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SUPPLY CHAINS
2008-2020

RCS GLOBAL GROUP
SAVING THE EV REVOLUTION: BETTER MINING

DIGITAL MONITORING, DATA-DRIVEN RISK
MANAGEMENT AND POSITIVE IMPACT GENERATION
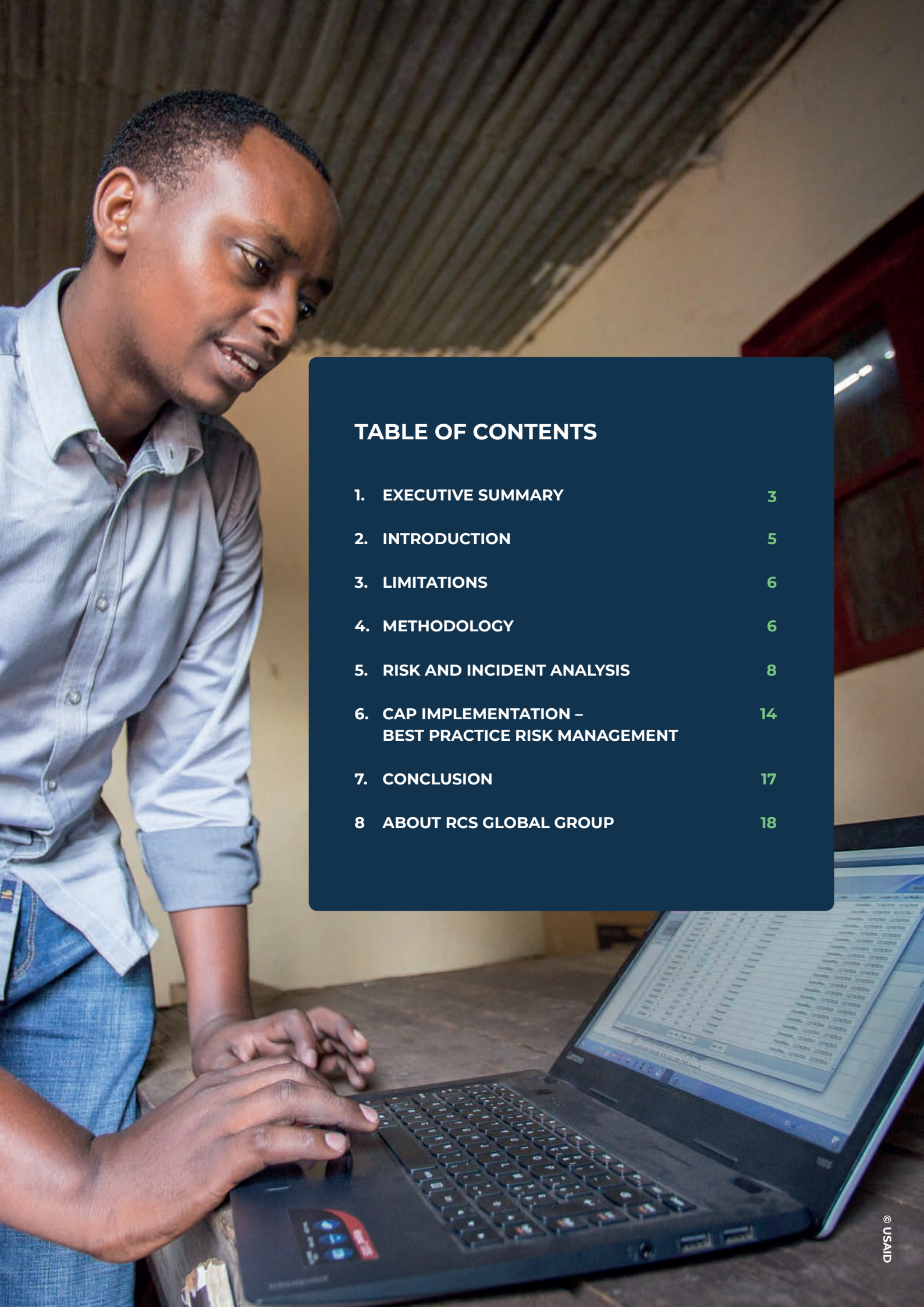IN COBALT, COPPER & 3TG ASM SUPPLY CHAINS

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1. EXECUTIVE SUMMARY

RCS Global Group has developed the Better Mining program to support supply chain risk management and positive impact generation at the source of global raw materials supply chains (the 'upstream').

Successfully piloted as 'Better Cobalt' on a cobalt supply chain from the Democratic Republic of Congo (DRC), Better Mining evolved into an ASM site monitoring program implemented in cobalt, copper, tin, tantalum, tungsten, and gold, and is adaptable to any other ASM-produced raw material.

Better Mining's promises are:

a) active and permanent monitoring of artisanal mine sites (ASM) and trading chains in all minerals for adherence to responsible sourcing market expectations; and

b) secure delivery of analysed data packages in flexible formats to meet clients' risk management and positive impact generation objectives.

Better Mining continuously collects, analyses and provides data packages on upstream risks and risk mitigation. It also monitors the implementation of risk mitigation measures and provides quantitative and qualitative data on the impact achieved.

Data is recorded through trained monitoring agents who are deployed to mine sites on a quasi-permanent basis. Utilising a custom smartphone application, the agents transmit the data to a central database, managed by RCS Global Group's systems and data analytics team. A sophisticated methodology co-developed with the Responsible Minerals Initiative (RMI) calculates risk levels based on incident and context data.

Based on the data, RCS Global Group's team of upstream risk experts recommends best practice context-specific risk mitigation actions. These are provided in monthly issued Corrective Action Plans (CAPs) to on-the-ground actors (cooperatives, government agencies, offtaker companies, civil society). In the next step of implementation, the implementation of the CAPs is monitored.

For a visualisation of the process, please refer to Process 1: Better Mining in Action.

Initial Mine Site Assessment

Permanent Smartphone-Based Mine Site Monitoring

Data Verification by Due Diligence Experts

Regular Meetings with Cooperatives, Government Stakeholders, and Purchasers on Corrective Actions Implementation

Online Data Reporting to Better Mining data subscribers

This paper provides an analysis of Better Mining data collected from select cobalt and copper, tin, tantalum, tungsten, and gold ASM mines in the Democratic Republic of Congo (DRC) and Rwanda for monitoring periods between December 2017 and September 2019.

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Analysis of data gathered during this period resulted in the following conclusions:

1.1. Observations on risk trends

1. Risks related to **occupational health and safety** (OHS) are the most prevalent in the ASM sector across countries and minerals where Better Mining operates. OHS risks, which account for 26% of all registered incidents across the entire sample, are far more prevalent at sites than the risks outlined in Annex II of the OECD Due Diligence Guidance on Responsible Mineral Supply Chains from Conflict-Affected and High-Risk Countries such as serious human rights abuses (13% of all registered incidents across the sample).

2. Deployment of the Better Mining program, which includes a risk mitigation monitoring process since January 2019, has led to a **reduction in overall risk levels** at 4 out of the 5 mine sites in the sample. In line with the OECD Due Diligence Guidance for Responsible Mineral Supply Chains from Conflict-Affected and High-Risk Areas, assessing continuous improvement rather than focusing on a baseline of existing risks is crucial to due diligence along mineral supply chains.

3. Rwanda sites present a lower risk profile than those in the DRC. Incident data from the DRC mine sites in the sample of comparable sizes to Rwandan mine sites represents 89% of all registered incidents.

4. Risks at ASM gold sites prove to be particularly difficult to manage compared to other minerals, which is linked to commodity and market characteristics of the commodity.

1.2. Observations on risk mitigation progress

1. At sites where **human rights risks** have been found – including those with the risk of child labour - monitoring and risk management (trainings, awareness raising, closure of affected pits, removal of responsible pit managers) has resulted in reduced levels of risk. The complete eradication of the risk of child labour remains challenging however due to the difficulty of robust access control on large concessions in remote areas.

2. When risk mitigation is assigned to multiple parties – e.g. a cooperative and an exporter – CAP closure has shown to be slower. Often the process of coordination, communication, and splitting of accountability between parties on the ground leads to worse results.

3. On-site stakeholders have been **most successful** in progressing corrective actions related to human rights. 67% of total CAPs registered since January 2019 in that category have been implemented, 33% are in progress.

Typical examples of corrective actions in that category include signposting, policy developments, and worker and community awareness raising.

4. On-site stakeholders have shown the **least progress** in implementing corrective actions related to legality, mostly related to theft, but also related to corruption. 67% of total CAPs in that category are not started. Most legality CAPs require joint action or direct engagement by the government or hierarchies of state agencies. This makes the timeframes for implementation much longer and progress of implementation of corrective actions significantly slower. Examples of actions recommended are the development and implementation of new policies and procedures for topics such as bribery or corruption, the delivery of trainings on these topics, or the roll out of a project to register all workers at a site.

5. **Access control** is the most important part of ASM risk management allowing the enforcement of responsible production practices within a controlled environment. Access-controlled sites have performed significantly better than the rest of the sample, with only 20% of all registered incidents having occurred at access-controlled sites over a 12 months period. OHS-related fatalities have been reduced to zero at these sites since March 2019.

6. Overall, **risk mitigation remains insufficient.** Across all risk categories in the total sample, only 15% of recommended corrective actions have been implemented, with 32% in progress and 53% not started. Upstream actors such as cooperatives and offtaker companies lack the technical and financial capacity to implement structural risk mitigation measures. Identifying these, the Better Mining process opens up tangible and concrete opportunities for downstream companies to a) support the implementation of corrective actions; and b) benefit from the ensuing positive impact on their supply chains and the mining communities at their source.

With a Better Mining data subscription, downstream companies have access to data packages that provide clearly defined opportunities to support upstream risk mitigation and impact generating efforts directly within downstream companies' supply chains. These recommendations are based on an analysis of risks, CAPs and CAPs implementation data and they are presented in a manner that respects business confidentiality.

2. INTRODUCTION

Automotive and consumer electronics companies belong to a global industry that is increasingly under pressure to manage and mitigate environmental, social and governance (ESG) risks in their supply chains. Minerals such as cobalt, copper, tin, tantalum, tungsten, and gold are key inputs into the products that define the future of the modern world. Supply chains in these and other high-risk raw materials feature numerous risks. In fact, the successful transition to electric vehicles (EV) and clean energy is contingent on industry succeeding with the management of risks and impacts in their supply chains.

ASM

Artisanal and small-scale mining (ASM) sites are often the origin of the supply chains of our essential products. ASM employs at least 40 million people worldwide and is often seen as a prominent risk factor in supply chains, particularly in the African Great Lakes Region (GLR). Estimates of the numbers of ASM miners in the GLR vary, however the number of miners and their dependants is in the millions.

As a result of this importance of ASM to the global – and the GLR's mineral economy – the significant environment, social, and governance risks (and human rights risks in particular) have been clearly and repeatedly documented by the media and advocacy organisations.

Response to ASM risks

Regulatory efforts and advocacy organisations have placed the onus of risk identification, assessment and mitigation squarely on the consumer facing companies at the end of these supply chains. These consumer facing companies, until recently, had no means to proactively manage mine site related risks. This was a result of a lack of supply chain transparency and of the fact that there was no monitoring process in place to provide them with the required data to manage these risks effectively. Reporting expectations for businesses include the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Due Diligence Guidance), and regulations including the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502 (Dodd-Frank Act) and the European Union (EU) Mineral Supply Due Diligence Regulation.

Better Mining implementation

Better Mining today has a global scope across all minerals that are produced by ASM activities. It is currently implemented on 11 mine sites in the African GLR. Implementation of Better Mining mine site monitoring was successfully piloted as part of the **'Better Cobalt'** pilot project in the DRC's cobalt and copper sector in 2018. In the tin, tantalum, tungsten and gold (3TG) sector, which are labelled 'conflict minerals' in advocacy reports and international supply chain legislation, mine site monitoring is also applied by the Better Sourcing Program (BSP) since 2015[1]. Implemented by the RCS Global Group, the core focus of these early activities was the Democratic Republic of Congo (DRC) and Rwanda.

Better Mining value add

Better Mining's promises are: a) active and permanent monitoring of artisanal (ASM) mine sites in **all minerals** and trading chains for adherence to responsible sourcing market expectations; and b) secure delivery of analysed data packages in flexible formats to meet clients' risk management and positive impact generation objectives.

With a Better Mining data subscription, downstream companies have access to data packages that provide clearly defined opportunities to support upstream risk mitigation and impact generating efforts directly within downstream companies' supply chains. These recommendations are based on an analysis of risks, CAPs and CAPs implementation data and they are presented in a manner that respects business confidentiality.

Paper content

This paper provides an analysis of data on risks and the impact of risk mitigation efforts at five cobalt-copper and 3TG sites in the DRC and Rwanda for up to 12 months from December 2017 - September 2019, (no five projects have operated in parallel and therefore it was not possible to use the same time frame for all compared sites).

Paper objectives

The objectives of the paper are a) showcasing that mine site monitoring and the gathering of robust data is not only possible, but also highly effective across high-risk materials and CAHRAs; b) demonstrating that provision of robust guidance on the basis of this data to steer upstream risk mitigation and monitored CAP implementation is possible; and c) delineating the role that mine site monitoring can and cannot play in the architecture of tools in responsible sourcing due diligence implementation.

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1   BSP is an upstream assurance mechanism that validates 3TG exports from the Great Lakes Region as conformant to purchasing smelter's international due diligence requirements. BSP has a strong upstream focus and a different client base and stakeholder community than Better Mining, which has a strong downstream focus.

3. LIMITATIONS

Sample size: Currently Better Mining is implemented at 11 mine sites across 3TGCC. The presented data in this report stems from 5 sample ASM mines. It provides a robust, but limited sample, from which it is not yet possible to draw inferences for all mine sites in the DRC and/or Rwanda. Rather, the paper showcases what is possible if Better Mining expands to additional sites.

Severity: Graphs related to incidents do not account for different severities and the relative sizes of the sites. Risks were identified through a methodology based on a risk categorisation framework from the Draft Risk Management Protocol (RMP) co-developed with the RMI.

Community risk category: This report did not quantify the Community category due to an insufficient sample size, though it will form a core part of future stakeholder updates.

Timelines: No five projects have operated in parallel and therefore it was not possible to use the same time frame for all compared sites. The Corrective Action Plans (CAPs) monitoring component was rolled out progressively between January 2019 and August 2019 and is therefore still a new procedure at some of the mine sites in the scope of the analysis.

4. METHODOLOGY

Better Mining data analysed in this paper includes logged incidents and associated attributable risks (daily), and results from corrective action assignments (based on the review of monthly meetings with on-the-ground stakeholders).

4.1. Data collection

Data is recorded through RCS Global Group trained monitoring agents who are deployed to mine sites on a quasi-permanent basis. Utilising a custom smartphone application, the agents transmit the data to a central database, managed by RCS Global Group's systems and data analytics team.

4.1. Risk identification

To identify risks for this paper (which are different from incidents[2]), Better Mining applies the Draft RMP methodology of translating incidents into risks, which was developed in consultation with leading responsible sourcing experts. This methodology, in turn, is built on the Better Mining methodology of assigning severity scores to incidents based on impact and ability to resolve the incident.

Better Mining also utilises an algorithm based on the Draft RMP that calculates risk levels based on the occurrence of incident severities within predefined monitoring periods. This paper does not provide risk levels.

N.b.: It is important to consider that the quantity of incidents does not necessarily have a bearing on risk levels. For instance, a high quantity of low impact incidents may still yield a low risk level.

4.1. Risk categorisation

RCS Global Group has defined a categorisation of incidents into risks and these are then grouped into seven risk categories. This categorisation includes all OECD Annex II risks, but also extends beyond.

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2   For Better Mining, incidents describe events that have taken place and risks represent a probability or threat of adverse impacts. Incidents are events where a risk has materialized.

Better Mining buckets risks in the following categories:

Table 1: Risk Management Protocol Risk Categorisation

Risk Category	Risk
Human Rights	Child Labour
	Worst Forms of Child Labour (WFCL)
	Discrimination
	Forced Labour
	Gender
	Torture, Cruel & Inhumane Treatment
Security	International Humanitarian Law
	Non-State Armed Group
	Public or Private Security Forces
Working Conditions / Safety	Occupational Health & Safety
	Worker Rights
Environment	Emissions / Waste
	Water
	Mine Closure and Reclamation
	Protected Flora/ Fauna
	Resource/ Land Management
Legality / Legitimacy	Corruption/ Bribery
	Legal/Transparent Tax Paying (EITI)
	Money Laundering
	Operational Legality
	Transparency/ Reporting
Community	Business Conflict
	Community Engagement/ Development
	Indigenous/ FPIC/ Heritage
Chain of Custody	Traceability

5. RISK AND INCIDENT ANALYSIS

5.1. Risk analysis

The methodology of the RMP involves considering a specific time frame as a monitoring period. One monitoring period is 90 days. The below tables compare the presence of risks during their first and last monitoring periods.

Based on the defined monitoring periods there was a review of risks and incidents across the five sites. The following table shows whether a Low Risk (Low Risk Identified) or a Moderate/High Risk (Risk Identified) was identified during the first monitoring periods of the mines in sample. The specificities of the location of the mines, incidents and risks have been removed for confidentiality purposes. All risks in 3TCC, whether Low, Moderate, or High, are included in Better Mining's CAP process, which monitors implementation of risk mitigation measures. The status of risk mitigation implementation across the sites in the sample is analysed in Section 6.

Table 2: Risk identification at sample mine sites at the end of their first Monitoring Periods

Risk Category	Cobalt-copper	Tantalum	Tin	Tungsten	Gold
Human Rights	Risk Identified	Risk Identified	Low Risk Identified	No Risk Identified	Risk Identified
Security	No Risk Identified	Risk Identified	No Risk Identified	No Risk Identified	No Risk Identified
Working Conditions / Safety	Risk Identified	Risk Identified	Risk Identified	Low Risk Identified	Risk Identified
Environment	Risk Identified	Low Risk Identified	No Risk Identified	No Risk Identified	No Risk Identified
Legality / Legitimacy	Risk Identified	Risk Identified	Low Risk Identified	Low Risk Identified	Risk Identified
Chain of Custody	Risk Identified	Risk Identified	Risk Identified	Risk Identified	Risk Identified

Table 2 above shows, at a glance, which are the risk categories presenting a higher challenge across the sample: Working Conditions / Safety, Legality / Legitimacy, and Chain of Custody risks were present at the start of Better Mining monitoring at all mine sites.

The Working Conditions / Safety risk category includes all incidents classified under OHS risks (e.g. fatalities, workplace accidents, no use of PPE, etc.), as well as protests by workers or strikes by state agents that work at mine sites.

The data collected under the Legality / Legitimacy risk category corresponds principally to two types of incidents in particular: operational legality (theft and presence of illegal or non-registered workers) as well as corruption and bribery cases.

When looking at the data per mineral, tantalum shows a higher risk profile, with risks identified in 6 out of 7 risk categories, followed by cobalt-copper (risks identified in 5 out of 7 risk categories), and gold (risks identified in 4 out of 7 categories).

In contrast, and to allow for the observation of the evolution of risk levels, Table 3 shows whether a Low Risk (Low Risk Identified) or a Moderate/High Risk (Risk Identified) was identified during the last monitoring periods of the mines in sample.

Table 3: Risk Identification at sample mine sites at the end of their latest monitoring periods

Risk Category	Cobalt-copper	Tantalum	Tin	Tungsten	Gold
Human Rights	No Risk Identified **IMPROVEMENT**	**Risk Identified** NO CHANGE	No Risk Identified **IMPROVEMENT**	No Risk Identified **NO CHANGE**	**Risk Identified** NO CHANGE
Security	No Risk Identified **NO CHANGE**	No Risk Identified **IMPROVEMENT**	**Risk Identified** DETERIORATION	No Risk Identified **NO CHANGE**	No Risk Identified **NO CHANGE**
Working Conditions / Safety	**Low Risk Identified** IMPROVEMENT	**Risk Identified** NO CHANGE	**Risk Identified** NO CHANGE	**Low Risk Identified** NO CHANGE	**Risk Identified** NO CHANGE
Environment	**Low Risk Identified** IMPROVEMENT	**Risk Identified** DETERIORATION	No Risk Identified **NO CHANGE**	No Risk Identified **NO CHANGE**	No Risk Identified **NO CHANGE**
Legality / Legitimacy	**Risk Identified** NO CHANGE	**Risk Identified** NO CHANGE	**Risk Identified** DETERIORATION	No Risk Identified **IMPROVEMENT**	**Risk Identified** NO CHANGE
Chain of Custody	**Low Risk Identified** IMPROVEMENT	**Risk Identified** NO CHANGE	No Risk Identified **IMPROVEMENT**	No Risk Identified **IMPROVEMENT**	**Risk Identified** NO CHANGE

Table 3 shows a reduction in overall risk levels at 4 out of the 5 mine sites in the sample. Whereas at the beginning of monitoring at all sites 3 risk categories (Working Conditions / Safety, Legality / Legitimacy, and Chain of Custody) were present at all 5 mine sites in sample, at the latest monitoring period, only one risk category (Working Conditions / Safety) remains identified across all sites in sample. In line with the OECD Due Diligence Guidance, assessing continuous improvement rather than focusing on a baseline of existing risks is crucial to due diligence along mineral supply chains. Based on the data above, such continuous improvement can be demonstrated at the sites in the sample.

Working Conditions / Safety as well as Legality / Legitimacy (mostly related to theft), while having improved across all sites in sample, are the most challenging risk categories to address. This can be interpreted as an indicator of a) where a positive impact of Better Mining can be appreciated (reduction in severity of risk levels), and b) a prioritisation of risks that require urgent downstream support.

At the end of the last monitoring periods risks continue to be identified in all supply chains, with 5 risk categories identified in gold, 4 in tantalum, 3 in cobalt-copper, and 3 in tin and 1 in tungsten. The tantalum site in the sample shows significant improvement: from risks identified in 6 out of 7 risk categories at the beginning of monitoring, and risks identified in 4 risk categories at the latest monitoring period. A similar pattern is followed by the cobalt-copper site, which has also reduced the number of risk categories from 5 to 3. It should be noted that human rights issues were not found at this specific site as a result of strict access control and management systems in place. This is atypical in many ASM cobalt and copper sites.

The gold site generally showed a high risk in the chain of custody risk category. This is aligned with the well-known challenges gold represents for traceability systems. Better Mining is currently no longer engaged in gold. The Better Mining CAPs procedure was therefore not deployed at the gold site.

As stated above, Better Mining has developed a methodology to standardise the identification, review, and assessment of incidents and to categorise them into different risks. The underlying risk criteria are drawn from the OECD Due Diligence Guidance Annex II risks and additional risk factors stipulated in the Draft RMP and introduced in Table 3 above. This direct reporting in risk categories allows Better Mining to provide corrective action recommendations to upstream actors and Better Mining data subscribers at the downstream tier of the supply chain.

5.2. Incident analysis

Incidents refer to events that have a negative impact and illustrate a risk for supply chain actors. Reported incidents are systematically reviewed by international RCS Global Group staff – with serious incidents triggering immediate alerts to the RCS Global Group team and supply chain participants. Graphs related to incidents do not account for different severities and the relative sizes of the sites.

Figure 1: Incident comparison per country
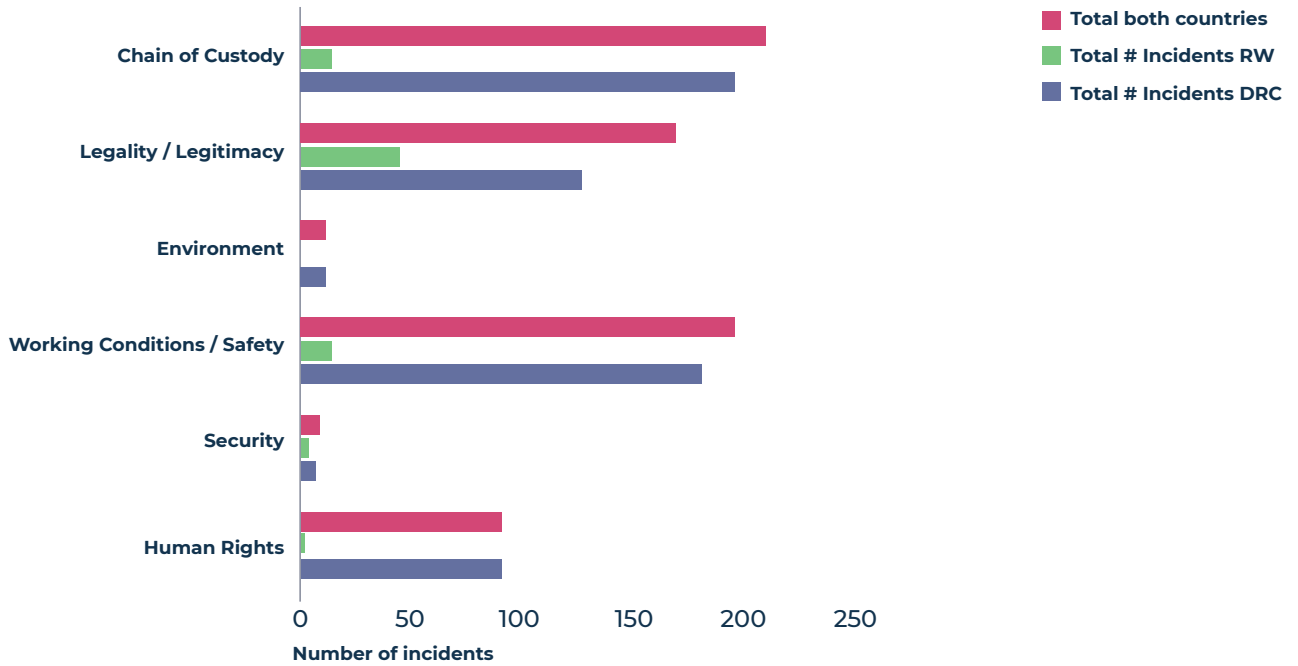
In line with the observations from the Risk Analysis tables (Tables 2 and 3), Figure 1 above indicates how, across countries, the majority of registered incidents are found under the key risk categories affecting all sites in sample: Working Conditions / Safety, Legality / Legitimacy, and Chain of Custody. Chain of Custody incidents typically include the absence of government agents tasked with traceability-related activities.

Figure 2: Proportion of registered incidents by risk category - DRC
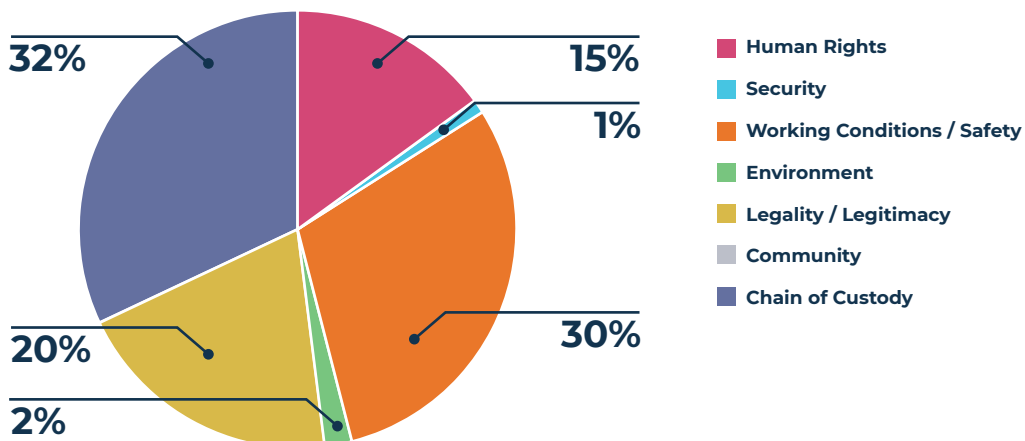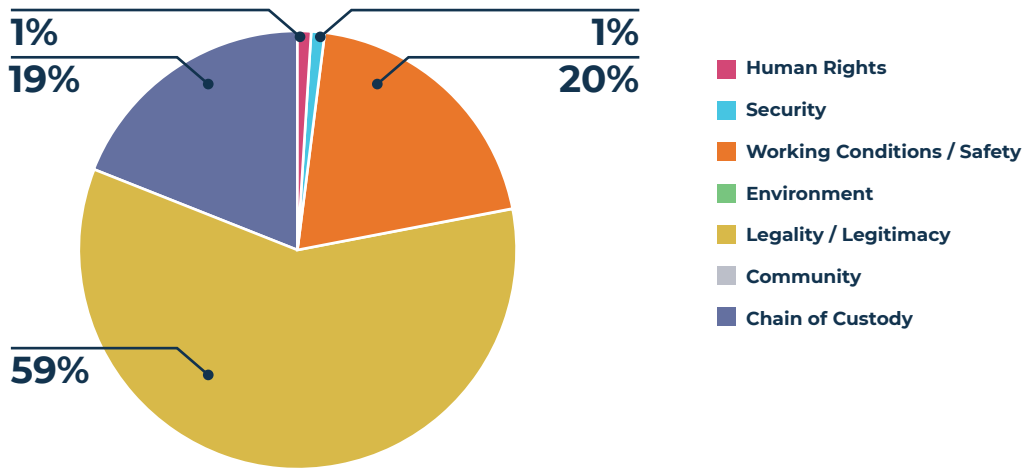
Figure 3: Proportion of registered incidents by risk category - Rwanda

Legend:
- Human Rights
- Security
- Working Conditions / Safety
- Environment
- Legality / Legitimacy
- Community
- Chain of Custody

When looking at the data sets aggregated per country, one observes slight differences in terms of the most prevalent risk categories affecting the sites in sample:

■ The incident data for Rwanda presents a noticeably different pattern in terms of the key categories. Chain of Custody in Rwanda gathers 19% of the incidents, whereas in the DRC Chain of Custody represents 32% of the recorded incidents.

■ In Rwanda, the clear majority of incidents (59%) are registered under the Legality / Legitimacy category. Specifically, the sites in Rwanda are affected by theft of minerals from the concessions. The risk posed by these incidents is one that requires joint efforts in the risk mitigation, including action by the government.

■ Working conditions, Chain of Custody and Environment all present a visibly different (higher) risk profile for DRC as compared to Rwanda.

5.3. Analysis of incidents registered over time

Figure 4: Total Incidents registered over time by category

Legend:
- Human Rights
- Security
- Working Conditions / Safety
- Environment
- Legality / Legitimacy
- Community
- Chain of Custody
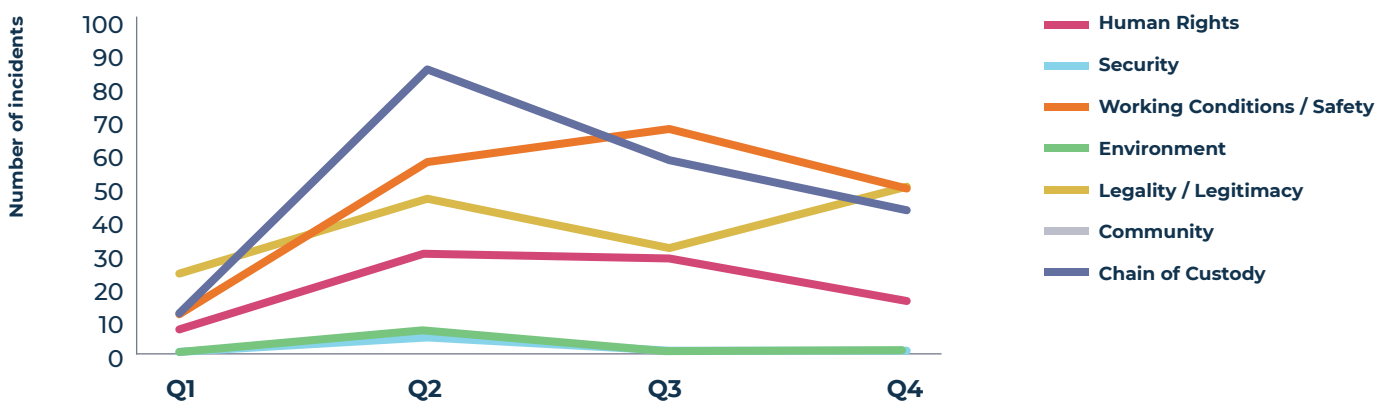
The data on incidents registered over time shows a decrease in the number of incidents registered across all risk categories, except Legality / Legitimacy, where the number of incidents increased from 33 in Q3 to 51 in Q4.

Chain of Custody is a risk category showing remarkable improvement, with a significant peak in the number of incidents registered (86 during Q2), and the total number of incidents in Q4 being 44, a reduction of 49%. This improvement can be attributed to the implementation of robust traceability systems and monitoring by Better Mining.

Q2 stands out as the monitoring period with the highest number of recorded incidents. This, however, is largely due to the fact that the first monitoring periods at all sites typically present higher risks due to the novelty of Better Mining deployment.

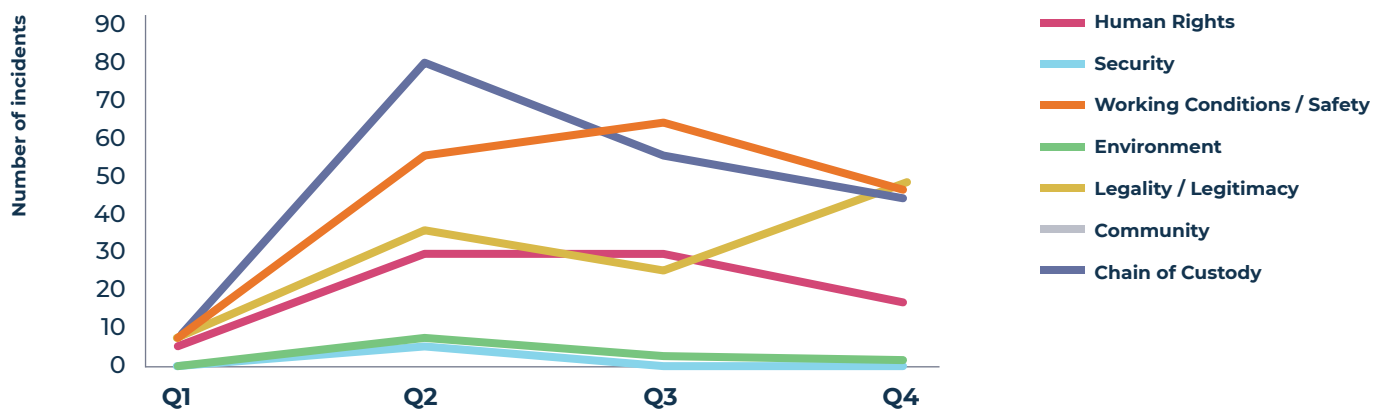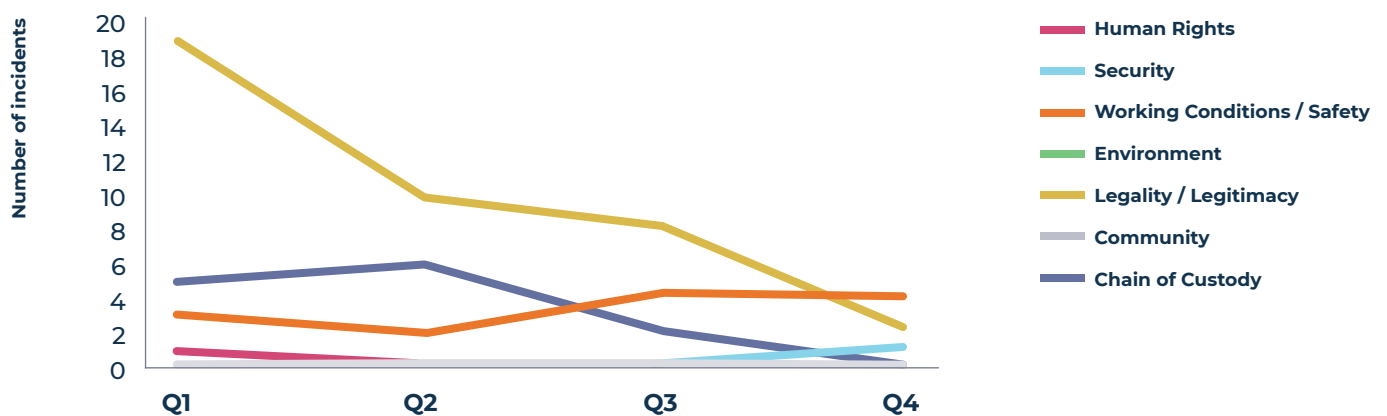**Figure 5: Incidents registered over time by category - DRC**

Figure 6: Incidents registered over time by category - Rwanda

A look at the trends of incidents registered by country shows a decline in incidents in Rwanda, whereas mine sites in the DRC show more uneven patterns. For confidentiality reasons we cannot show further disaggregated data in this public report.

5.4. Overall risk analysis

■ While risks related to human rights and conflict are often considered the most 'high profile' risks from an international attention perspective, Better Mining data shows that the **Working Conditions / Safety** risk category is also key to prioritise. This risk category includes the Occupational Health and Safety (OHS) risk, which was the most prevalent (26% of all registered incidents) across the sample. The OHS risk across all sites includes a wide variety of incidents, including workers not wearing PPE, physical altercations between workers on site, consumption of alcohol or other drugs on site, as well as injuries and fatalities. Another risk included in this category; Worker Rights also registered incidents but in significantly lower numbers than OHS-related incidents. This is explained by the fact that the incident types in the Worker Rights risk (worker protests, strikes) are generally events that are not as frequent as OHS incidents, but carry a significant weight in terms of their severity and impact.

■ Working Conditions / Safety risks are also spread out more evenly across minerals and geographies than other risks.

■ The Data indicates that the **Legality / Legitimacy** risk category is also a challenge across geographies and minerals. In this category, the vast majority of the risk is operational legality (typically theft) (17% of all registered incidents). The second most commonly reported incident falling under the operational legality risk was that of the presence of illegal miners at the site (this means workers that are not registered with the mining cooperative or mining operator of the site). Other types of risks from this category, such as the corruption/bribery risk, represented less than theft, at 6% of all recorded incidents.

■ As with the operational legality risk, the **Worker Rights** risk was largely assigned due to a single type of incident: protests by workers and strikes by state agents.

■ Risks pertaining to money laundering and forced labour are virtually absent at sites within the scope of the program. This is likely due to the Know Your Customer (KYC) and Supply Chain Evaluation (SCE) processes that Better Mining implements at project launch. This excludes sites and supply chain partners with these issues from entry into the program.

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6. CAP IMPLEMENTATION – BEST PRACTICE RISK MANAGEMENT

As a key process improvement recommendation from the Better Cobalt pilot, the Better Mining CAP procedure was developed in consultation with key stakeholders and it is formally under full pilot implementation in 2019, including on all Better Mining monitored mine sites. In 2020, it is planned to update this report with full findings on the results of the CAP success and limitations.

Corrective Action Plans stipulate the risks that require risk mitigation along with a recommendation of mitigation measures that are found to be most appropriate based on best practice. As part of our export approach, progress on CAPs implementation must be found to be sufficient to demonstrate continuous improvement. Better Mining issues CAPs bearing in mind the context of supply chain actors at each site.

6.1. Results

Figure 7: CAP statuses across all mine sites per category
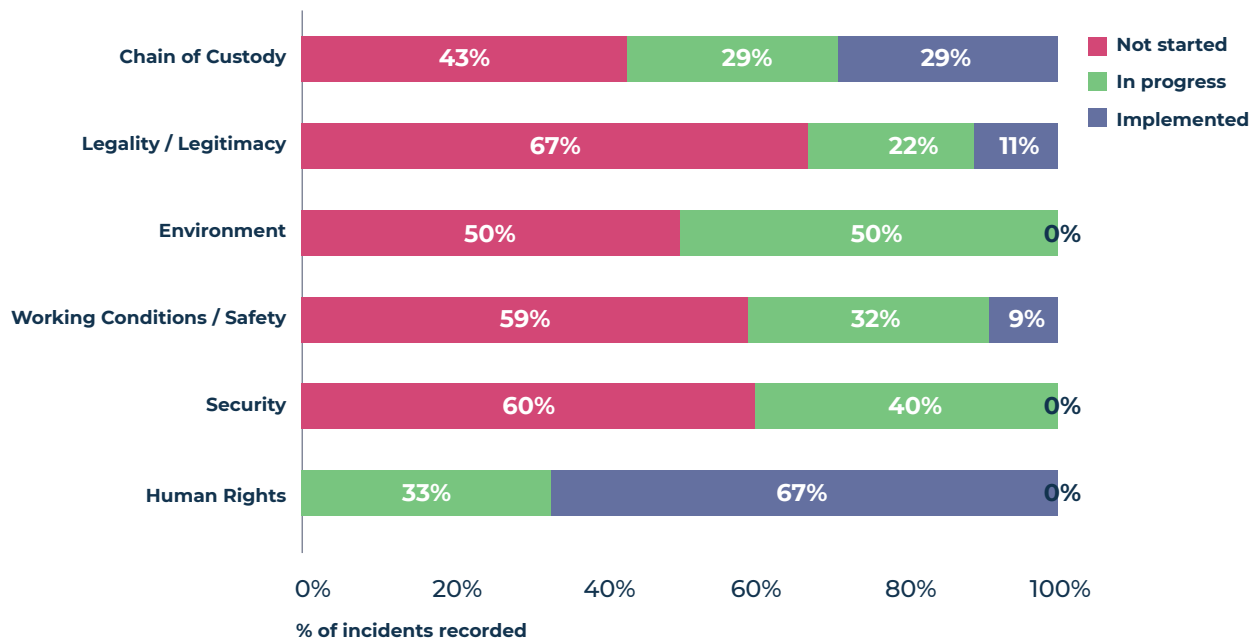
The above figure shows the implementation statuses of all corrective actions across all mine sites by risk category.

From early analysis, we have found the following to be true:

- On-site stakeholders have been **most successful** in progressing corrective actions related to **Human Rights.** 67% of total CAPs registered since January 2019 in that category have been implemented (4 out of 6), 33% (2 out of 6) are in progress. Typical examples of corrective actions in that category include the issuance of communications around child labour awareness to the neighbouring communities, signposting, as well as collaboration with state agencies. These corrective actions usually require less effort for implementation and are implemented in the short or mid-term. However, it is possible that certain corrective actions for Human Rights also address risks outside of child labour, such as excessive use of force, torture or other serious abuses. These issues generally require intense engagement with authorities, as well as a significant number of workshops and trainings that can only be implemented over longer periods of time.

- **Working Conditions / Safety**, which data indicates is a risk category presenting challenges across all minerals and geographies, is the category with the **highest number of corrective actions issued** (22).

- **Typical examples** of recommendations made in CAPs for the **Working Conditions / Safety** risk category are items such as developing a code of conduct, installing OHS signposting, or collaborating with the relevant state agencies or technical experts to establish regular safety checks. These CAPs include actions that require a shorter time frame for implementation and that can be completed by a single supply chain participant, such as the installation of signposting throughout the site. As such, the Working Conditions / Safety risk category is the category where most CAPs have been closed and risks have been mitigated.

- On-site stakeholders have shown the **least progress** in implementing corrective actions related to **legality risks**, mostly related to theft, but also related to corruption. 67% of total CAPs in that category are not started. Most Legality CAPs require joint action or direct engagement by the government or hierarchies of state agencies. This makes the time frames for implementation much longer and progress of implementation of corrective actions significantly slower. Examples of actions recommended are the development and implementation of new policies and procedures for topics such as bribery or corruption, the delivery of trainings on these topics, or the roll out of a project to register all workers at a site.

Figure 8: CAP statuses across all sites and all risks

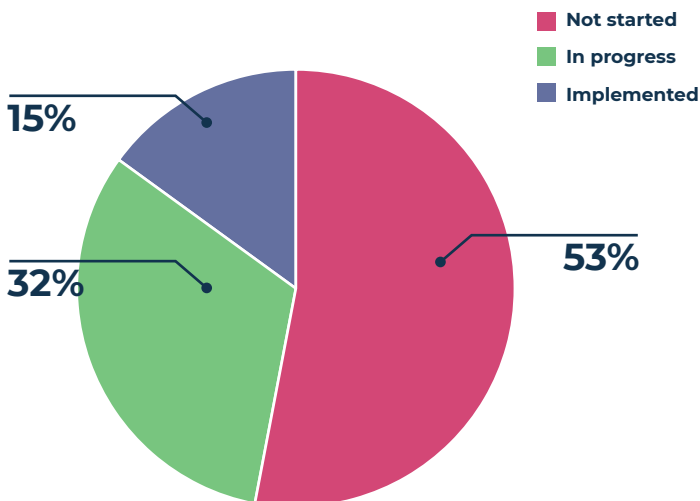- Not started
- In progress
- Implemented

15%
32%
53%

Figure 8 shows the status of CAP implementation across all sites and risks. It shows that, **overall, risk mitigation remains insufficient**. Across all risk categories in the total sample, only 15% of recommended corrective actions have been implemented, with 32% in progress and 53% not started. Upstream actors such as cooperatives and offtaker companies lack the technical and financial capacity to implement structural risk mitigation measures. Downstream support is urgently required.

Figure 9: CAP assignment by actor

Legend:
- Joint (pink)
- Exporter/Off-taker (green)
- Cooperative (blue)

Total
- Joint: 11%
- Exporter/Off-taker: 82%
- Cooperative: 8%

Chain of Custody
- Joint: 29%
- Exporter/Off-taker: 71%
- Cooperative: 0%

Legality / Legitimacy
- Joint: 17%
- Exporter/Off-taker: 61%
- Cooperative: 22%

Environment
- Joint: 0%
- Exporter/Off-taker: 100%
- Cooperative: 0%

Working Conditions / Safety
- Joint: 5%
- Exporter/Off-taker: 91%
- Cooperative: 5%

Security
- Joint: 0%
- Exporter/Off-taker: 100%
- Cooperative: 0%

Human Rights
- Joint: 17%
- Exporter/Off-taker: 83%
- Cooperative: 0%

% of corrective actions assigned (x-axis: 0% to 100%)

As part of the CAP process, when risk mitigation measures are recommended to upstream actors, they are at the same time assigned to specific actors. The RMP also provides guidance around this process. This is necessary to allow for a flexible and context-specific assignment of responsibilities.

Figure 9 analyses how the total corrective actions that have been recommended to upstream actors across all sites in scope have been assigned. It shows that **most corrective actions are assigned to exporters / offtakers.** This is mostly due to the fact that - in accordance with the OECD Guidance - risk mitigation should take into consideration the specific circumstances of upstream actors and companies and RCS Global Group's Better Mining has found that most mitigation measures should be assigned to exporters / offtaker companies due to their higher financial capacity when compared to cooperatives.

Furthermore, analysis has found when risk mitigation is assigned to multiple parties – e.g. a cooperative and an exporter – CAP closure has shown to be slower. Often the process of coordination, communication, and splitting of accountability between parties on the ground leads to worse results.

ASM sites in the DRC are often larger, more remote and require a more intensive use of resources, not only by mining operators but also by State Agencies. This makes CAPs which involve access control complex and challenging. Reliable, permanent, on-site monitoring is required that allows the detection of these issues and can propose corrective actions to mitigate against risk.

7. CONCLUSION

In conclusion, data driven risk management is possible for the ASM Sector. Downstream support, active participation, and funding is urgently required in order to implement tailored risk management approaches. RCS Global's Better Mining process opens up tangible and concrete opportunities for downstream companies to a) support the implementation of corrective actions; and b) benefit from the ensuing positive impact on their supply chains and the mining communities at their source.

Implementation of Better Mining has provided the following lessons learnt:

1. Data driven risk management in the ASM sector is possible.

2. Downstream support, active participation, and funding are urgently required to implement tailored risk management approaches.

3. Recording accurate data provides valuable insights into the presence and impact of real versus perceived risks.

4. The analysis has shown that support in the form of risk management assistance has a measurable positive impact.

5. Further work needs to be done to monitor long-term development regarding more structural risks rooted in socio-economic problems.

6. Further guidance on best practice upstream risk mitigation is required. Better Mining can provide valuable data points to inform such development.

Looking forward, Better Mining seeks further support and input to refine its approach, particularly with regards to how best to support upstream actors on the implementation of risk mitigation measures and the most efficient channels and format to share relevant data with supply chain participants for upstream impact.

8. ABOUT RCS GLOBAL GROUP

RCS Global Group's Better Mining product provides artisanal and small-scale mining (ASM) supply chain specific digital risk and impact data packages on a subscription basis to downstream companies and consumer brands.

Better Mining's promises are:

a) active and permanent monitoring of artisanal mine sites (ASM) and trading chains in all minerals for adherence to responsible sourcing market expectations; and

b) secure delivery of analysed data packages in flexible formats to meet clients' risk management and positive impact generation objectives.

RCS Global Group is the global leader in data-driven responsible sourcing in raw materials, with clients comprising the globally leading automotive, automotive supplier and electronics brands, along with mining companies, multi-stakeholder initiatives, industry platforms and donor organisations.

RCS' vision is a world where natural resources are produced, traded and transformed in a way that generates sustainable positive impacts on people and planet. We advance this vision by undertaking programs that transform the market through partnership with industry, while taking into consideration the needs and concerns of stakeholders, as we advance industry good practice.

RCS firmly believes in taking a holistic approach towards risk management and positive impact generation in global value chains. We offer our global clients full source to store assurance services covering production, trade and transformation. These services, delivered through our dedicated expert teams in offices at key stages of the value chain, comprise: global supply chain mapping and audit services; advisory, knowledge and training services; and technology backed supply chain and production monitoring services in the upstream portion of the global value chain.

RCS Global Group creates positive impact by offering companies the knowledge and tools to act more responsibly, also allowing them to measure, demonstrate and report on their own - and their supply chains' – compliance and continuous improvement over time. RCS is regularly featured in the media and is also a sought-after expert commentator at industry conferences at industry conferences and in public forums.

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