily the case, especially in the context of dynamic markets in which ASM operates.

**Assumption #14:** While the DDG mainly targets company actions and behaviours related to minerals flowing out of CAHRAs, the well-being of miners and their communities is also referenced<sup>7</sup>. Also, since relevant literature provides empirical evidence between socio-economic conditions (SEC) and the potential for conflict, the SEC of miners and their communities are considered in this Framework.

## 4.2. Framework

Figure 4.1. Theory of change

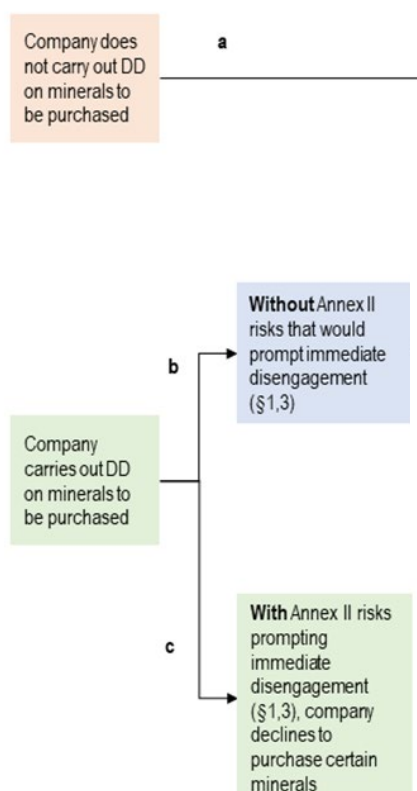


Source: Author's own work

### Initial Conditions

DDG implementation, at the company level, would involve following its stipulated five Steps. Carrying out robust due diligence is a precondition to identify and mitigate negative conditions associated with the extraction and trade of minerals to be purchased as per Annex II. Conversely, the model includes the possibility that a company may not conduct due diligence (a).

Figure 4.2. Due diligence decision tree (ToC)



Source: Author's own work.

Due diligence on specific minerals to be purchased would lead to bifurcation (b) or (c). Each of these conditions is informed by Annex II of the DDG, paragraphs 1 and 3. These first and second adverse impacts – i.e. 1. Serious abuses associated with extraction, transport or trade of minerals, and 2. Direct or indirect support to non-state armed groups – are prioritised in the sense that they “prompt immediate disengagement” (c). This latter condition itself is expected to not further negative conditions related to Annex II (x). If, however, the conditions as spelled out in paragraphs 1 and 3 are absent, the company proceeds with (d) through (h).

### Immediate level outcomes

As per the DDG, down- and up-stream actors have a central role to play in either not sourcing – or sourcing with special care – minerals linked to Annex II Adverse Impacts.

The myriad of companies in minerals-based supply chains make daily decisions to engage with, disengage from, or suspend operations with specific suppliers and supply chains or to invest in risk

mitigation or harm reduction in line with the DDG. Conversely, they may simply ignore the risks or not take DDG-informed action.

Assessing this behaviour allows one to categorise companies according to their DD practices. The following six basic actor types are featured in the ToC:

**No Due Diligence:** The company provided no evidence of OECD-premised due diligence.

**De-risking:** The company stated they (a) avoided engaging in, doing business in, or sourcing from certain countries, or (b) avoided engaging with – or sourcing from – certain production types (e.g. ASM).

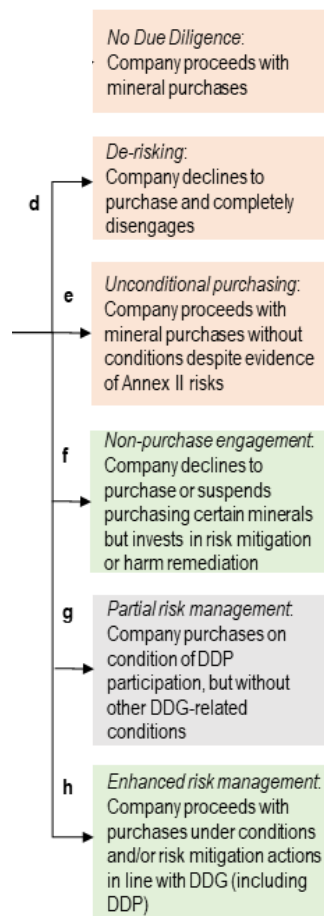
**Unconditional purchasing:** The company indicated that while they carried out some DD, they did not assess conditions for purchases of minerals or intermediate forms. Further, the company did not indicate that, if sourcing from CAHRAs, its supply chains exclusively purchased DDM.

**Non-purchase engagement:** The company indicated they responsibly disengaged their supply chains from CAHRAs when they found conditions as per Annex II paragraphs 1 and 3, but invested in harm reduction and/or risk mediation.

**Partial risk management:** The company indicated that they purchased minerals (or intermediate forms) on condition of source material associated with a Due Diligence Programme (DDP), but did not engage further.<sup>8</sup>

**Enhanced risk management:** The company indicated that they (a) responsibly disengaged their supply chains from a given CAHRA when they found conditions as per Annex II paragraphs 1 and 3, (b) prudently engaged their supply chains in conditions according to paragraphs 10 and 14, and (c) engaged their supply chains across a spectrum of risk management actions:

Figure 4.3. Immediate level outcomes (ToC)



Source: Author's own work.

## Downstream

- use of leverage
- contract conditions
- capacity-building of suppliers
- grievance mechanisms
- direct engagement on Annex II-cited phenomena
- DDP participation and/or provision of financial support to DDPs



## Upstream

- on-the-ground risk assessments
- capacity-building
- ASM formalisation
- child labour remediation
- engaging multi-stakeholder efforts to assist vulnerable populations
- tracking and disclosing payments to governments
- formalising security arrangements
- DDP participation

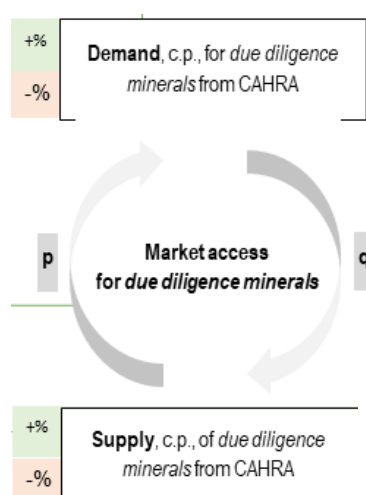
DDG-aligned risk mitigation and harm reduction activities are thus complemented by DDG-inspired proactive engagement that may enhance positive impacts on miners and their communities.<sup>9</sup>

### **Intermediate level outcomes**

Individual company-level procurement decisions at the micro level to mitigate, suspend, disengage, or engage, will, at the macro level, be reflected, *ceteris paribus*, in the demand and supply for *Due Diligence Minerals*, i.e. minerals that have originated from a DDP.

Purchasing through mining operations and associated chain-of-custody systems that have undergone a robust responsible sourcing and due diligence process is an effective way for companies to *empirically* demonstrate that they sourced from a CAHRA in accordance with Annex II of the DDG. The Framework tallies DDM volumes and ratios of incident resolution, per mineral and per CAHRA, to obtain aggregate-level values. The M&E Framework thus yields empirical measures of the degree of due diligence. If these values are low, one may conclude that a critical mass of due diligence is not evidenced.

**Figure 4.4. Intermediate level outcomes (ToC)**



Source: Author's own work.

### Ultimate level outcomes

At the ultimate outcome level of the TOC, there are two categories: the first focuses on the private sector's effect on the conditions highlighted in ANNEX II, and the second concerns relevant actions that affect socio-economic conditions (SEC) for miners and mining communities.

Figure 4.5. Ultimate level outcomes (ToC)

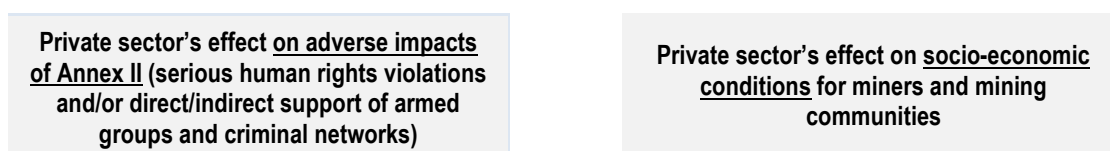
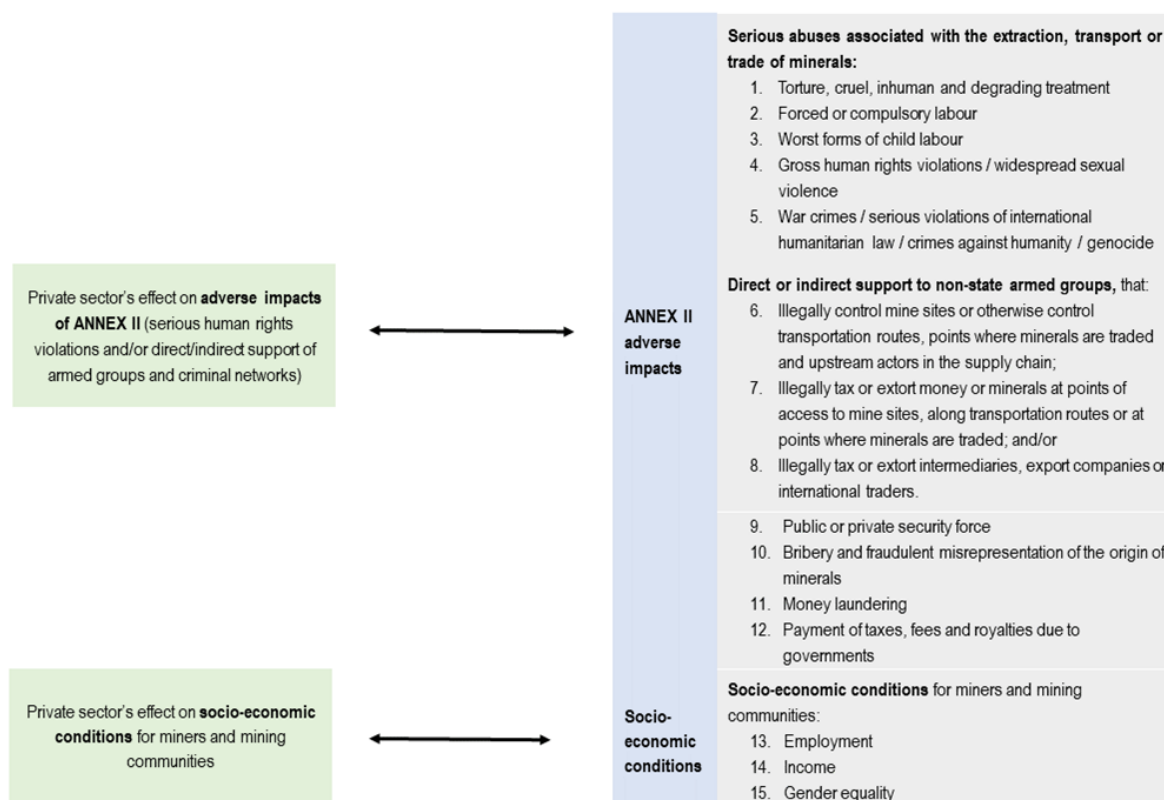


Figure 4.5 below breaks down the particular impacts featured in the TOC, 12 individual Annex II impacts and 3 SEC impacts. In sum, the private sector's effective implementation of the DDG would hypothetically result in the reduction of its active contribution to Annex II Adverse Impacts. Moreover, the more widely and conscientiously the DDG is implemented by private sector actors, the more substantial its positive impact across ultimate-level outcomes.

Figure 4.6. DDP ultimate outcomes

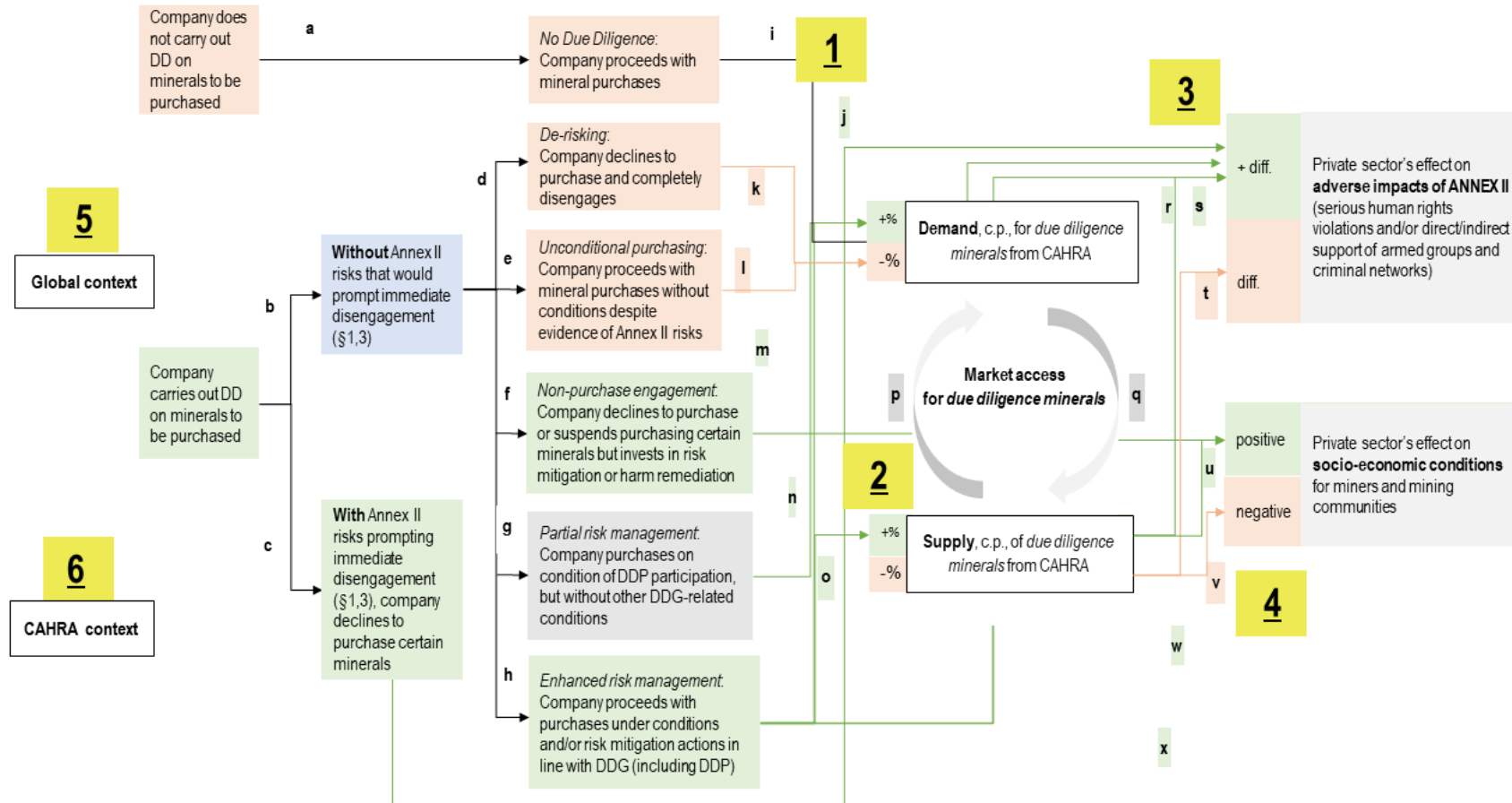


Source: Author's own work

### 4.3. Hypotheses

Since the stated Theory of Change is initially untested, it is therefore a fully hypothetical mechanism at the outset. The TOC is to be validated through hypothesis-premised assessments as laid out in this Framework, while no validation of assumptions is proposed. In other words, the hypotheses are tested through the conduct of related assessments underpinning the M&E Framework. Linkages between featured elements will be consequently explored and subsequent adjustments proposed if need be.

Figure 4.7. Hypotheses



Source: Author's own work

On an individual mineral basis, the following (null) hypotheses positions are taken. Should the required research called for in this M&E Framework determine that any hypothesis ought to be rejected, alternative hypotheses are proposed (see Handbook).

### ***Hypothesis Cluster 1 (Due Diligence Minerals Demand)***

**IF** a critical mass of companies purchases minerals on condition of DDP participation, but without other DDG-related conditions (m),

or

**IF** a critical mass of companies proceeds with mineral purchases under conditions and/or risk mitigation actions fully in line with the DDG (including DDP participation) (n),

**THEN** demand for *Due Diligence Minerals* from CAHRAs will rise, *ceteris paribus*.

*Conversely:*

**IF** a critical mass of companies declines to purchase minerals and completely disengage (de-risking) (k),

and/or

**IF** a critical mass of companies proceeds with mineral purchases without conditions despite evidence of Annex II Adverse Impact risks (l),

**THEN** demand, for *Due Diligence Minerals* from CAHRAs will fall, *ceteris paribus*.

### ***Hypothesis Cluster 2 (Due Diligence Minerals Supply)***

**IF** demand for *Due Diligence Minerals* from CAHRAs rises,

**THEN** the quantity of *Due Diligence Minerals* from CAHRAs supplied will consequently also rise over the long run (more DDPs, larger scale) (q),

**AND** there will be more market access for *Due Diligence Minerals* (p), *ceteris paribus*.

*Conversely:*

**IF** demand for *Due Diligence Minerals* from CAHRAs falls,

**THEN** the quantity of *Due Diligence Minerals* from CAHRAs supplied will consequently fall over the long run (fewer DDPs, smaller scale) (q),

**AND**, there will be less market access for *Due Diligence Minerals* (p), *ceteris paribus*.

### ***Hypothesis Cluster 3 (Annex II Impacts)***

**IF** the supply of *Due Diligence Minerals* from CAHRAs rises (r),

or

**IF** there is a critical mass of private sector engagement that fosters capacity and formalisation (enhanced risk management) (s),

**THEN** the private sector will make a *positive* difference on the adverse impacts of ANNEX II, *ceteris paribus*.

*Conversely:*

**If** the supply of *Due Diligence Minerals* from CAHRAs falls (t),

and

**IF** there is an absence of private sector engagement that fosters capacity and formalisation (enhanced risk management) (s),

**THEN** the private sector will make a *negative* difference on the adverse impacts of ANNEX II, *ceteris paribus*.

#### ***Hypothesis Cluster 4 (SEC Impacts)***

**IF** the supply of *Due Diligence Minerals* from CAHRA rises (u),

or

**IF** there is a critical mass of private sector engagement that fosters capacity and formalisation (enhanced risk management) (w),

**THEN** the private sector will make a *positive* difference on socio-economic conditions of miners and mining communities, *ceteris paribus*.

Conversely:

**IF** the supply of *Due Diligence Minerals* from CAHRAs falls (v),

and

**IF** there is an absence of private sector engagement that fosters capacity and formalisation (enhanced risk management) (w),

**THEN** the private sector will make a negative difference on socio-economic conditions of miners and mining communities, *ceteris paribus*.

#### ***Hypothesis Cluster 5 (Global Context)***

**IF** the global demand for in-scope minerals rises,

**THEN** that will result in increased demand for *Due Diligence Minerals* from CAHRAs, *ceteris paribus*.

Conversely:

**IF** the global demand for in-scope minerals falls,

**Then** that will result in decreased demand for *Due Diligence Minerals* from CAHRAs, *ceteris paribus*.

#### ***Hypothesis Cluster 6 (CAHRA Context)***

**IF** the prevalence of ANNEX II Adverse Impacts in a CAHRA decreases significantly,

or

**IF** the business and operating environment in a CAHRA improves significantly,

**THEN** that will result in increased demand for *Due Diligence Minerals* from that CAHRA, *ceteris paribus*.

Conversely:

**IF** the prevalence of ANNEX II Adverse Impacts in a CAHRA increases significantly,

or

**IF** the business and operating environment in a CAHRA worsens significantly,

**Then** that will result in decreased demand for *Due Diligence Minerals* from that CAHRA, *ceteris paribus*.

## Notes

<sup>5</sup> Findings have shown that in countries with abundant natural resources and relatively low rates of economic growth, social development and political stability, violent conflict erupts or persists, described as the “paradox of plenty” (Bruch, 2016). The presence of valuable minerals in a context of conflict effectively fans the flames: Empirical research conducted for the African region found that the higher the mineral value, the more likely it will attract the attention of armed groups. Conducting a meta-analysis of natural experiments that use difference-in-difference designs to estimate the causal effect of international commodity price changes on armed conflict,” Blair, Christensen and Rudkin (2020) find that price increases in labour-intensive (capital-intensive) and lootable commodities prevent (provoke) conflict. Specifically with respect to ASM, increases for artisanally mined commodities (principally, gold and diamonds) raise the likelihood of armed civil conflict.

This finding is notably echoed by Stoop, Verpoorten and van der Windt, (2019), who find that an “exogenous rise in the value of ASM sites leads to increases in battles, attacks against civilians and looting, indicating competition between rapacious armed groups.” Berman et al. (2014: 1) observe that “secessionist insurgencies are more likely in mining areas,” and that “the appropriation of a mining area by a group increases the probability that this group perpetrates future violence elsewhere.” Bates (2008) argues that governments can use force to either protect or prey upon their citizens: Whether a government functions as a guardian or a warlord largely depends on: (1) public revenues, (2) the presence of natural resources, and (3) the benefits from predation. He then examines the interactions between mineral wealth, state-capacity, and armed insurgent groups with a focus on Africa. Thus, these findings may also help to predict which minerals are likely to become associated with conflict-financing risks in the context of a CAHRA.

<sup>6</sup> Multi-stakeholder action is evidenced on various levels and in different forms, for example:

- cross-recognition of audit programmes, where audit systems recognize each other’s audits (e.g. LBMA and RMI)
- data exchange standards (e.g. IPC-1755, Conflict Minerals Data Exchange Standard)
- pre-competitive supply chain information flow (e.g. software vendors iPoint-systems or Assent Compliance)
- audited and non-audited SORs (e.g. RMI’s CMRT, which functions as both)
- pre-competitive working groups (e.g. RMI working groups)
- joint sponsorship of interventions (e.g. the Public-Private Alliance for Responsible Minerals Trade).

<sup>7</sup> The Foreword of the DDG highlights that the “Guidance provides companies with a complete package to source minerals responsibly in order for trade in those minerals to support peace and development and not conflict” (OECD, 2016: 3). In this vein, the Appendix in the Supplement on Gold features steps companies may take to “minimise the risk of marginalisation of the artisanal and small-scale mining sector, particularly the victims of extortion, while promoting conflict-free gold supply chains, thereby creating economic and development opportunities for artisanal and small-scale miners” (OECD, 2016: 114). While participation in one or more DDPs is a way for a company to partially meet its due diligence responsibilities, it is, however, not a substitute for carrying out its own due diligence. See DDG (OECD, 2016: 114), Appendix, Supplement on Gold: “Suggested measures to create economic and development opportunities for artisanal and small-scale miners.”

<sup>8</sup> While participation in one or more DDPs is a way for a company to partially meet its due diligence responsibilities, it is, however, not a substitute for carrying out its own due diligence.

<sup>9</sup> See DDG (OECD, 2016: 114), Appendix, Supplement on Gold: “Suggested measures to create economic and development opportunities for artisanal and small-scale miners.”

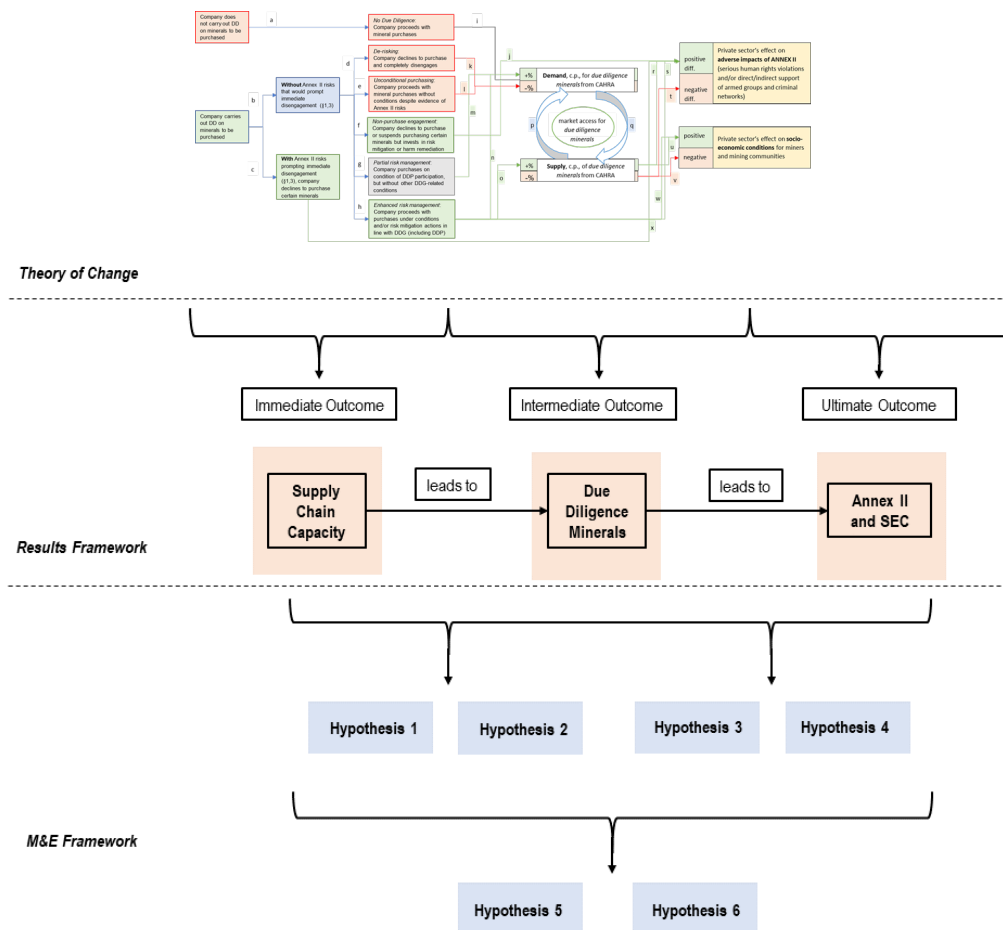
# 5. The impact blueprint

## 5.1. Dimensions of Impact

The impact blueprint refers to the conversion of the Theory of Change into a results-based model that provides the basis to validate the stated hypotheses and provide analytical insight in the impact of the DDG over time. As Figure 5.1 shows, the Theory of Change converts into a results framework with three key outcomes, namely:

- **Ultimate outcome level:** Improved Annex II and socio-economic conditions
- **Intermediate outcome level:** Due Diligence Minerals supply and demand
- **Immediate outcome level:** Increased supply chain capacity for due diligence

Figure 5.1. Theory of Change linked to the results framework and to the hypotheses



Source: Author's own work.



Each outcome dimension is investigated through M&E verification, i.e. assessments that determine the degree to which the hypothesised change is occurring, validating or invalidating specific relationships outlined in the Theory of Change. Each outcome dimension is in turn developed in greater detail, with indicators associated with the outcome as described in the next chapter.

**Table 5.1. Results dimensions and descriptions**

Results dimension	Description
<b>Annex II and Socio-Economic Conditions</b>	Annex II and socio-economic conditions of miners are improved as a result of companies in the mineral(s) supply chain implementing due diligence-based processes in accordance with the OECD DDG
Annex II Adverse Impacts	Significant Annex II Adverse Impacts associated with the extraction, transport or trade of minerals
Socio-Economic Conditions	Socio-Economic Conditions of miners and mining communities
<b>Due Diligence Minerals Supply and Demand</b>	Growing supply and demand of Due Diligence Minerals
Mineral supply	Mineral(s) production in line with DDG and documented sufficiently to access international markets
Mineral demand	Mineral(s) demand levels, incorporation of source verification and due diligence documentation
<b>Supply Chain Capacity for Due Diligence</b>	Downstream and upstream companies have the systems and capacity in place to assure that approaches for due diligence are established and functioning
Supply chain management systems	Level of management systems implementation associated with the minerals supply chain
Supply chain transparency	Mineral provenance, production, purchase and chain-of-custody traceability along the upstream and downstream supply chain
Risk identification, monitoring and mitigation	Level of risk monitoring and documentation and the associated risk mitigation actions along the supply chain
Audits, reporting transparency	Level of transparency reflected in the published annual Step 5 reporting

## 5.2. Results Framework

**Table 5.2. Results framework**

Outcome Level	DDG Outcomes	Dimensions of Impact	Dimension of M&E Verification
Ultimate Outcome	Companies in the minerals supply chain do not contribute to serious human rights abuses and conflict	Annex II Adverse Impacts	Prevalence/incidents of 12 Annex II Adverse Impacts
	Companies in the mineral supply chain support the socio-economic conditions of miners and mining communities	Socio-Economic Conditions of miners and mining communities	<ul style="list-style-type: none"> <li>• Livelihood</li> <li>• Gender equality</li> <li>• Occupational Health and Safety (OHS)</li> </ul>
Intermediate Outcome	Minerals-based industries applying OECD DDG-based due diligence	Due Diligence Minerals	Due Diligence Minerals Trade Quality and scale of Due Diligence Programmes
Immediate Outcome	Both upstream and downstream companies align their programmes to the OECD DDG	Increased supply chain capacity	Supply chain management systems
			Transparency of commodity metadata
			Risk identification, monitoring and mitigation
			Audits, reporting transparency (Step 5 reporting)

## 6. M&E Framework

### 6.1. Monitoring vs. Evaluation

The M&E Framework follows the hypothesised causal logic of the Theory of Change and the corresponding results framework. However, it also provides additional details about how the hypotheses will be verified, indicators used, how they will be measured, and how the information is intended to be used. After identifying the key indicators, the M&E plan assigns the appropriate levels of rigour and outlines the assessment methodology. The assessment methodology guides the M&E activities throughout the assessment implementation (before, during and after).

The concepts of Monitoring and Evaluation are defined as follows:

**Evaluation** is defined as a systematic “assessment of the design, implementation and outcome of an on-going or completed intervention” in order to assess value (FORMIN, 2006: 39). The results of an evaluation should provide stakeholders with the information they need to analyse whether the DDG and its TOC are meeting its anticipated objectives. The exercise of “evaluation” falls into one of two categories, being either formative or summative.

- A summative evaluation is the term for a final assessment to reveal whether a higher *programme goal was achieved*. This type of evaluation would commonly serve as a post mortem on an initiative by assessing whether or not the goals were achieved.
- A formative evaluation is the term given to an assessment performed for the purpose of *improving an initiative* and is thus conducted during the course of implementation. A formative evaluation aims to reveal whether progress is being made towards achieving planned goals, and whether this progress is unfolding as planned or needs to be improved upon.

In this case, evaluation refers to the periodic collection, examination and analysis of information that pertains to the DDG Theory of Change, and the DDG implementation outcomes (immediate, intermediate and ultimate). With the DDG being implemented by companies sourcing from CAHRAs, it would be appropriate to approach the evaluation aspect of this Framework in the ‘formative’ evaluation context as, in the private sector context, continuous improvement is pursued. As such, the evaluation covers principally only those matters over which the change in the phenomena being measured may arguably be attributed back to ongoing DDG implementation activities.

**Impact Monitoring** is defined as “the continuous assessment of the intervention and its environment” (FORMIN, 2006: 31). It is a form of surveillance which regularly monitors outcomes. Multiple indicators are followed to measure changes in the main aspects of the process, rather than just focussing on specific questions predetermined by the longer-term evaluation framework. As conditions in CAHRAs and supply chains are constantly changing, through Impact Monitoring, stakeholders will have the ability to review the broad outcomes of their efforts with real-time data to make decisions immediately, rather than waiting to compare and contrast results at subsequent points in time (i.e. through evaluation assessments).

When monitoring impacts, the Framework goes beyond the individual actions (activities and outputs) of companies performing Due Diligence and purchasing DDM. Impact concerns the changes at the

outcome level, in the occurrences of Annex II Adverse Impacts and/or variation of socio-economic conditions that are generated from having more formalised supply chains and safer working conditions for miners and mining communities. The results of impact monitoring provide stakeholders with the information they need to analyse outcomes, identify trends and patterns related to shorter-term outcomes, and identify problems before they become serious obstacles to performance and progress.

Table 6.1 outlines the type of assessment (Monitoring or Evaluation) that will be applied through the application of this M&E Framework.

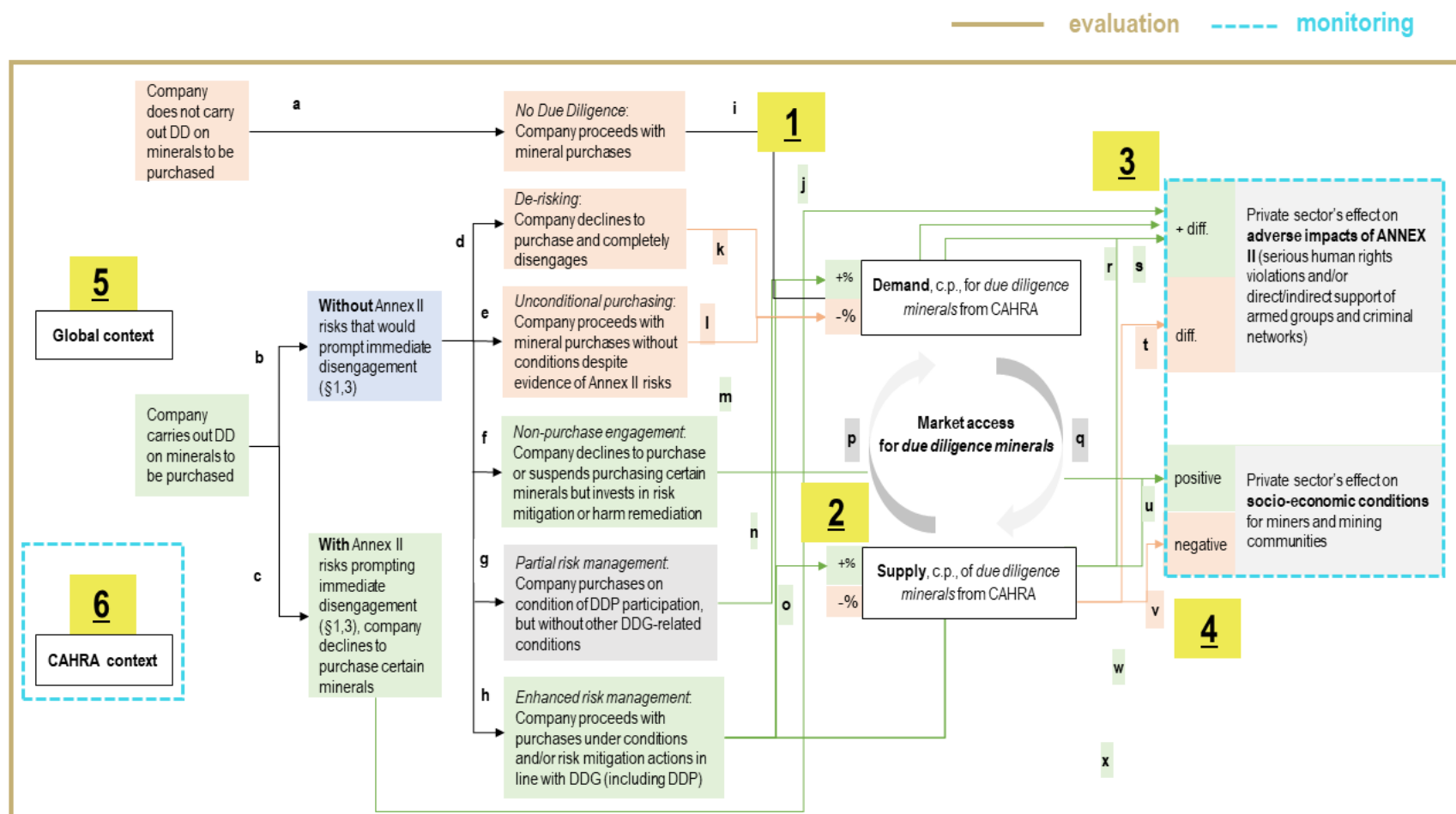
**Table 6.1. Monitoring vs. Evaluation, attribution vs. contribution**

Goal level	Description	Monitoring vs. Evaluation	Attribution
Ultimate Outcome	A. Annex II Adverse Impacts	Monitoring, Evaluation	3rd order attribution (does not only depend on supply of DDM)
	B. Socio-Economic Conditions	Monitoring, Evaluation	3rd order attribution (does not only depend on supply of DDM)
Intermediate Outcome	C. Due Diligence Minerals Trade	Evaluation	2nd order attribution between DDG and demand for DDM (does not only depend on DDG uptake)
	D. Due Diligence Programmes	Evaluation	2nd order attribution between DDG and supply of DDM (does not only depend on demand for DDM)
Immediate Outcome	E. Downstream DDG uptake	Evaluation	1st order attribution between DDG and individual market actor practices
	F. Upstream DDG uptake	Evaluation	1st order attribution between DDG and individual market actor practices
Context	G. Global DDG Context Profile	Evaluation	Not applicable No attribution theorised at the onset
	H. CAHRA Context Profile	Monitoring, Evaluation	Not applicable No attribution theorised at the onset

Source: Author's own work

In graphical format, Figure 6.1 shows how the Monitoring and Evaluation exercises relate to the Theory of Change, previously presented.

Figure 6.1. Monitoring vs. evaluation



Source: Author's own work

## 6.2. M&E Periodicity

### ***At what intervals should the DDG M&E Framework collect data and compare its findings?***

Given the serious nature of the subject matter (conflict, serious human rights abuses, financial crime), yearly monitoring research is recommended. For evaluations on the other hand, as they take into account the rate of change over time and assess outcomes based on research findings, a longer time frame in the range of every 3-5 years is appropriate. Given that this M&E Framework has been published 10 years after the DDG was released, its first evaluation will be considered a quasi “baseline,” and available historical data will be used to estimate the expected rate of change.

Annual monitoring of results will indicate the rate of change at the outcome level, which may then be used to trigger the appropriate timing of a subsequent evaluation. The monitoring plan keeps a continuous eye on how impacts evolve in the rapidly changing environments of CAHRAs. The set of monitoring indicators is proposed to be implemented annually. However, for a particular CAHRA and mineral that is experiencing exceptionally high variability related to ANNEX II adverse impacts, it may make sense to change the frequency of data collection, for example, to twice annually (every six months). The data will serve to update a “DDG implementation” dashboard that would serve to visualise the ‘change’ observed in CAHRAs with respect to DDG impact. In sum, the M&E Framework thus calls for both annual monitoring and periodic evaluations.

## 6.3. Primary vs. Secondary Data, Levels of Rigour

Primary research involves the gathering of data first-hand. Secondary research involves the use of data/information that originates from primary research conducted by others. Assessments C, D, E and F feature primary research, and Assessments A, B, G and H feature secondary research (see Table 6.2).

The level of rigour of the assessment methodology refers to the precision and thoroughness of the methods employed. Rigour refers to the quality and source of the data and information (evidence) being used, in addition to how the information is analysed and utilised. A rigorous evaluation would be objective, precise, and have sufficient time and budget allocated to its execution. Applied research involving scientific design, sampling, data collection and analysis is recommended as a minimum level of rigour for the purposes of this M&E Framework.

**Table 6.2. Primary vs. secondary data sources**

Goal level	Assessments	Data sources
Ultimate Outcome	A. Annex II Adverse Impacts	Secondary data
	B. Socio-Economic Conditions	Secondary data
Intermediate Outcome	C. Due Diligence Minerals Trade	Primary data
	D. Due Diligence Programmes	Primary data
Immediate Outcome	E. Downstream DDG uptake	Primary data
	F. Upstream DDG uptake	Primary data
Context	G. Global DDG context profile	Secondary data
	H. CAHRA context profile	Secondary data

Source: Author’s own work

## 6.4. Attribution vs. Contribution

In order to determine the potential impact of the DDG, one needs to establish attributable action or influence premised on the DDG.

In general, a causal link between (parts of) an observed change and a specific intervention is established through attribution or contribution.

**Attribution:** Attribution is determined when one may attribute observed changes to the intervention being studied. As featured in the Glossary of Terms, addressing the “attribution problem” implies both isolating and accurately measuring the particular contribution of an intervention and ensuring that causality runs from the intervention to the outcome” (Leeuw and Vaessen, 2009: xii). Relying on quantitative research methods, e.g. Randomised Control Trials (RCT), the aim of attribution-premised studies is impact evaluation. Also, attribution does not imply “sole attribution.” One intervention may very well not have been the sole cause of the observed change.

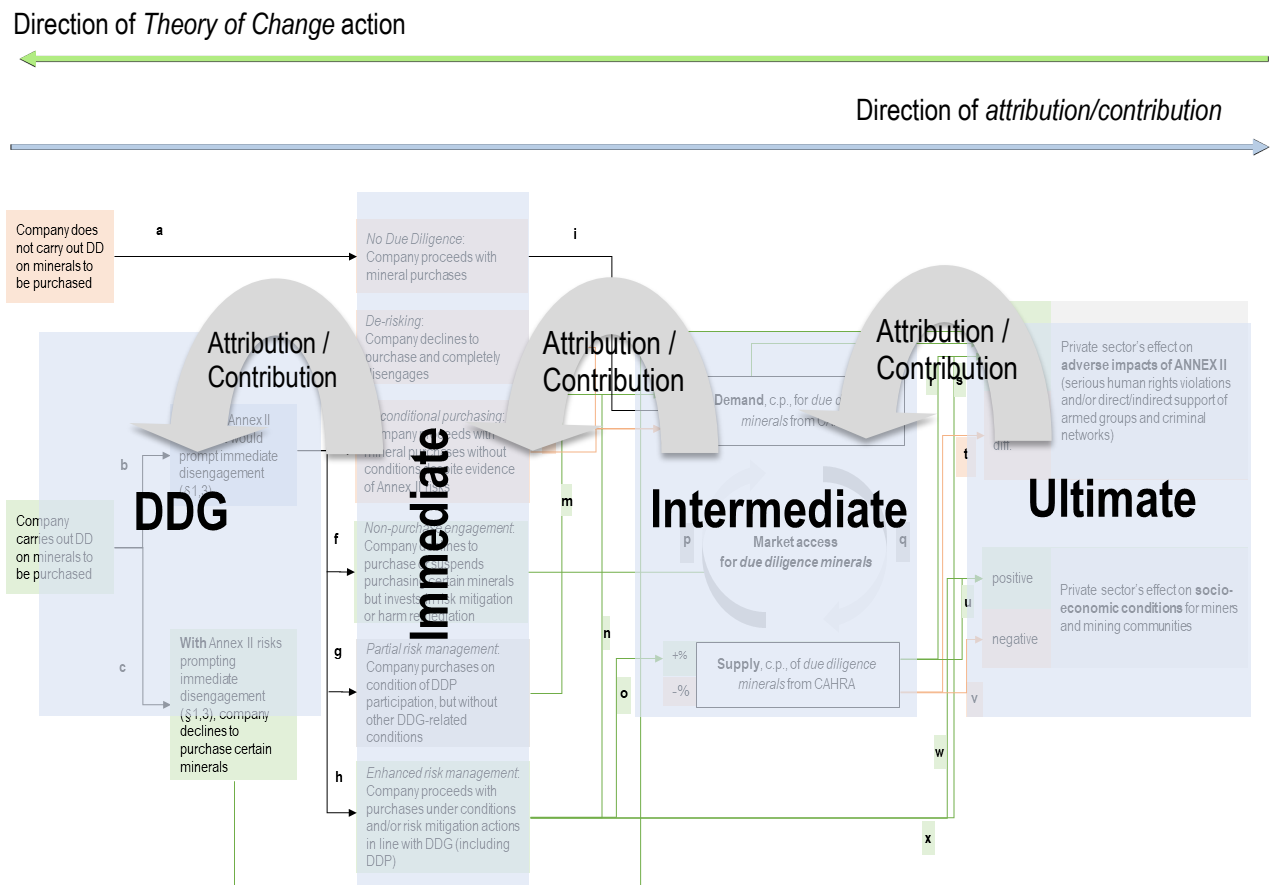
**Contribution:** Through ‘contribution analysis’, data on trends in outcomes and plausible explanatory factors of observed trends are used to show that an intervention contributed to the outcome. One of two methods, which do not rely on quantifying effects attributable to an intervention, are applied: (1) Causal Contribution Analysis (CCA), and (2) the General Elimination Methodology (GEM). CCA relies on chains of logical arguments that are verified through careful analysis (Mayne, 2001), a “non-quantitative way to solve the attribution problem” (Leeuw and Vaessen, 2009: 31). Applying GEM involves (a) identifying possible explanations and then (b) gathering and analysing data to see if the possible alternative explanations can be ruled out.

Depending on whether quantitative or qualitative methods were applied, either the term “attribution” or the term “contribution” will be used to describe whether an effect was observed between elements featured in the ToC, i.e. between the DDG, immediate, intermediate and ultimate outcome levels (described in Table 6.1 and illustrated in the figure below. The relationship between each ToC level will be assessed upon obtaining the results of each assessment section.

Where it would not be possible to establish attribution, e.g. because a research design was implemented that did not produce a sufficient number of observations to allow for relevant statistical analyses, non-quantitative methods will be applied to establish contribution (namely, CCA or GEM). It illustrates that while the direction of action flows from the DDG to the CAHRA, attribution works the other direction, and asks what, if any, changes to the ultimate outcome level can be traced back to the DDG.

The intervention in question is the roll-out of the DDG. Fundamentally, we are interested in learning how the DDG – as a standard – has influenced market actors, and how their purchasing behaviour and other relevant supply chain engagement, in turn, is reflected in the work and output of upstream due diligence programmes.

Figure 6.2. Attribution or contribution between levels of action



Source: Author's own work

At the immediate level, the downstream and upstream corporate uptake of the DDG is measured and assigned to six categories into which companies' data (drawn from their public representations) are inserted.

On-the-ground DDPs represent the intermediate level action. Since DDPs vary in scope and configuration, one must parse the objectives and results of each in-scope DDP. To what extent do they detect and potentiate the mitigation of adverse impacts as per the 12 Annex II priorities, while not negatively affecting socio-economic conditions? Also, to what extent are they built around the priorities of the DDG? The necessary data for that will be collected through a survey.

Finally, for the ultimate outcome level, what are the trends on the ground vis-a-vis the 12 Annex II priorities and Socio-Economic Conditions (SEC) of miners? The necessary data for that will be collected through a metadata analysis. (An example of this would be the analysis provided in the annual study the U.S. Government Accountability Office does for sexual violence in the DRC). With this analysis, one may judge to what extent the big picture is impacted by the DDG.

Based on anecdotal evidence, we may anticipate findings. With respect to the immediate outcome level, since companies are – to varying degrees – implementing the DDG in their policies, systems, programmes and processes, evidence for attribution may likely be found. Between the intermediate DDM demand-supply level and the ultimate outcome level, while it may not be possible to isolate and

accurately estimate the effect of *one* particular contribution to a macro-level outcome, the intervention's contribution on the outcome is nonetheless understood and either anecdotally or empirically reported.

While it is challenging to isolate and estimate the effect of the DDG's implementation on specific ultimate outcomes, the OECD expects to be able to collect a significant amount of data that can at least affirm (or call into question) the theory of change and its underlying hypotheses. The data used to evaluate the existence and strength of the relationships presented by the ToC will grow with further data collection cycles, better reporting by industry (including in response to legislation and market requirements), and supporting complementary studies if necessary and contingent on available resources.

## 6.5. Identification of Data and Methodological Gaps

To understand the effects of a particular DDP in a given CAHRA, depending on the type of funding mechanism, a DDP will undertake a programme evaluation on a regular basis. These may vary from a simple process evaluation targeting beneficiaries to a robust impact evaluation design assessing the program's effectiveness in achieving its ultimate goals. Apart from the design, further quality variables also hinge on the independence of the evaluation, evaluator competence, and whether the assessment was on- or off-site.

The analysis of particular evaluations, or noting their absence (e.g. in a particular CAHRA), may occur through an appropriate gap analysis, such as carried out through the deployment of the M&E framework. The findings may help harmonise future research, and appropriate coordination may occur through umbrella organisations such as the OECD in concert with partners (e.g. government agencies, international organisations, and DDPs). Indeed, one of the objectives of the OECD Secretariat, through piloting the Framework, will be to compile topics on which there are significant data gaps. The Secretariat will therefore indicate such gaps when publishing the results of this framework's implementation, and liaise closely with DDPs and the research community in order to signal priorities for future research and together address such gaps.

An inventory of relevant studies and data, with a particular focus on impact evaluations targeting the subject of DDP performance, will reveal potential methodological gaps. Applicable studies may thus be assessed for their rigour in order to improve future research on the effects of DDPs, including research that employs quasi-experimental or experimental methods, which would include the employment of comparison groups that enable evaluators to better isolate the effects of DDPs.

Three tables would reveal the basic specifications of applicable DDP evaluations. Table 6.3 pinpoints the type of evaluation conducted,<sup>10</sup> Table 6.4 the thematic coverage of the evaluation, and Table 6.5 practical evaluation considerations.



Table 6.3. Type of evaluation

DDP name:	Check type of evaluation implemented	Time frame covered
<b>Quasi-experimental designs (relatively robust)</b>		
1. Pre-test/post-test non-equivalent control group design with statistical matching of the two groups.		
2. Pre-test/post-test non-equivalent control group design with judgmental matching of the two groups.		
<b>Quasi-experimental designs (less robust)</b>		
3. Pre-test/post-test comparison where the baseline study is not conducted until the project has been under way for some time.		
4. Pipeline control group design.		
5. Pre-test/post-test comparison of project group combined with post-test comparison of project and control group		
6. Post-test comparison of project and control groups		
<b>Non-experimental designs (least robust)</b>		
7. Pre-test/post-test comparison of project group		
8. Post-test analysis of project group		

Source: Author's own work

Table 6.4. Ultimate outcome dimensions treated by evaluation

<i>Ultimate outcome dimensions</i>	<i>yes / no</i>
<b>Annex II Adverse Impacts</b>	
1. Serious Human rights abuses associated with extraction, transport, or trade of minerals	
2. Direct or indirect support to non-state armed groups	
3. Public or private security forces	
4. Bribery and fraudulent misrepresentation of the origin of minerals	
5. Money laundering	
6. Non-payment of taxes, fees and royalties due to governments	
<b>Socio-economic conditions of miners</b>	
1. Livelihoods	
2. Occupational health and safety	

Source: Author's own work

Table 6.5. Evaluation process indicators

Indicator	Response
1. On-site evaluation?	
2. Days evaluator(s) spent on evaluation – desk	
3. Days evaluator(s) spent on evaluation – on-site	
4. Primary data collected?	
5. # of interviews held, key informant (single respondent)?	
6. # of interviews held, focus groups (multiple respondents)?	
7. Independence of evaluator(s), i.e. reputation of external evaluation entity	

Source: Author's own work

## Notes

<sup>10</sup> Typology based on: Impact Evaluations and Development -- Nonie Guidance on Impact Evaluation (see Leeuw and Vaessen, 2009: 109)

## 7. Evaluation plan

The evaluation plan is based on the same cause-effect logic as the theory of change and the impact framework. It involves scientific methods to launch inquiries that obtain data. Data, when analysed, produce findings, that either refute or uphold the hypotheses as previously outlined.

After the initial evaluation or baseline has been completed, a better understanding will be gained of the expected change that will occur in the defined cause-effect logic of the theory of change and how that change will occur.

### 7.1. Methods

Scientific methods are employed by the M&E framework in order to empirically gauge the degree of OECD DDG implementation, as well as the effect of such implementation on CAHRAs.

The scientific approaches incorporated into this framework involve the:

- Incorporation of pertinent literature and theory;
- Performance of characterisations, including making observations, defining terms, and describing measurements of the subject of inquiry;
- Posing empirically measurable research questions;
- Specification of research design, data sources, sampling, data collection and data analysis methods for each assessment;
- Testing of hypotheses, including in order to be able to either confirm or refute them;
- Application of appropriate statistical analysis and visualisation of results.

### 7.2. Key Questions

Key questions guide the inquiry in accordance with each of the assessment sections featured in the Framework. The answers to these questions challenge and/or confirm the hypothesis made in the theory of change. The M&E framework poses the following key questions for the evaluation plan.

**Table 7.1. Evaluation, key questions**

Goal level	Assessment section	Key question
Ultimate Outcome	A. Annex II Adverse Impacts	To what extent are Annex II Adverse Impacts occurring in mining and mineral processing areas in the CAHRA?
	B. Socio-Economic Conditions	What are the socio-economic conditions of miners in the CAHRA? To what extent are miners and mining communities economically affected by DDPs?
Intermediate Outcome	C. Due Diligence Minerals Trade	What is the degree of demand for DDM from the CAHRA?
	D. Due Diligence Programmes	What is quality and scale of DDPs supplying minerals from the CAHRA?

Immediate Outcome	E. Downstream DDG Uptake	To what degree are companies in downstream mineral supply chains aligned with the OECD's 5-step due diligence framework?
	F. Upstream DDG Uptake	To what degree are companies in upstream mineral supply chains aligned with the OECD's 5-step due diligence framework?
Context	G. Global Trends	What is the current backdrop of trends and emerging issues related to the sourcing of minerals from CAHRAs at the international level?
	H. CAHRA Context Profiles	What are the current business and operating environment issues that affect a company's ability to conduct business and/or operate in the sector/CAHRA?

Source: Author's on work

### 7.3. Types of Data Consulted

Designed to measure the impact of the DDG, this M&E framework presents a blueprint for data collection, data analysis and generating evidence-based conclusions principally featuring four types of data:

1. **Corporate, self-reported data:** To gauge the degree of OECD awareness and uptake, self-reported data on the part of companies will be taken into account. Many companies around the world claim to be applying the DDG to varying degrees. However, how exacting they are in their Step 5 reporting, in particular whether they properly account for Annex II adverse impacts and whether they make a plausible case that those risks are being actively managed must be evaluated.
2. **Empirical, economic data:** While self-reported data is useful to gauge the maturity of due diligence programmes, primary data is needed to assess market behaviour and the degree of ground-level verification per CAHRA. Thousands of purchasing decisions happening on a daily basis determine from whom, and at what price, minerals are bought. Ultimately, companies that have issued a policy in line with Annex II commit themselves to a code of conduct that would also be discernable at the aggregate level. To detect whether there is a cumulative response in the market, this framework looks at macro-level economic indicators such as volumes of DDM vs. non-DDM being exported from specific CAHRAs. If DD is being effectively implemented by a critical mass of companies, this will also be reflected in the extent to which actors are engaging with DDPs that work on the ground.
3. **Annex II adverse impact data:** This Framework also provides for the tracking of extraction-level realities, in particular the prevalence of Annex II adverse impacts associated with in-scope CAHRA-mineral pairs.
4. **Context data:** Other circumstantial evidence provides the background to explain changes in the impact metrics. Existing context-based metrics offer descriptive statistics and trends to build a meaningful understanding that accounts for contextual factors when interpreting specific impact measurements.

Companies' actions do not occur in a vacuum. The actions of other stakeholders (especially national governments) can directly and/or indirectly affect changes in Annex II impacts. For example, migration, CSO participation in mine site monitoring, government requirements on mineral certification, etc. all affect conflict risks in mines. These contextual factors are featured in the two context components of the M&E framework and can be considered in the selection and prioritisation of CAHRA-mineral pairs during the scoping exercise.

Context is dynamic, not static, as the world is constantly changing. Understanding a company's incentives, influences and pressures in the larger "responsible sourcing context" provides insights into a company's direct and indirect, individual and/or collective actions, contributing to the overall impacts achieved through the implementation of the DDG. As this M&E framework's main focus is the

measurement and reporting on the DDG's impact on mineral sourcing from CAHRAs, it is vital to clarify the distinction between impact- and context-based metrics. These terms are not synonymous, although they do often overlap.

Impact metrics are – by themselves – insufficient for the purpose of assessing performance. Impact metrics are far more relevant when expressed against a backdrop of the changes in global-local business and operating environments over time or changes that occur to relevant markets, norms and institutions. A context-based backdrop is designed to provide a relevance check for impact metrics. Context-based metrics can do that well; impact measures by themselves do not.

It is not the intention of the M&E framework to collect primary data on any context-based metrics, nor to use such metrics to perform complex correlations and/or causal link analyses. The objective is to use existing context-based metrics (indexes such as the WGI, etc.) to leverage descriptive statistics and narrative to sense-check and help interpret specific impact measurements.

No company is an island. Other stakeholders can affect a company's effectiveness through a complex interaction of economic, social, political, technological and environmental activities. For companies to implement the DDG with success in a particular CAHRA and/or with a particular conflict mineral, they need to understand the relationships with other stakeholders that shape their environment. This normally consists of:

- Understanding the company's complex interactions in its market context, and with its primary stakeholders.
- Analysing the kinds of market forces and influences that have the potential to impact business success today and in the future.
- Identifying how to integrate this thinking into business strategy and planning to capture the most value and ensure long-term success.

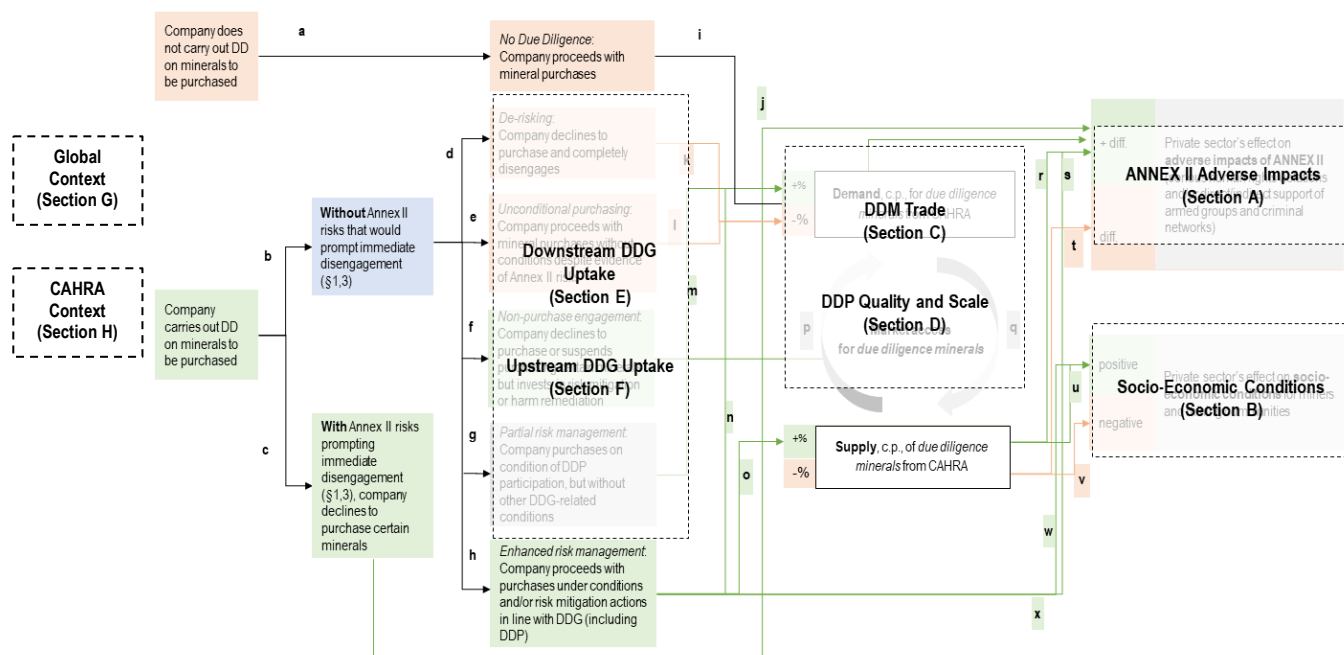
Furthermore, there is a two-way interaction between the business and its context. Society creates costs and value for businesses and business creates value and costs for society. A contextual backdrop of this larger environment can provide a greater understanding of analytics that frame a company's success/difficulty conducting business in its environment. As such, the M&E framework defines three categories of context that provide a relevant backdrop to each of the DDG impact dimensions as follows:

- Global trends provide the M&E Framework with an up-to-date backdrop on trends and emerging issues relating to responsible sourcing of minerals from CAHRAs at a global level.
- CAHRA profiles as related to the operating environment:
  - as it relates to mitigated minerals markets, providing the M&E framework with an up-to-date backdrop of the external factors that affect a company's ability to build and conduct a successful business in a sector/CAHRA.
  - as it relates to supply chain capacity, providing the M&E framework with a backdrop of the factors that affect a company's prospects and ability to operate in a sector/CAHRA.

## 7.4. Evaluation Sections

The Evaluation plan of the M&E Framework features eight evaluation components represented by the following eight assessment sections. Figure 7.1 illustrates how the eight assessment sections are related to and overlaid on the theory of change.

Figure 7.1. Assessment sections as related to the Theory of Change



Source: Author's own work

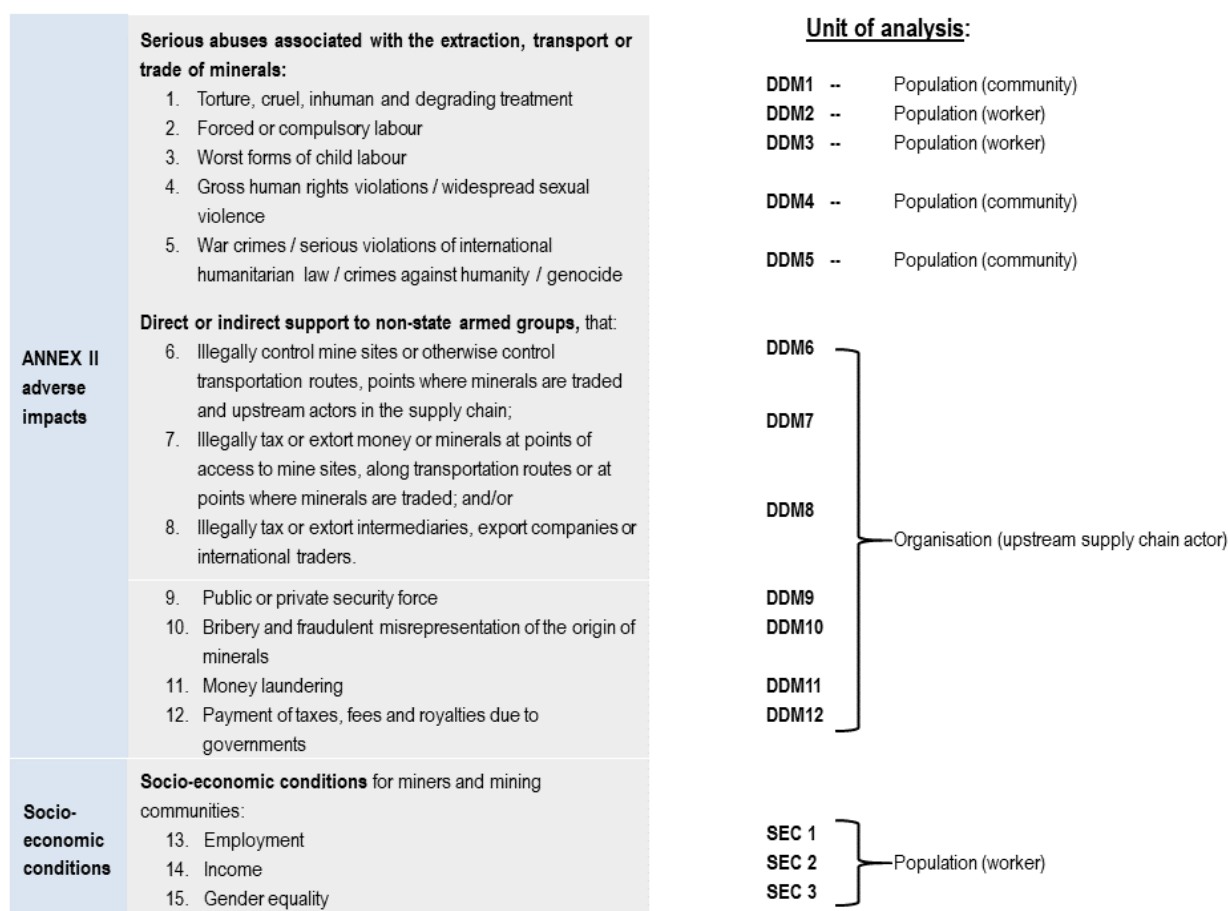
The following eight assessment sections are combined to implement the evaluation component of the M&E framework.

### Section A: Annex II Adverse Impacts

<b>Assessment type:</b>	Evaluation
<b>Key question(s):</b>	To what extent are Annex II Adverse Impacts occurring in mining and mineral processing areas in the CAHRA?
<b>Research design:</b>	Meta-analysis of existing research and data, longitudinal. The conduct of a meta-analysis of scientific surveys undertaken on Annex II adverse impacts would allow for big-picture trends to be revealed. In order to be relevant, the occurrence of Annex II Adverse Impacts will be geographically linked to mineral extraction and trade routes (e.g., intercommunal violence and human rights abuses in a non-mineral extraction area of a country would not be in-scope). Sub-national level data will be employed to this end.
<b>Data sources</b>	Secondary data sources, examples of which are featured in Table 7.2.)  The inclusion threshold would constitute internationally recognised/cited datasets, scientific surveys and investigative journalism/research reports from reputable sources.
<b>Unit(s) of analysis</b>	This assessment will encompass three units of analysis (see Figure 7.2): <ul style="list-style-type: none"> <li>• general population living within the in-scope CAHRA;</li> </ul>

	<ul style="list-style-type: none"> <li>• worker/miner population within the in-scope CAHRA;</li> <li>• organisation (upstream supply chain actor).</li> </ul>
<b>Key metric(s):</b>	Prevalence / incidents will be taken for each indicator.
<b>Sampling:</b>	Given the reliance on secondary data, the meta-analysis would defer to the sampling methods employed in the primary research.
<b>Assessment themes:</b>	<p>As per Annex II adverse impacts:</p> <ul style="list-style-type: none"> <li>• Serious abuses associated with mining activities;</li> <li>• Direct or indirect support to non-state armed groups;</li> <li>• Public or private security forces;</li> <li>• Bribery and fraudulent misrepresentation of mineral origin;</li> <li>• Money laundering;</li> <li>• Non-payment of taxes, fees and royalties due to government.</li> </ul>
<b>Indicators:</b>	This assessment features 12 indicators – one per Annex II adverse impact.

Figure 7.2. Units of analysis



Source: Author's own work

Table 7.2. Annex II Adverse Impact indicators

OECD DDG Annex II	Indicator	Data source examples (for the DRC)
<b>1. Serious human rights abuses –</b> (i) Torture, cruel, inhuman and degrading treatment	1. Prevalence of torture, cruel, inhuman and degrading treatment (cases per 1 million inhabitants) <sup>11</sup> .	<ul style="list-style-type: none"> <li>• Case-file information (e.g. United Nations Organization Stabilization Mission – MONUSCO (2020) and UN (2020a)</li> <li>• DDP incident reporting (for examples see Handbook)</li> <li>• “Specific instances” brought to National Contact Points (NCPs) – offices set up by governments that have adhered to the OECD Guidelines for Multinational Enterprises</li> </ul>
(ii) Forced or compulsory labour	Prevalence of forced / compulsory labour (cases per 1 million inhabitants).	<ul style="list-style-type: none"> <li>• Global Slavery Index (Walk Free Foundation, 2018)</li> <li>• ILO (2020a): Forced labour, modern slavery and human trafficking</li> <li>• DDP incident reporting (for examples see Handbook)</li> <li>• “Specific instances” brought to National Contact Points (NCPs) – offices set up by governments that have adhered to the OECD Guidelines for Multinational Enterprises</li> </ul>
(iii) Worst forms of child labour	Prevalence of worst forms of child labour (cases per 1 million inhabitants).	<ul style="list-style-type: none"> <li>• ILO (2020b): Child Labour</li> <li>• United Nation Children Fund (UNICEF)’s Multiple Indicator Cluster Survey (UNICEF, 2014)</li> <li>• ILO, UNICEF and World Bank (2018)</li> <li>• Alliance 8.7 (n.d.)</li> <li>• DDP incident reporting (for examples see Handbook)</li> <li>• “Specific instances” brought to National Contact Points (NCPs) – offices set up by governments that have adhered to the OECD Guidelines for Multinational Enterprises</li> </ul>
(iv) Gross human rights violations / widespread sexual violence	Prevalence of widespread sexual violence (cases per 1 million inhabitants).	<ul style="list-style-type: none"> <li>• Demographic and Health Survey (ICF, 2020)</li> <li>• Harvard Humanitarian Initiative / United Nations Development Programme (UNDP) surveys (e.g. HHI, 2020)</li> <li>• Reported Cases of Sexual Violence in South Kivu Province, DRC – Ministry of Gender, DRC Government</li> <li>• Kivu Security Tracker (KST, 2020)</li> </ul>
(v) War crimes / serious violations of international humanitarian law / crimes against humanity / genocide	Conflict-related deaths per 1 million inhabitants.	<ul style="list-style-type: none"> <li>• United Nations (UN) Group of Experts reports (UN, 2020b)</li> <li>• Non-Governmental Organisation (NGO) reports (Amnesty International, 2020; HRW, 2020; Enough, 2020)</li> <li>• Armed Conflict Location and Event Data Project (ACLED)</li> </ul>



<b>2. Direct or indirect support to non-state armed groups</b>		
i) Illegally controlled mine sites, transportation routes, trading hubs	Documented adverse incidents <sup>12</sup> of illegally controlled mine sites, transportation routes, trading hubs.	<ul style="list-style-type: none"> <li>• Supply chain incident reports (reported as part of corporate Step 5 reports)</li> <li>• 3rd party incident reporting (for examples see Handbook)</li> <li>• UN Group of Experts reports</li> <li>• Investigative journalism / research reports (e.g. on illegal trade)</li> <li>• "Specific instances" brought to National Contact Points (NCPs) – offices set up by governments that have adhered to the OECD Guidelines for Multinational Enterprises</li> <li>• DDP incident reporting</li> </ul>
ii) Illegally taxed or extorted money or minerals at mine site access points, transportation routes and/or trading hubs	Documented adverse incidents of illegally taxed or extorted money or minerals at mine site access points, transportation routes and/or trading hubs.	
iii) Illegally taxed or extorted intermediaries, export companies and/or international traders	Documented adverse incidents of illegally taxed or extorted intermediaries, export companies and/or international traders.	
<b>3. Public or private security forces</b>		
	Documented adverse incidents regarding security forces in the past 3-5 years.	<ul style="list-style-type: none"> <li>• Investigative journalism / research reports</li> <li>• DDP incident reporting (for examples see Handbook)</li> </ul>
<b>4. Bribery and fraudulent misrepresentation of the origin of minerals</b>		
	Documented adverse incidents regarding bribery and fraudulent misrepresentation in the past 3-5 years.	<ul style="list-style-type: none"> <li>• Investigative journalism / research reports</li> <li>• OECD Portal for Supply Chain Risk Information (OECD, 2018d)</li> <li>• DDP incident reporting (for examples see Handbook)</li> </ul>
<b>5. Money laundering</b>		
	Documented adverse incidents involving money laundering in the past 3-5 years.	<ul style="list-style-type: none"> <li>• Investigative journalism / research reports</li> <li>• OECD Portal for Supply Chain Risk Information (OECD, 2018d)</li> <li>• DDP incident reporting (for examples see Handbook)</li> </ul>
<b>6. Non-payment of taxes, fees and royalties due to governments</b>		
	Documented adverse incidents regarding the non-payment of taxes, fees and royalties due to governments in the past 3-5 years.	<ul style="list-style-type: none"> <li>• Investigative journalism / research reports</li> <li>• OECD Portal for Supply Chain Risk Information (OECD, 2018d)</li> <li>• DDP incident reporting (for examples see Handbook)</li> <li>• Extractive Industries Transparency Initiative (EITI, 2020)</li> </ul>

Source: Author's own work

### Section B: Socio-Economic Conditions of Miners and Mining Communities

<b>Assessment type:</b>	Evaluation
<b>Key question(s):</b>	<ul style="list-style-type: none"> <li>• What are the socio-economic conditions of miners and mining communities in the CAHRA?</li> <li>• To what extent are miners and mining communities economically affected by DDPs?</li> </ul>
<b>Research design:</b>	<ul style="list-style-type: none"> <li>• Cross-sectional study consisting of a survey of in-scope DDPs;</li> <li>• Meta-analysis of independent surveys of miners and mining communities.</li> </ul> <p>A meta-analysis of information on socio-economic conditions would allow for a comparison between the SEC of miners associated with a DDP to those who are not.</p>
<b>Data sources</b>	<p>Two data sources are envisioned:</p> <ul style="list-style-type: none"> <li>• Primary data provided by DDPs;</li> <li>• Secondary data sources featuring surveys of miners and mining communities.</li> </ul>
<b>Unit(s) of analysis</b>	The population of miners within the in-scope CAHRA, both miners working in participation with a DDP and those who are not. The benefit to the wider mining communities will be inferred.
<b>Key metric(s):</b>	Livelihoods and Occupational Health & Safety (OHS) are the main themes of the SEC section.
<b>Sampling:</b>	Given the reliance on secondary data, the meta-analysis would rely on the sampling methods employed in the primary research.
<b>Assessment themes:</b>	The DDG is premised on the notion that cutting the link between mineral production and trade and adverse human rights and corruption-related impacts can help countries benefit from their natural resources. Furthermore, the DDG includes specific risk mitigation measures intended to provide greater opportunities for formal trade to largely informal parts of the sector. DDPs, however, may affect the terms and conditions on which minerals are traded. These dynamics are closely bound up with the implementation of the DDG and may have consequences for the socio-economic welfare of miners and mining communities. Studies of DDP implementation should uncover how DDPs influence SEC outcomes related to the above issues. Livelihood impacts will be measured through miner income, gender ratios, savings and cell phone ownership. OHS of miners is measured through injury and fatality data as well as through the use of mercury (in the case of gold mining). The difference between the DDP values and national averages will provide a way to compare the performance of each in-scope DDP.
<b>Indicators:</b>	This assessment features 11 indicators.

Table 7.3. SEC indicators

Indicators	Data source examples (for the DRC)
<b>Livelihoods</b>	
1. Mining income per month (disaggregated by gender) compared to national average GNI.	<ul style="list-style-type: none"> <li>• In-scope DDPs (for examples, see forthcoming Handbook)</li> <li>• National statistics</li> <li>• Reports, e.g. IPIS (2020)</li> <li>• Academic studies, e.g. Radley (2020), Geenen et al. (2020), etc.</li> <li>• Disclosures of payments</li> </ul>
2. Gender parity for income derived from mining.	
3. Household income (month) from mining as a percentage of total household income.	
4. Income derived from mining in DDP Areas of Operation, on the part of DDP miners (compared to non-mining community members).	
5. Payments to government from mining activity (e.g. fees for mining, exploration and export licenses; royalties; taxes; payments).	
6. Cell phone ownership of DDP participant households, compared to national average.	
7. Gender gap for cell phone ownership of DDP participant households versus national average.	
8. Average % of savings over average income for participating surveyed community members (F/M).	
<b>OHS</b>	
9. Instances of workplace death (per 100 workers, disaggregated by gender).	<ul style="list-style-type: none"> <li>• In-scope DDPs</li> </ul>
10. Instances of workplace injuries (per 100 workers, disaggregated by gender).	
11. Gold produced without mercury as percentage of that produced with mercury, in Areas of Operation (AO).	

Source: Author's own work

### Section C: Due Diligence Minerals Trade

<b>Assessment type:</b>	Evaluation
<b>Key question(s):</b>	What is the degree of DDM demand from the CAHRA?
<b>Research design:</b>	Cross-sectional, longitudinal, data aggregation.
<b>Data sources</b>	<p>Primary and secondary sources will be consulted:</p> <ul style="list-style-type: none"> <li>• Primary data collection involving in-scope mineral DDPs.</li> <li>• Secondary data collection involving total in-scope minerals production values.</li> </ul> <p>In the event there are diverging numbers between the various sources of data (e.g. between national statistics, UN, EITI, etc.), expert estimations will be considered.</p>

<b>Unit(s) of analysis</b>	The export of in-scope mineral(s) flowing through DDPs (see typology in Glossary). Only DDPs involved in mineral sourcing (and thus collecting related data) will be included in these metrics.
<b>Key metric(s):</b>	Three key metrics are targeted: <ul style="list-style-type: none"> <li>• Volumes of DDM vs. non-DDM produced (typically a measure of minerals transacted at the mine or upstream trader)</li> <li>• Volumes of DDM vs. non-DDM transacted at level of export (officially and estimated)</li> <li>• Volumes of DDM vs. non-DDM refined outputs imported into third countries</li> </ul>
<b>Sampling:</b>	For the export level, given a finite number of official exporters cooperating with institutionalised DDPs, it is both opportune and feasible to assess them all (i.e. sample the universe). For the total mineral production values, official data will be triangulated with other sources of evidence, e.g. expert estimations, EITI, etc., where the credibility of the officially reported data has been questioned.
<b>Assessment themes:</b>	Measuring the variable volumes of DDM vs. non-DDM transacted at export level, and the ratio of these two volume points over time, will, to a large extent, <i>ceteris paribus</i> , indicate the efficacy of the aggregate due diligence and procurement actions on the part of in-scope companies.
<b>Indicators:</b>	This assessment features seven indicators.

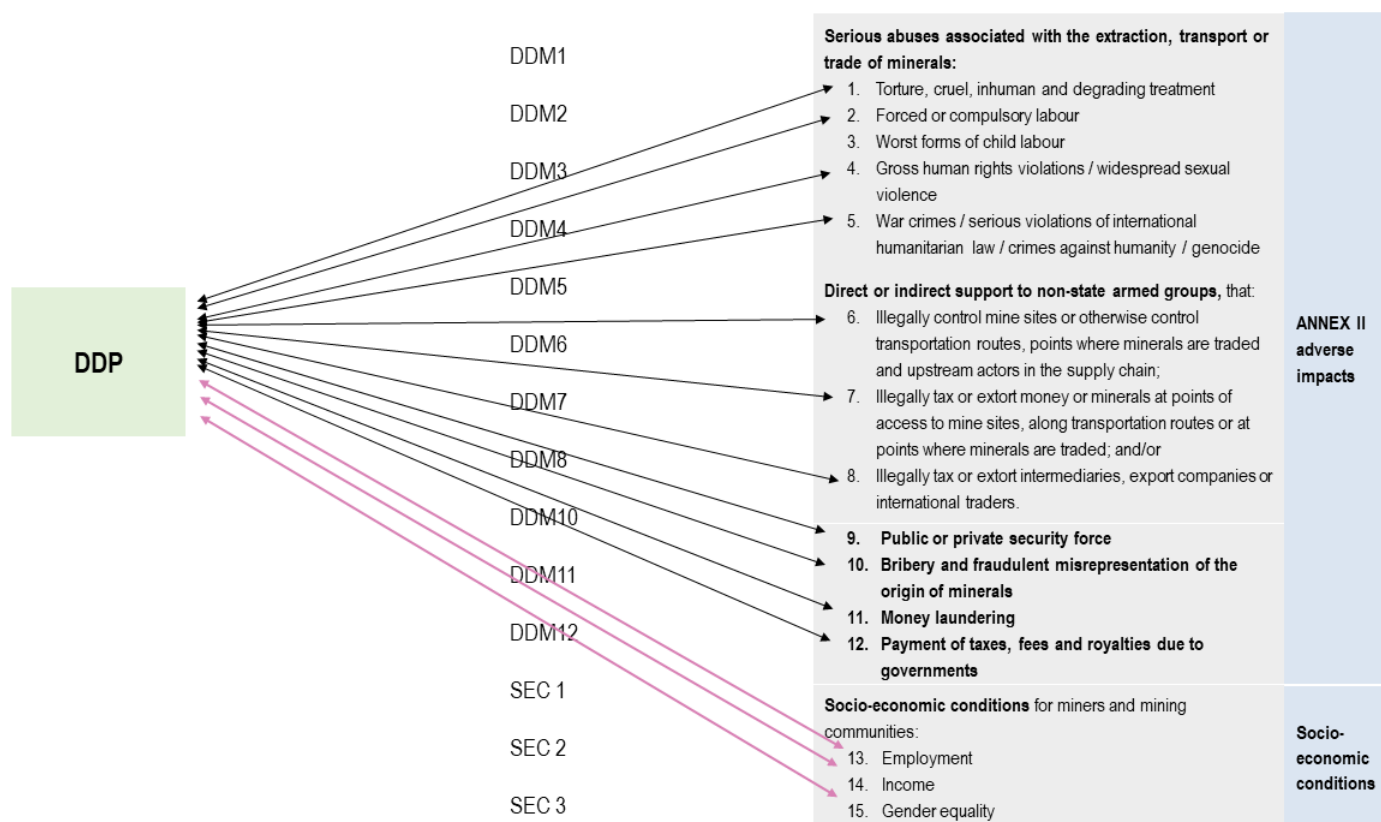
Table 7.4. Minerals trade indicators

Indicators	Data Sources
1. Type and volume/weight of DDM produced.	Primary data collection involving all in-scope mineral DDPs.
2. Type and volume/weight of non-DDM produced in the CAHRA.	Official data triangulated with other sources of evidence, e.g. expert estimations, EITI (2020), etc.
3. Type and volume/weight of DDM exported (export level).	Primary data collection involving all in-scope mineral DDPs.
4. Type and volume/weight of non-DDM exported (export level) in the CAHRA.	Official data triangulated with other sources of evidence, e.g. expert estimations, EITI (2020), etc.
5. Type and volume/weight of DDM refined metal outputs imported into third countries.	Official import data in jurisdictions with due diligence legislation that regulate imported metals; exchanges and market makers; corporate self-reporting and annual reports on operations.
6. Type and volume/weight of non-DDM refined metal outputs imported into third countries.	Official import data; corporate self-reporting and annual reports on operations.
7. Quantity (#) of buyers.	Primary data collection involving all in-scope mineral DDPs.

### Section D: Quality and Scale of Due Diligence Programmes

<b>Assessment type:</b>	Evaluation
<b>Key question(s):</b>	What is the quality and scale of DDPs supplying minerals from CAHRAs?
<b>Research design:</b>	A cross-sectional, longitudinal research design is envisioned that surveys in-scope DDPs (as with Section C), as well as the producer-level participants of the DDP (DDP Tier 1) for triangulation purposes.
<b>Data sources</b>	Primary data collection involving in-scope mineral DDPs/producer-level.
<b>Unit(s) of analysis</b>	The primary units of analysis are: (1) DDP organisation-level, and (2) producer (cooperative/miner) level.
<b>Key metric(s):</b>	<p>The following key metrics are featured in this assessment:</p> <ul style="list-style-type: none"> <li>Types of DDPs, i.e. incidents per adverse impact (DDM1-DDM12) identified, followed-up and mitigated (see Figure 7.3 and Table 7.6)</li> </ul> <p>Quality of DDP with regard to processes and outcomes, in particular with regard to DDP stakeholder participation and control of leakage-in (see in Table 7.5).</p>
<b>Sampling:</b>	All DDPs operating in CAHRAs within the scope of the study or comprised of members or programme participants sourcing from such CAHRAs (universe) are in-scope. A literature review and the snowball method will yield the list of operational DDPs in each selected CAHRA.
<b>Assessment themes:</b>	DDPs are queried in order to assess their value addition with respect to mitigating Annex II Adverse Impacts. Each DDP is categorised according to its objectives vis-à-vis Annex II, i.e. DDM1-DDM12 (see Figure 7.3). DDPs are requested to provide mineral-specific data on incidents identified and followed-up/mitigation actions. In addition, the membership/participation, employment related to minerals production and trade covered by such DDPs, and the extent of stakeholder consultation for on-the-ground risk mitigation purposes are featured in order to capture the support/patronage for – and overall scale of – each in-scope DDP. The data collected through this section can then be applied and/or linked to the Section C study on trade volumes.
<b>Indicators:</b>	This assessment features 15 indicators.

Figure 7.3. Due Diligence Programmes and relevant impacts



Source: Author's own work

Table 7.5. DDP indicators

Indicators	Data Sources
<b>Processes</b>	
1. # of DDP members or participants in the form of companies, cooperatives or other supply chain actors directly participating in the programme (through direct participation in minerals traded through the programme, explicit use of programme data or providing financial support or paying fees to the DDP).	In-scope DDPs (for examples, see Handbook) OECD Alignment Assessments
2. # participating mine workers/estimated employment of participating mine sites and upstream trade hubs prior to export (only applicable to DDPs that directly involve upstream actors).	
3. # people participating annually in stakeholder consultations related to risk mitigation.	
4. Level of alignment with the DDG assessed through an OECD Alignment Assessment if available.	
5. Did the DDP track mineral sales and compare them to corresponding financial flows? (In order to detect and deter fraud, illicit financing, financial crimes, and leakage-in – fraud being a primary risk as per point 4 of Annex II).	
6. Did the DDP establish and maintain a complete registration system of miners and mine sites? (Accounting for the principal mining inputs through the registration of miners and mine sites allows one to control for fraud, illicit financing, misrepresentation and leakage-in, fraud being a primary risk as per point 4 of Annex II).	

7. Did the DDP triangulate data on relevant events from multiple sources (as data validity is enhanced through triangulation)?	
8. Did the DDP publicly report meta-level data (as meta-data reporting enhances visibility of the initiative)?	
<b>Outcomes</b>	
9. # of incidents identified per adverse impact (see Table 7.6).	Primary data collection involving all in-scope mineral DDPs.
10. # of incidents followed-up per adverse impact (see Table 7.6).	
11. # of incidents mitigated per adverse impact (see Table 7.6).	
12. Percent (%) of Annex II-relevant incidents, managed through a DDP, associated with a particular mineral, which has been followed-up upon/mitigated, per adverse impact.	
13. Percent (%) of Annex II-relevant incidents, managed through a DDP, associated with a particular mineral, which has been followed-up upon/mitigated, aggregated.	
14. Average DDM price at export level per volume/weight unit (\$).	
15. Average % of refined metal product price, per volume/weight unit at point of export.	

Source: Author's own work

**Table 7.6. Incidents detected vs followed-up vs mitigated through each in-scope DDP**

Adverse impact variable	# of relevant incidents identified through DDP system	# of relevant incidents followed-up on through DDP system	# of relevant incidents mitigated through DDP system
<b>Human-rights serious abuses – Serious abuses associated with extraction, transport or trade of minerals</b>			
Incidents of torture, cruel, inhuman and degrading treatment.	# of relevant incidents	# of relevant incidents	# of relevant incidents
Incidents of forced / compulsory labour.	# of relevant incidents	# of relevant incidents	# of relevant incidents
Incidents reported of worst forms of child labour.	# of relevant incidents	# of relevant incidents	# of relevant incidents
Incidents reported of sexual violence.	# of relevant incidents	# of relevant incidents	# of relevant incidents
Incidents reported of conflict-related deaths.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Direct or indirect support to non-state armed groups</b>			
Incidents reported of illegally controlled mine sites, transportation routes, trading hubs.	# of relevant incidents	# of relevant incidents	# of relevant incidents
Incidents reported of illegally taxed or extorted money or minerals at mine site access points, transportation routes and/or trading hubs.	# of relevant incidents	# of relevant incidents	# of relevant incidents
Incidents reported of illegally taxed or extorted intermediaries, export companies and/or international traders.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Public or private security forces</b>			
Incidents related to public or private security forces.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Bribery and fraudulent misrepresentation of the origin of minerals</b>			

Incidents related to bribery and fraudulent misrepresentation.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Money laundering</b>			
Incidents related to money laundering.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Non-payment of taxes, fees and royalties due to governments</b>			
Incidents related to non-payment of taxes, fees and royalties due to governments.	# of relevant incidents	# of relevant incidents	# of relevant incidents
	<i>total</i>	<i>total</i>	<i>total</i>

Source: Author's own work

### **Section E: Downstream DDG Uptake**

<b>Assessment type:</b>	Evaluation
<b>Key question(s):</b>	To what degree are companies in the downstream minerals supply chain demonstrating uptake of the OECD's 5-step due diligence framework?
<b>Research design:</b>	Cross-sectional, longitudinal study
<b>Data sources</b>	<p>Primary data collection based on corporate self-reporting (e.g. Step 5 reports or similar), operationalising the items stipulated for disclosure as per OECD Step 5 and other relevant information on sourcing practices that may feature as part of corporate disclosures. Relevant corporate representations are located in various reporting sources, e.g.:</p> <ul style="list-style-type: none"> <li>• Company websites</li> <li>• Conflict minerals policy</li> <li>• Mineral sourcing policy</li> <li>• Responsible sourcing of raw materials policy</li> <li>• Code of conduct</li> <li>• Supplier code</li> <li>• Sustainability report</li> <li>• Integrated annual report</li> <li>• Devices Sustainability Report</li> <li>• U.K. Modern Slavery Statement</li> <li>• California Transparency in Supply Chains Statement</li> <li>• U.S. Form SD filings</li> <li>• RMI Reasonable Country of Origin Inquiry (RCOI) Data</li> </ul>
<b>Unit(s) of analysis</b>	The downstream section of the supply chain features the OEM level, situated at the far end (often consumer-facing) of the supply chain. OEMs are selected as the unit of analysis based on their disproportionate purchasing power vis-à-vis the lower tiers. Sectors with the highest mineral content are chosen as per the methods described in the Handbook.
<b>Key metric(s):</b>	A company's implementation of DDG Steps 1-5, through the perspective of Step 5 reporting. The data collected in Table 7.7 will allow any given company under study to be classified according to the typology offered in the ToC. The case frequency in each category will inform the degree of DDG uptake at the aggregate level. In addition, discrepancies between Annex II-relevant allegations and company self-reporting will also be analysed.



<b>Sampling:</b>	<p>A random sampling method to derive a representative sample is employed to select industries, sectors, or all companies with products containing minerals, depending on the M&amp;E scope. To this end, it would first need to be determined what type of company has products that contain an in-scope mineral: in the case of tin, tungsten, tantalum and gold (3TG), an approach featuring a Standard Industrial Classification (SIC) analysis is advised as performed by Bayer and Hudson (2017). Findings would then be extrapolated to non-U.S. markets. While one supply chain study (Mizuno, 2016) focused on companies within the G8, extending the inquiry to the Group of 20 (G20) would allow for the inclusion of other large mineral-demand markets, e.g. China and India<sup>13</sup>. Upon extrapolating the sample data, the findings may then be generalised for entire industries, sectors or all companies.</p>
<b>Assessment themes:</b>	<p>The DDG features reporting stipulations in Step 5 that a company properly implementing the DDG will follow. The degree of corporate disclosure may then be consequently assessed as an indication of a company's implementation of the DDG (see Table 7.7).</p> <p>In order to determine whether a downstream company engages in enhanced risk management, one should examine the extent to which a company features: the use of leverage, contract conditions, capacity-building of suppliers, DDP participation, grievance mechanisms and direct upstream engagement on Annex II (see Table 7.7 and Table 7.8).</p> <p>Furthermore, a gap analysis will point to any discrepancies between self-reported procurement/sourcing behaviour of a given company and allegations it faces on risks and adverse impacts as per the 12 dimensions of Annex II (covering the period of the interval between evaluations).</p>
<b>Indicators:</b>	<p>This assessment section features Downstream Step 5 indicators as itemised in Table 7.7.</p>

Table 7.7. Downstream Step 5 indicators

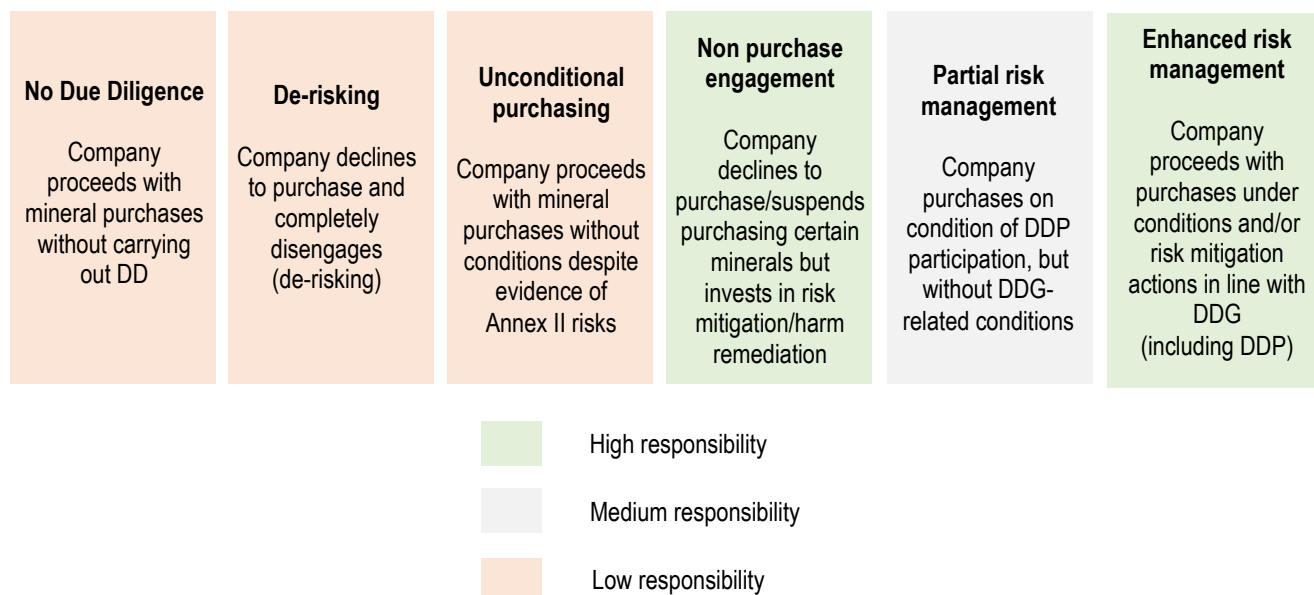
Downstream DDG uptake indicators		Annex II / III / Gold suppl.	Annex II / III / 3T suppl.
<b>Step 1: Management Systems</b>			
1	The company mentioned the OECD Minerals DDG in public document(s).	--	--
2	The company published a policy for responsible minerals sourcing / trade. <i>Note: The policy should be sourcing and/or raw materials-focussed.</i>	p. 113	p. 53
3	The company's policy takes into account the six main adverse impacts as per the Annex II model policy, disaggregated by impact.	p. 17	p. 17
4	The company seeks to direct suppliers to source through SORs that have successfully undergone an independent third-party audit (e.g. as provided by RMI's RMAP, LBMA, RJC) or second-party audit.	--	--
5	The company's supply chain policy was incorporated into commercial contracts and/or written agreements with suppliers.	p. 17, 74, 99	p. 17, 38, 40
6	The commercial contracts and/or written agreements with suppliers contained flow-down provision clauses in which the company's supply chain policy is made relevant in lower tiers. <i>Note: the DDG states that companies should "build leverage, over suppliers who can most effectively prevent or mitigate the identified risk." (p.18)</i>	--	--
7	The company's contracts contained <i>due diligence performance</i> clauses	p. 104	
8	The company monitored the compliance with its supply chain policy in commercial contracts with suppliers.	p. 74, 99, 104	p. 40
9	The company had in place a supplier escalation process in the event of non-compliance with the company's supply chain policy.	--	--
10	The company explained "the management structure responsible for the company's due diligence and who in the company is directly responsible." <i>Note: The description can include departments in charge, persons in charge, involvement of executives.</i>	p. 113	p. 53
11	The company described internal systems of transparency, information collection and control over the supply chain. <i>Note: For downstream companies, this includes a system of transparency and control that companies use to identify SORs, all countries of origin and transit of the minerals supplied to SORs in their supply chain.</i>	p. 113	--
12	The company described "the company's database and record-keeping system."	p. 113	--
13	The company had an operational-level grievance mechanism in line with the DDG under the period of review. <i>Note: The grievance mechanism may be a general mechanism (for all sorts of grievances) as long as it is specifically for the supply chain AND is mentioned in minerals documents/policies. Examples would be email addresses or a hotline.</i>	p. 17	p. 17
<b>Step 2: Risk assessment</b>			
14	The company described "the steps taken to identify refiners in their supply chain."	p. 113	p. 53
15	The company participated in or supported "independent third-party audits" of SORs' due diligence practices (for example through industry programme membership). <i>Note: Such programmes include the RMI, LBMA, and RJC.</i>	p. 106, 110	p. 47
16	The company participates, through membership and/or financial support, in an upstream DDP (see DDP criteria in the Glossary of Terms).	--	--
17	The company required its <i>suppliers</i> to participate in a due diligence programme through membership and/or financial support.	--	--
18	The company assessed the due diligence practices of the smelters/refiners in its supply chain, including disclosing the "published list of qualified smelters/refiners through industry validation schemes conforming to the due diligence processes" recommended in the DDG. <i>Note: Among other features, such industry schemes must include Step 4 audits of smelters/refiners.</i>	p. 113	p. 53
19	The company explained "the methodology of [its] supply chain risk assessments."	p. 113	--

20	The company disclosed “the actual or potential risks identified.”	p. 113	--
<b>Step 3: Risk management</b>			
21	The company described “the steps taken to manage risks.”	p. 113	--
22	The company included “a summary on the strategy for risk mitigation in the risk management plan.” <i>Note: This should include how companies are responding to specifically identified risks/incidents.</i>	p. 113	--
23	The company assisted “suppliers in building capacities with a view to improving due diligence performance.” (p. 17)	p. 104, 113	p. 43, 45
24	The company described “the involvement of affected stakeholders.”	p. 113	--
25	The company disclosed “the efforts made [...] to monitor and track performance for risk mitigation.” <i>Note: The DDG e.g. recommends that companies: “Implement the risk management plan, monitor and track performance of risk mitigation, report back to designated senior management and consider suspending or discontinuing engagement with a supplier after failed attempts at mitigation.”</i> (p. 46)	p. 113	p. 46
26	The company disclosed all the instances and results of follow-up to evaluate significant and measurable improvement.	p. 113	--
27	The company disclosed “the number of instances where the company has decided to disengage with suppliers and/or supply chains, consistent with Annex II, without disclosing the identity of those suppliers, except where the company deems it acceptable to do so in accordance with applicable laws.”	p. 112	--
28	The company accounted for its mitigation action, structured according to the six main adverse impacts as per the Annex II model policy. <i>Note: The six “significant adverse impacts,” “associated with extracting, trading, handling and exporting minerals from conflict-affected and high-risk areas” are (1) “serious abuses associated with the extraction, transport or trade of minerals”; (2) “direct or indirect support to non-state armed groups”; (3) “public or private security forces”; (4) “bribery and fraudulent misrepresentation of the origin of minerals”; (5) “money laundering”; and (6) non-payment “of taxes, fees and royalties due to governments” (OECD, 2016: 20).</i>	p. 20	p. 20
29	The company has no unaddressed allegations relating to the six main adverse impacts as per the Annex II model policy.	--	--
30	The company has no unaddressed allegations relating to the six main adverse impacts as per the Annex II model policy, which contradict public representation(s) the company has made.	--	--

Source: Author’s own work

Assessing in-scope companies for their corporate supply chain behaviour allows one to further categorise them. The following six basic actor types are featured in the figure below.

Figure 7.4. Company DD and purchasing modes



Source: Author's own work

The indicators used for such classification are listed in the table below. Best judgment should be used to categorize companies based on uptake sources.

Table 7.8. Downstream supply chain actor classification

		Supply Chain Actor(s)
		Actor's name
<b>1. No Due Diligence</b>		
a.	The company provided no representation or evidence of OECD-premised due diligence.	Yes/No Source
b.	The company did not mention DDG in public document(s).	Yes/No Source
<b>2. De-risking</b>		
a.	The company's representations stated they avoid engaging in, doing business in, or sourcing from certain countries.	Yes/No Source
b.	The company's representations stated they avoid engaging with – or sourcing from – certain production types (e.g. ASM).	Yes/No Source
<b>3. Unconditional purchasing</b>		
a.	The company's representations indicated that while they carried out some DD, they did not assess on-the-ground conditions before purchases of minerals or intermediate forms.	Yes/No Source
b.	The company's representations did not indicate that, if sourcing from CAHRAs, their supply chains exclusively purchased DD-minerals.	Yes/No Source
<b>4. Non-purchase engagement</b>		
a.	The company's representations indicated that they responsibly dis-engaged from their CAHRAs supply chains as they found conditions as per Annex II paragraphs 1 and 3.	Yes/No Source
b.	The company's representations indicated that if they found conditions as per Annex II paragraphs 1 and 3, the company invested in harm reduction and/or risk remediation.	Yes/No Source

5. Partial risk management		
a.	Company's representations mentioned explicit engagement of DDPs (e.g. in terms of membership, volumes and engagement on incidence monitoring and resolution).	Yes/No Source
b.	The company indicated that they purchased minerals (or intermediate forms) on condition of source material associated with a DDP, but did not engage further.	Yes/No Source
6. Enhanced risk management		
a.	The company's representations indicated that they responsibly dis-engaged from their supply chains leading to CAHRAs when they found conditions as per Annex II paragraphs 1 and 3.	Yes/No Source
b.	The company's representations indicated that they prudently engaged supply chains in conditions according to paragraphs 10 and 14.	Yes/No Source
c.	The company's representations indicated engagement across a spectrum of actions, which included the following themes captured through the following indicators:	
	• Use of leverage (Table 7.7: 4 to 9)	Yes/No Source
	• Contract conditions (Table 7.7: 4 to 7)	Yes/No Source
	• Capacity-building of suppliers (Table 7.7: 23)	Yes/No Source
	• Grievance mechanisms (Table 7.7 13)	Yes/No Source
	• Direct engagement on Annex II-cited phenomena (Table 7.7: 2, 3, 21 to 28)	Yes/No Source
	• DDP participation or provision of financial support to DDPs (Table 7.7: 16)	Yes/No Source

### Section F: Upstream DDG Uptake

<b>Assessment type:</b>	Evaluation
<b>Key question(s):</b>	To what degree are companies in the upstream minerals supply chain demonstrating uptake of the OECD's 5-step due diligence framework?
<b>Research design:</b>	Cross-sectional, longitudinal study
<b>Data sources</b>	Primary data collection based on corporate self-reporting (Step 5 reports or equivalent).
<b>Unit(s) of analysis</b>	The upstream section of the supply chain features, at the top of the upstream supply chain (according to the DDG typology), the SOR level, which comprises the main unit of analysis of this assessment. Positioned at the ultimate supply chain control point, smelters, refiners, and diamond cutters exercise comparatively high discretionary power from whom, and on what terms, they source their minerals.
<b>Key metric(s):</b>	DDG Steps 1-5, through the perspective of Step 5 disclosure. As with the downstream section, the data collected will allow any given company under study to be classified according to the typology offered in the TOC (See Table 7.9) The case frequency in each category will inform the degree of DDG uptake.
<b>Sampling:</b>	Wherever feasible, all registered SOR-level actors, as per the to-be-defined scope of the M&E Framework, will be surveyed for the purpose of this section assessment. For example, in the 3TG space there were 332 SORs in 2018. In the cobalt industry, there were 52 cobalt refiners (both

	fine and crude cobalt refiners as per the RMI taxonomy) in 2018 (Bayer et al., 2018).
<b>Assessment themes:</b>	<p>The DDG features reporting stipulations in Step 5 that a company properly implementing the DDG will follow. The degree of corporate disclosure may then be consequently assessed as an indication of a company's implementation of the DDG (see Table 7.9).</p> <p>This narrow assessment scope for the stipulated disclosure is required as a given company can implement the full letter and spirit of the DDG, but opt to still only provide the minimum elements stipulated for disclosure by Step 5 according to their signalling strategy (transparency ≠ quality of due diligence and purchasing behaviour).</p> <p>In order to determine whether an upstream company engages in enhanced risk management, the extent to which an upstream company carries out on-the-ground risk assessments, capacity-building, ASM formalisation, child labour remediation, engaging multi-stakeholder efforts to assist vulnerable populations, tracking and disclosing payments to government, and formalisation of security arrangements is assessed (see Table 7.9).</p> <p>Included in the uptake assessment is an analysis of Annex II-relevant allegations against the company originating from a credible source, and how the company responded, if at all. Each of the 12 dimensions in Annex II are in scope. This analysis then reveals a pattern regarding the type and frequency of allegations concerning relevant corporate behaviour.</p>
<b>Indicators:</b>	This assessment section features the following indicators.

Table 7.9. Upstream Step 5 indicators

Upstream DDG uptake indicators		Annex II / III / Gold suppl.	Annex II / III / 3T suppl.
<b>Step 1: Management Systems</b>			
1	The company mentioned the OECD Minerals DDG in public document(s).	--	--
2	The company published a due diligence policy for responsible minerals sourcing / trade. <i>Note: The policy should be sourcing and/or raw materials focused.</i>	p. 111	p. 52
3	The company's policy takes into account the six main adverse impacts as per the Annex II model policy, disaggregated by impact.	p. 17	p. 17
4	The company supports ASM formalisation either through: (a) direct engagement with ASM workers or operators, including through commercial and/or sourcing relationships with such entities, or (b) indirect engagement, for example by providing support to partnerships seeking to formalise ASM.	p. 115, 116, 117	p. 25, 27
5	The company explained "the management structure responsible for the company's due diligence and who in the company is directly responsible." <i>Note: Description can include departments in charge, persons in charge, involvement of executives.</i>	p. 111	p. 52
6	The company described internal systems of transparency, information collection and control over the supply chain, explaining how this operates. <i>Note: Upstream companies must have a chain of custody or traceability system if they have identified red flags.</i>	p. 111	p. 52
7	The company described "the company's database and record keeping system and explain[ed] the methods for identifying all suppliers, down to the mine of origin and the methods for sharing the information about due diligence throughout the supply chain." (p. 111)	p. 111	p. 52
8	The company developed or supported a grievance mechanism and provided evidence attesting to the fact that it is operational. <i>Note: The grievance mechanism may be a general mechanism (for all sorts of grievances) as long as it is specifically for the supply chain AND is mentioned in minerals documents/policies. Examples would be email addresses or a hotline.</i>	p. 17	p. 17
<b>Step 2: Risk assessment</b>			
9	The company carried out on-the-ground risk assessment(s) and published risk assessment using Annex II categories, including the disclosure of aggregate results.	--	p. 52
10	The company explained "how the company identified red flag operations or red flags in their supply chain, including the verifications of supplier representations proportional to risk."	p. 111	--
11	The company described the "red flags identified in the supply chain."	p. 113	--
12	The company described "the steps taken to map the factual circumstances of those red flag operations and red flagged supply chains."	p. 111, 112	--
13	The company outlined "the methodology, practices and information yielded by the on-the-ground assessment team, including whether and how the company collaborated with other upstream companies and how the company ensured that all joint work duly takes into consideration circumstances specific to the individual company."	p. 112	--
14	The company disclosed "the actual or potential risks identified" using Annex II categories.	p. 112	--
15	The company participates, e.g. through membership, in an upstream DDP (see DDP criteria in the Glossary of Terms).	--	--
<b>Step 3: Risk management</b>			
16	The company described "the steps taken to manage risks."	p. 112	p. 52
17	The company included "a summary of the strategy for risk mitigation in the risk management plan." <i>Note: The plan and/or summary should include how companies are responding to specifically identified risks and incidents.</i>	p. 112	p. 52
18	The company itself – or through participation in a relevant programme– carried out actions	p. 116	--

	in order to prevent or remediate child labour (e.g. vocational training, psychosocial support, awareness-raising, other forms of training, support for formal education).		
19	The company itself – or through participation in a relevant programme– engaged in multi-stakeholder efforts to assist vulnerable populations.	p. 22, 64, 114	p. 22
20	The company disclosed “information on payments made to governments in line with EITI criteria and principles (where relevant).”	p. 111	p. 52
21	The company ensured that security arrangements with public or private security forces were formalised and made only in accordance with the Voluntary Principles on Security and Human Rights.	p. 22, 23, 116, 117	p. 22, 23, 55, 56, 59
22	The company described “capability-training, if any, and the involvement of affected stakeholders,” held in the last 12 months.	p. 112	p. 52
23	The company disclosed “the efforts made by the company to monitor and track performance for risk mitigation and all the instances and results of follow-up after 6 months to evaluate significant and measurable improvement.” (p. 112)	p. 112	p. 52
24	The company disclosed “the number of instances where the company has decided to disengage with suppliers and/or supply chains, consistent with Annex II, without disclosing the identity of those suppliers, except where the company deems it acceptable to do so in accordance with applicable laws.”	p. 112	--
25	The company has no unaddressed allegations against it relating to the six main adverse impacts as per the Annex II model policy.	--	--
26	The company has no unaddressed allegations against it relating to the six main adverse impacts as per the Annex II model policy, which contradict public representation(s) the company has made.	--	--
<b>Step 4: Audits</b>			
27	The company published “the summary audit reports of refiners with due regard taken of business confidentiality and other competitive or security concerns.”	p. 112	p. 53
28	The company published an audit report that includes SOR “details and the date of the audit.”	p. 112	--
29	The company published an audit report that includes “the audit activities and methodology.” <i>Note: As “defined in Step 4(A)(4), where an Industry Programme or Institutionalised Mechanism in conformance with [the] Guidance and as defined in Step 4(B)(2) has not published these details.”</i>	p. 112	--
30	The company published an audit report that includes “the audit conclusions.” <i>Note: As “defined in Step 4(A)(4), as they relate to each step in this Guidance.”</i>	p. 112	--

Source: Author’s own work

The supply chain engagement of upstream companies will be classified according to the same six categories as the downstream companies (see Figure 7.5), assessed through the criteria in Table 7.10. Best judgment should be used to categorize companies based on uptake sources.



Figure 7.5. Company DD and purchasing modes

No Due Diligence	De-risking	Unconditional purchasing	Non purchase engagement	Partial risk management	Enhanced risk management
Company proceeds with mineral purchases without carrying out DD	Company declines to purchase and completely disengages (de-risking)	Company proceeds with mineral purchases without conditions despite evidence of Annex II risks	Company declines to purchase/suspends purchasing certain minerals but invests in risk mitigation/harm remediation	Company purchases on condition of DDP participation, but without DDG-related conditions	Company proceeds with purchases under conditions and/or risk mitigation actions in line with DDG (including DDP)

	High responsibility
	Medium responsibility
	Low responsibility

Source: Author's own work

Table 7.10. Upstream supply chain actor classification

		Supply Chain Actor(s)
		Actor's name
<b>1. No Due Diligence</b>		
a.	The company provided no representation or evidence of OECD-premised due diligence.	Yes/No Source
b.	The company did not mention DDG in public document(s).	Yes/No Source
<b>2. De-risking</b>		
a.	The company's representations stated they avoid engaging in, doing business in, or sourcing from certain countries.	Yes/No Source
b.	The company's representations stated they avoid engaging with – or sourcing from – certain production types (e.g. ASM).	Yes/No Source
<b>3. Unconditional purchasing</b>		
a.	The company's representations indicated that while they carried out some DD, they did not assess on-the-ground conditions before purchases of minerals or intermediate forms.	Yes/No Source
b.	The company's representations did not indicate that, if sourcing from CAHRAs, their supply chains exclusively purchased DD-minerals.	Yes/No Source
<b>4. Non-purchase engagement</b>		
a.	The company's representations indicated that they responsibly disengaged from their CAHRAs supply chains as they found conditions as per Annex II paragraphs 1 and 3.	Yes/No Source
b.	The company's representations indicated that if they found conditions as per Annex II paragraphs 1 and 3, the company invested in harm reduction and/or risk remediation.	Yes/No Source
<b>5. Partial risk management</b>		
a.	Company's representations mentioned explicit engagement of DDPs (e.g. in terms of membership, volumes and engagement on incidence monitoring and resolution).	Yes/No Source
b.	The company indicated that they purchased minerals (or intermediate forms) on condition of source material associated with a DDP, but did not engage further.	Yes/No Source

6. Enhanced risk management		
a.	The company's representations indicated that they responsibly disengaged from their supply chains leading to CAHRAs when they found conditions as per Annex II paragraphs 1 and 3.	Yes/No Source
b.	The company's representations indicated that they prudently engaged supply chains in conditions according to paragraphs 10 and 14.	Yes/No Source
c.	The company's representations indicated engagement across a spectrum of actions, which included the following themes captured through the following indicators:	
	• On-the-ground risk assessments (Table 7.9: 9, 10)	Yes/No Source
	• Capacity-building (Table 7.9: 18, 19, 22)	Yes/No Source
	• ASM formalisation (Table 7.9: 4)	Yes/No Source
	• Child labour remediation (Table 7.9: 17, 18)	Yes/No Source
	• Engaging multi-stakeholder efforts to assist vulnerable populations Table 7.9: 19)	Yes/No Source
	• Tracking and disclosing payments to governments (Table 7.9 20)	Yes/No Source
	• Formalising security arrangements (Table 7.9: 21)	Yes/No Source

Source: Author's own work

### Section G: Global DDG Context Profile

<b>Assessment type:</b>	Evaluation
<b>Key question(s):</b>	What is the current context on trends and emerging issues relating to responsible sourcing of minerals from CAHRAs at the international level?
<b>Research design:</b>	Literature review and synopsis of most current reports on global trends most directly related to the demand of minerals studied in Assessment Section C.
<b>Data sources</b>	Secondary data sources (indexes), examples of which featured in Table 7.11.
<b>Unit(s) of analysis</b>	National-level phenomena and market trends related to in-scope CAHRAs.
<b>Key metric(s):</b>	Data to be used from referenced literature, operationalised with indicators in Table 7.11.
<b>Sampling:</b>	Authoritative sources are consulted for this assessment.
<b>Assessment themes:</b>	This assessment will review the identified and expanded sources dealing with relevant global trends related to the demand of minerals studied in Assessment Section C.
<b>Indicators:</b>	This assessment features 8 domains (see Table 7.11).

Table 7.11. Global DDG context indicators

Domains	Data sources
<b>A. Normative and legal drivers of mineral supply chain due diligence</b>	
1. Global standards and instruments incorporating responsible business conduct (OECD, UN)	<ul style="list-style-type: none"> <li>• OECD and UN instruments on responsible business conduct</li> <li>• OECD and UN conventions</li> <li>• National legislative repositories</li> <li>• OFAC lists; FCPA and UK Bribery Act</li> <li>• Mapping coverage of in-scoped supply chains by prospective international normative drivers of due diligence</li> </ul>
2. Global conventions and international law relevant to responsible business conduct	
3. Regional and national legislation and regulations	
4. Sanctions and legal judgments targeting or affecting entities involved in or linked to the minerals trade	
<b>B. Market drivers of mineral supply chain due diligence</b>	
5. Rules mandating supply chain due diligence in mineral supply chains set forth by industry associations and exchanges for members and listed entities	<ul style="list-style-type: none"> <li>• London Metal Exchange (LME), Responsible Jewellery Council (RJC), London Bullion Market Association (LBMA), Dubai Multi Commodities Centre (DMCC), Responsible Mineral Initiative (RMI), World Gold Council (WGC), etc.</li> <li>• Mapping coverage of in-scoped supply chains by prospective market drivers of due diligence</li> <li>• Deloitte: Annual trend analysis on the future of mining (Swart, 2020), recurring desk review</li> </ul>
6. Market behaviour & investment trends	
7. Insights, strategies, and forward-thinking analysis	
8. Demands from communities and investors	

Source: Author's own work

### Section H: CAHRA Context Profiles

<b>Assessment type:</b>	Evaluation
<b>Key question(s):</b>	What are the current issues related to the business and operating environment that affect a company's ability to conduct business and/or operate in the sector/CAHRA and may influence the way it conducts due diligence?
<b>Research design:</b>	Literature review and supporting data informing descriptive analysis of most current national index reports most directly related to the impacts at the intermediate and ultimate outcome levels. These index domains provide a backdrop to the identified impact indicators.
<b>Data sources</b>	Secondary data sources (indexes), as recommended in Table 7.12
<b>Unit(s) of analysis</b>	National-level statistics for each identified and studied CAHRA.
<b>Key metric(s):</b>	Data on regulatory, financial, formalisation and the security environment in CAHRA are derived from indexes, featuring the themes in Table 7.12.

<b>Sampling:</b>	Authoritative sources are consulted for this assessment.
<b>Assessment themes:</b>	Using identified validated global indexes, the research will review sections and related data corresponding to referenced impact indicators. Descriptive statistics, along with relevant narrative, will provide a CAHRA profile as a backdrop to referenced impact indicators.
<b>Indicators:</b>	This assessment features 17 domains (see Table 7.12).

**Table 7.12. In-scope context profile domains**

<b>Domains</b>	<b>Data sources</b>
<b>Regulatory environment</b>	
<ol style="list-style-type: none"> <li>1. Voice and accountability</li> <li>2. Political stability and absence of violence</li> <li>3. Government effectiveness</li> <li>4. Regulatory quality</li> <li>5. Rule of law</li> <li>6. Control of corruption</li> </ol>	<ul style="list-style-type: none"> <li>• World Bank: Worldwide Governance Indicators (Kaufman and Kraay, 2018)</li> <li>• World Bank: Country Policy and Institutional Assessment (World Bank Group, 2019)</li> <li>• Transparency International: Corruption Perceptions Index (Transparency International, 2021)</li> </ul>
<b>Economic environment</b>	
<ol style="list-style-type: none"> <li>7. Ease of doing business</li> <li>8. Employment informality</li> <li>9. Financial inclusion</li> <li>10. Mining and metals sector as share of GDP</li> <li>11. Presence of hyperinflation (rate of local currency inflation of more than 50% per month)</li> </ol>	<ul style="list-style-type: none"> <li>• ILO informality data</li> <li>• Global Financial Inclusion (FINDEX) database</li> <li>• World Bank: Mineral rents (% of GDP)</li> <li>• World Bank: Ease of Doing Business (World Bank Group, 2021)</li> </ul>
<b>Formalisation environment</b>	
<ol style="list-style-type: none"> <li>12. Defined regulatory environment for ASM</li> <li>13. Established supply chain procedures</li> <li>14. Adequate enabling environment</li> <li>15. Presence and enforcement of gender and child protection norms and regulations</li> </ol>	<ul style="list-style-type: none"> <li>• Ministry of mines implementing the UNITAR Formalization Framework (de Haan and Turner, 2018)</li> <li>• African Mining Legislation Atlas</li> <li>• Other desk-based research</li> </ul>
<b>Security environment</b>	
<ol style="list-style-type: none"> <li>1. Level of safety and security</li> <li>2. Level of conflict</li> <li>3. Level of militarisation</li> </ol>	<ul style="list-style-type: none"> <li>• Institute for Economics and Peace: Global Peace Index (IEP, 2020).</li> <li>• University of Heidelberg: <i>Conflict Barometer</i> (HIK, 2019).</li> <li>• OECD “States of Fragility” Reports (OECD, 2018b).</li> </ul>

Source: Author’s own work

## 7.5. Evaluation Summary

### Compare section findings

The results of studies will be compared in order to draw meaningful links and conclusions on the strength of such links if they exist. For example, the DDP trade volume data (e.g. X kg of mineral transacted per year) may be compared with documented action regarding Annex II incidents (e.g. X incidents identified, Y incidents followed-up, and Z incidents mitigated). Of further interest would be to qualify the volumes of DDP transacted in terms of whether or not the DDP also exercised control over leakage-in/fraud through mineral sales tracking and comparison to corresponding financial flows. In addition, one may compare the volumes of DDP transacted to DDP participation in terms of membership, number of mine workers, and stakeholder risk mitigation consultation.

An inter-section comparison is particularly important for the findings of Sections C and D (due diligence minerals trade and quality and scale of due diligence programmes). For example, while studies on uptake (E and F) may reveal data about the levels of uptake specific to upstream and downstream supply chain segments, they can also stand alone as studies, each with a corresponding node along the theory of change. Only by assessing how Sections C and D relate to one another, however, can we develop a clear understanding of the overall trade in responsibly sourced minerals. In other words, we need to build an understanding of both quality of due diligence programmes, *and* the scale (volumes of minerals traded through such programmes) to have a complete picture.

**Table 7.13. Quantitative measures of DDP quality and scale<sup>14</sup>**

Measure(s) of volumes per year		Measure(s) of DDP quality and scale, per year
X kg of mineral(s) transacted		• X incidents identified
		• Y incidents followed-up
		• Z incidents mitigated
		• DDP membership (#)
		• Mine workers (#)
		• Stakeholder risk mitigation consultation (#)

Source: Author's own work

Further measures of quality include the following four binary measures.

**Table 7.14. Qualitative measures of DDP quality and scale**

Further measures of quality	Yes / No
1. Mineral flow tracking and comparison with corresponding financial flows	
2. Registration system of miners and mine sites	
3. Data triangulation (one or more sources to observe the same phenomenon)	
4. Public reporting of meta-level data	

Source: Author's own work

### **Accept or reject TOC hypotheses**

As a next step, once the key questions have been answered, the M&E Framework will be in a position to validate or reject the ToC hypotheses. Table 7.15 further details how the assessment sections relate to the specific hypothesis identified.

**Table 7.15. Assessment related to hypothesis clusters**

<b>Assessments Sections</b>	<b>Hypothesis Cluster #</b>
Section A: Annex II Adverse Impacts	3, 6
Section B: Socio-Economic Conditions of Miners	4
Section C: Due Diligence Minerals Trade	1, 2, 5, 6
Section D: Due Diligence Programmes	2, 3, 4
Section E: DDG Downstream Uptake	1, 3, 4
Section F: DDG Upstream Uptake	1, 3, 4
Section G: DDG Global Profile	5
Section H: CAHRA Context Profile	6

Source: Author's own work

### **Conduct further analysis**

Thereafter, further analysis *between the sections* may be conducted, premised on the following questions.

**Table 7.16. Evaluation, further key questions**

<b>Further key questions</b>
1. Is downstream and upstream DDG uptake, with respect to comprehensiveness and content, concordant or discordant?
2. If DDG uptake is relatively "robust" at the aggregate level (according to typology), is that condition reflected in the demand for DDM?
3. Is there more DDM supply than demand (i.e. a gap between supply and demand) or vice versa?
4. How do the quality and scale compare to the volumes of DDM minerals traded through DDPs?
5. If DDPs quality and scale are significant, is the impact reflected in Annex II Adverse Incidents and miners SEC conditions?
6. Are the socio-economic trends comparable to the Annex II Adverse Impacts trends?
7. Are current trends and context in mining reflected in the way downstream and upstream actors conduct business?
8. Is the CAHRA context affecting downstream and upstream actors in their ability to conduct business?
9. Is the CAHRA context influencing the way downstream and upstream actors conduct due diligence?

Measuring the phenomena as per the primary questions, over time, longitudinal observations are potentiated.

Table 7.17. Evaluation, longitudinal questions

<b>Longitudinal questions</b>
1. Are changes in DDG uptake correlated with the demand for DDM?
2. Is downstream DDP participation correlated with DDM demand?
3. Is upstream DDP participation correlated with DDM demand?
4. Is enhanced risk management in the downstream correlated with DDM demand?
5. Is enhanced risk management in the upstream correlated with DDM demand?
6. Are requirements/conditions for suppliers to participate in DDP correlated with DDM demand?
7. Are requirements/conditions for suppliers to undertake <i>enhanced risk management</i> correlated with DDM demand?
8. To what degree is the demand for DDM from the CAHRA changing over time?
9. To what degree is the supply for DDM from the CAHRA changing over time?
10. Is the supply of DDM correlated with a change of ANNEX II Adverse Impacts?
11. Is the supply of DDM correlated with a change in socio-economic conditions of miners and mining communities?
12. Is a global demand for in-scope minerals correlated with DDM demand?
13. Is a change at the immediate outcome level correlated with changes at the ultimate outcome level?

Answering these questions will provide further evidence to support or refute the M&E Framework's hypotheses.

Table 7.18 summarizes the indicators used for the evaluation assessment.

Table 7.18. Evaluation Framework

Outcome level	DDG outcome	Dimension of impact	Indicators	Data type	Frequency	Data source(s)
<b>Ultimate Outcome</b>	Companies in the mineral supply chain do not contribute to serious human rights abuses and conflict	Annex II Adverse Impacts	See Table 7.2	Secondary data	3-5 years	See Table 7.2
	Companies in the mineral supply chain support the socio-economic conditions of miners and mining communities	Socio-Economic Conditions of miners and mining communities	See Table 7.3	Primary data/ Secondary data	3-5 years	Data from DDPs Independent surveys of miners and mining communities
<b>Intermediate Outcome</b>	Minerals-based industries applying OECD based due diligence	DDM Trade	See Table 7.4	Primary data/ Secondary data	3-5 years	Data collection involving in-scope DDPs Official data triangulated with other sources of evidence, e.g. expert estimations, EITI, etc.
		DDPs	See Table 7.5	Primary data	3-5 years	In-scope DDPs (for examples, see Handbook)
<b>Immediate Outcome</b>	Industries align their programmes to the OECD DDG both upstream and downstream	Increased downstream supply chain capacity	See Table 7.7 See Table 7.8	Primary data	3-5 years	Sample data collection on in-scope mineral-sourcing companies
		Increased upstream supply chain capacity	See Table 7.9 See Table 7.10	Primary data	3-5 years	Data collection on in-scope mineral-sourcing companies at the SOR level
<b>Global Context</b>	Backdrop of global trends influencing industry decisions and investments	Normative and legal drivers of mineral supply chain due diligence	See Table 7.11	Secondary data	3-5 years	OECD and UN instruments on responsible business conduct; UN and OECD conventions; National legislative repositories; OFAC lists; FCPA and UK Bribery Act; Mapping coverage of in-scope supply chains by prospective international normative drivers of due diligence



		Market drivers of mineral supply chain due diligence		Secondary data	3-5 years	London Metal Exchange (LME), Responsible Jewellery Council (RJC), London Bullion Market Association LBMA), Dubai Multi Commodities Centre (DMCC), Responsible Mineral Initiative (RMI), World Gold Council (WGC), etc.; Mapping coverage of in-scoped supply chains by prospective market drivers of due diligence; Deloitte: Annual trend analysis on the future of mining (Swart et al., 2020)
<b>CAHRA Context</b>	Backdrop of CAHRA operating environments influencing industry decisions and behaviours	Regulatory environment	See Table 7.12	Secondary data	3-5 years	World Bank: Worldwide Governance Indicators (Kaufman and Kraay, 2018; World Bank: Country Policy and Institutional Assessment (World Bank Group, 2019); Transparency International: Corruption Perceptions Index (Transparency International, 2021)
		Economic environment		Secondary data	3-5 years	ILO informality data; Global Financial Inclusion (FINDEX) database; World Bank data: Mineral rents (% of GDP); World Bank: Ease of doing business (World Bank Group, 2021)
		Formalisation environment		Secondary data	3-5 years	Ministry of mines implementing the UNITAR Formalization Framework (de Haan and Turner, 2018); African Mining Legislation Atlas
		Security environment		Secondary data	3-5 years	Institute for Economics and Peace: Global Peace index (IEP, 2020); University of Heidelberg: Conflict Barometer (HIK, 2019); OECD "States of Fragility" Reports (OECD, 2018b)

## Notes

<sup>11</sup> If relying on crowdsourced data, calculate prevalence.

<sup>12</sup> The interpretation of data collected for indicators on a discrete basis (i.e. as documented adverse incidents) as opposed to aggregate prevalence should give consideration to the severity of such incidents, including if they are of an irremediable character.

<sup>13</sup> Collectively, G20 members represent around 80% of the world's economic output, 66% of the global population, and 75% of international trade. As of 2020, there are 20 members of the group: Argentina, Australia, Brazil, Canada, China, European Union, France, Germany, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Turkey, United Kingdom, and United States (G20, 2020).

<sup>14</sup> The quantitative measures are the result of calculating the square root of the multiplication between “kg of mineral” and the corresponding indicator in Table 21.

## 8. Monitoring plan

### 8.1. Methods

This DDG M&E Framework further establishes measures for routine, annual monitoring and reporting on DDP outcomes, as well as the evolution of the interplay between CAHRA and at-risk minerals.

The monitoring plan is based on the same cause-effect logic as the Theory of Change as featured in the evaluation plan and provides indicators to be measured on an annual basis. After the initial evaluation baseline has been completed, the monitoring plan keeps a continuous eye on how these impacts evolve in the rapidly changing environments of CAHRA. This agile understanding will allow for improvements to the periodic evaluation process, and, as such, regularly update the overall M&E plan. Thus, the monitoring plan itself represents an annual, ongoing, iterative process.

### 8.2. Key Questions

Key questions guide the monitoring inquiry, which are associated with the Theory of Change. They are similar to those asked in the evaluation plan and are aimed to not only monitor the key impacts associated with the identified DDPs, but also monitor the CAHRA. The monitoring plan of the M&E Framework poses the following key questions.

**Table 8.1. Key Monitoring questions**

Goal level	Section	Key questions
Ultimate Outcome	A. Annex II adverse impacts	1. To what extent are Annex II Adverse Impacts occurring?
	B. Socio-Economic Conditions	2. What are the socio-economic conditions of miners?
Context	H. CAHRA Profiles	3. What are changes in business and operating environments that affect a company's ability to conduct business and/or operate in the CAHRA?

Source: Author's own work

**Table 8.2. Summary monitoring-indicators**

Goal level	Section	Indicators
Ultimate Outcome	A. Annex II Adverse Impacts	19 indicators: one per Annex II sub-point
	B. Socio-Economic Conditions	10 indicators: one per SEC sub-point
Context	H. CAHRA Profiles	2 indicators: Global Peace Index 3 indicators: Formalization Framework 2 indicators: Worldwide Governance Indicators

Source: Author's own work

### Section A: Annex II Adverse Impacts

<b>Assessment type:</b>	Monitoring
<b>Key question(s):</b>	To what extent are Annex II Adverse Impacts occurring?
<b>Research design:</b>	Cross-sectional, longitudinal study
<b>Data sources</b>	Primary data, annual invitation for DDPs to self-report.
<b>Unit(s) of analysis</b>	DDPs, which engage actors (e.g. ASM mining cooperatives) at the production-level of the upstream supply chain.
<b>Key metric(s):</b>	Primary data collection using self-reporting approach using indicator(s) in Table 8.3.
<b>Sampling:</b>	An invitation for due diligence programmes to self-report will be launched annually. DDPs may opt to self-include in this process.
<b>Assessment themes:</b>	The monitoring indicators at the Annex II ultimate outcome level will serve as a backdrop for the annual incident reporting. The change over time in reported incidents and their nature will provide a window into the changing supply chain impact landscape. Of particular interest is the change in prevalence and nature of Annex II Adverse Impacts in the supply chain as reported by DDPs in the upstream supply chain.
<b>Indicators:</b>	This assessment features Annex II-premised indicators.

**Table 8.3. Monitoring indicators for Annex II Adverse Impact risks**

Adverse impact variable	# of relevant incidents identified through DDP system	# of relevant incidents followed-up on through DDP system	# of relevant incidents mitigated through DDP system
<b>Human-rights serious abuses – Serious abuses associated with extraction, transport or trade of minerals</b>			
1. Incidents of torture, cruel, inhuman and degrading treatment.	# of relevant incidents	# of relevant incidents	# of relevant incidents
2. Incidents of forced / compulsory labour.	# of relevant incidents	# of relevant incidents	# of relevant incidents
3. Incidents reported of worst forms of child labour.	# of relevant incidents	# of relevant incidents	# of relevant incidents
4. Incidents reported of sexual violence.	# of relevant incidents	# of relevant incidents	# of relevant incidents
5. Incidents reported of conflict-related deaths.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Direct or indirect support to non-state armed groups</b>			
6. Incidents reported of illegally controlled mine sites, transportation routes, trading hubs.	# of relevant incidents	# of relevant incidents	# of relevant incidents
7. Incidents reported of illegally taxed or extorted money or minerals at mine site	# of relevant incidents	# of relevant incidents	# of relevant incidents

access points, transportation routes and/or trading hubs.			
8. Incidents reported of illegally taxed or extorted intermediaries, export companies and/or international traders.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Public or private security forces</b>			
9. Incidents related to public or private security forces.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Bribery and fraudulent misrepresentation of the origin of minerals</b>			
10. Incidents related to bribery and fraudulent misrepresentation.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Money laundering</b>			
11. Incidents related to money laundering.	# of relevant incidents	# of relevant incidents	# of relevant incidents
<b>Non-payment of taxes, fees and royalties due to governments</b>			
12. Incidents related to non-payment of taxes, fees and royalties due to governments.	# of relevant incidents	# of relevant incidents	# of relevant incidents
	<i>total</i>	<i>total</i>	<i>total</i>

Source: Author's own work

### **Section B: Socio-Economic Conditions of Miners**

<b>Assessment type:</b>	Monitoring
<b>Key question(s):</b>	What is the change in socio-economic conditions of miners and their communities as reported by DDPs in the upstream value chain?
<b>Research design:</b>	Cross-sectional, longitudinal study.
<b>Data sources</b>	Two data sources are envisioned: <ul style="list-style-type: none"> <li>• Primary data, short-form survey of DDPs;</li> <li>• Secondary data sources featuring surveys of miners and mining communities.</li> </ul>
<b>Unit(s) of analysis</b>	The upstream section of the supply chain features only the bottom of the upstream supply chain, being the ASM mining cooperatives as part of participating DDPs.
<b>Key metric(s):</b>	OHS conditions and income levels (see Table 8.4).
<b>Sampling:</b>	An invitation for DDPs to self-report will be launched annually. DDPs can opt to self-include in this process.
<b>Assessment themes:</b>	The indicators of the SEC ultimate outcomes will further inform the annual monitoring reports. The change over time in reported socio-economic impacts on miners and their communities will provide a window into the changing supply chain impact landscape.
<b>Indicators:</b>	This assessment features 11 indicators (see Table 8.4).

**Table 8.4. Monitoring indicators for Socio-Economic Conditions**

Indicators	Data sources examples (for the DRC)
<b>Livelihood</b>	
1. Mining income per month (disaggregated by gender) compared to national average GNI.	<ul style="list-style-type: none"> <li>• In-scope DDPs (for examples, see Handbook),</li> <li>• National statistics</li> <li>• Reports, e.g. IPIS (2020)</li> <li>• Academic studies, e.g. Radley (2020), Geenen et al. (2020), etc.</li> <li>• Disclosures of payments</li> </ul>
2. Gender parity for income derived from mining.	
3. Household income (month) from mining as a percentage of total household income.	
4. Income derived from mining in DDP Areas of Operation, on the part of DDP miners (compared to non-mining community members).	
5. Payments to government from mining activity (e.g. fees for mining, exploration and export licenses; royalties; taxes; payments).	
6. Cell phone ownership of DDP participant households, compared to national average.	
7. Gender gap for cell phone ownership of DDP participant households versus national average.	
8. Average % of savings over average income for participating surveyed community members (F/M).	
<b>OHS</b>	
9. Instances of workplace death (per 100 workers, disaggregated by gender).	<ul style="list-style-type: none"> <li>• In-scope DDPs</li> </ul>
10. Instances of workplace injuries (per 100 workers, disaggregated by gender).	
11. Gold produced without mercury as percentage of that produced with mercury, in Areas of Operation (AO).	

Source: Author's own work

**Section H: CAHRA Context Profiles**

<b>Assessment type:</b>	Monitoring
<b>Key question(s):</b>	What are the ongoing business and operating-environment matters that affect a company's ability to conduct business and/or operate in the sector/CAHRA?
<b>Research design:</b>	Review of most current national index reports.
<b>Data sources</b>	Secondary data sources (indexes), examples of which featured in Table 8.5.
<b>Unit(s) of analysis</b>	National-level statistics for each identified and studied CAHRA.
<b>Key metric(s):</b>	Data to be used is drawn from identified indexes. No primary data collection needed.

<b>Sampling:</b>	Index sections providing a targeted backdrop to identified Impact indicators.
<b>Assessment themes:</b>	Using identified, validated global indexes, this monitoring exercise will review themes and data corresponding to referenced DDG indicators. Descriptive statistics along with relevant narrative will provide a backdrop to the ultimate outcome topics
<b>Indicators:</b>	This assessment features 7 indicators.

**Table 8.5. Monitoring indicators for in-scope CAHRA Contexts**

Indicators	Data sources
<b>Regulatory environment</b>	
1. Political stability and absence of violence Control of corruption	<ul style="list-style-type: none"> <li>World Bank: Worldwide Governance Indicators (Kaufman and Kraay, 2018)</li> <li>Transparency International: Corruption Perceptions Index (Transparency International, 2021)</li> </ul>
<b>Formalisation environment</b>	
2. Defined regulatory environment for ASM 3. Adequate enabling environment 4. Presence and enforcement of gender and child protection	<ul style="list-style-type: none"> <li>UNITAR Formalization Framework (de Haan and Turner, 2018)</li> <li>African Mining Legislation Atlas</li> </ul>
<b>Security environment</b>	
5. Level of terrorism impact 6. Levels of conflict	<ul style="list-style-type: none"> <li>University of Heidelberg: Conflict Barometer (HIK, 2019)</li> <li>Global Peace Index (IEP, 2020)</li> <li>OECD "States of Fragility Reports" (OECD, 2018b)</li> </ul>

Source: Author's own work

### 8.3. Monitoring Summary

Monitoring, in the context of the DDG, is the ongoing process of collecting and analysing essential data in order to stay informed about ongoing developments and efforts in the sector. While the periodic Evaluation assessments of the DDG take a careful look at its impact over time, the monitoring process that keeps a finger on the pulse *in between* these periodic evaluations. When a new evaluation process starts, evaluators would review the results of past monitoring cycles undertaken since the previous evaluation and use them to determine the focus of the new evaluation process. In other words, Monitoring informs Evaluation and allows the overall M&E process to be effective.

The monitoring indicators to be implemented are presented in the table below.

Table 8.6. Monitoring Framework

Outcome level	DDG outcome	Dimension of impact	Indicators	Data type	Frequency	Data sources
Ultimate Outcome	Companies in the mineral supply chain do not contribute to serious human rights abuses and conflict support	Annex II Adverse Impacts	See Table 8.3	Primary data	Annual	Short-form survey of DDPs.
	Companies in the mineral supply chain support the socio-economic conditions of miners and mining communities	Socio-Economic Conditions of miners	See Table 8.4	Primary data/ Secondary data	Annual	<ul style="list-style-type: none"> <li>Short-form survey of DDPs.</li> <li>Independent surveys of miners and mining communities.</li> </ul>
CAHRA Context	Backdrop of CAHRA operating environments influencing industry decisions and behaviours	Regulatory environment	<ul style="list-style-type: none"> <li>Political stability and absence of violence</li> <li>Control of corruption</li> </ul>	Secondary data	Annual	World Bank: Worldwide Governance Indicators (Kaufman and Kraay, 2018); Transparency International: Corruption Perceptions Index (Transparency International, 2021)
		Formalisation environment	<ul style="list-style-type: none"> <li>Defined regulatory environment for ASM</li> <li>Adequate enabling environment</li> <li>Presence and enforcement of gender and child protection</li> </ul>	Secondary data	Annual	UNITAR Formalization Framework (de Haan and Turner, 2018); African Mining Legislation Atlas
		Security environment	<ul style="list-style-type: none"> <li>Level of terrorism impact</li> <li>Level of conflict</li> </ul>	Secondary data	Annual	University of Heidelberg: Conflict Barometer (HIK, 2019); Institute for Economics and Peace: Global Peace Index (IEP, 2020); OECD "States of Fragility Reports" (OECD, 2018b).

Source: Author's own work



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# Monitoring and Evaluation Framework

The development of this M&E Framework was premised on the OECD's terms of reference, which had involved extensive prior stakeholder input over a period of 18 months. Further input and guidance was received by the OECD's Secretariat at each step of the M&E Framework's development. It was critiqued by an Informal Advisory Group of academic and civil society representatives. Leading theory was applied to the problem at hand, including systems theory, game theory, and literature specific to the problematic of minerals associated with conflict and adverse impacts.

The basic characteristics of minerals markets were considered, as well as precedents involving the measurement of policy implementation. Upon being operationalised, the guiding specifications and parameters in the form of particular research methods and indicators were tested through example case studies, providing a perspective of how this M&E Framework is to be applied.

For this reason, several examples spanning indicators and data sources were drawn from experience implementing the DDG in the Democratic Republic of the Congo. These should be considered indicative as specific national and sub-national data sources will be considered for the deployment of the M&E Framework in selected countries.