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The implementation of due diligence in 3TG supply chains

The cases of Burkina Faso, Mozambique and Nigeria

Imprint

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ABOUT THIS REPORT

This report presents the final results of a study on the implementation of due diligence in 3TG supply chains from Conflict-Affected and High-Risk Areas. This study is a product of BGR's sector project "Extractives and Development", which is implemented on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). The set up and the implementation of the study have been coordinated and accompanied by Thomas Grupp. For more information please visit: www.bmz.de/rue/en

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Abbreviations and acronyms

3T	Tin, tantalum, tungsten
3TG	Tin, tantalum, tungsten, gold
AGC	Artisanal Gold Council
ANEEMAS	Agence National d'Encadrement des Exploitations Minières Artisanales et Semi-mécanisées (National Agency for the Management of artisanal and semi-mechanised mining)
ARM	Alliance for Responsible Mining
ASGM	Artisanal and small-scale gold mining
ASM	Artisanal and small-scale mining
ASWJ	Ahlu-Sunna Wa-Jama'a
BAFA	Bundesamt für Wirtschaft und Ausfuhrkontrolle (Federal Office for Economic Affairs and Export Control)
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe (Federal Institute for Geosciences and Natural Resources)
BMZ	Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung (Federal Ministry for Economic Cooperation and Development)
BNAF	Brigade National Anti-Fraude de l'Or (National Anti-Fraud Brigade of Gold)
BUMIGEB	Bureau des Mines et de la Géologie du Burkina (Bureau of Mines and Geology of Burkina Faso)
CAHRA	Conflict-affected and high-risk areas
DRC	Democratic Republic of the Congo
EITI	Extractive Industries Transparency Initiative
EMEM	Empresa Moçambicana de Exploração Mineira (Mozambique Mining Exploration Company)
EPRM	European Partnership for Responsible Minerals
FFM	Fundo de Fomento Mineiro (Mining Promotion Fund)



GIZ	Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
HAMC	Highland African Mining Company
ICGLR	International Conference on the Great Lakes Region
ILO	International Labour Organization
INAMI	Instituto Nacional de Minas de Mocambique (National Institute of Mines)
LBMA	London Bullion Market Association
LCT	Lithium-cesium-tantalum
LSM	Large-scale mining
MMC	Ministère des Mines et des Carrières (Ministry of Mines and Quarries)
NEITI	Nigeria Extractive Industries Transparency Initiative
OECD	Organisation for Economic Co-operation and Development
ONASSIM	Office National de Sécurisation des Sites Miniers (National Office for the Security of Mine Sites)
OSH	Occupational safety and health
PAGMI	Presidential Artisanal Gold Mining Development Initiative
RBA	Responsible Business Alliance
RMI	Responsible Minerals Initiative
STAG	Scalable Trade in Artisanal Gold Project
UAE	United Arab Emirates
UGPK	Unidade de Gestão de Processo Kimberley (Management Unit for the Kimberley Process)

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Executive summary

The objective of this study was to conduct an analysis of to what extent due diligence is implemented in supply chains of tin, tungsten, tantalum and gold in Burkina Faso, Mozambique and Nigeria. It focusses on the areas in which improvements in the implementation of due diligence is needed in order to enable responsible sourcing of 3TG from those regions, in particular areas where support by actors of the German development cooperation can be used to leverage greater positive impact in the sector.

The study aims to provide insights into the challenges and barriers of due diligence implementation especially in conflict-affected and high-risk areas (CAHRAs) in the context of the EU Regulation on Conflict Minerals¹ which came into effect on 1 January 2021. The EU Regulation is positioned to ensure conflict-free sourcing of at least 95% of EU imports of tin, tantalum, tungsten and gold. In particular, the EU Regulation is concerned with overseeing the trade flow of these minerals, which are often sourced from conflict-affected and high-risk areas (CAHRAs) and may be implicated directly or indirectly in supporting serious human rights abuses such as the worst forms of child labour or the financing of armed groups, as outlined in the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

This study identifies and assesses these risks in upstream 3TG supply chains, with a focus on the risks presented in Annex II of the OECD Due Diligence Guidance. It assesses the implementation of due diligence requirements, with a particular focus on the EU Regulation on Responsible Sourcing of Minerals, on 3TG supply chains in the target countries. Finally, the study provides analytical conclusions of common themes across the three countries and suggests recommendations for im-

proving the implementation of due diligence, in particular for actors in the German development cooperation.

Burkina Faso

Burkina Faso is known for its rich mineral resources. Gold remains the country's most important currently extracted ore, and the only one of the 3TGs to be extracted. The vast majority of officially declared gold production – remaining at around 99% from 2014-2018 – is produced by the large-scale mining (LSM) sector. The 1% of official exports coming from artisanal and small-scale mining (ASM) sources are mainly exported through the National Agency for the Management of artisanal and semi-mechanised mining (ANEEMAS).

Gold smuggling and armed group involvement are major Annex II risks linked to the gold trade in Burkina Faso. There is a growing risk of control of artisanal gold supply chains in Burkina Faso being controlled directly by armed groups, who participate directly in the informal trade and smuggling of gold. Gold from these sites is likely to be accruing millions of dollars into the hands of the non-state armed groups. Other major OECD Annex II risks include non-payment of taxes and the illicit involvement of public and private security forces in gold mining in Burkina Faso.

Mozambique

The 3TG sector in Mozambique consists of the production of gold and tantalum-niobium, both of which are produced largely by artisanal and small-scale operations. There are thought to be between 100,000 and 200,000 people working in ASM in Mozambique overall on a range of different minerals. The participation of women is considered to be significant, with estimates ranging at around 20-30%

1 Regulation (EU) 2017/821 laying down supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold (3TGs) originating from conflict-affected and high-risk areas

of the labour force. Informality in the ASM sector is widespread due to high structural barriers to formalisation. Officially, artisanal mining can take place only in designated areas, as identified by the Ministry of Mines (MIREME). A census that is currently underway has identified over 1044 artisanal sites across the country, reflecting the high levels of informality in the Mozambican ASM sector.

A major Annex II risk includes non-payment of taxes via gold smuggling. In Manica, gold is often smuggled over the border with Zimbabwe, and many of the traders who operate in the local area are from Zimbabwe. Zambia is also a destination for gold smuggled from Mozambique, but to a much lesser extent. Child labour, considered a serious human rights abuse under the OECD Annex II framework, is a serious risk in the artisanal production of 3TGs – in particular gold – in Mozambique, with as much as 10% of the country’s ASM population estimated to be children. It is likely that there is also a risk of tantalum smuggling out of Mozambique, although tantalum supply chains, in particular unregulated supply chains, are poorly documented.

Nigeria

An analysis of the 3TG mining sector in Nigeria reveals that both gold and 3T mining are widespread throughout the country. The mining of 3TGs is very region-specific: Where gold is available, even if 3Ts occur there as well, gold mining will be preferred over 3T. This is due to the high prices that may be elicited from the sale of gold, and it is also a consequence of the high effort and low yield that characterises artisanal 3T mining in Nigeria.

Gold mining is almost completely artisanal. The high value of gold makes it preferable in some instances as currency over the naira. This has led to a high demand for gold and the use of gold as currency, which has become one incentive for widespread gold smuggling. Field research demonstrates that even small amounts of gold may be traded and used to buy food, equipment, or other supplies, in an exchange known as “gold for goods”. Illicit routes for the gold trade include smuggling gold by land to the Republic of Niger, where export taxes and procedures are allegedly simpler. From there,

gold is flown to Dubai, UAE, where it is sold for goods that are imported back into Nigeria. Smaller gold exporters may smuggle gold by land to the Republics of Benin or Togo, where a similar exchange for goods occurs. Conflicts between security forces and artisanal miners is another widespread Annex II risk. Artisanal gold miners have also experienced violence at the hands of the banditry and kidnapping spree that is sweeping across certain parts of northern Nigeria.

Among artisanal miners in Nigeria, all of the 3Ts are known collectively as “tin”. The mineral deposits occur together, and the minerals are not separated until much further down the supply chain, nearer to the exporting stage. This means the 3Ts are inextricably linked in Nigeria, and the discussion of one mineral’s supply chain cannot occur in isolation without referencing the other.

Because of the low profit margins currently being experienced by 3T mining within the country, many of the miners are from members of vulnerable groups, such as women, who use mining to support an otherwise meager income. Another difference to gold: 3Ts are not used to exchange for money or other goods, and they are not as easy to smuggle due to the large quantities needed to export them. One due diligence risk associated with the 3Ts in Nigeria lies with the misrepresentation of taxes, fees and royalties associated with the minerals, which may occur at the point of export and may be used to avoid the paying of such fees. Another risk, similar to gold, lies with the kidnapping and ransom of miners that is occurring by non-state armed groups, particularly in the northern part of the country.

Recommendations

An overwhelming finding from this study was that the level of knowledge and understanding of international due diligence frameworks and supply chain traceability in the three countries studied was very low. Recommendations therefore focus on areas where these actors can best support the creation of a strong enabling environment for due diligence in conflict-affected and high-risk areas, including but not limited to the three target countries of this report. The recommendations are

aimed at providing guidance in line with the wider strategy and policy agenda of the German Development Cooperation. In particular, the recommendations speak to priorities of the German Raw Materials Strategy (“Rohstoffstrategie der deutschen Regierung”)² such as sustainability and transparency in the raw materials sector. They provide concrete entry points to foster the establishment of more transparency and control in raw material supply chains and enhance compliance with corporate due diligence requirements as set out in the German National Action Plan on Business and Human Rights and the OECD Due Diligence Guidance.

² Rohstoffstrategie der Bundesregierung (https://www.bmwk.de/Redaktion/DE/Publikationen/Industrie/rohstoffstrategie-der-bundesregierung.pdf?__blob=publicationFile&v=4)

1 Introduction and background

The following report constitutes the desk study and field research for the project “Study on the implementation of due diligence in the supply chains of tin, tungsten, tantalum and gold (3TG) from conflict-affected and high-risk areas” commissioned by the Federal Institute for Geosciences and Natural Resources (BGR).

The objective of this study is to conduct an analysis of to what extent due diligence is implemented in supply chains of 3TG (tin, tungsten, tantalum and gold) in Burkina Faso, Mozambique and Nigeria. While each country context is distinct, a number of overarching themes have been identified over the course of the research. The following study focusses on the areas in which extra support on the implementation of due diligence is critically needed in order to improve supply chain transparency and enable responsible sourcing of 3TG from those regions, in particular areas where it is felt that targeted support by BGR can be used to leverage greater positive impact in the sector.

One area of focus for this study is on the identification and reasoned assessment of risks in upstream 3TG supply chains, with a focus on the risks presented in Annex II of the OECD Due Diligence Guidance. This assessment’s objective is to guide further analysis on the current state of, challenges to and opportunities for implementation of due diligence measures in 3TG supply chains in each of the three target countries.

The second area of focus for data analysis is an assessment of the implementation of due diligence requirements, with a particular focus on the EU Regulation on Responsible Sourcing of Minerals, on 3TG supply chains in the target countries. This assessment focusses on the extent to which due diligence requirements are i) known about

and ii) implemented in each area. The assessment also looks at potential impacts – positive or negative – of these due diligence requirements on the different groups of stakeholders. The assessment presents the main challenges and key barriers associated with implementing due diligence in the respective upstream contexts.

Finally, the study provides analytical conclusions of common theme across the three countries and suggests recommendations for improving the implementation of due diligence.

1.1 Regulations on due diligence in mineral supply chains

1.1.1 EU Regulation on responsible sourcing of 3TG minerals

On 1 January 2021 the ‘[Regulation \(EU\) 2017/821 laying down supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold \(3TGs\) originating from conflict-affected and high-risk areas](#)’ came into effect. The Regulation, hereinafter referred to as the ‘EU Regulation on Responsible Sourcing of Minerals’ or the ‘EU Regulation’ (commonly referred to as the Conflict Minerals Regulation),³ is positioned to ensure conflict-free sourcing of at least 95% of EU imports of tin, tantalum, tungsten and gold. In particular, the EU Regulation is concerned with overseeing the trade flow of these minerals, which are often sourced from conflict-affected and high-risk areas (CAHRAs) and may be implicated directly or indirectly in supporting serious human rights abuses such as the worst forms of child labour or the financing of armed groups (REGULATION (EU) 2017/ 821, 2017). Other commonly cited is-

³ For more information on the terminology for this regulation, see Di Lorenzo and Levin-Nally, 2021: <https://www.cambridge.org/core/blog/2021/02/22/the-conflict-minerals-regulation-or-the-regulation-on-responsible-sourcing-of-minerals-evolving-purpose-and-terminology/>

sues with minerals sourced from CAHRAs include risks of bribery and corruption in the context of the avoidance of payment of taxes or royalties to governments, the fraudulent misrepresentation of the origin of minerals, money laundering, and conflict with public or private security forces and local communities (Responsible Minerals Initiative, n.d.).

Overall, the EU Regulation aims to disrupt the link between violent conflict and the illegal exploitation of minerals while putting an end to the exploitation and abuse experienced by local communities and mine workers located in conflict-affected regions (European Commission, 2020). By ensuring that EU importers of 3TG (tin, tungsten, tantalum and gold) are compliant with international responsible sourcing standards, and by ensuring that EU and global refiners and smelters of 3TG source responsibly, the EU Regulation aims to support peace, local development and security in resource-rich nations experiencing conflict (European Commission, 2020).

The EU Regulation mandates Union importers of minerals and metals to implement:

- a. management systems obligations, including policies for suppliers with materials potentially originating from CAHRAs, grievance mechanisms, and chain of custody or supply chain traceability systems;
- b. risk management obligations, including the identification and assessment of risks along the mineral supply chain;
- c. implementation of risk mitigation strategies consistent with OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas' Annex II and monitoring of risk mitigation efforts and reporting;
- d. third-party audit obligations; and

- e. disclosure obligations, including annual reporting of supply chain due diligence policies and responsible sourcing (REGULATION (EU) 2017/ 821, 2017).

The above process is in line with the five-step framework outlined in the OECD Guidance. In addition, the Commission was tasked with developing a list of global responsible smelters and refiners, with indications of those that at least partially source minerals originating from CAHRAs. Smelters and refiners are seen as critical operators in the minerals supply chains, as they are often the pinch point at which a mineral's origin and chain of custody may be verified (REGULATION (EU) 2017/ 821, 2017).

Background and policy environment of the EU regulation

The EU regulation was developed on the backdrop of several due diligence initiatives over the last decades, including in the EU and elsewhere. It was developed to address the overriding challenge of sourcing critical minerals, including tackling risks such as the financing of armed groups and security forces in resource-rich countries, child labour and forced labour, and human trafficking. On 4 November 2008, the Commission released a communication entitled 'The raw materials initiative—meeting our critical needs for growth and jobs in Europe,' wherein it recognized the procurement of reliable access to raw minerals as an important element of the Union's economic and political strategy. The initiative promoted supply chain transparency and corporate social responsibility in regard to the sourcing of non-energy and non-agricultural raw materials. The European Parliament submitted multiple resolutions between 2010 and 2014⁴ calling on the Commission to legislate for a law that would be in line with the US Dodd-Frank Wall Street Reform and Consumer Protection Act, a 2010 US law outlining companies' responsibilities in relation to sourcing 3TG from the Democratic Republic of the Congo (DRC) and adjoining countries.⁵

⁴ Resolutions were submitted 7 October 2010, 8 March 2011, 5 July 2011 and 26 February 2014 (REGULATION (EU) 2017/ 821, 2017)

⁵ Adjoining countries covered under the Dodd-Frank Act include the Central African Republic, South Sudan, Zambia, Angola, the Republic of Congo, Tanzania, Burundi, Rwanda and Uganda (U.S. Securities and Exchange Commission, 2014).

Further communications in 2011 and 2012 announced the intention to promote due diligence along raw materials supply chains.⁶

On 15 December 2010, the Lusaka Declaration to fight the illegal exploitation of natural resources in the African Great Lakes Region was adopted by the relevant heads of State. The following year, in 2011, the OECD Ministerial Council recommended the active promotion of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Due Diligence Guidance), which was devel-

oped through a global multistakeholder process. Meanwhile, civil society organisations and citizens across the Union engaged in awareness-raising campaigns about the illicit trade and finance of minerals from conflict areas and the ensuing human rights violations, including sexual violence against women used to control local populations, and they urged Union leadership to hold economic operators accountable per the OECD Guidelines (REGULATION (EU) 2017/ 821, 2017).

On 8 June 2017, the EU Regulation entered into force.

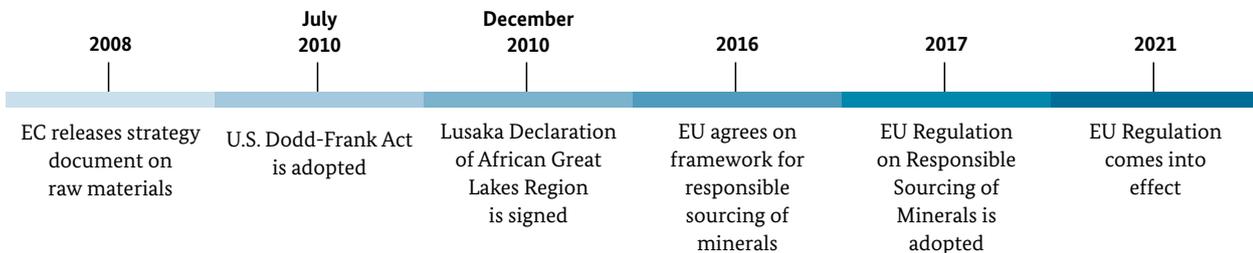


Figure 1: Historical Timeline of the EU Regulation on Responsible Sourcing of Minerals

Significance and impact for private sector

The EU Regulation on Responsible Sourcing of Minerals will apply to Union importers of 3TG, but may indirectly affect supply chain actors all along the 3TG value chain: firms and other stakeholders

that extract, process and refine raw materials, such as artisanal miners or refiners and smelters (known as upstream actors), and companies and supply chain actors that handle minerals and materials that are further processed, including component manufacturers and end users (downstream actors).

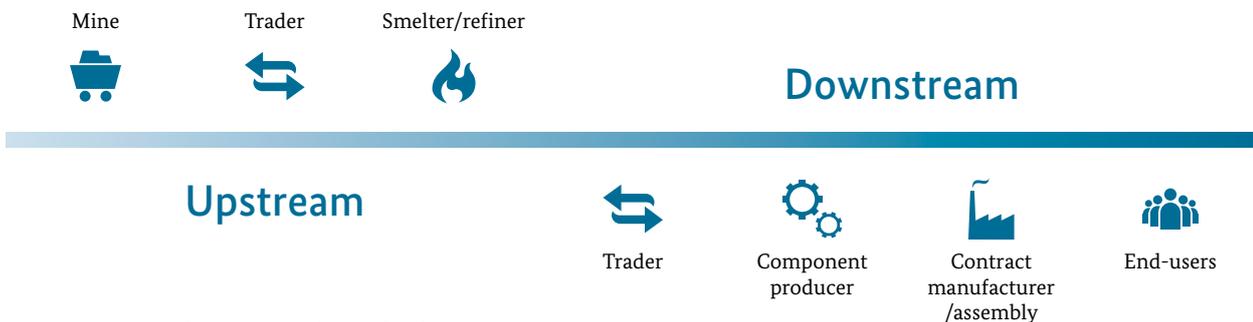


Figure 2: Exemplary mineral supply chain.

Source: Adapted from <https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/>

⁶ Communications released on 2 February 2011 ('Tackling challenges in commodity markets and on raw materials') and 27 January 2012 ('Trade, growth and development—tailoring trade and investment policy for those countries most in need') (REGULATION (EU) 2017/ 821, 2017).

Table 1: The EU Regulation imposes different obligations on upstream and downstream actors in the Union

Upstream actors	Downstream actors
Must comply with due diligence obligations when exporting minerals to the EU	<p>If importing metals, must comply with due diligence obligations</p> <p>If operating beyond the metals stage, they do not have due diligence obligations under the Regulation, but must ensure they use reporting and other tools to make their due diligence processes transparent (European Commission, 2020).</p>

1.1.2 New German due diligence legislation

Although not specific to 3TG or minerals sourced from CAHRAs, a wave of additional due diligence legislation is sweeping across the EU. Such legislation will undoubtedly support the responsible sourcing process of 3TG as companies across the EU (and the globe) become better prepared to identify, track, monitor and mitigate human rights and environmental risks across all stages of their supply chains.

The German Bundestag adopted the German Supply Chain Duty of Care Act (Act on Corporate Due Diligence in Supply Chains) on 11 June 2021, with final deliberations passed on 25 June by the German Bundesrat. The German Supply Chain Act will enter into force in 2023 and apply to companies with 3,000 or more employees. By 2024, its scope will expand to companies with a registered office or branch in Germany and with 1,000 or more employees (Initiative Lieferkettengesetz, 2021).⁷

The German Supply Chain Act mandates covered companies to fulfil their environmental and human rights due diligence obligations in line with

the UN Guiding Principles (Initiative Lieferkettengesetz, 2021). The law represents a paradigm shift in Germany from voluntary corporate social responsibility initiatives to binding human rights and environmental obligations. Companies in violation of their obligations may face enforcement procedures, including fines, from the Federal Office for Economic Affairs and Export Control (BAFA) (Initiative Lieferkettengesetz, 2021). Affected parties, including trade unions and NGOs authorised to act on behalf of them, may bring claims directly before German courts.

1.2 Due diligence risks in 3TG supply chains

The OECD Due Diligence Guidance for Responsible Mineral Supply Chains from Conflict-Affected and High-Risk Areas is one of the leading global frameworks for the responsible sourcing of 3TG. The EU Regulation uses the OECD Guidance as a framework for what risks should be analysed when conducting due diligence on mineral supply chains, listed in Annex II of the Guidance. Annex II of the OECD Guidance outlines a 'Model supply chain policy for a responsible supply chain of minerals from conflict-affected and high-risk areas', which covers the following risks:

⁷ The German government estimates the scope of the Act to expand from covering 900 companies in 2023 to 4,800 companies in 2024 (Seibt et al., 2021).

Table 2: OECD Annex II Risks. Source: OECD (2016)

	Serious abuses in the extraction, transport or trade of minerals	Includes serious human rights abuses such as torture, cruel, inhuman and degrading treatment; forced labour; the worst forms of child labour ⁸ ; widespread sexual violence; war crimes and other crimes against humanity, such as genocide.
	Direct or indirect support to non-state armed groups	Direct or indirect support to non-state armed groups may occur through the extraction, transport, trade, handling or export of minerals. This may involve procuring minerals from, making payments to or providing logistical assistance or equipment to non-state armed groups who engage in activities such as: illegally controlling mine sites, transportation routes, mineral trading posts or upstream actors; unlawfully taxing or extorting money or minerals at mine sites, transportation routes, or other places where minerals are traded; or illicitly taxing or extorting intermediaries, international traders or export companies.
	Public or private security forces	OECD Guidance requires that both public and private security forces will act in accordance with the UN Voluntary Principles on Security and Human Rights. Security forces should be screened for a past history of 'gross human rights abuses', and they will also not be permitted to illegally extort, tax or control mine sites, transportation routes or upstream actors in the supply chain. Artisanal miners in particular are seen as a vulnerable group that may be adversely impacted by security forces acting out of compliance with the OECD Guidance.
	Bribery and fraudulent misrepresentation regarding the origin of minerals	The OECD Guidance requires that no offer, provision or demand of a bribe will occur, particularly in relation to the concealment of the origin of minerals or the misrepresentation of taxes or fees paid to the government for mineral extraction, transport or export.
	Money laundering	The Guidance provides steps to eliminate money laundering related to the extraction, trade, handling, transport or export of minerals or where minerals are traded by upstream actors.
	Payment of taxes, fees and royalties to government agencies	OECD Guidance requires that all taxes, duties and royalties are rightfully paid to government agencies, and that such payments are disclosed in accordance with the principles outlined by the Extractive Industry Transparency Initiative (EITI)

1.3 Conflict-affected and high-risk areas (CAHRAs)

The EU Regulation on Responsible Sourcing of Minerals defines conflict-affected and high-risk areas (CAHRAs) as '[a]reas in a state of armed conflict or fragile post-conflict as well as areas witnessing weak or non-existing governance and security, such as failed states, and widespread and systemat-

ic violations of international law, including human rights abuses' (European Commission, 2017).

Compare this to the OECD Guidance's definition of CAHRAs, which may be identified by:

“the presence of armed conflict, widespread violence or other risks of harm to people. Armed conflict may take a variety of forms, such as a conflict of international or non-international character,

⁸ As outlined by the International Labour Organization No. 182 on the Worst Forms of Child Labour.

which may involve two or more states, or may consist of wars of liberation, or insurgencies, civil wars, etc. High-risk areas may include areas of political instability or repression, institutional weakness, insecurity, collapse of civil infrastructure and widespread violence. Such areas are often characterised by widespread human rights abuses and violations of national or international law” (OECD, 2016).

As of 17 December 2020, pursuant to Article 14(2) of the EU Regulation, the European Commission Directorate General for Trade published the indicative, non-exhaustive and list of conflict-affected and high-risk areas (CAHRAs). Currently overseen by RAND Europe, the list is updated quarterly and was last updated in September 2021 (European Union & RAND, 2021).

The criteria used to identify the regularly updated list of CAHRAs is in line with the definition outlined within the 2017 EU Regulation and is consistent with the EC’s Recommendation 2018/1149

on the identification of CAHRAs and other supply chain risks (European Union, 2018). As listed earlier, the EU Regulation defines CAHRAs as:

- areas in a state of armed conflict, or
- fragile post-conflict areas, or
- areas with weak or non-existent governance and security, such as failed states; and
- in all cases, areas with widespread and systematic violations of international law, including human rights abuses (REGULATION (EU) 2017/ 821, 2017).

The 2018 Recommendation further identifies CAHRAs by the following key principles:

- state of armed conflict
- fragile post-conflict
- failed state

Such principles follow those set out in international law and are further explained in the following table.

Table 3: Elements of CAHRAs. Source: EC Recommendation 2018/1149

State of armed conflict	<ul style="list-style-type: none"> – Presence of armed conflict, widespread violence or other risks of harm to people – May be international or non-international in character – May involve two or more states or Parties – May consist of wars of liberation, insurgency, civil war or partial or total occupation of a territory
Fragile post-conflict areas	<ul style="list-style-type: none"> – Cessation of active hostilities – Weak capacity to carry out basic governance functions and security – Either institutional weakness or lack of governance and widespread and systematic violations of international law and human rights abuses
Failed states	<ul style="list-style-type: none"> – A situation of extreme institutional weakness – Implosion of structures of power and authority – A collapse of law and order – The absence of institutions capable of representing the state

The CAHRAs list is based on information gathered through 26 resources and datasets, as well as stakeholder consultations and interviews (Bellasio et al., 2020) (Ropes & Gray, 2020). Companies are encouraged to stay up-to-date with the list of CAHRAs published quarterly so as to ensure their mineral supply chain due diligence procedures are well-suited to prevent the intentional or un-

intentional contribution to the adverse impacts that may arise when 3TG and other minerals are sourced from conflict-affected and high-risk areas. However, as the EU list is indicative only, companies should verify through their own due diligence processes whether a given country or region is a high-risk area, as companies are required to conduct due diligence for countries and regions that

may fulfil high-risk criteria even if the country or region is not identified as a CAHRA on the EU list. The scope of the EU regulation therefore applies outside of CAHRAs. The major difference between CAHRA and non-CAHRA sourcing refers to the level of scrutiny to be applied in the due diligence

process, and shall further consider a risk-based approach (i.e., consider red flags). So for instance, sourcing tantalum from a non-conflict Nigerian state may still imply due diligence risks if trading routes pass through that state and there are red flag indications.

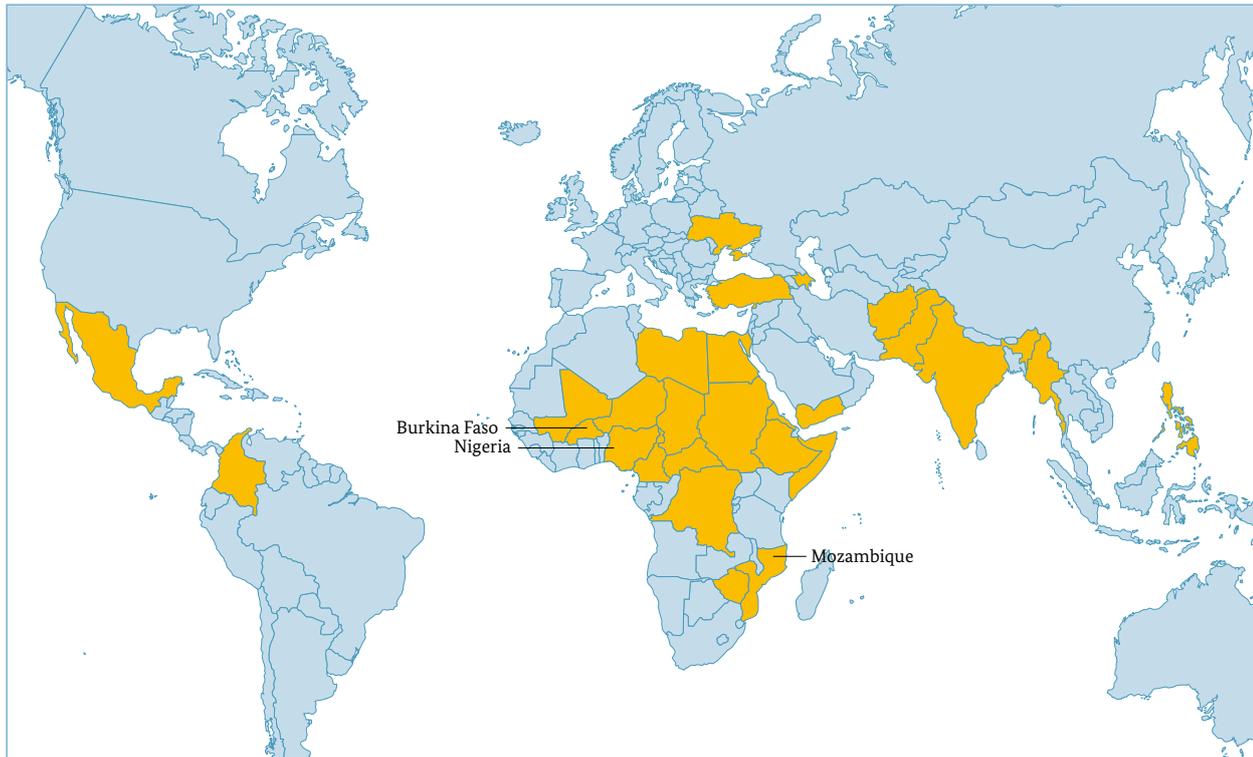


Figure 3: CAHRA map as of December 2021, adapted from European Partnership for Responsible Minerals (EPRM)

Current Countries on the List of CAHRAs (as of December 2021) (see Fig 3). The CAHRAs list is indicative not of the country, but of certain regions or

areas within the countries that may be defined as conflict-affected and high-risk areas.

- Afghanistan
- Azerbaijan
- Burkina Faso
- Burundi
- Cameroon
- Central African Republic
- Chad
- Colombia
- Democratic Republic of the Congo
- Egypt
- Eritrea
- Ethiopia
- India
- Libya
- Mali
- Mexico
- Mozambique
- Myanmar
- Niger
- Nigeria
- Pakistan
- Philippines
- Somalia
- South Sudan
- Sudan
- Turkey
- Ukraine
- Venezuela
- Yemen
- Zimbabwe

2 Methodology and data collection

This report is based on data and information from both secondary and primary sources, which were collected in two phases: A desktop study of secondary literature, and primary research in the three case study countries.

2.1 Desk research: Secondary sources

Using secondary sources and literature, a first draft report was compiled for the client. This desktop research and the draft report served to establish the basis for the subsequent field research. It provided a view of information and data which was already known or had to be confirmed or triangulated with additional field work, as well as providing a sense of the data gaps that would still need to be filled during the research in-country, thus guiding the development of the field research tools and questionnaires.

The sources used for the desk research included academic studies, reports by NGOs and civil society, reports published by donors and development programmes or Government actors, articles in well-known media and newspapers, as well as previous studies and work that Levin Sources had conducted in the three case study countries. The chapter on the EU regulation and due diligence requirements specifically also included a review of the relevant policy or legal documents.

In addition, the desk research phase served to map key actors in the three case study countries and to preliminarily identify potential interview participants for the field research phase. This preliminary list of stakeholders was provided by the three expert researchers located in each country according to their networks and knowledge of the sector in their respective jurisdictions, and complemented

with documentary sources. The preliminary list of stakeholders included actors all along the respective mineral value chains, representing all relevant segments including government, value chain actors, civil society and academia, industry associations, etc.

2.2 Field research: Primary sources

The primary data collection had the objective of verifying the findings of the desk study and expanding upon them, with a focus on filling any significant information gaps on the 3TG sectors of the case study countries. The field research was designed and implemented in several steps, as outlined below.

Development of research tools: The field research consisted of both key stakeholder interviews and on-site observations. For this, tools were developed to guide the expert researchers in the three countries. A unified approach to research tool development was essential, in order to ensure that the researchers all had the same understanding of the objectives of the study and the key aspects to collect data on. At the same time, it required differentiated tools that were adapted to each context, since information gaps were not always the same.

The **key stakeholder interview guides** were designed to collect primarily qualitative data in each country, using semi-structured interview guides. This allowed the expert researchers to flexibly address and probe specific topics and questions that were relevant in the particular context or for the individual interviewee - allowing interviewees to bring up questions and issues of primary importance to them in the context of due diligence im-

plementation, helping to mitigate researcher bias and ensuring that the data collected reflects the real issues that impact each group of stakeholders. In some cases, closed questions were added to the interview guides, in order to allow for the capturing of quantitative data points.

Key stakeholder interview guides were developed and tailored for each specific stakeholder group, in order to account for different roles and responsibilities of each group in the mineral value chains. However, these actor specific interview guides flowed from an overarching set of research questions that was developed based on the initial desk-top study and was intended to steer the data collection process to ensure that the most relevant information was captured.

In addition, an **observation guide** was developed in order to enable the capturing of visual observation during field visits. These guides included questions around key documentation to request or check at operators' sites, existing infrastructure and procedures, as well as questions on observable due diligence practices. These guides were also designed to allow the researchers to collect additional information such as relevant documentation or statistics (production, revenue generation, trade flows, etc.) that may not be available online or at the national level.

Researcher training: In order to ensure the highest standards of research, as well as to ensure consistency across all three countries, trainings with each of the country-based researchers were conducted. This enabled a comprehensive understanding of the objectives of the assignment, the questionnaires and data objectives behind them, data triangulation methods and ways of ensuring consistency in data collection across minerals and regions. In addition, the expert researchers were trained on ethical research conduct, including ensuring free, prior and informed consent for each interview as well as the taking of photos, in line with the standards provided by BGR.

Field research: itineraries and interview partners: In all three countries, key stakeholder interviews were conducted both remotely by phone and through in-person site visits in the field. This

allowed for the covering of a wider geographical area in each country, especially in cases where interviewees or sites were located in remote or difficult to access areas (also with regards to security).

The initial stakeholder mapping and list of relevant actors guided the selection of key interview partners. In addition, snowball sampling was used during the field visits to identify further relevant interview participants. Where the country expert researchers did not yet have the contacts of specific important stakeholder groups, they were identified through the first interviews conducted. This snowball sampling method, combined with purposive sampling, allowed the researchers to prioritise participants. Annex 1 provide an overview of the number of interviews conducted in each country, the type of stakeholder interviewed, as well as a view of the research itineraries.

The findings of each interview were recorded by the researchers in an **interview summary sheet**, along with confirmation of informed consent of the participant. Interview findings were anonymised as standard. No personal data of participants were stored, with the exception of phone numbers used to contact the interviewees for remote interviews.

Triangulation and monitoring: Throughout the data collection process, the expert researchers in the three case study countries implemented triangulation and 'sense-checking' methods to ensure the reliability and credibility of the data collected. As the researchers were all long-standing experts in the mining sector of their respective country, their in-depth understanding of the context helped to interrogate responses by interviewees, other data and results that come from it.

In addition, triangulation and monitoring was enhanced through an iterative process during which the Levin Sources team lead kept in close contact with each of the researchers during the field work. This allowed for:

- Identification and addressing of any problems or challenges early on
- Real-time oversight and preliminary analysis of the data collected

- Identification of any gaps that remain in the data and guidance on how to fill these gaps in subsequent interviews
- Monitoring of security situation

2.3 Data analysis and reporting

Data analysis and reporting was conducted in collaboration with the researchers in each country. The above-mentioned debrief meetings with the researchers also served to conduct interactive data analysis jointly with the researchers, in order to flesh out the relevant findings.

Based on the findings in each country, the analysis identified common themes and issues that occurred across these countries, in terms of the types of risks occurring along value chains, but also in terms of due diligence practices and the policy environment. This analysis was then reflected in overall conclusions, which in turn feed into concrete recommendations.

2.4 Limitations and challenges

The following limitations and challenges occurred during the research phase and have an impact on the quality and quantity of the data, as well as subsequently on the analysis and recommendations:

- Official statistics either did not exist or we could not obtain them from authorities. This was particularly the case in Nigeria, where no government officials agreed to be interviewed for this study. In addition, employees at government offices related to mining and metals were instructed to refrain from sharing official mining statistics, import and export data, production statistics, and any other requested materials. The result was a limited number of official production and trade data resources related to Nigeria; therefore, the main sources we reference are the Nigeria Extractives Industries Transparency Initiative (NEITI) Solid Minerals Audit Report 2018, and then official import and export data from the UN Comtrade database.
- Quantitative data was very difficult to obtain and/or to triangulate generally, beyond

the UN Comtrade data. There was often great discrepancy between import and export data reported on the UN Comtrade database, and trade and production data officially reported by official government sources. As UN Comtrade data is comprised of data compiled from national governments, the major discrepancies between official statistics from government sources and UN Comtrade data for the same years is worthy of note.

- Authorities or key stakeholders were not available for interviews, particularly official government stakeholders in Nigeria, as described above.
- The security situation in certain parts of these countries (including 3TG areas) is extremely difficult and so no primary field research was conducted there. Interviews in the Jos Plateau area in Nigeria were initially delayed for weeks due to the unsafe security situation in that area of the country; however, field research was eventually successful and interviews with gold exporters and artisanal miners were conducted. In addition, the security situation in states such as Zamfara, Kaduna, Niger, Ilesha, Bauchi and Cross Rivers meant that during large portions of the field work, cell phone lines were inoperable. However, by extending the timeline in which to conduct field work, interviews with various stakeholders in each region were successfully conducted.
- The field work largely confirmed the desk research, therefore little “new” / different information was uncovered. But because the field work was very limited, some of the data gaps could not be filled either. It is indicated in the text where information is incomplete or inconclusive.
- A quantitative assessment of the number and types of risks in 3TG value chains was thus not possible and the analysis remains on a qualitative level. However, this report can still give a solid understanding of what risks are occurring where and what is done (or not done) to address them.

3 Burkina Faso

3.1 Representation of the 3TG sector

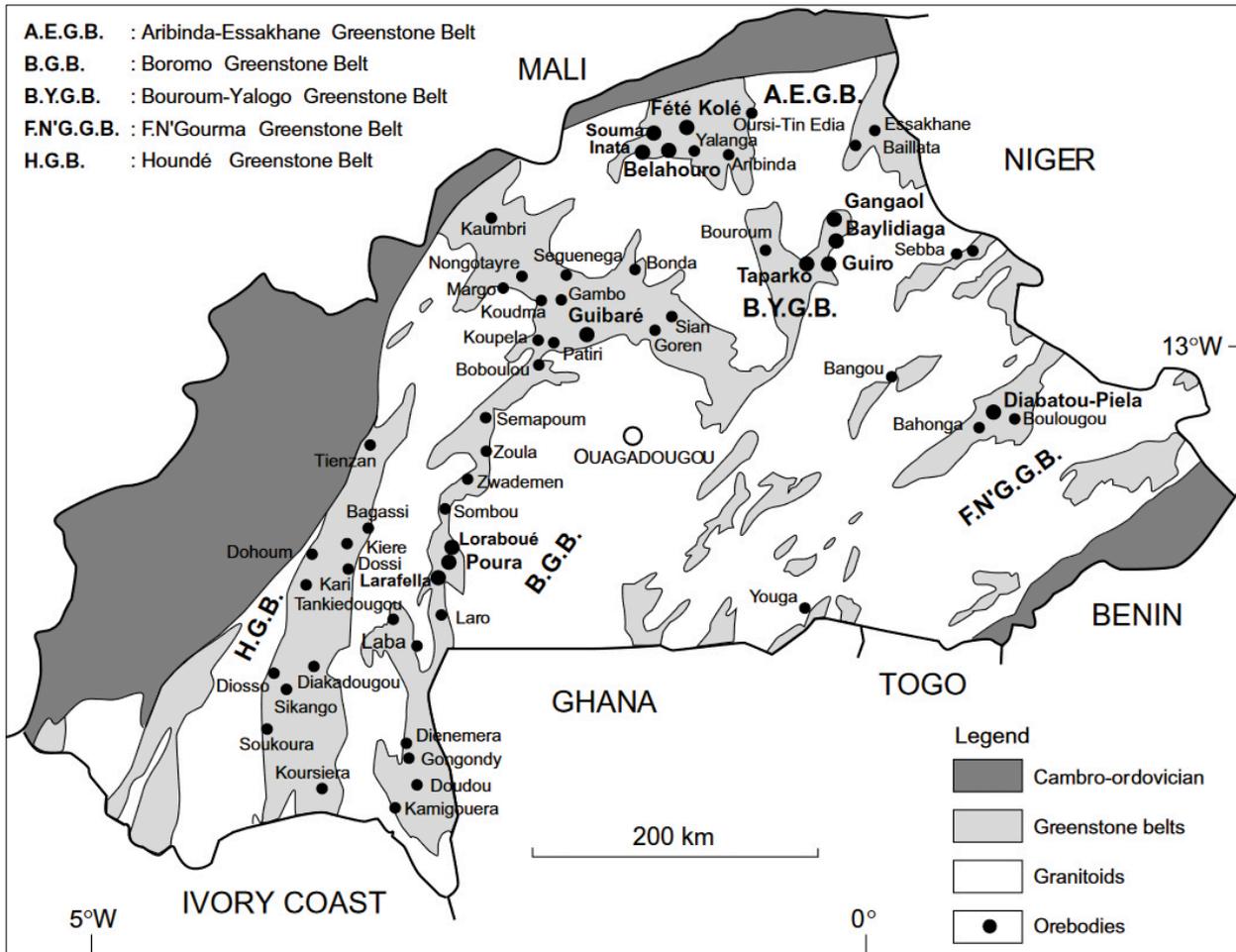


Figure 4: Location of Burkina Faso gold bodies. Source: Béziat and Dubois (2008)

Burkina Faso is known for its rich mineral resources. Its main deposits are in gold, zinc, copper, manganese, phosphate and limestone, as well as traces of diamonds, bauxite, nickel and vanadium (EITI, 2021). However, gold remains the country’s most important currently extracted ore, and the only one of the 3TGs to be extracted (EITI, 2021; USGS, 2016).

Gold has been produced by ASM since the 1970s, and by LSM since the beginning of the industrial operation of the Essakane mine in the 1990s (Solazzo, 2018). Surges in the global gold price in the

early 2000s saw an uptick in production, driving gold to the top of the country’s export list. It is now Africa’s fourth largest producer, with an official production of 50 tonnes (taking into account both LSM and ASM) in 2019 (EITI, 2021; World Gold Council, 2020). According to data from BGR, this increased to 58 tonnes in 2020. It replaced cotton as the country’s main export commodity in 2009, rising from 2% of all exports in 2007 to 75% in 2019 (EITI, 2021; Munshi, 2021; OEC, 2021; Sollazzo, 2018).

The vast majority of officially declared gold production – remaining at around 99% from 2014-2018 – is produced by the LSM sector (USGS, 2021a; ANEEMAS, 2020). Industrial gold mining in Burkina Faso is concentrated in the Sahel, the Centre-North and the Mouhoun Loop. A chain of custody usually is implemented for the official exports coming almost exclusively from the LSM sector. The 1% of official exports coming from ASM sources are mainly exported through the National Agency for the Management of artisanal and semi-mechanised mining (ANEEMAS).

The country's main exploration projects include Essakane, Mana, Inata, Taparko, Youga, and Bissa (EITI, 2021). The gold sector is an important contributor to government coffers. The extractives sector – of which gold takes the largest share – made up 12.19% of GDP in 2019 and 8.23% of government revenues (although this share could be higher if artisanally-produced gold was legally exported) (EITI, 2021).



Figure 5: Karatinga mine site, Burkina Faso (Photo: Traore 2021)

Artisanal mining is widespread and has become an important economic sector for a large number of people in the country. Accurate estimates of employment by ASM are difficult to come by, as the sector is largely unregulated. Estimates range from 200,000 to 1.2 million – the discrepancy may

be partly due to differences in defining ASM operators (IGF, 2017; Mondlane, 2017). A 2018 OECD report estimates between 1-1.2 million people directly involved in ASM – 13% of the total labour force in Burkina Faso – of whom an estimated 300,000 are diggers (Sollazzo, 2018; World Bank, 2020b). In

2018, there were 500 – 700 officially listed (formal) ASM sites in the country (Sollazzo, 2018).

In terms of production, ASM sites in Burkina Faso range from fully artisanal – where all work is conducted manually using hand tools – to semi-mechanised, where machines such as crushers and water pumps are used to increase the productivity of a site. The size of sites also varies significantly – our field research included visits to a small, village-run site, as well as a site where the high season would see more than 2000 people working on gold extraction. Due diligence measures are generally not implemented at either of these types of ASM sites. However, there have been sensitisation and training efforts at a few selected sites through some of the projects and interventions by the OECD, ARM

and others (see further below). The direct extraction (i.e. digging), is generally conducted by men, while women tend to work on manual crushing and washing of ore to produce a concentrate.

The gold produced at artisanal mine sites in Burkina Faso is generally processed on site. As in many ASM sites around the world, ore is crushed, washed and, often, amalgamated using mercury. At large sites, there tend to be separate areas for digging, crushing/washing and processing (with mercury). Large sites also tend to have workers with greater specialisations – for example pit owners, teams of diggers, machine operators, washers, sellers of goods and services, etc. Other sites operate in a more community-run manner, with family groups taking joint responsibility for tasks and production.



Figure 6: Korssimoro mine site, Burkina Faso (Photo: Traore 2021)

Artisanal gold production at ASM sites and nationally is difficult to estimate. The ASM sector in Burkina Faso is characterised by under-declaration.

The sites visited in the field reported a production of around 1kg per month, which for the size especially of the larger one is likely to be a gross

under-estimation. National data is also implausibly low. ANEEMAS reported an ASM production of 259kg and 267kg in 2019 and 2020 respectively (ANEEMAS, 2020). Actual production is thought to be far higher. An analysis of mercury emissions and stakeholder interviews put the figure in 2018 at around 20-25 tonnes annually (Sollazzo, 2018).

ASGM activity is not thought to have decreased significantly since then – high international gold prices are likely to mean that ASGM continues to provide an important source of income for many Burkinabé, especially in the context of high levels of internal displacement due to the ongoing conflict in the northeast regions of the country.

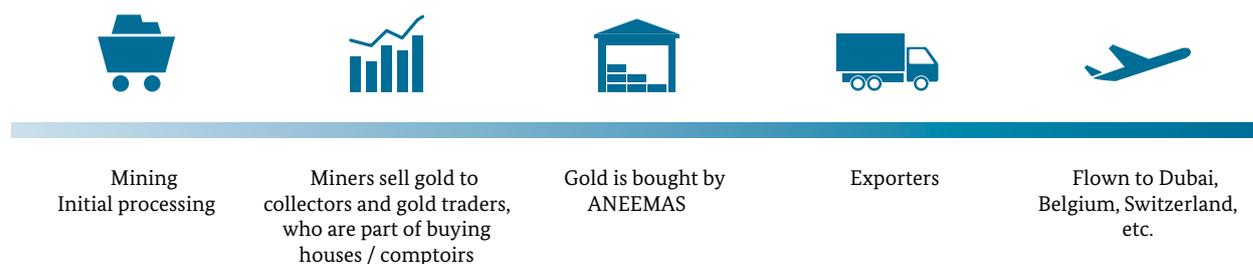


Figure 7: Simplified supply chain of gold within Burkina Faso.

Once produced, artisanal gold is normally sold to ‘collectors’ – small buyers who buy gold directly from artisanal miners at mine sites. Officially, these collectors have to be linked to a formal gold trader and exporter, called a *comptoir* (Sanou & Holmes, 2021). *Comptoirs* will often pre-finance collectors, who act, as their name suggests, as vehicles for transporting gold from a wide number of sites to the *comptoirs*, who act as aggregators for artisanal gold. Officially, *comptoirs* sell locally to ANEEMAS as well as the local jewellery sector. However, ANEEMAS reportedly lacks capital and systems to buy large amounts of gold from *comptoirs* (Sanou & Holmes, 2021). Gold that does go through ANEEMAS can be exported, and *comptoirs* can also export directly. Data collected in the field identified Dubai, Belgium and Switzerland as destinations for the ASM gold produced, and there are likely to be others.

It is likely that the vast majority of ASM gold from Burkina Faso does not pass through the formal channels described above but is traded informally. This can take a number of different forms. Collectors can buy gold from sites, and then sell to unlicensed traders or business people, often in neighbouring countries, without declaring the trade to the authorities in Burkina. Interviews uncovered reports that important traders involved in the smuggling of gold from Burkina Faso are also sometimes mine site owners, obliging all gold pro-

duced on the site to be sold to them. Togo and Mali are well known points of aggregation for informally traded and smuggled Burkinabé gold due in part to their much lower export taxes and entrenched smuggling networks. Togo, which does not produce any of its own gold, has an export tax of 50,000 CFA (\$85 USD) per kilo compared to around 200,000 CFA (\$343 USD) per kilo in Burkina Faso. In addition, the tax rate for one kilo of exported gold is applied also in cases where the export is less than one kilo – disproportionately increasing the cost for formal exports of small lots.

Information from the field showed that artisanal miners themselves also sometimes travel directly to *comptoirs* in Burkinabé cities, bypassing collectors altogether, in order to obtain better prices for their gold. Finally, gold can pass through all the official channels (except ANEEMAS) and remain undeclared. Information from the field confirmed, for example, that high taxes and fees on the trade and export of gold, as well as on the mandatory repatriation of funds from exported gold, drive many *comptoirs* to trade only a small proportion of the gold they buy through official channels. In order to keep their trade and export license active, *comptoirs* are obliged to declare 50g per year to ANEEMAS. Interviews in-country revealed that *comptoirs* often declare the minimum amount to the authorities and smuggle the rest. Furthermore, it is likely that there are significantly more *comptoirs*

than are currently listed as active by the authorities. Data obtained from the Ministry of Mines of licensed comptoirs as of July 2021 shows only 38 registered comptoirs, but interview participants confirmed the unofficial number is far higher (Ministry of Mines and Quarries, 2021). Finally, there is a growing risk of control of artisanal gold supply chains in Burkina Faso being controlled directly by armed groups, who participate directly in the informal trade and smuggling of gold. Both gold smuggling and armed group involvement in the gold sector are discussed in more detail below.

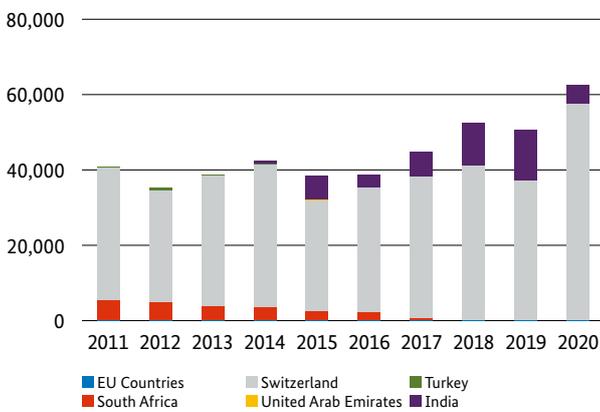


Figure 8: Gold exports (kg) declared by Burkina Faso by destination. Source: Comtrade

Official exports from Burkina are reported to go largely to Switzerland to be refined, with recent years seeing India take an increasing share (see Figure 8). Given the high levels of smuggling of artisanal gold, the vast majority – around 99%, based on ASM gold export data from ANEEMAS – of official exports come from industrial production. Destinations for artisanal gold are more difficult to verify, as they do not appear in official statistics. The majority is likely to be smuggled to the UAE, although information from the field suggests that the UAE may not be the only destination. Other destinations were cited by comptoirs and ANEEMAS, all of whom deal only with artisanal gold, were Belgium and Switzerland, with reports that some comptoirs sell directly to refineries in those countries. This is significant, because both the comptoirs and ANEEMAS act as aggregators for artisanal gold with little monitoring as to which sites they are sourcing from or the conditions on these sites. This means that artisanal gold with significant risk of presence

of Annex II risks may be passing directly to European refineries. This is not a problem in itself, as long as proper due diligence is being conducted. However, the likelihood of thorough due diligence being possible throughout the Burkinabé supply chains (upstream from exporters) is very low, because no comptoirs interviewed reported monitoring or keeping track of the provenance of the gold they buy, or of visiting sites with the intention of better understanding how the gold they buy is produced.

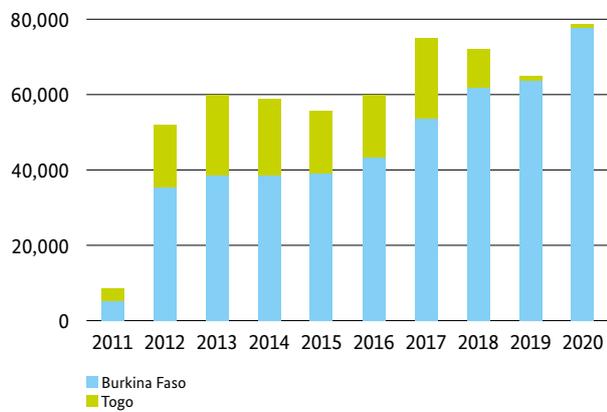


Figure 9: Combining reported gold imports (kg) from Burkina Faso and Togo is likely to give a more accurate picture of actual gold exports from Burkina Faso, of which a large share goes through Togo. Source: Comtrade

To get a sense of estimated total (declared and undeclared) exports from Burkina, including both LSM and ASM production, it is necessary to look at imports from Burkina Faso as declared by the country’s trading partners, and to do the same for Togo (See Figure 9). Given how much gold from Burkina is likely to travel through Togo, this gives a simplistic overview of gold production in the country, both ASM and LSM. Of course, some of the gold passing through Togo may come from other locations such as Mali, and some ASM gold from Burkina is smuggled directly to Mali. But despite these limitations it is possible to get a sense of the scale of undeclared production from Burkina Faso: Exports out of Burkina are reported at slightly above 60 tonnes for 2020 (Figure 8), whereas imports from Burkina Faso are reported at almost 80 tonnes for the same year (Figure 9). This highlights the extent to which fraudulent misrepresentation

and illicit trade are key risks in gold supply chains of Burkina Faso provenance.

3.1.1 Political and legal framework conditions of the sector

Mining activity in Burkina Faso is governed by the Mining Code, instituted by Law n° 036-2015/CNT of 26 June 2015 replacing the 2003 Mining Code (EITI, 2021). The code flows out of the Mining Sector Policy, adopted in 2013 for the period 2014-2025 to replace the 1996 Mining Policy Statement (EITI, 2021). Its vision is for the mining sector in Burkina Faso to be competitive and to constitute a real level for sustainable socio-economic development (EITI, 2021). Finally, the Mining and Quarrying Strategy 2017-2026 aims to increase the sector's potential for sustainable development including, among other things, an increase of the share of the extractive industries in GDP from 7.9% in 2015 to 12% by 2026, to increase local purchases in the consumption of the extractive industries from 14% in 2015 to 30% in 2026 and to increase the number of direct jobs created by the sector to 20,000 in 2026 compared to 10,000 in 2015 (EITI, 2021). It is clear that these numbers do not take into account the ASM sector, which is estimated to employ almost 1 million people. During 2017, the mining sector also saw the promulgation of law 028-2017 on the organisation of the marketing of gold and other precious substances in Burkina Faso (EITI, 2021). The government's mining policy is implemented and monitored by the Ministry of Mines and Quarries (MMC).

The Ministry of Mines and Quarries implements and monitors the government's mining policy. In addition, the management of mining activities mobilises several structures of the Ministries in charge of Mines, Finance, Environment and Territorial Administration.

The policy and legal framework of West Africa – including Burkina Faso – has historically been seen to favour the development of large-scale mines and marginalise ASM, which is seen as a primary cause of problems for the sector and its development (Sollazzo, 2018). However, policy developments in Burkina Faso in recent years show promise in terms of the establishment of a more inclusive mining

sector. The sectoral policy of 2018 on 'Industrial and Artisanal Transformations' takes into account the development of the mining sector for inclusive growth and sustainable development (EITI, 2021). Attempts have been made to regulate and formalise ASM. This included the establishment of the National Agency for the Management of artisanal and semi-mechanised mining (ANEEMAS) in 2015, mandated to regulate, monitor and support ASM production and trade (Decret N. 2015-1420/PRES-TRANS/PMMEF/MME Portant Création de l'Agence Nationale d'Encadrement Des Exploitations Minières Artisanales et Semi-Mécanisées En Abrégé "ANEEMAS," 2015).

ANEEMAS was set up with the sole mandate of supervising and monitoring artisanal and semi-mechanised gold mining activities in Burkina Faso. It was intended to act as a 'one-stop-shop' for ASGM for licensing miners and traders, providing support to the sector, reducing fraud in the gold trade, minimising negative social and environmental impacts from the sector, as well as providing a reliable market for artisanally-produced gold in the form of a state-sponsored buying scheme. According to interviews with ANEEMAS, the agency was intended to present an opportunity to take back control of the ASGM sector in Burkina Faso, following a decade-long period where government control of the sector was very limited. In 2018, for example, there were 500 – 700 officially listed ASM sites in the country, only 25 of whom had valid permits (Lewis et al., 2019; Sollazzo, 2018).

In 2019, a system was put in place by ANEEMAS to try to increase the formalisation of the sector. Four categories of cards or licenses were developed for those working in the ASM sector. These include a miner's card (10,000 FCA / year (\$17 USD)), a service provider's card, e.g. for machine operator (50,000 FCA / year (\$86 USD)), a small buyer / collector's card (100,000 FCA / year (\$173 USD) and a site owner's card (who becomes an intermédiaire agréé, and must have signed an agreement with the government) (250,000 FCA / year (\$431 USD)). These cards intend to lower the bar for entry into the formal sector for actors in ASM supply chains and take into account the different roles that exist. This is even more the case with the site owner's card (intermédiaire agréé), which was created as a solution

for formalising artisanal operations where traditional licensing was not suitable, for example ASM operations on industrial concessions or large ASM sites under customary control (DeJong, 2019). It is likely to be the first in West Africa to formally organise miners outside of traditional licensing frameworks (DeJong, 2019).

While these innovative solutions in theory lower the bar for entry into the formal sector for actors in ASGM supply chains in Burkina Faso, they have not been widely implemented and may actually constitute another barrier for formalisation, due to the costs and paperwork associated with obtaining such cards for the individual, and also the backlog in issuing them caused by the lack of resources in respective Government agencies. According to an interview with ANEEMAS, only 3000 ASM cards have been distributed, meaning that the vast majority of the 200,000 – 1.2 million people working in the sector remain informal. Up to date statistics on agreements under the *intermédiaire agréé* system were not available, but in 2019 only 44 agreements had been put in place, with the process taking time because of the need for buy-in from local authorities and communities (DeJong, 2019). As a recommendation, the German development cooperation could consider, therefore, supporting the further implementation of these formalisation efforts, as well as encouraging a deeper understanding as to the impacts of the system on the ASM sector, and whether it has the potential to be applied in other contexts.

The gold trade in Burkina Faso is regulated by the Loi n. 028-2017/AN de 18 mai 2017 portant organisation de la commercialisation de l'or et des autres substances précieuses au Burkina Faso. This law replaces the Loi n.027-2011/AN du 15 novembre 2011 portant repression de la fraude en matière de commercialisation de l'or. The law outlines all the ways in which gold may be legally traded and exported from Burkina Faso. It includes specific provisions for the trade of gold of artisanal production, as well as for industrial production. For artisanal gold, traders must possess an *agrément* (authorisation) from the authorities, valid for three years. With this, they are authorised to buy, sell and export gold under the conditions of the present law. The law also includes provisions for informal min-

ers, something that is innovative in the regulation of artisanal mining on the continent. All artisanal miners are obliged to sell their gold to the owner of the ASM permit on which they are operating. The owner is then obliged to sell all the gold they obtain either to a *comptoir*, or to ANEEMAS. Sites that do not have an ASM permit are automatically under the control of ANEEMAS. In terms of regulating the ASM sector and acknowledging that informality is a reality for many artisanal miners, therefore, the law is strong, and should be regarded as a good solution to regulating a largely informal sector. However, ANEEMAS' ability to control the sector has been limited by a lack of financial and structural resources. Reports from the field show that they are not able to offer miners competitive prices or a reliable market, and as such do not capture very much of the artisanal gold that is produced, as highlighted in their export statistics. Licensing has been slow as described above, and much more work is needed to support the implementation of their intended reforms.

Secondly, there is no provision in the law as to proof of origin of gold, or of any collection of chain of custody information along the supply chain. This is a major weakness in the potential for Burkina Faso to become a strong enabling environment for the implementation of due diligence. The law does outline in detail the gold trading practices that are considered to be fraudulent. These include, for example, trading without a license and selling to non-licensed traders, import or export of gold without declaring to the authorities, disguising or misrepresenting the value of a gold lot in any way, and non-payment of taxes, amongst others.

The legislation should go further to define the practices that should be obligatory under the law and that would support supply chain traceability of gold and other products. Currently, the only relevant requirement in the law is that exports are subject to the presentation of the required documentation. Our research was not able to ascertain exactly which documentation was needed, other than proof that the exporter has authorisation / license to export. Proof of origin or chain of custody information is not required. The requirements for exports should be widened to ensure the collecting of chain of custody information along the supply

chain, including proof of origin, and ensuring that production and trade practices are responsible. Given the low capacity of most ASM producers to collate and register this information, the responsibility of collating chain of custody information should fall at the point of export, where financial and human resources tend to be less constrained. These legal requirements should be implemented in conjunction with capacity building to supply chain stakeholders – in particular exporters – to collect chain of custody information and conduct due diligence on their supply chains in an inclusive, supportive and responsible way, in collaboration with downstream actors and other organisations where extra support is necessary.

Other governmental entities relevant to the production and trade of gold in Burkina Faso include:

- The National Anti-Fraude Brigade for Gold (BNAF) whose mission is to investigate and establish offences relating to the marketing of gold and other precious substances. It is the reference structure at national level, which coordinates the activities of the fight against fraud in the field of the marketing of gold and other precious substances.
- Bureau of Mines and Geology of Burkina Faso (BUMIGEB) is responsible for supporting the

identification and recovery of mineral substances in the soil and subsoil, supporting the promotion and development of small-scale mining, and ensuring the implementation of various mining and environmental safety controls, as well as completing the assay of gold prior to export.

- National Office for the Security of Mine Sites (ONASSIM) whose objective is to ensure safety and to contribute to the improvement of safety conditions for the exploitation of mining sites.

3.1.2 Identification of relevant local, regional and national actors

The below table below presents key groups of stakeholders who are active or have a mandate over the gold sector in Burkina Faso, including both industrial and artisanal production. All have a different part to play in the strengthening of due diligence implementation in the sector, and specific interventions should make sure to take into account the potential for collaboration with each stakeholder group on a case-by-case basis.

Table 4: Stakeholder mapping Burkina Faso

Stakeholder	Organization	Mandate related to 3TG / due diligence
Governmental Organisations	Ministry of Mines and Quarries (MMC)	Overall responsible for the mining sector, in particular the implementation and monitoring of the Mining Policy, supported by a number of other agencies as described below.
	The General Directorate of Mines, Geology and Quarries (DGMGC)	<p>Design, development, coordination and implementation of the ministry's policy in the field of mining, geology and quarrying</p> <p>Promotion of activities related to the research and exploitation of mining substances;</p> <p>Promotion of activities related to the research and exploitation of quarry substances;</p> <p>Preparation and organisation of meetings of the national mining commission (CNM)</p> <p>Dissemination of documentation relating to the regulation of mining activities</p> <p>Computerisation of the management of mining titles;</p> <p>Collecting fees on mining titles;</p> <p>Search for partners for the exploitation of mineral substances and the corresponding developments.</p> <p>Mine site inspections</p>
	The General Directorate of the Mining Cadastre (DGCM)	<p>Developing and enforcing regulations on geological and mining research</p> <p>Controlling and monitoring the execution of geological and mining research programmes</p> <p>Proposing the withdrawal of permits in case of non-compliance with the programmes;</p> <p>Keeping a technical file of all research permits in progress in the country;</p> <p>Centralising all the results of geological and mining research work carried out on the national territory</p> <p>Synthesising geological data from the regions of Burkina Faso and ensuring that geological mapping is updated;</p> <p>To establish and maintain a file of mineral occurrences.</p>

Table 4: Stakeholder mapping Burkina Faso

	The General Services Inspectorate (IGS)	<p>This service monitors mining sector structures under the supervision of the Ministry as well as the activities of natural or legal persons operating in the mining and energy sectors in Burkina Faso.</p> <p>It can monitor and inspect companies in relation to the payment of taxes.</p>
	The Bureau of Mines and Geology of Burkina Faso (BUMIGEB)	Ensures control of the quality and quantity of the gold before export.
	Agence Nationale d'Encadrement des Exploitations Minières Artisanales et Semi-Mécanisées (ANEEMAS)	<p>Supervise and monitor artisanal and semi-mechanised gold mining activities;</p> <p>Help minimise the negative impacts of artisanal mining on the environment;</p> <p>Help ensure better security on the sites;</p> <p>Help reduce fraud in the marketing of the gold produced;</p> <p>Help eradicate child labour on artisanal mining sites.</p> <p>Buying from the ASM sector</p>
	National Anti-Gold Fraud Brigade (BNAF)	<p>The BNAF intervenes on denunciation, information, unannounced control, valid counters, control of counters, semi-mechanized, frauds in the marketing of gold (Law n° 027-2011/portant repression of fraud in the marketing of gold,</p> <p>Verify the repatriation of export earnings for foreign exchange (comptoirs, companies, all actors in the gold trade)</p>
	Local Development Mining Fund Commission (FMDL)	The Commission oversees the implementation of the Mining Fund for Local Development;
	Ministry of Economy, Finance and Development (MINEFID)	Collects taxes and other royalties related to mining activity in the country
	Office National de Sécurisation des Sites Miniers (ONASSIM)	<p>ONASSIM is a public administrative establishment of the State (EPA) with financial autonomy. Its objective is to ensure safety and contribute to the improvement of safety conditions for the exploitation of mining sites.</p> <p>Conducts health and safety inspections at large scale mines</p>

Table 4: Stakeholder mapping Burkina Faso

	The Ministry of Environment, Green Economy and Climate Change (MEEVCC)	<p>Implement the environmental assessment policy for projects; impact notices, reports, environmental inspection,</p> <p>A presidential decree created ANEVE, which provides a framework for the environmental monitoring of mining projects, ANEVE carries out inspections of mine sites.</p> <p>Strategic assessment of mining and industrial projects environmental inspection, audit and monitoring;</p> <p>No intervention on gold panning sites;</p>
LSM	Iamgold, Semafo, Endeavour, Avocet, Nordgold, etc	Mining companies comply with social and environmental standards as required by their shareholders;
ASM Associations	Syndicat des exploitants miniers artisanaux du Burkina	<p>A national level association for artisanal miners, with local level arms.</p> <p>Conduct awareness-raising for ASMs, as well as support informal ASMs with formalisation. They also control access to a number of mines, requiring ASMs to become members of the association in order to be able to access the mine sites.</p>
	ASM associations and cooperatives at the local level	Other ASM associations exist at the local level. Characteristics of the associations differ by location.
Civil society	Organisation for Capacity Building in Development (ORCADE)	<p>Advocacy campaigns on the inadequacies of the regulatory texts,</p> <p>Awareness raising on human rights, community rights for the improvement of laws and regulations.</p> <p>The coalition was involved in advocacy on the review of the 2003 Code, which resulted in the 2015 Code.</p>
	L'Association des Femmes du secteur minier du Burkina en abrégé (AFEMIB)	Civil society organisation operating since 2000 with an objective to support women in mining in Burkina Faso through the improvement of working conditions for women and greater inclusion into the mining sector, both LSM and ASM.
Comptoirs		<p>Trade and export of gold.</p> <p>Key supply chain node for artisanal gold in Burkina Faso. First place of aggregation of gold from different sites.</p>

Table 4: Stakeholder mapping Burkina Faso

Industry associations	The Burkina Chamber of Mines (CMB)	<p>Created in 2011 to represent the interests of the private mining sector in Burkina. Currently comprises of over 50 entities, including LSM, geoservices (e.g. labs), other service providers, etc</p> <p>Promotion of the mining sector, in particular of competitiveness within the mining sector</p>
International organisations	Artisanal Gold Council, RESOLVE and the Responsible Business Alliance's (RBA) Responsible Minerals Initiative (RMI)'s Scalable Trade in Artisanal Gold (STAG) project	Funded by the European Partnership for Responsible Minerals (EPRM), STAG is a three-year project focused on scaling up legal trade in artisanal gold. The project will connect upstream field sites to the midstream through the Responsible Minerals Assurance Process (RMAP) and the CRAFT Code and will engage and educate downstream buyers through its Progressive Due Diligence Lab. "Engage to Improve" is both the motto of the project and the strategy that it is using to improve Burkina Faso's artisanal and small-scale gold mining (ASGM) sector.
	Alliance for Responsible Mining	Project supporting the establishment of legal artisanal and small-scale mining (ASM) in Burkina Faso in the Central-west, Central-north and South-west.

3.2 Risks to due diligence compliance in the raw material supply chain

The following section presents the key risks that are present in gold supply chains in Burkina Faso. Given the focus of this study on the EU Due Diligence Regulation, the below section focusses on the risks included in the OECD Due Diligence Guidance Annex II, as the main red flag risks that are encompassed by the Regulation.



Serious abuses in the extraction, transport or trade of minerals



Child labour

Child labour is a common occurrence at gold mining sites in Burkina Faso. While accurate figures are

difficult to come by, it is estimated that as many as 30-50% of the mining workforce may be minors (World Bank, 2020a). Children work all along the mineral supply chain and are often exposed to toxic chemicals used in gold processing, such as cyanide and mercury (U.S. Department of Labor, 2019). Worst forms of child labour are commonplace at mine sites and have been for a long time (Le Faso. Net, 2020; Tongnoma, 2020; White, 2002).

A number of programmes have been put in place in the past to tackle child labour in gold mining, although the US Department of Labour determines the scope of these projects insufficient to fully addressing the extent of the problem (U.S. Department of Labor, 2019).

Information from the field confirms the widespread presence of children at mine sites, with children of all ages present at all the sites visited.

However, these visits also highlighted the complex drivers of presence of children at mine sites. In Burkina Faso, this includes for example the high levels of internal migration that has taken place as a result of the worsening conflict in the northeast of the country. Displaced families living in temporary accommodation and uprooted from community networks are not able to access sufficient support in the form of childcare. At the same time, for many of these displaced communities, ASGM provides the only form of income they can access. They are forced, therefore, to bring children with them to the mine site. These children often work at the mine site in order to supplement their meagre family incomes.

Value chain stages: Mining and initial processing/ aggregation



Sexual violence

Burkina Faso is facing a rapidly increasing crisis of sexual violence. While rates of sexual and gender-based violence (SGBV) have historically been high, the rising internal displacement due to the violent insurgency by non-state armed groups puts women at particular risk of sexual violence by these groups. There are reports of sexual violence perpetrated by members of armed groups against women who go back to collect belongings from villages from which they were forced to flee (Mednick, 2021b). Sexual violence also appears to be used as a weapon of war by armed groups, with many attacks taking place in public during village attacks (Oxfam, 2020).

Information from the field confirmed that sexual violence is thought to be relatively widespread in the ASM sector and in surrounding communities, but underreported.

Value chain stages: All along the upstream value chain



Forced labour and human trafficking, including sex trafficking

There is significant risk of human trafficking in Burkina Faso generally, both as a country of origin of trafficked people elsewhere, and as a destination for

trafficking of people of other nationalities. Significantly to 3TG supply chains, artisanal gold mining towns are reportedly hot spots of sex trafficking destinations in the country (U.S. Department of State, 2021a). Links have been uncovered between Nigerian sex trafficking rings and women forced into sex work in artisanal gold mining sites in Burkina Faso, where Nigerian women are reportedly brought to Burkina Faso under false pretences and then sold into the sex trafficking trade (Mednick, 2021a).

There are also reports of children being fraudulently recruited by traffickers under the pretences of education opportunities and forced to work in agriculture or artisanal and small-scale gold mining (ASGM) (U.S. Department of State, 2021a). The rapid increase of internally displaced people (IDPs) in Burkina Faso – which now total over 1 million people – as well as the spread of control by violent non-state armed groups increases the population's vulnerability to trafficking and forced labour (U.S. Department of State, 2021a).

Value chain stages: Mining and initial processing/ aggregation



Direct or indirect support to non-state armed groups

Since 2017, Burkina Faso has been experiencing an increasingly deadly rural conflict, spearheaded by a number of non-state armed groups primarily in the north and east of the country. Three groups are active: Ansarul Islam, the Group to Support Islam and Muslims (JNIM), and Islamic State in the Greater Sahara (ISGS) (ACAPS, 2021). The conflict started primarily in the tri-border region between Mali, Niger and Burkina Faso and saw the deaths of 2,440 civilians across the Central Sahel region in 2020 alone (Global Centre for the Responsibility to Protect, 2021). In Burkina Faso, it has resulted in over 2,600 battle-related deaths since 2017 (the total death toll is likely to be much higher), and over 1.3 million internally displaced persons (IDPs) (UCDP - Uppsala Conflict Data Program, 2021; UNHCR, 2021). The intensification of the conflict is tipping the country to the brink of a humanitarian crisis.

The conflict is of growing significance for minerals supply chains in the country. Links between

the conflict and gold production a few years ago were largely anecdotal – research conducted in 2017 and 2018 found no conclusive evidence of links between artisanal gold sites and non-state armed groups in the region (Martin & Helbig De Balzac, 2017; Sollazzo, 2018). More recently, however, attacks on gold mines – both industrial and artisanal – in Burkina Faso by non-state armed groups have grown increasingly common. Gold is now thought to be the largest source of revenue for the armed groups operating in Burkina Faso, and there is mounting evidence that the armed groups are specifically targeting artisanal gold sites in order to control the production of these sites (Munshi, 2021). The control of artisanal gold sites by armed groups is thought to have grown in re-

lation to the spread of the insurgency. The pattern of armed group activities appears to entail attacks on sites during which miners are either killed or forced to flee, with the group then taking control of the mine. The latest significant attack on a gold site was in June 2021 on a mine in the North Eastern Yagha province where 140 people were killed (Dufka, 2021). It was the deadliest attack in the country's history (Munshi, 2021). As well as deadly attacks, armed groups also reportedly use ASGM sites as places to recruit new members and attain the explosives and detonators they need to carry out attacks in other areas (Smith, 2021). They have also reportedly expelled gold traders from sites, preferring to buy the gold themselves or take a cut of production (Lewis & McNeill, 2019).



Figure 10: Map of attacks by non-state armed groups with gold mine locations in Burkina Faso between 2018 until June 2021. Source: Munshi, N. (2021)

Using data from the Armed Conflict Location & Event Data Project (ACLED), the above figure maps attacks by non-state armed groups with possible locations of (formal and informal) artisanal gold mining sites. As shown by the conflict data, the insurgency is concentrated in the north and east of the country, and there are many ASGM sites in the south and west of the country that are not affected. The correlation shown in this Figure does not imply causation – i.e. the spread of the insurgency is not necessarily only linked to the location of ASGM sites. However, as described in the text, numerous reports of armed groups benefitting from the ASGM sector exist, and the risk of conflict-financing from informal ASGM gold in Burkina Faso is high.

The scale of the benefit from gold sites by armed groups in Burkina Faso is immense. In 2019, of the 2,200 possible informal gold mines identified in a government survey of satellite imagery the year

before, around half were located within 25 km of places where militants had carried out attacks (Lewis & McNeill, 2019). Other than this geographical proximity, researchers at the time were not able

to ascertain to what extent armed groups were controlling or benefitting from the ASGM sector. Today, the link is clearer. Figure 10 shows the spread of attacks by jihadist groups from 2017 until June 2021, showing a clear expansion of armed group activities in line with gold mining locations (Lewis & McNeill, 2019; Munshi, 2021). Gold from these sites is likely to be accruing millions of dollars into the hands of the non-state armed groups. In 2018, government officials visited just 24 sites where jihadist attacks had taken place.

These sites produced an estimated 727kg of gold per year, worth about \$34 million according to the gold price at the time. A 2020 report by the US Department of State estimated that since 2016, armed extremist groups had reaped 70 billion CFA francs (\$126 million) from attacks on mining sites (U.S. Department of State, 2021b). Soaring global gold prices as well as increasing numbers of gold sites from which armed groups benefit mean that the value accruing to the groups today is likely to be even higher.

While the precise links between armed groups and the gold sector could not be verified through reliable data from the field, there were some indications as to the existence of this link. The interviewee from BNAF, for example, reported that there are many artisanal gold sites in the north of the country, which are no longer accessible to be monitored by government authorities because of the security risks from armed groups at and around the sites. Furthermore, many of the miners at the visited sites had been displaced from gold mining areas in the north by the conflict. It is common for displaced families to take up ASGM as a livelihood, and frequently camps of the displaced are set up next to mine sites, which increases risks for their health and safety and also for child labour or children being impacted by mining activities. In addition, the displaced often take the most difficult, precarious jobs in the ASGM value chain, often out of necessity and frequently without any protections, causing grave impacts on their health and safety.

Another worrying development is attacks by armed groups on large-scale mining operations. Most of the attacks tend to be on land convoys transporting staff to mine sites. Canadian company Semafo,

for example, took the decision to fly foreign staff to mine sites by helicopter following attacks on its convoys in 2018 (Sollazzo, 2018). A further attack on a Semafo convoy, carrying local employees, in 2019 resulted in the deaths of 37 civilians and injuries to 60 more, and resulted in the closure of the gold mine (Reuters, 2019a). Acquired by Endeavour, the mine reopened in October 2020 (Reuters, 2020). More recently, IAMGOLD suspended convoys to and from its Essakane gold mine near the border with Niger, after a convoy was attacked in September 2021 (Jamasmie, 2021).

Abductions have also taken place – in 2018 three employees of the Inata gold mine, near the Malian frontier, were abducted by a group of men strongly suspected by the authorities to be linked to terrorist organisations based in Mali (Sollazzo, 2018).

Value chain stages: Mining, initial processing/aggregation, transport and trade



Public and private security forces

The illicit involvement of public and private security forces in gold mining in Burkina Faso constitutes a risk. There are reports of officers from public security forces participating in extortion at sites they are supposed to be overseeing, especially in the southwest of the country (Sollazzo, 2018). There are also reports of security officers – allegedly with the support of local politicians – facilitating the production of gold at sites that have been closed by the government, e.g. the Poura site which has been officially closed since 1999 (Sollazzo, 2018).

Extortion of mine site operators by police is also a risk, and is traditionally referred to as *tracasserie*. It can involve the levying of illegal taxes by security officials or the illicit seizure of gold by police or other authorities. A government anti-corruption hotline receives frequent reports of *tracasseries* (Sollazzo, 2018). Customary authorities have also been reported to demand payment (not foreseen by the law) in return for access to mine sites (Sollazzo, 2018).

There are also reports of violence against artisanal gold miners by public security forces at large-scale

gold mining sites. In September 2021, eight people reportedly suffocated to death when police used tear gas against unauthorised gold miners at Nordgold's Bissa mine (Reuters, 2021a).

Other groups that have been accused of committing grave human rights abuses include the Volunteers for the Defence of the Homeland (VDP, by its French initials), a citizen security force set up in 2019 to assist Burkina Faso's army in its fight against the violent insurgency. Members of the VDP are reported to have been involved in unlawful or arbitrary killings, including extrajudicial killings by the government and extremists; forced disappearance by the government and extremist groups; torture and cases of cruel, inhuman, or degrading treatment or punishment by the government; harsh and life-threatening prison conditions; arbitrary detention by the government; serious abuses in an internal conflict; serious acts of corruption; crimes involving violence or threats of violence targeting members of national, racial, and ethnic minorities; and the worst forms of child labour (U.S. Department of State, 2021b). However, stakeholders (comptoirs and miners) state that there do not appear to be strong links between the VDP and the extraction of gold.

Value chain stages: Mining, initial processing/ aggregation, transport and trade



Bribery, fraudulent misrepresentation, and non-payment of tax

The quantities of gold smuggled from Burkina Faso are thought to be significant. Taking Sollazzo's lower figure of 20 tonnes estimated produced per year by the ASM sector, we see that the official ASM production as declared by ANEEMAS makes up only 1% of total ASM production in the country, leaving 99% unaccounted for by official production. Smuggling of artisanal gold from Burkina Faso often occurs through the porous borders with its neighbours, although sometimes directly through Ouagadougou airport, aided by corrupt officials (Lewis & McNeill, 2019). It is smuggled in a variety of ways – land transport, strapped to cattle, hidden in bales of hay or on the bodies of traders (Lewis & McNeill, 2019). Togo – which produces very little of its own gold

but has a favourable export tax rate – is thought to be one of the main destinations for smuggled Burkinabé gold, which is then flown to Dubai, mostly in hand luggage on commercial flights (Munshi, 2021). As the dealers involved in the smuggling do not pay tax, this enables them to pay high prices for the gold they buy and thereby ensure consistent supply (Sollazzo, 2018). This means, however, that the illicit gold trade is depriving the country of millions of dollars in potential tax revenue.

It also means that the formal gold supply chain, and entities like ANEEMAS with a mandate to buy up artisanal gold, cannot compete with the prices offered by the illicit trade. Before the COVID-19 pandemic, artisanal miners at mine sites were reportedly receiving around 94% of international spot price (for gold ranging from 20-23 carats, depending of the site and the production process), which leaves very little margin for costs such as the payment of taxes (Artisanal Gold Council, 2020). The pandemic had a devastating effect on mine site prices due to the closure of international borders and supply chain disruptions, with prices falling as low as 55% of spot price in mid-2020 (Artisanal Gold Council, 2020). Today, gold prices at Burkinabé sites are back up to 79% spot price (Artisanal Gold Council, 2020). Interviewees for this report spoke of an average of 80% paid at the level of mine sites, resulting in smaller traders being unable to compete with larger ones who can offer these prices. One of the main reasons that interview participants gave for ASMs not selling to ANEEMAS was that their prices were very low compared to what can be obtained in the illicit market. This point was corroborated even by ANEEMAS themselves. Informal traders, on the other hand, can afford to pay high prices at the mine site because their operating costs are lower, and they can recover losses on gold transactions by circumventing formal financial systems. Firstly, the informal trade avoids taxes and the bank fees associated with the mandatory repatriation of funds, lowering their operating costs. Secondly, while overall transactions in the illicit gold trade may cost 105-110% of the price of the gold smuggled, this cost can be offset by the import of other goods from Dubai and re-sale for a markup of 25-30% back in Burkina Faso, enabling them to purchase more gold at inflated prices (Sollazzo, 2018).

The majority of the gold smuggled out of Burkina Faso is thought to end up in the United Arab Emirates to be refined. Over the past two decades, Dubai has emerged as a global hub for gold refining, as well as a key destination for artisanally produced gold from Africa (Blore & Hunter, 2020; IMPACT, 2020; Martin & Helbig De Balzac, 2017; Martin & Taylor, 2014). Dubai's customs legislation does not place rigorous certificate of origin requirements on hand carried gold, meaning that artisanal gold from a location such as Burkina Faso can be imported into the UAE relatively easily and absorbed into the country's vast gold market. As well as avoiding rigorous due diligence, these trade links also allow traders to circumvent formal finance. Using gold as currency enables them to circumvent formal financial institutions and the checks and balances that they entail. Traditional methods of transfer such as hawala or modern methods such as phone-based money are also used to the same end (Sollazzo, 2018), though at the level of the first transaction between miner and trader, it appears to be exclusively cash payments, due to the lack of trust and the necessity of fast payments

Value chain stages: All along the upstream value chain from mining to export

Other Risks



Gender

Estimates suggest that the role of women in ASM in Burkina Faso may be significant, although accurate data is hard to come by. One estimate puts the number of women working in ASM in the country as high as 45% (Mondlane, 2017). For those working in ASM, the sector represents both economic opportunities that may not be found elsewhere, as well as a greater sense of personal freedom (Werthmann, 2009). Economic activities in gold mining camps tend to follow the gendered patterns of wider society. Women are generally marginalised to peripheral, less well-remunerated roles and do not tend to be involved in the digging or management of pits or in the gold trade, although some exceptions do exist (Werthmann, 2009). Despite high representation in terms of numbers, therefore, it is likely that women are marginalised in the sector and do not experience equality with their male counterparts. Research has

also shown examples of women becoming excluded from sites following greater mechanisation, where their traditional roles at sites such as crushing and washing are rendered obsolete (Hinton, 2016). This is confirmed by interviews for this report, where women state that they face difficulties in accessing permits or equipment, including health and safety equipment, and that they are mainly paid as daily labourers through a daily stipend, rather than a share in the sale of gold.

Value chain stages: Mining and initial processing/aggregation



Environment

Environmental risks are also of concern in Burkina Faso. Firstly, the use of mercury in ASGM is widespread, the emissions of which have significant negative impacts on both human health and on biodiversity and ecosystems in gold mining regions. The artisanal gold sector in Burkina Faso was classed by Mercury Watch in 2017 to be the fourth most significant contributor to mercury emissions worldwide, with an estimated 35 tonnes per year (IGF, 2017). Analysis done in 2014 also classed Burkina Faso as having one of the highest global consumption of mercury per unit of gold produced (Seccatore et al., 2014).

There are also reports of artisanal gold mining taking place – promoted by non-state armed groups – in protected areas in eastern Burkina Faso (Lewis & McNeill, 2019).

Value chain stages: Mining and initial processing/aggregation, crude refining

3.3 Measures to implement due diligence obligations

3.3.1 Challenges to due diligence implementation

In-country research found that understanding and knowledge of international due diligence frameworks in Burkina Faso was limited. Of all the types of actors interviewed along and around 3TG supply chains, including ASM, LSM, traders, civil society,

exporters, etc, only the government representatives had heard of any international due diligence frameworks, namely the EU Regulation and the OECD Due Diligence Guidance. ANEEMAS reported to have attended workshops on the OECD Due Diligence Guidance organised by international organisations including the World Bank, the Alliance for Responsible Mining and UNIDO, as well as having participated in the OECD Forum on Responsible Mineral Supply Chains. Other representatives with familiarity of the OECD Due Diligence Guidance included BUMIGEB. Other entities including the Ministry of Mines, ONASSIM and BNAF mentioned different initiatives such as the Kimberley Process, EITI and Publish What You Pay (PWYP).

In general, however, there appeared to be a lack of clarity among government stakeholders as to the differences between the initiatives mentioned above, and the specific implications of these frameworks for stakeholders on the ground in Burkina Faso. In particular, there was confusion amongst interviewees as to whose responsibility it is to implement the requirements of the OECD Due Diligence Guidance, and in turn the EU Regulation.

Practical implementation of due diligence requirements in Burkina Faso is hindered not only by a lack of understanding as to how they should be implemented and by whom, but also by limited government capacity to monitor and control the mining sector, in particular the ASM sector. Monitoring of the industrial mining sector also presents its challenges – one BNAF representative reported that compliance amongst industrial mining companies is not strong and that the authorities don't have sufficient authority in practice to monitor their activities in detail. These claims could not be corroborated, but they serve as a reminder that the industrial sector is not immune to risk and poor practices.

That said, limited control of the ASM sector presents the largest barrier to the implementation of due diligence in the country. No sector-wide industry or multi-stakeholder initiatives were identified in Burkina Faso that deal with issues related to due diligence or supply chain transparency or traceability. In the absence of such initiatives,

the way the artisanal supply chain is set up is not conducive to traceability, even when production and trade are conducted in a fully formal manner. Neither ANEEMAS nor the comptoirs reported to having any sort of monitoring system to track the origin of the gold they buy. The 'collectors' system used by both ANEEMAS and the comptoirs means that the gold they buy arrives to them already aggregated, and both reported to not being able to tell which sites provided which amount of gold. Moreover, neither reported having in place any system for mine site monitoring or spot checks in order to identify any risks that may exist in the mines they source from. Their sourcing decisions are purely commercial, and do not take anything like due diligence requirements into account.

ANEEMAS seems to have aimed to work with specific mine sites, however they do not have a permanent presence on the ground at these sites. They also lack the financial means to compete with prices offered by other buyers, as well as the financial and personnel resources to conduct "buying missions" at the mine sites on the ground. There is awareness of these challenges, and during the research period for this report, a study was under way that aimed at making recommendations for the improvement of ANEEMAS' mandate and mission. Political changes in the Ministry and the wider Government have affected ANEEMAS' resources and budget in recent months. The World Bank's programme to support land and mining management strengthening⁹ aims to tackle some of these deficits through financial support for ANEEMAS and the provision of sensitisation and training.

Moreover, the high levels of informality, both in terms of production and trade, would make any sort of sector-wide traceability initiative very difficult to implement. This appears to be exacerbated by the growing conflict, with more mine sites and mining regions inaccessible to government agents due to security concerns, and very high levels of smuggling.

3.3.2 Potential solutions for enabling due diligence

⁹ . Burkina Faso : la Banque mondiale apporte son soutien au renforcement de la gestion des terres et des mines

In spite of the challenges mentioned above, a number of entry points exist for the improvement of due diligence implementation in Burkina Faso.

Firstly, the legal and regulatory framework has potential to improve government oversight of the sector. The innovative legislation in place, which recognises a much wider variety of actors than a traditional licensing system, may – if properly rolled out – provide the opportunity for large-scale formalisation of the sector. In combination with good data collection and recording, in particular chain of custody data, this could provide a strong foundation for sector-wide traceability initiatives.

In line with the above, ANEEMAS mandate and mission could be further strengthened and supported, in alignment with the above mentioned World Bank programme. The institutions carrying out mine inspections, such as the Mine Inspection Service, ONASSIM, and BNAF show a willingness to play a role in the oversight and monitoring of due diligence practices, though establishing this would require support to build capacity and ensure sufficient resources.

However, the current conflict context means that it is unlikely that government oversight of the sector will be able to improve drastically in the near future. It is necessary, therefore, for solutions to be provided that can be successful in spite of the ongoing insurgency. These solutions are most likely to come in the form of localised due diligence initiatives that can support the responsible artisanal production and trade of gold on a small-scale, working with individual ASM sites to improve practices and provide access to responsible markets.

Such initiatives already exist, reflecting a trend of growing interest in Burkina Faso as both a significant producer of artisanal gold in the region, and a country where supply chains are exposed to serious risks. One such initiative is the Scalable Trade in Artisanal Gold (STAG) project. The project is the result of a partnership between the Canadian not-for-profit organization and artisanal gold mining specialist, the Artisanal Gold Council (AGC), non-governmental organization RESOLVE, and the Responsible Business Alliance's (RBA)

Responsible Minerals Initiative (RMI), which includes corporate partners Ford Motor Company, ABB, CISCO, and local gold trading social enterprise AG SARL (Artisanal Gold Council, 2021). The project aims to work along the supply chain from a market entry perspective, using the CRAFT Code and the Responsible Minerals Assurance Process (RMAP) to support ASM sites in accessing downstream buyers. The project encourages engagement of downstream buyers with ASM as a strategy for improvement of the sector. Connecting producers directly with international buyers provides, in theory, producers with the opportunity to bypass informal gold flows. However, the project will need to address the commercial viability of buying gold in Burkina through formal channels, as the high prices offered by the informal trade are likely to pose a challenge to downstream buyers who cannot afford to pay above market prices.

Another such project is the work currently conducted in Burkina Faso by the Alliance for Responsible Mining (ARM, 2019). This project also focusses on promoting sustainable development through responsible ASM production and trade of gold in the country, working in the Centre-West, Centre-North and Southwestern regions. ARM is also using the CRAFT Code, as well as the Fairmined Standard, aligned with the requirements of the OECD Due Diligence Guidance, to provide support and capacity building to both mineral supply chain stakeholders and government actors.

In conclusion, therefore, Burkina Faso represents a complex and high-risk context for the sourcing of gold, in particular with regards to ASGM. The current levels of awareness and implementation of due diligence are very low. It is not, however, devoid of opportunities for improvement. A number of opportunities for entry exist, in particular those that involve working directly to increase the capacity of government agencies working in the sector, and those that involve targeted intervention to improve production practices and promote access to responsible markets for artisanal producers.

4 Mozambique

Mozambique is rich in mineral resources. While best known for its natural gas, for which it has the third-largest proven reserves in Africa, it also boasts commercially important deposits of coal, gold, graphite, ilmenite, iron ore, titanium, copper, tantalum, bauxite and coloured gemstones (EIA, 2020; Goodrich, 2021). Mozambique achieved significant economic growth between 2000 and 2015, with average real GDP growth rates of 7%, representing one of the highest in the continent (EITI, 2020). However, since 2016, the country has taken an economic downturn as well as experiencing two tropical cyclones, and it remains one of the poorest countries in the world, underperforming significantly in human development indicators – it ranks 181 out of 189 countries in the UNDP’s Human Development Index (HDI) (EITI, 2020; UNDP, 2021c). Agriculture makes up the country’s most important sector in terms of employment, employing 70% of the population (World Bank, 2021). In terms of manufacturing / industry, however, the extractives industries have historically taken primary importance. In 2019, the extractives sectors made up 68.3% of total industrial output, including coal (26.3%), aluminium production (from imported aluminium) (23.6%), petroleum and natural gas (7.6%), non-metallic minerals (6.0%) and metallic minerals 4.8%) (INE, 2019).. In 2018, the extractives sector contributed 7.4% to GDP (EITI, 2020). In 2019, it made up 6% of total tax revenue (EITI, 2020). Infrastructure development remains the main challenge faced by private investors in Mozambican extractives (Filhão et al., 2021). However, the government has been promoting infrastructure projects, such as the Nacala Corridor Railway project, in order to promote investment and boost GDP growth (Filhão et al., 2021).

The production of coal, natural gas and coloured gemstones is dominated by large-scale mining. Bauxite is produced by medium-scale operations. The majority of the remaining mineral products, however, are produced by ASM, which makes up

an important part of the country’s mining labour force (Mondlane, 2017).

The COVID-19 pandemic has shown significant negative economic outcomes for Mozambique. In the context of the economic slowdown triggered by a hidden debt crisis and recovery from the 2019 cyclones, the pandemic will see Mozambique’s economy contract for the first time in 28 years, since the end of the protracted civil conflict in 1992 (World Bank, 2021). The extractives sector has been hit hard. Already struggling in 2019 due to reduced production capacity at the country’s main coal plant, the situation deteriorated in 2020 in the face of low prices and disruptions in global supply chains. As such, the extractives sector was expected by the World Bank to contract by 12% in 2020 (World Bank, 2021). How well the sector recovers will depend on a number of factors, including the country’s resilience to the COVID-19 pandemic and any developments in the instability caused by an insurgency in the north of the country. The conflict in Cabo Delgado escalated at the end of 2019, which led to the temporary suspension of the building of a factory for gas liquefaction. As a result, the high tax revenues that were slated to commence in 2024 are therefore delayed.

4.1 Representation of the 3TG sector

4.1.1 Overview of 3TG supply chains

The 3TG sector in Mozambique consists of the production of gold and tantalum-niobium, both of which are produced largely by artisanal and small-scale operations. There are thought to be between 100,000 and 200,000 people working in ASM in Mozambique overall on a range of different minerals (IGF, 2017; Mondlane, 2017). The participation of women is thought to be significant, with estimates ranging at around 20-30% of the labour force made

up of women (Hinton et al., 2003; Mondlane, 2017; World Bank, 2020). This workforce is estimated to support 1.2 million dependents, 6% of the country's rural population.

ASM is an important employer and economic contributor in a context where two thirds of the country's population live in a rural environment. Research has also shown that ASM in Mozambique may act as a stabiliser for small-scale agriculture, which supports 70% of the population but is vulnerable to frequent extreme weather conditions (Hilson et al., 2021).

Informality in the ASM sector is widespread due to high structural barriers to formalisation. Officially, artisanal mining can take place only in designated areas, as identified by the Ministry of Mines (MIREME). According to interviews conducted, there are 109 designated areas in Mozambique. A census that is currently underway, however, has identified over 1044 artisanal sites across the country, reflecting the high levels of informality in the Mozambican ASM sector. Some of the discrepancy may be explained by several sites in one Designated Area, but the discrepancy is too high to fully explain this. While some positive steps towards facilitating formalisation have been taken by the state, for example the allocation of more designated areas for ASM, provision of some extension services and promotion of ASM associations, the licensing procedure remains out of reach for many artisanal miners. Trust in the legal system remains low and support from the authorities inadequate (Hilson et al., 2021). As such, there remains much to be done to achieve higher levels of formalisation in the sector.

Gold

Gold production in Mozambique is conducted mostly as a small-scale activity. While a number of industrial gold licenses exist, production in practice ranges from artisanal and small-scale to medium-scale at most and practices generally remain rudimentary. Large-scale gold projects such as the Manica Gold Project do exist, but they have not achieved full productivity and have changed hands several times in the last two decades (Mining Review Africa, 2015; Reuters, 2021b).

Manica Province has traditionally been seen as the centre of Mozambique's gold production, sharing a greenstone belt with neighbouring Zimbabwe (Hilson et al., 2021). Gold production in the province is thought to have begun during the Monomotapa Empire in Southern Africa, established in the 15th century (UniZambeze & Mining Development Fund 2012). During the Portuguese occupation, artisanal gold mining was banned, and did not start again before the 1980s. In the late 1980s, the company Manica Gold Mines was granted two mining licenses. The commencement of their operations led also to an uptake of informal ASGM on and around their concessions (UniZambeze & Mining Development Fund 2012). While large-scale gold mining has not achieved full productivity in Manica or elsewhere in Mozambique, ASM proliferated, spreading to other provinces including Tete, Nam-pula, Niassa, Zambezia, Sofala and Cabo Delgado. There are currently an estimated 60,000 artisanal gold miners working in Mozambique (Hilson et al., 2021). Today, official statistics show that Tete is the most productive gold province in Mozambique (see Annex II), with a production of 340kg in 2020, compared to 100kg in Manica. This is due to the production of one entity – MMC Resources, who have a mining concession in Tete and export a few hundred kg of gold annually. However, it is likely that the actual production in Manica is much higher due to under-reporting and a widespread informal gold trade in the province.

For this study, telephone interviews were conducted with gold miners in Manica Province. Below is an example of how gold supply chains tend to work in Manica.

Gold production generally uses relatively simple extraction techniques. Extracted ore is crushed if necessary and then washed, to produce a concentrate. The concentrate is then amalgamated using mercury, and taken to a gold market, where it is traded. In some cases, the concentrate is sold directly to traders who are able to conduct further processing themselves.

Accurate figures on gold production in Mozambique are hard to come by, given the largely informal nature of the sector. Official figures reflect only the amounts held by the formal market. In

recent years, official figures put gold production at a few hundred kilos per year – 429kg in 2019 and 488kg in 2020 (EITI, 2020; INAMI, 2020). This has climbed steadily over the past two decades. In 2000, official gold production was only approximately 27.5kg, and 101kg in 2010 (Hilson et al., 2021). The gold and precious stone's sector share of exports

has also increased over that time. Ores, metals, precious stones (e.g., rubies) and non-monetary gold increased from 6% of the country's exports in 1995 to 31% in 2017 (Hilson et al., 2021). It is unclear at present how much of the official exports also undergo appropriate due diligence checks.

A historic example: Fundo de Fomento Mineiro (FFM)

From 1988 – 2013, the legal trade in ASM gold was through the state-run Fundo de Fomento Mineiro (FFM). The FFM was an institution which sat under the Ministry of Natural Resources, but that had administrative and financial autonomy. The mandate of the FFM was to support the ASM sector in Mozambique by providing / facilitating access to finance to mining associations, providing technical training, training on environmental impacts and rehabilitation, as well as buying ASM gold in order to guide more of the production through formal channels. It also intended to regulate gold prices by setting price caps on gold prices offered to miners. However, these price caps posed a challenge to the FFM's success, meaning that they were often unable to compete with gold prices offered by the informal trade, where cross-border smuggling meant that gold prices offered could at times be higher than international market price. The FFM was eventually closed down in 2013, and its mandate of purchasing gold was taken over by the state-owned mining company EMEM, until this also was dissolved in 2021 (Radio Moçambique, 2021).

The official gold trade today in Mozambique takes place between miners and registered gold buyers, of which there are approximately 250 (Hilson et al., 2021). However, it is likely that large amounts of the gold produced (from both formal and informal sites) are traded through informal channels, including unlicensed traders, who do not declare the trade and the export. This is due in part to poor infrastructure and the remote nature of many mine sites that are located in border areas, from where minerals are often smuggled to neighbouring countries (Hilson et al., 2021). In Manica, our interviews showed that gold is often smuggled over the border with Zimbabwe, and that many of the traders who operate in the local area are from Zimbabwe. Zambia is also a destination for gold smuggled from Mozambique, but to a much lesser extent. Reliable information on incentives for informal trade is difficult to come by, but it is likely that informal trade is driven partly by: deliberate evasion of taxes; a lack of awareness as to the requirements of the legal framework; and the existence of entrenched networks operating in the gold trade. These have sufficient capital to secure supply on a continuous basis and at high prices. One of the roles played by the FFM was sensibilisation on the fiscal framework amongst the ASM sector in order to increase tax payments by associated miners.

The purity of gold produced by ASM in Mozambique tends to fall within the range of 87%-96% (after amalgamation and burning of the mercury), depending on the deposit. Where gold is associated with sulfides, attaining a purity of over 90% is very difficult using only rudimentary processing techniques. Gold valuing techniques in local markets tend to be rudimentary, based on the colour of the gold amalgam / concentrate. Prices vary according to international market prices and with demand, but a framework price of 3000 MZN /g (\$47 USD) is said to be standard for ASM gold in Manica, according to interviews with members of the Manica mines association. At the time of the research, this amounted to approximately 78-81% of the international spot price.

There are no official gold processing facilities in Mozambique outside of mine sites. Some ASM gold is reportedly smelted in local gold aggregator hubs, into ingots with a higher level of purity. The larger operations have some access to processing within their operations to produce bullion-smelted gold. Overall, on-the-ground research demonstrates most mines have crude smelting facilities from which they increase the gold's purity to 95%, but no commercial refineries are operational in Mozambique. Plans for the establishment of a refin-

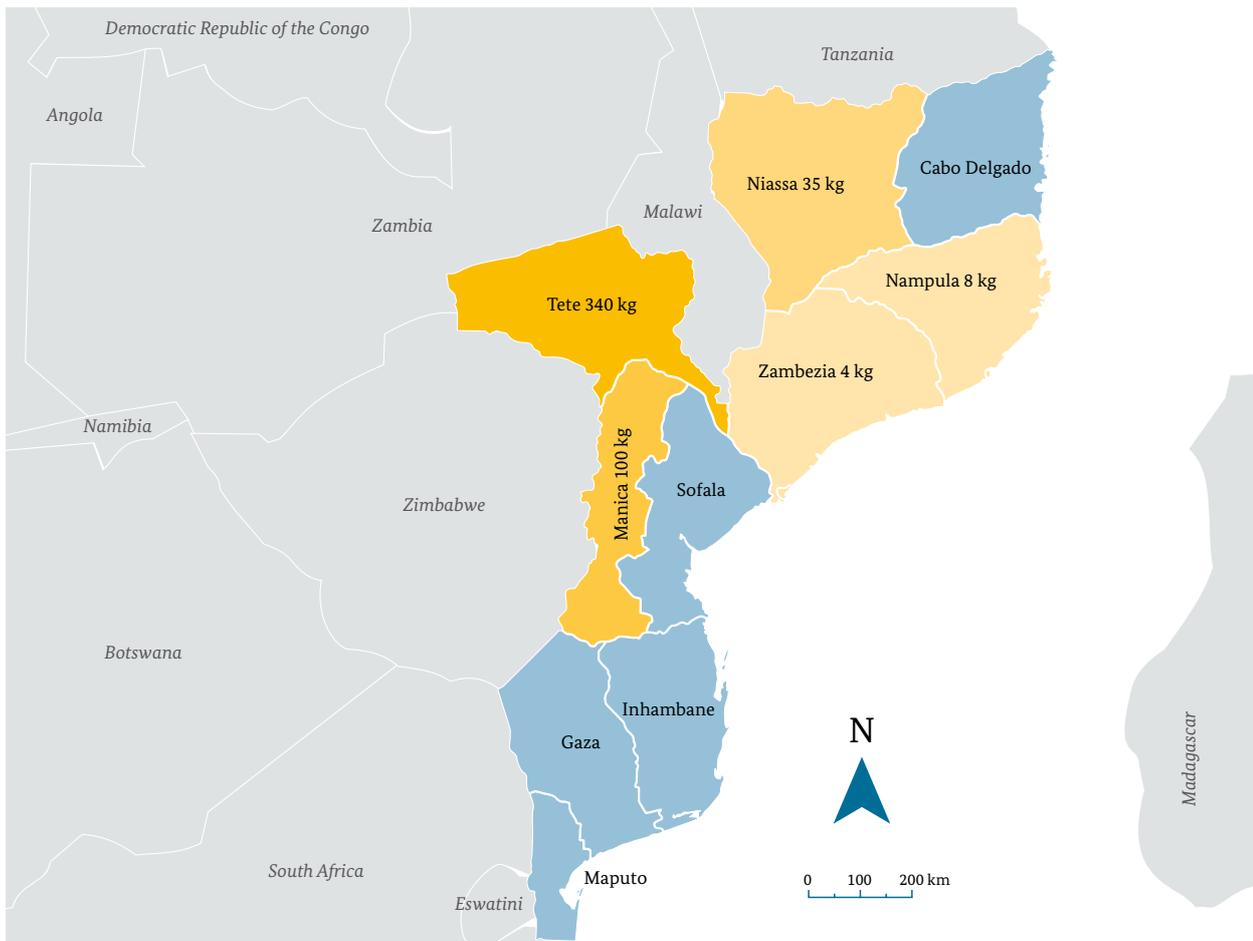


Figure 11: Geographical concentration of artisanal gold production by province in 2020. Source of data: INAMI

ery in 2010 by a South African firm did not come to fruition, and no others have attempted the same task (Reuters, 2009).

Gold supply chains are difficult to trace in Mozambique. Official figures tell only a partial story. Ac-

ording to data provided by the National Institute of Mines (INAMI), of the 321kg produced in the first half of 2021, for example, only 236kg were accounted for in exports or (declared) internal sales, leaving a quarter of the gold formally produced officially unaccounted for.



Figure 12: Sample ASGM supply chain in Mozambique.

Historically, some of the gold produced in Mozambique, in particular by ASM, has gone into the local production of jewellery (interviews in Manica). Gold was sold in the form of so-called ‘sponge

gold’, which has been smelted using rudimentary techniques but retains some impurities. Industry experts confirm, however, that the domestic gold market in Mozambique is greatly diminished, due

in part to rising international gold prices in recent years making international gold sales into an increasingly lucrative business. That said, one of the traders interviewed still reported to selling to local jewellery makers, so a small domestic trade does still exist.

The vast majority of Mozambican gold, however, is likely to end up in informal gold supply chains and smuggled across international borders. International gold smuggling is notoriously difficult to trace. Gold has a very high value to volume ratio and is fungible – individual gold lots become impossible to identify once they have been combined. The smuggling of gold within and out of Africa has been well-documented, and entrenched illicit supply chains such as timber, wildlife products and narcotics in Mozambique mean that it is very likely that gold is also a highly smuggled commodity.

There are also indications of the illicit gold trade out of Mozambique in international trade data. An analysis of Comtrade data shows that Mozambique has reported very low exports of gold over the past five years, mainly to Lebanon and the United Arab Emirates (see Figure 13).¹⁰

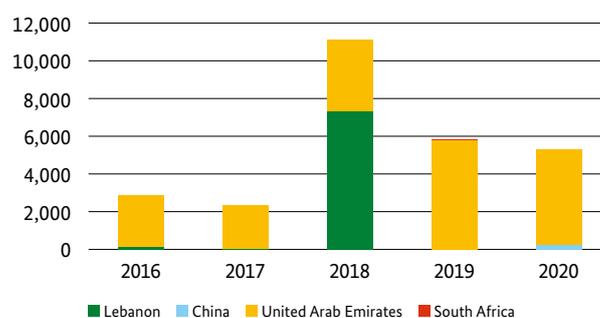


Figure 13: Gold imports in kg from Mozambique declared by partner countries since 2016. Source: Comtrade

Table 5: Comparison of exports reported by Mozambique and imports from Mozambique reported by partner countries. Source: Comtrade

	2016	2017	2018	2019	2020
Exports reported by Mozambique (kg)	62	100	40	75	33
Imports from Mozambique reported by partner countries (kg)	2,888	2,336	11,130	5,811	5,333

However, data on reported gold imports by partner countries give values of gold imports that are in some cases nearly three hundred times greater than those reported exported by Mozambique (see Table 5).¹¹ This indicates significant levels of undeclared exports from Mozambique into destination countries with lenient certification of origin standards for gold imports such as Lebanon and the UAE. Lebanon is a well-known transit route for African gold, much of which is likely to have been smuggled from African smuggling hubs such as Togo (Rose, 2017, 2019). Gold smuggling into the UAE has been documented to an even greater extent in gold supply chain research from around Africa (see e.g. Blore & Hunter, 2020; Lewis et al., 2019;

Martin & Helbig De Balzac, 2017; Martin & Taylor, 2014). Hand-carried gold is not subject to stringent declarations of origin at the point of import into the UAE, and it has as such become an important route for smuggled ASM gold from Africa to enter international markets.

Tantalite

The tantalite sector in Mozambique is more limited in size and scope than the gold sector. Mozambique has resources of 7.4 Mt ore with a Ta₂O₅ content of 0.023% in a single deposit of Marropino hosted in a lithium-cesium-tantalum (LCT) pegmatitic granite. However, Marropino is almost mined out, and it

10 INAMI data obtained for 2020 and 2021 show higher figures than reported to Comtrade (368.29kg in 2020 and 112.98 in the first half of 2021). However Comtrade values have been used for the purpose of this comparison for the sake of consistency.

11 The low export figures for 2020 may be a result of the COVID-19 global pandemic. According to respondents in various mining associations and government institutions, legal mandates associated with the lockdown made it necessary for mining companies to reduce the number of workers in order to comply with social distancing. This is stated to have reduced the amount of gold produced.

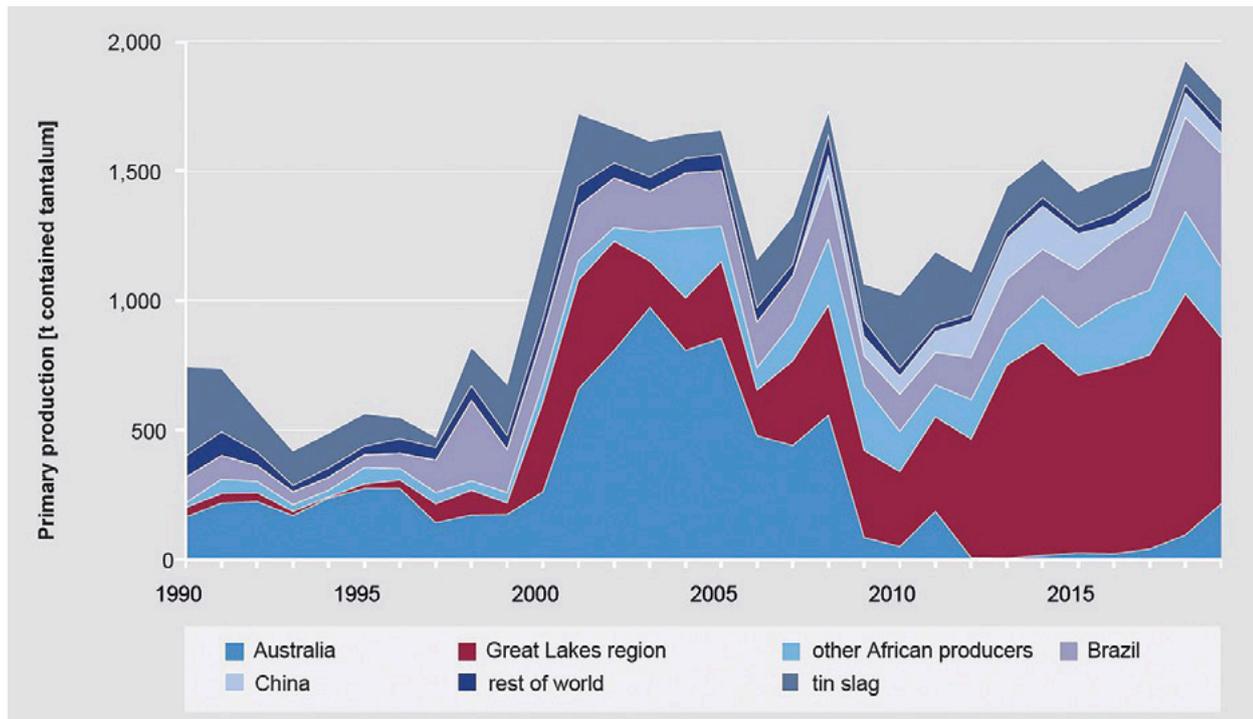


Figure 14: Global primary tantalum production from 1990-2019. Source: BGR raw materials database

is currently no longer producing. The resources in other deposits are still to be defined, but it is known that other deposits such as the Morrua and Moneia of the Highland African Mining Company (HAMC) and Muiane of TAN Mining and Exploration occur in the same pegmatitic Province. Mozambique is generally considered a minor global producer of tantalite. While historic global production has been dominated by Australia (see Fig 9), in recent years the focus has shifted to the DRC, Brazil and Rwanda as main producers. Mozambique's ASM sites producing ore with tantalite content are estimated to have produced approximately 49 tonnes of tantalum annually between 2017 and 2019. This amounts to 2.7% of global mine production in 2019 (estimated at 1,800 tonnes of tantalum) (BGR, 2021). Mozambique's tantalite production has remained at around 1% of global production over the past five years, down from 6% in 2006 (USGS, 2006, 2019).

Tantalite production is focussed in Zambezia province. Industrial tantalite production generally takes place in open pit mines, with tantalite being the principle mineral extracted, and other minerals sometimes produced as by-products. The ore is extracted and crushed into tantalite-bearing sands, though not all deposits in Mozambique require

crushing. Further processing is sometimes conducted at the mine site using gravitational techniques to increase the grade and magnetic separation to remove impurities, however several of the respondents operating on industrial concessions reported a lack of functioning equipment required for tantalite processing, and are currently forced to sell rough ore to those with processing facilities. This reflects the fact that, while the main tantalite producers in Mozambique operate with large-scale licenses, production in reality would be better described as small- to medium-scale, with several of the respondents clearly lacking the capital to invest in their operations and reverting to semi-mechanised methods.



Figure 15: Tantalite pool and processing platform at Companhia de Tantalite (Photo: Mondlane 2021)

In Mozambique, tantalite is considered a radioactive substance and is listed in the country's Regulation on Radioactive Minerals. Our interviews revealed that material with a content of more than 40% Ta₂O₅¹² must be diluted with crushed quartz until the Ta₂O₅ content is 40% or lower in order to qualify for regular export procedures that do not have to comply with the International Atomic En-

ergy Agency's Regulations for the Safe Transport of Radioactive Material (IAEA, 2018). It is then transported and shipped for export. Lack of infrastructure is a challenge for some of the operators interviewed. Poor road conditions make the transport of the tantalite ore and concentrates difficult and costly, thus hampering access to market for these producers.



Mining Initial processing



Processing facilities



transported by road to
shipping vessel



Shipped globally

Figure 16: Sample Mozambican tantalite value chain

Official figures for tantalite production (concentrate, grade not given) in 2019 were 131 tonnes, increasing to 209 tonnes in 2020 (EITI, 2020; INAMI, 2020). There are three principal tantalite producers in the province, with the majority of official production conducted by the Highland African Mining Company (HAMC), who have three active mining

concessions for tantalite and associated minerals totalling an area of around 15000 ha in Zambézia province (Mining Cadastre). HAMC reported a production of 173 tonnes in 2020 (83% of total official production) and 101 tonnes in the first half of 2021 (87% of total official production) (INAMI, 2020).

¹² Sources suggest the Highland African Mining Company (HAMC) has plans to improve the processing and to produce 60% Ta₂O₅ concentrate.



Figure 17: Ore separator at HAMC (Photo: Mondlane 2021)

As well as the four larger tantalite producers, the artisanal tantalite sector is thought to employ a significant number of workers, although recent and reliable estimates of workforce size or artisanal production are not available. Officially, all ASM tantalite production is informal, because artisanal miners are restricted from producing or trading radioactive materials. Production of tantalite and other minerals is regulated by Decree n° 88/2017 on Radioactive Materials and is only allowed for holders of a large-scale mining lease. Small-scale and artisanal licenses are excluded. Nonetheless, tantalite ASM continues to exist in Zambezia province, where miners tend to operate on or around abandoned LSM concessions. The Muiane mine, in Gilé district, is one important such site. The mine was abandoned in 2015 by Tantalum Mineração following a local uprising against the mine after the alleged killing of an artisanal miner on the concession (Marcos, 2015; Observador, 2020; Siteo, 2016). Since then, the abandoned site has been exploited informally by ASM, and there have been numerous reports of fatal accidents and serious injuries of ASMs at the site (Marcos, 2015; Mueia, 2017; Observador, 2020). Artisanal tantalite producers do not have access to processing equipment, and they tend to sell their production after crush-

ing, to be processed by larger operators at industrial sites. One of the operators interviewed reported to buying tantalite produced by artisanal miners on and around their concession. This means that a proportion of the tantalite exported from industrial concessions is likely to include tantalite that was produced by artisanal miners, but that is not labelled as ASM tantalite. Further, in the heavily altered pegmatites like those found in Muiane, tantalite concentrate can be produced with a handpan. In this context, ASM workers regularly work in the raining season, and this may lead to accidents, as the clayey material surrounding the hard rock often loses stability in wet conditions.

Official tantalite exports from Mozambique are generally conducted by industrial producers themselves, directly to international buyers. However, reliable conclusions on the quantity and destination of tantalite exports are difficult to draw from the data available. INAMI data shows that HAMC is currently by far the largest exporter of tantalite from the country, responsible for 89% of the 195 tonnes exported in 2020 (INAMI in 2020). According to information obtained from HAMC, they only export tantalite to the USA. Other interview participants did not disclose specific quantities or desti-

nation information, stating only which continents they exported to, including Asia and Europe. However, comparisons with Comtrade data from 2015 to 2020 on declared imports of tantalite from Mozambique does not show any European countries at all who declared importing from the country.

Furthermore, there appear to be significant inconsistencies in the export and import data of Mozambican tantalite, which do not represent a clear pattern or story. Comtrade data on tantalite exports declared by Mozambique contains several figures that appear to be anomalous to the general trend, including a declaration of 25.3 million tonnes exported to the USA in 2018, a figure which is over 500 times even the highest other declared export since 2011, and 390,000 times higher than what the

USA reported imported from Mozambique that year. Other export figures also appear to be anomalous, although to a lesser extent – 44,000 tonnes to China in 2014 and 20,000 tonnes each to China and Malaysia in 2016. These very high values reported exported by Mozambique are not reflected in what partner countries reported imported and are therefore likely to be inaccurate.

Looking at figures reported by importing countries of Mozambican tantalite paints a more consistent picture. According to Comtrade, Mozambique’s main trading partners for tantalite over the past decade have been Thailand, China and more recently the USA, with Thailand occupying a far greater share if 2020 data is taken into account (see Figure 18).



Figure 18: Average reported imports of tantalite ore in tonnes, 2011-2020. Source: Comtrade

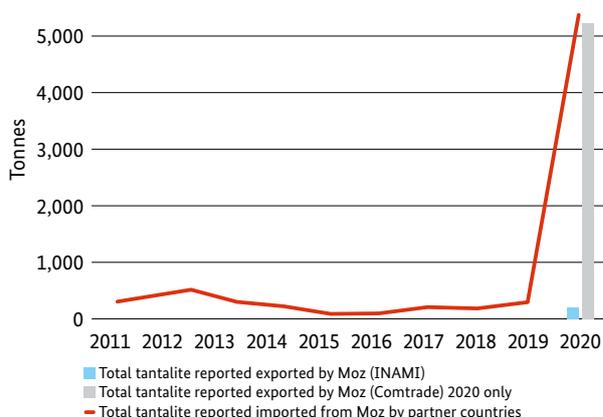


Figure 19: Reported tantalite exports, 2011-2020. Source: INAMI & Comtrade

Tantalite import quantities (imported from Mozambique) appear to have stayed fairly stable over the past ten years, with the exception of a large

spike in 2020 (see Figure 19). This spike is consistent across Comtrade import and export data, but it is not reflected in INAMI statistics. Our research was not able to ascertain the implications of such a spike in the data. Grouped data could be an explanation – Comtrade data groups tantalite ores and concentrates with niobium and vanadium ores and concentrates. However, while niobium occurs in every tantalum concentrate, it is unlikely that the imports declared by Thailand are vanadium, because Mozambique has not declared any production of this substance. Under-declaration at point of export is a possible explanation, but this could not be confirmed during our research. What is clear, however, is that better monitoring and reporting on the tantalite trade in Mozambique is needed if it is to become a welcoming environment for due diligence implementation.

4.1.2 Political and legal framework conditions of the sector

The Mining Sector in Mozambique is governed by the 2014 Mining Law (Law 20/2014, of 18 August 2014), which sets out the legal framework for the exploration of mineral resources, licensing and investors' regimes. This law is supported by a number of other laws and regulations that set out specific provisions for licenses, the tax regime for mineral production and trade, health and safety requirements and environmental regulations applicable to the sector (Filhão et al., 2021).

The main regulatory body for the sector is the Ministry of Mineral Resources and Energy (MIREME), which is responsible for granting of mining rights, development of policies and strategies, regulations etc. Within the Ministry, the National Institute of Mines (INAMI) oversees mining activities, the National Directorate of Geology and Mines (DNGM) is responsible for the administrative procedures within the industry, and the General Inspection of Mines monitors mining activities and carries out inspections. These entities are supported at the local level by the Provincial Directorates of Mines and Energy, which are engaged primarily with promoting ASM and disseminating good environmental and operational practices in ASM operations. Other key agencies include the Ministry of Land, Environment and Rural Development, responsible for ensuring compliance with environmental regulations and issuing environmental licenses, the Ministry of Economy and Finance, responsible for capturing income from the mining sector, and Customs, amongst others (de Amaral & Mussagy, 2020; Filhão et al., 2021; Hilson et al., 2021).

Given that the vast majority of gold and tantalite in Mozambique are supplied by ASM, the government's attitude to the sector is of note. The acknowledgement of the ASM sector as a potential driver of development in the country appears to have been recognised over the past two decades. The government of Mozambique recognised the economic potential of the ASM sector in its Poverty Reduction Strategy Paper, Action Plan for the Reduction of Absolute Poverty (2001-2005) (PARPA) (Republic of Mozambique, 2001). In this, it also recognised the need for increased support to the sector in order to help it

achieve its full potential as a driver of development and strategy for poverty reduction. This was to be achieved through supporting formalisation of ASM, promoting women in the sector, training and capacity-building and the promotion of associations (Alexandre, 2009). The Mining Development Fund (Fundo de Fomento Mineiro) was created with the principal objective of promoting amongst artisanal miners the use of improved mining technologies that minimise the environmental impact and improve the miners' safety. It was intended to enable the buying of ASM gold by the government at prices close to the global market price, aiming to minimise leakages of gold into informal supply chains. However, the government's goals for formalisation and development of the sector are yet to be achieved. The Mining Development Fund, for example, was not able to compete with the informal market that offered greater benefits to producers, like supplying producers with mercury, or higher gold prices than the FFM could afford (Mondlane, 2017). Price caps set by the FFM to its traders meant that they were not able to make nimble purchases at higher prices in order to compete with informal supply chains that tend to avoid production, trade and export tax costs. For a few years after the dismantling of the FFM, the EMEM (Empresa Moçambicana de Exploração Mineira), the state-owned entity mandated with buying ASM gold continued to struggle to attract the majority of gold produced in Mozambique into formal supply chains. This also has now closed, and there is no longer an official state-run gold buying scheme in the country.

Today, other governmental actors have arisen as key actors in 3TG supply chains. In November 2021, Mozambique was finally admitted into the Kimberley Process. During its process of application to the Kimberley Process, Mozambique established a Management Unit for the Kimberley Process (Unidade de Gestão de Processo Kimberley, UGPK). The UGPK was established in 2015 by the Decreto n.26/2015 de 20 de Novembro to implement the Kimberley Process, to which Mozambique applied (and was rejected) the following year. The mandate of the UGPK is the management of traceability, security and control of the trade in rough diamonds, under the Kimberley Process, and more widely the trade in other precious stones and all precious metals (Decreto n.26/2015 de 20 de Novembro, 2015).

4.1.3 Identification of relevant local, regional and national actors

Table 6 below presents key groups of stakeholders who are active or have a mandate over the 3TG sector in Mozambique, including both industrial

and artisanal production. All have a different part to play in the strengthening of due diligence implementation in the sector, and specific interventions should make sure to take into account the potential for collaboration with each stakeholder group on a case-by-case basis.

Table 6: Stakeholder mapping Mozambique

Stakeholder	Organization	Mandate related to 3TGS / due diligence
Ministry of Mineral Resources and Energy (MIREME)	National Directorate of Geology and Mines (DNGM)	The mining regulatory authority, responsible for the guidelines for public and private sector participation in research, exploration, exploitation, processing, export and import of mining products and their derivatives.
	National Institute of Mines (INAMI)	INAMI was created by Law 20/2014, of 18 August (Mining Law) as a legal person of public law with legal personality, with administrative and financial autonomy, and is overseen by the Minister who oversees the area of Mineral Resources. It started its activities in October 2015. It is the mining regulatory authority, responsible for the guidelines for public and private sector participation in the research, exploration, treatment, export and import of mining products and their derivatives. It is supervised by the Minister who oversees the Mineral Resources area. Financial supervision and oversight are exercised by the Minister who oversees finance. INAMI is the mining regulatory authority, responsible for the guidelines for public and private sector participation in the research, exploration, treatment, export and import of mining products and their derivatives.
	General Inspection of Mines (IGREME)	General Inspection of Mineral Resources and a public entity supervised by the Ministry of Mining Resources. Its function is to inspect the production, import and export of mineral resources and prepare their respective statistical reports.
DIPREMEs (Actual Servicos Provinciais de Infraestruturas)	Provincial Directorate of Mines and Energy	Located in each province, its function is to license and inspect mining activities, provide technical, institutional and financial support (mainly for artisanal and small scale mining).
UGPK	Kimberley Process Management Unit	The Kimberley Process is a joint initiative by governments, the diamond industry, precious metals and civil society to stem the flow of rough diamonds, from war or conflict, into the international market. The Management Unit is responsible for the implementation of the Kimberley Process in Mozambique, as well as for the upcoming certificate of origin development for precious metals and precious stones.

Table 6: Stakeholder mapping Mozambique

EMEM	Mozambican Exploration and Mining Company	State-owned company responsible for the promotion of the commercialisation of mining products, including those from ASM. Strongly oriented towards the export of raw materials and with a few links with the creation of value chains at the domestic level.
ASM associations	ASM associations	A variety of ASM associations in a range of sizes exist across Mozambique for different minerals.
Civil society	ASSONOMIN	Based in Maputo city, ASSONOMIN is an NGO dedicated to the organization of mining forums and support to small-scale miners at the national level.
Academia	Unipungue	Higher education institution based in Manica district. Conducts teaching and research in the field of ASM, including in the impacts of mercury in the Manica gold sector.
	Universidade Eduardo Mondlane	Higher education institution based in Maputo. Conducts teaching and research in the mining and geology sector, including research on the environmental impacts of ASM in Mozambique.
International entities	Mining and Gas Technical Assistance (MAGTAP) project	The MAGTAP project is a 6 year project funded by the World Bank to support the mining and gas sectors in Mozambique. Due to end in 2022, the MAGTAP project has a significant ASM component, including the development of an 'ASM strategy' and the implementation of this strategy on three pilot sites around the country. The MAGTAP project could provide an entry point for increased awareness about due diligence requirements, and how the government of Mozambique might best incorporate them into the policy and legal framework.

4.2 Risks to due diligence compliance in the raw material supply chain



Serious abuses in the extraction, transport or trade of minerals



Child labour

Child labour is a serious risk in the artisanal production of 3TGs – in particular gold – in Mozambique, with as much as 10% of the country's ASM population estimated to be children (Mondlane, 2017). Children as young as six are reported to be

working at ASGM sites, including in the transport and processing of ore as well as working in shafts or tunnels, which constitutes a worst form of child labour according to the ILO's Convention No. 182 (ILO, n.d.; Manhice, 2016; UniZambeze & Mining Development Fund, 2012). Child labour at ASM sites is also reportedly distancing children from access to education and school attendance (da Silva, 2013).

In-country research found limited instances of children working at ASM sites, with the presence of children reported at only one of the sites visited. This is likely because child labour is more prevalent in the gold and gemstones sector, and less so in the tantalite sector which is dominated by more semi-mechanised or industrial production. There

are still some reports of children at tantalite sites - children reportedly aged 10-18 participate in artisanal tantalite production, opening shafts and participating in washing of the ore. Widespread child labour in both gold and tantalite supply chains was confirmed by interviews with civil society. Producers also reported that awareness raising on the issue of child labour has been conducted by the provincial ministry of mines in some cases.

Value chains stages: Mining and initial processing/ aggregation



Forced labour

Forced labour is not widely reported in the ASM sector in Mozambique. However, some reports do exist of potential crime syndicates at Cabo Delgado gemstones sites accused of deliberately putting miners into a form of debt bondage, however these reports could not be corroborated by other sources (Mining Review Africa, 2019). While there are not explicit reports of this occurring in other supply chains, the incidence of gold mining in the region is likely to mean that artisanal gold miners in Cabo Delgado may be vulnerable to similar conditions.

In-country research did not reveal any reported instances or suspicions of forced labour in the focus areas of Manica and Zambézia, in either gold or tantalite supply chains.

Value chains stages: Mining and initial processing/ aggregation



Direct or indirect support to non-state armed groups

The primary non-state armed group presence in Mozambique is in the north, in Cabo Delgado province. Mozambique has been experiencing a violent insurgency in its Cabo Delgado province since 2017, in which nearly 3,000 people have been killed and another 800,000 displaced by the fighting (Wadekar, 2021b). The insurgency is led by an Islamist group known as Ahlu-Sunna Wa-Jama'a (ASWJ) or Al-Shabaab, which has declared itself as affiliated to Islamic State. It's not clear how strong the link is between ISIS central command and this group, but the US government designated it as a

global terrorist organization - ISIS Mozambique - in March 2021 (U.S. Department of State, 2021a). The insurgency has seized a number of important towns in Cabo Delgado, such as Mocímboa in 2020 and the coastal port of Palma in 2021. It is seen as a primary risk to large-scale mining companies, in particular those exploiting natural gas such as French company Total, which shelved its operations following the attack on Palma in early 2021 (Wadekar, 2021a).

The insurgency has been characterised by reports of horrific human rights abuses, largely against civilians. These include mass beheadings, including of children, abduction, burning of villages and sexual violence (Harding, 2021; Save the Children, 2021).

Despite the insurgency taking place in a mineral-rich zone of Mozambique, there is little evidence of systemic links between the illicit trade in natural resources and the financing of ASWJ. Early analysis of the conflict predicted that the insurgents were likely to take advantage of the illicit economy in the region in order to finance their activities (Global Initiative against Transnational Organised Crime, 2020). A more recent analysis continues to report links between the group and illicit trade, including in gemstones, timber, wildlife products and narcotics (Roberts, 2021). A study conducted by the Global Initiative Against Transnational Organised Crime, however, shows that the illicit supply chains - including in gold and gemstones - appear to have shifted in order to avoid the conflict-affected area, in which the logistics of trade are becoming increasingly difficult (see Fig 7) (Global Initiative Against Transnational Organized Crime, 2021). Damage to road infrastructure, the risks of violence and the presence of government forces have meant that trafficking routes in the region have dramatically changed from those mapped a year ago (Global Initiative Against Transnational Organized Crime, 2021). Any involvement of the armed group in illicit trade (of any kind) appears to be ad hoc. The enormous ruby deposits - providing the world's most productive source of gem-quality rubies - mined by Montepuez Ruby Mining further inland in Cabo Delgado also do not appear to have been directly affected by the conflict (Wadekar, 2021b).

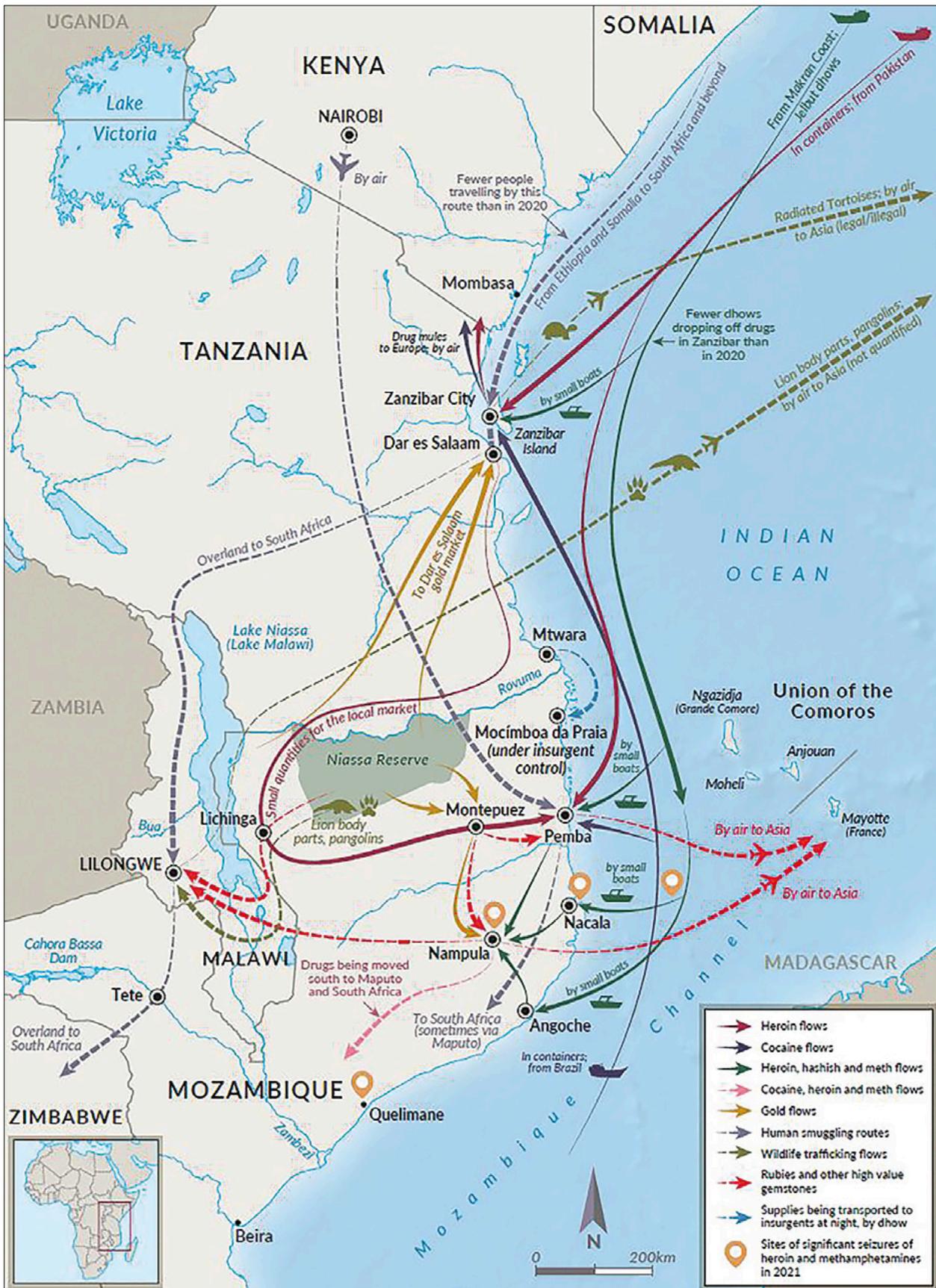


Figure 20: Illicit flows through northern Mozambique as of February 2021. Source: Global Initiative against Transnational Organised Crime (2021)

However, some links do remain. At the outset of the conflict, for example, insurgents reportedly recruited from gemstone and gold artisanal mining communities in Cabo Delgado and Niassa provinces (Global Initiative Against Transnational Organized Crime, 2021). The potential links between

ASWJ and mineral supply chains originating from Mozambique must be considered a serious risk in the context of due diligence.

Value chain stages: All along the upstream value chain



Figure 21: Destroyed excavator at abandoned Muiane mine site (Photo: Hennig, BGR 2018)



Public and private security forces

Human rights abuses by public and private security forces is an ongoing issue in Mozambique and occurs in a number of different spheres.

Private security at large-scale mines have a history of human rights abuses towards artisanal miners. In Cabo Delgado, for example, there are reports of security guards and police officers beating artisanal gemstone miners in the vicinity of the Montepuez ruby mine. In 2019, UK-based Gemfields settled a lawsuit brought by UK-based firm, Leigh Day, on behalf of 273 locals with regards to the issue. While Gemfields made no admission of liability in agreeing the settlement, it did recognise that violence had occurred near Montepuez (Wadekar, 2021b).

In the tantalum sector, the revolts that led to the destruction and closing of the Muiane mine in Gilé District (Zambezia Province) were reportedly triggered by the killing of an artisanal miner by the local police (Deutsche Welle, 2017). Artisanal miners are now reported to be producing at the mine site, although the extent of the activities and the risk of involvement of public or private security forces in these activities must be verified.

While not specifically linked to 3TG supply chains, abuses have also been reported against civilians by both the Mozambican military and Dyck Advisory Group (DAG, a private military contractor employed by the Mozambican government to provide an aerial response to the insurgency). Both parties have been accused of serious human rights abuses, including torture and extrajudicial killings (Amnesty International, 2021). While these abuses are

not reported to have taken place in or around mine sites, the fact that there is significant mineral production activity in the region – including gold – means that there is a risk that supply chains may be affected by the abuses in the future.

Value chain stages: All along the upstream value chain



Bribery, fraudulent misrepresentation, and non-payment of tax

The illicit trade of natural resources and other commodities has a strong hold in Mozambique, with significant smuggling networks operating in the country, in particular in certain regions. Timber, for example, is one of Mozambique’s major exports, with more than 90% going to China. However, some estimates suggest that as much as half of the wood being shipped to China is illegal (Wadekar, 2021b).

Smuggling also presents a risk in gold supply chains in Mozambique, although the unregulated trade is relatively poorly documented. The only way of trading gold legally in Mozambique is through the approximately 250 licensed traders. However, unlicensed gold buyers are widespread, reportedly composed largely of foreigners from places such as Tanzania, Zimbabwe, the DRC and elsewhere (Mondlane, 2017). While trade routes are difficult to trace, the border between Zimbabwe and Mozambique reportedly represents a key point of entry and exit for smuggled goods (Pophiwa, 2010; The Herald, 2021). Informally produced gold is reported to flow unregulated between Zimbabwe and Mozambique, but the direction of the gold flow is not always clear (Hunter et al., 2021). There have been reports of gold being sold from Zimbabwe on the black market into Mozambique in response to lack of availability of cash at Zimbabwe’s state-run gold buying arm, Fidelity Printers and Refinery (FurtherAfrica, 2016). The border between Mozambique and South Africa also represents a point of exit of Mozambican gold (News24, 2021).

As well as cross-border smuggling, another risk of fraudulent misrepresentation of the origin of minerals is reported with gold that originates from

protected areas within Mozambique. ASGM is reportedly common in Chimanimani National Park, which borders Zimbabwe. From here, ASGMs sell the gold produced either smuggled across the border to Zimbabwe, or to Lebanese, US-American or South African traders in Manica’s gold markets (Barroso, 2011).

As with many other geographies in East, Central and West Africa, it is likely that much of the gold smuggled out of Mozambique ends up in the United Arab Emirates, where lower certificate of origin standards for hand-carried gold allow large amounts of smuggled gold to be absorbed into global supply chains. There have been specific reports of smuggled gold apprehended on its way from Mozambique to Dubai in hand-carried luggage, likely in collaboration with airport officials (Dolley, 2021). As described above, trade data confirms the likelihood that significant proportions of the gold produced in Mozambique is smuggled to the United Arab Emirates.

It is likely that there is also a risk of tantalum smuggling out of Mozambique, although tantalum supply chains, in particular unregulated supply chains, are poorly documented. In 2018, a Chinese citizen was allegedly arrested for taking part in an international smuggling ring for tantalite in Zambezia (Club of Mozambique, 2018). Given the practical difficulties in smuggling bulkier (as compared to gold) tantalite ore and concentrate out of the country, smuggling is likely to take the form of under-reporting of values exported to Asia (in particular China and Thailand), the biggest market for Mozambican tantalite.

Value chain stages: All along the upstream value chain from mining to export

Other relevant risks



Environment

The use of mercury in gold mining and processing in Mozambique is widespread (Marrufo et al., 2020; Shandro et al., 2009; Spiegel et al., 2006). As well as causing significant damage to the health of humans and ecosystems, the use of mercury also brings with it smuggling challenges, as the sub-

stance is often obtained on the black market (Sacchetti, n.d.). In-country research confirmed that the use of mercury in processing at ASM sites is common across the country, even for alluvial deposits. Participants reported that the provincial ministry of mines conduct awareness-raising sessions for ASM on the negative impacts of poor mercury management on human health and on the environment. Many report to implementing measures to avoid the pollution of water and soil by mercury. For example, instead of washing the gold directly in the rivers, interviewees reported creating small ponds where the gold is processed using mercury, in this way avoiding the pollution of the rivers and soils. For air pollution, respondents have not yet adopted an adequate technique, however, they report wearing masks to avoid respiratory diseases or other complications.

Other environmental impacts include deforestation, soil erosion and water and air pollution (Marufo et al., 2020). In-country research found that participants appear to have a strong understanding of the negative environmental impacts that mining can have and implement varying levels of measures to avoid or mitigate these impacts in their operations.

Value chains stages: Mining and initial processing/ aggregation



Tensions and violence

There are reports of serious – sometimes fatal – violence between ASM communities on the border of Zimbabwe and Mozambique, in Chimanimani National Park, including reports of Mozambican miners being killed by Zimbabwean miners (Sebastião, 2015).

While not associated with violent conflict, but with tensions and disputes between LSM and ASM, in-country research revealed that one of the biggest challenges reported by artisanal miners and civil society in gold and tantalite supply chains is the insecurity of tenure for artisanal miners who are in the process of formalisation. Participants reported significant frustration at being forcibly removed from areas in which they have mined for a long time, despite being in the process of applica-

tion for a license, by entities granted larger-scale licenses for the same area. Reports of open conflict as a result of this situation were not found, but antagonism by ASM against concession holders could increase the risk of conflict between the two groups.

Value chains stages: Mining and initial processing/ aggregation



Working conditions

Accidents – including fatal accidents – occur at ASM sites in both gold and tantalum supply chains. Many fatalities have been reported of ASMs extracting tantalum in the abandoned Muiane mine (Mueia, 2017). In-country research confirmed that accidents at ASM sites can be common. Several participants reported an intervention from the provincial ministry of mines at their mine sites as a result of poor working conditions, occupational safety and health (OSH) and frequent accidents at their mine sites.

Value chains stages: Mining and initial processing/ aggregation



Qualitative analysis of key risks

The key risks (in the framework of the risks covered by the EU Regulation) differ slightly for gold and tantalite supply chains.

The conflict in Cabo Delgado in northern Mozambique represents a key risk in the mineral supply chains that originate from the region. Despite no clear evidence pointing to explicit links between the non-state armed groups active in the region and mineral supply chains, the conflict itself is characterised by extreme violence and gross human rights violations, and any minerals of Cabo Delgado provenance should therefore be subject to careful due diligence. Cabo Delgado is the only Province in Mozambique that is listed on the EU's indicative, non-exhaustive list of CAHRAs. It is listed as a conflict-affected area, with gold and tantalite and niobium listed as relevant commodities. However, Cabo Delgado is not a principle producer of either gold or tantalite. While there is some gold produced in Cabo Delgado, it is not a primary gold producing region in Mozambique. Tantalum and

niobium production, on the other hand, happens only in Zambezia, which is not currently affected by the conflict in Cabo Delgado.

However, it is important to remember that this does not mean that gold and tantalite supply chains originating in Mozambique outside of Cabo Delgado are without risk. In gold supply chains, key risks include: the extremely high likelihood of significant international smuggling of Mozambican gold (and thus fraudulent misrepresentation of origin); child labour and reports of violence against artisanal miners by private security forces; and other (non-OECD Annex II) risks related to a largely artisanal sector, including poor working conditions and widespread and poorly managed use of mercury.

The key risks in tantalite supply chains as described above include mainly risks of poor working conditions at ASM sites, child labour, a previous conflict between public security forces and artisanal miners on a large-scale concession, and potential smuggling or under-valuation of tantalite exports.

4.3 Measures to implement due diligence obligations

4.3.1 Challenges to due diligence implementation

Lack of understanding and knowledge of international due diligence frameworks

In-country research found an extreme lack of knowledge and awareness of international due diligence frameworks in the 3TG sector in Mozambique. Of all the types of actors interviewed along and around 3TG supply chains, including ASM, LSM, traders, civil society, exporters, etc, only the government representatives had heard of any international due diligence frameworks, namely the EU Regulation and the OECD Due Diligence Guidance. Even these government representatives did not demonstrate an in-depth understanding of the requirements of the various international frameworks and regulations, or of what due diligence is and how it works. From this awareness, however, government representatives interviewed had a fa-

vourable view of the EU Regulation and the OECD Due Diligence Guidance, with the perception that they allow for a positive environment within which minerals can be produced and traded, helping to avoid or mitigate negative social and environmental impacts often associated with mining.

As well as a very limited knowledge of due diligence requirements, it is clear that practical implementation of due diligence appears to be non-existent. No industry or multi-stakeholder initiatives were identified in Mozambique that deal with issues related to due diligence or supply chain transparency or traceability. Supply chain stakeholders interviewed on the ground repeatedly told the research team that no one in their supply chain had ever asked them about where their product came from or about working conditions at and around the mine sites where the minerals had been produced. Those who exported reported the same findings that their export partners did not ask them questions about the provenance of the minerals they were exporting.

The exception to this is in matters of compliance with national legislation. Several of the ASM sites interviewed said that the local authorities had asked them to change the way they produced in the past due to high frequency of accidents on their mine sites, lack of appropriate PPE or avoidance of water and soil pollution and other environmental impacts. Industrial-scale sites reported 'audits' by local authorities to ensure compliance with OSH and environmental regulations. Furthermore, the majority of actors appeared to have a strong level of awareness of the requirements of national legislation applicable to their activities, in particular the Mining Law and relevant environmental legislation. While full compliance with national legislation in the mining sector is low, particularly in the informal sector, awareness of the requirements of national legislation is higher. Complete regulatory compliance is reported to be hindered by at least two factors: financial and institutional. Limited financial resources lead most mining associations to operate without licenses, as there is a monetary investment required to obtain mining certificates and other legal requirements. Institutionally, the government of Mozambique has low capacity to engage in raising awareness and train-

ing artisanal miners on issues related to the implementation of national legislation. There are a limited number of technicians available to travel to mining associations, and there is a lack of operational resources for the provincial directorates. In addition, although applications for mining licenses can be submitted from the provincial offices of the Mines Department, they are still often too far from the mine sites to be accessible by artisanal miners.

Higher awareness of the requirements of national legislation seems to be due in part to awareness-raising campaigns by the government to the ASM sector, reports of which include presentations, radio programmes, TV programmes and pamphlets on safe use of mercury, preventing negative environmental impacts at mine sites, OSH, production and export taxes, presence of children on mine sites, etc. This indicates that the government could play a key role in raising awareness about due diligence requirements in Mozambique, particularly amongst the ASM sector.

4.3.2 Enabling environment for due diligence

Despite the lack of understanding and implementation of initiatives to promote due diligence or supply chain traceability and transparency in Mozambique, the country is taking positive steps towards creating an enabling environment for due diligence implementation in mineral supply chains going forward. Two in particular were identified over the course of this research.

UGPK Certificate of Origin

Firstly, the UGPK is in the process of developing a certificate of origin, to be issued at the point of export, for all precious metals and precious stones exported out of Mozambique. This is being developed in the wake of Mozambique's admission into the Kimberley Process in November 2021. The Kimberley Process traditionally deals with certifying the rough diamond trade – Mozambique does not currently produce diamonds (although there is some prospecting taking place). In Mozambique, however, the UGPK is responsible for the certification not only of diamonds but of all precious stones and precious metals. This includes Mozambique's

significant coloured gemstone production, as well as gold. Other metals such as tantalum are not included, but a number of stakeholders in this study mentioned plans for the UGPK's mandate to be extended eventually to a wider range of minerals.

One of the UGPK's specific tasks is to develop a format for the Kimberley Process Certificate for rough diamonds, and a Certificate of Origin for other precious stones and precious metals (Diploma Ministerial n. 67/2020 de 3 de Dezembro, 2020). This has in theory been necessary for exports as of August 2021, however our data reveals that the certificate has not yet been developed, and is not yet in operation (SAL & Caldeira Advogados, 2021). Given its origins in the Kimberley Process, our interviews revealed that the Mozambican certificate of origin will likely be modelled on the minimum requirements for a Kimberley Process certificate, as found in Annex I of the Kimberley Process Certification Scheme Core Document (Kimberley Process, 2003). This forgery-resistant document must be attached to every sealed mineral parcel and must include the country (but not necessarily the region) of origin of the mineral lot, as well as the weight of the parcel, value in USD, issuing authority and identification of the exporter and the importer, amongst other things. While a certificate with these requirements goes some way to facilitating chain of custody of the mineral supply chain, it does not contain enough detailed information to facilitate compliance with international due diligence regulations such as the OECD Due Diligence Guidance or the EU Regulation. If more detailed information is not included, Mozambique would miss out on a significant opportunity to vastly improve the enabling environment for due diligence on minerals of Mozambican provenance. If the certificate of origin is developed with international due diligence requirements such as the EU Regulation in mind, this will give them a significant advantage in markets such as the EU where importers are required to provide detailed information about the provenance of their mineral imports. Even in markets where this is not yet required such as the UAE and important Asian importers such as Thailand, China and India, global trends are moving towards greater oversight of international mineral trade. Developing the Certificate of Origin with due diligence and supply chain traceability in mind will place

Mozambique at the forefront of supplying markets with increasingly rigorous supply chain due diligence requirements.

Census of the ASM sector

Mozambique is currently conducting a nationwide census on its ASM sector. Over the course of 2021, INAMI, in coordination with the DNGM and INS, a census of all ASM has been carried out, starting with the southern regions and progressing to all mineral producer provinces in the country. The census is attempting to map out the characteristics of the ASM sector and is collecting a wide range of data including sociodemographic, mining and processing techniques, impacts of COVID-19, mineral trade, use of mercury, environmental impacts, quality of minerals produced, amongst other things. Interviews have been conducted not only with producers, but also with mineral traders and members of local communities in mining areas. The results of the census have not yet been fully analysed, and are due to be published in 2022. In addition, the rising gold prices that were experienced during the COVID-19 crisis led to an influx of job seekers to Manica and the expansion of ASM there. However, preliminary information from interviewees is that the results of the census will reveal the extent of informality in the Mozambican ASM sector.

This is very important when it comes to understanding due diligence risks in Mozambique. Firstly, a lack of data on mineral production in a country is a key challenge to conducting due diligence and the provision of chain of custody information for minerals coming from that country. Understanding the basic characteristics of a sector is the first step in being able to understand the key risks involved in that sector. The fact that the majority of the gold produced in Mozambique comes from ASM (if probable informal trade of gold is included), and the vast majority of ASM is informal, this means that the risk of gold of Mozambican provenance being produced outside of the country's legal framework is very high. This in turn means that rigorous due diligence should be conducted on minerals of Mozambican origin.

However, Mozambique is not alone in having an ASM sector that is largely informal. The census is

a crucial first step in allowing importers access to key chain of custody information needed for due diligence efforts. The plan, according to the study's participants, is for a map of ASM sites in Mozambique to be produced and continually updated, allowing potential importers access to basic information about certain sites, as well as reflecting the reality of the ASM sector, in which the number of workers fluctuates often. In combination with the potential requirements of the certificate of origin, this places Mozambique in good stead for becoming known as a country from where minerals can be easily traced, and where data is available to enable this.

5 Nigeria

5.1 Representation of the 3TG sector

5.1.1 Overview

An analysis of the 3TG mining sector in Nigeria reveals that both gold and 3T mining are widespread throughout the country. The mining of 3TGs is very region-specific: Where gold is available, even if 3Ts occur there as well, artisanal miners prefer gold mining over 3T. This is due to the high prices that may be elicited from the sale of gold, and it is also a consequence of the high effort and low yield that characterises artisanal 3T mining.

Gold mining is almost completely artisanal. The first large-scale gold mine began production in 2021. The high value of gold makes it preferable in some instances as currency over the naira, which has experienced devaluation in recent years. This has led to a high demand for gold and the use of gold as currency. Field research demonstrates that even 0.5g of gold may be traded and used to buy food, cars, or other supplies. Gold is well evidenced to be involved in conflict financing and other OECD Annex II risks, such as smuggling.

However, a different picture is painted when looking at the 3Ts. Among artisanal miners in Nigeria, all of the 3Ts are known collectively as “tin”. The mineral deposits occur together, and the minerals are not separated until much further along the supply chain, nearer to the exporting stage. This means the 3Ts are inextricably linked in Nigeria, and the discussion of one mineral’s supply chain cannot occur in isolation without referencing the other.

The presence of columbite, or niobium, adds further complexity to the tantalite and 3T supply chain. In import and export statistics, tantalum and niobium are often grouped together. These miner-

als occur together naturally in deposits in Nigeria, and often a substance will be labelled “tantalum” if it contains more tantalite than columbite, and it will be labelled “niobium” if it contains more columbite than tantalite. Therefore, export statistics on tantalum must also take niobium into account, as referenced in the EU due diligence regulation.

Nonetheless, from the artisanal mining perspective at the upstream extraction stage, all of these minerals, including tungsten, are referred to by the workers as “tin”, and these minerals only are separated into their distinctive mineral constituencies at the export stage.

3Ts are not used to exchange for money or other goods, and they are not as easy to smuggle as gold. The due diligence risks associated with the 3Ts in Nigeria lie mostly with misrepresentation of origin (due to the lack of chain of custody or traceability from mines to aggregators to exporters), non- or underpayment of export taxes, fees and royalties associated with the minerals, or indirect financing of criminal groups through kidnapping for ransom of miners.

5.1.2 Background of the Nigerian mining sector

In Nigeria in 2020, the mining sector experienced growth and exceeded the budgeted forecast by the government by an estimated 10% (actual \$5 million USD, or N 2.09 billion contribution to GDP, versus the forecasted \$4.5 million USD, or N 1.9 billion contribution) (KPMG, 2021). This is despite the negative impact the COVID-19 pandemic had on mining across the globe. Much of that sectoral growth may be attributed to quarrying activities, which include materials such as sand, gravel and crushed rocks, including limestone. Such figures may indicate an increase in construction across the country (KPMG, 2021). In addition, mining was

listed as a priority sector in the government's Economic Sustainability Plan, which was created in response to the pandemic (KPMG, 2021). N6 billion (\$14 million USD as of February 2022's exchange rates) was allocated to support ASM workers in the areas of job and value creation. Further, the Central Bank of Nigeria launched a credit facility of \$120 million (N50 billion) to support micro, small and medium enterprises (MSMEs) and households impacted by the pandemic. This funding went to the capacity building of enterprises in the areas of research and development and equipment upgrades.

Despite the recent expansion of the mining sector, it makes up a small portion of the country's GDP and is marginal compared to the size and value of the oil sector. In 2018, the Nigerian Extractive Industries Transparency Initiative (NEITI) listed mining as 0.18% of the country's total GDP (solid minerals contributed N224.79 million to the country's N127.76 trillion GDP, or just over half a million USD to the country's \$310 billion GDP, at current exchange rates) (Nigeria Extractive Industries Transparency Initiative (NEITI, 2018). However, it should be noted that informal ASM activities are not included in official GDP statistics. Metal ores, under which 3TG are categorized, further comprises just under 5% of the value of the mining sec-

tor, over 90% of which is dominated by quarrying and other minerals (Nigeria Extractive Industries Transparency Initiative (NEITI, 2018). Overall, in 2018, official statistics declare that 46.68 million tonnes of minerals were produced in Nigeria, valued at N47.87 billion (\$115 million USD).

Royalties from solid minerals are divided by the three tiers of government: federal, state-level and the local government authorities (LGAs). Producing states earn an additional revenue from royalties, permits, penalties, and fees on the derivation principle, which means that 13% of revenues accruing to the federation account from any natural resources goes to the state where the resources were mined (The State House, 2020a). In 2019, the sum of N5.0 billion (\$12 million USD) was shared by the three tiers of government, with N0.65 billion (\$1.6 million USD) shared among mineral producing states (The State House, 2020a). The NEITI report declared that total financial flows from 2007-2018 (Royalties, Permits, Fees, Penalties, CIT, EDT, VAT & WHT) to the federation account from the sector equalled N416.3 billion (\$1 billion USD). In 2018 alone, N69.4 billion (\$166 million USD)¹³ were received by the government from the sector (The State House, 2020a).

Table 7: 2018 Mining contribution to Nigeria's GDP

Sub sector	Contribution million	Contribution sector %	Contribution national GDP %
Coal mining	9,782.10	4.35	0.01
Metal ores	10,904.02	4.85	0.01
Quarrying and other minerals	204,104.37	90.80	0.16
Total sector contribution	224,790.49	100.00	0.18

Source: NEITI (2018)

Artisanal and small-scale mining (ASM) sector

2019; Mondlane, 2017. Artisanal miners are estimated to account for 80 to 90 percent of Nigeria's overall solid mineral production (Aina, 2021; Schneck et al., 2021). Overall, Nigeria is estimated to have 1.5 million people indirectly involved in mining, including 300,000 service providers to the ASM mining sector (Mondlane, 2017).

Between 2015 and 2019, the Mining Cadastre Office (MCO) had issued 2,000 small-scale mining licenses, which signals the sector remains overwhelmingly informal (Ango et al., 2019). A more detailed breakdown of existing small-scale licenses is provided further below. Recent years have seen the government place additional attention on formalising the ASM sector, including through the development of a strategic roadmap for the mining sector, 2016-2025.

¹³ All USD are as of February 2022 exchange rates, unless otherwise noted.

Licences issued by the Mining Cadastre Office, 2015-2019	
Title	Number of Licenses Issued
Exploration License	2,763
Quarry Lease	1,191
Mining Lease	126
Small Scale Mining Lease	2,276

Source: Nigerian Mining Cadastre Office (2021)

However, as of December 2021, the Mining Cadastre office reports the following valid, current mineral titles for the 3TGs: 29 small-scale mining leases have been issued for the 3Ts, compared to 110 large-scale mining leases for the 3Ts. For gold, 39 small-scale mining leases were valid as of December 2021, compared to 15 for large-scale gold mining leases. Between December 2021 and February 2022, 5 additional large-scale mining leases were issued for gold, bringing the total to 20.

The national law differentiates between formal and informal artisanal miners. Artisanal and small-scale miners that work with the holders of valid mining licenses or titles, host communities, and authorised buyers of solid minerals (known as mineral buying centres) are recognised by the federal government (The State House, 2020a). The Ministry of Mines and Steel Department hosts a technical department dedicated to artisanal and small-scale mining, and mining laws and regulations outline how the government may aid artisanal and small-scale mining cooperatives with issues such as health and safety, market access and profit optimisation (The State House, 2020a).

Conversely, “illegal miners”, as per Nigeria’s regulatory framework, are those who conduct mining activities without valid mining licenses, titles or permits. Under Nigerian law, illegal mining of solid minerals is punishable by law, and offenders may be tried in a Federal High Court (The State House, 2020a). A Mines Police Division, established in 2017, and a Special Mines Surveillance Taskforce, revived in 2017, have been established to tackle “illegal mining” and issues related to security at mine sites (Gabadeyanka, 2018).

Women’s participation in the ASM sector in Nigeria is varied, yet they generally face marginalisation and discrimination, including a lack of access to capital (Schneck et al., 2021). Women also tend to participate in less labour-intensive and lower paying activities, such as the transportation or processing of the ore, or the provision of goods and services.

All of the 3TG are produced through artisanal mining, yet official employment statistics are not known (Schneck et al., 2021). Relevant to the EU Regulation on Responsible Sourcing of Minerals, as of March 2021, five states in Nigeria are identified as CAHRAs: Zamfara, Yobe, Borno, Adamawa and Kaduna (Schneck et al., 2021). Although production data disaggregated by region is not available for Nigeria, field and desk research suggests that Zamfara is one of the top producing gold states in the country, and the current security situation there is impacting artisanal mining sites. There are claims of gold miners abandoning sites in Zamfara as a result of the escalating conflict, and one gold exporter interviewed stated he had suspended his operations in Zamfara and Zaria due to the worsening security situation. Field research also included interviews at several 3TG sites in Kaduna, a region the EU has identified as a CAHRA and which is currently experiencing heightened tensions between artisanal miners and widespread kidnapping, banditry and violence (ENACT, 2020).

5.1.3 Overview of gold mining

Gold is considered a strategic mineral by the Nigerian government. Nigeria has an abundance of gold deposits in Northern Nigeria in the Borno, Kaduna, Kebbi, Kogi, Niger and Zamfara states (Schneck et al., 2021). Formal gold production with valid mining titles occurs in the States of Zamfara, Kogi, Kwara, Osun, Niger, Sokoto, FCT, Oyo, Kebbi, Adamawa, Katsina, Benue, Anambra, Kano, Taraba and Kaduna, with 59 current mining and small scale mining leases as of February 2022 (Ministry of Mines and Steel Development, n.d.). These are also the states in which the majority of illegal and informal gold mining occurs. Field research for this study interviewed informal and illegal miners in Abuja, FCT, Niger, Kwara and Cross River States. Additionally, the status of some artisanal miners could not be determined during interviews in Ka-

duna State. Gold mining in Nigeria dates to the colonial period in the early 20th century, and today, artisanal and small-scale operators conduct virtu-

ally all of the gold mining across the country (Schneck et al., 2021). The vast majority of the gold supply chain exists outside the formal sector.

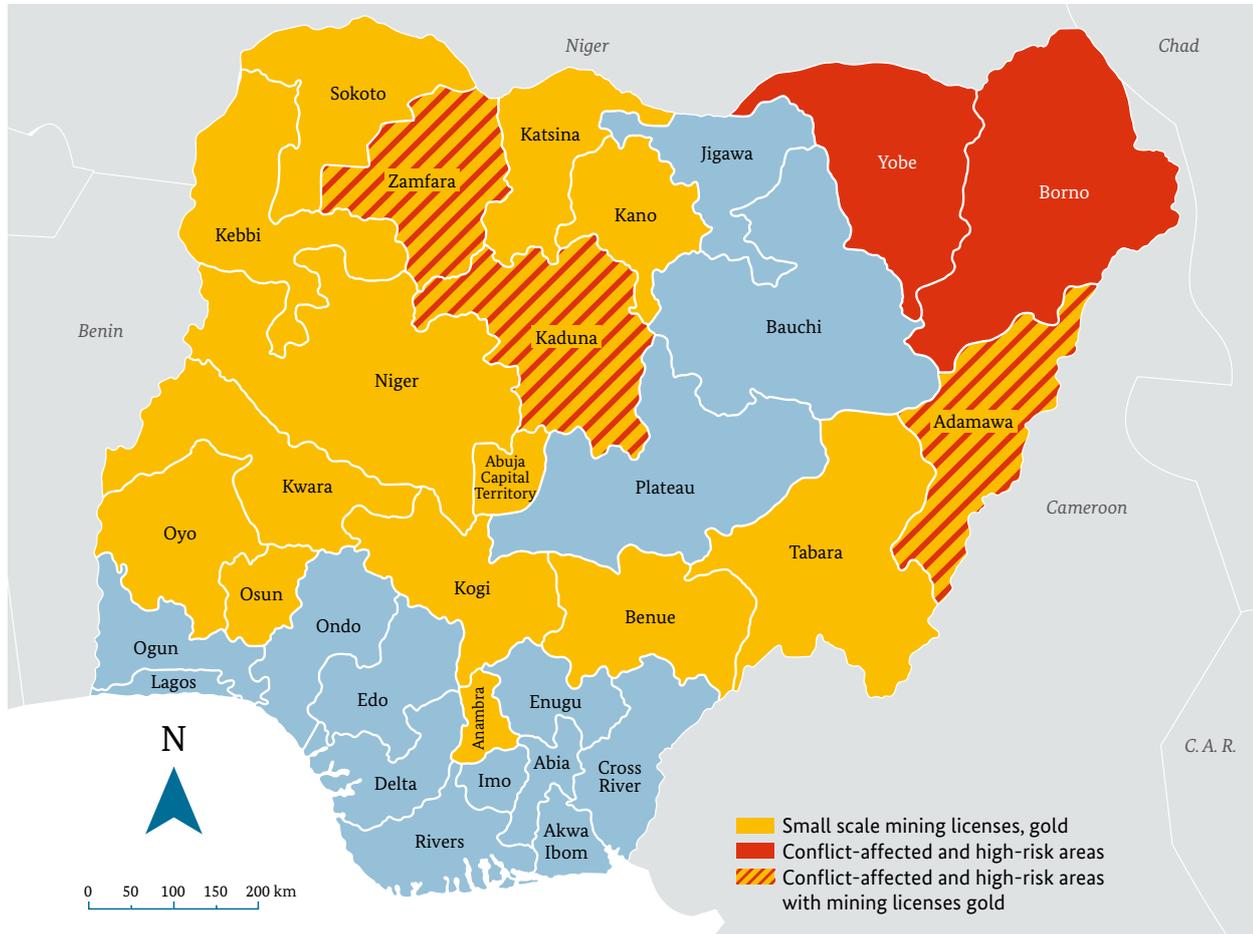


Figure 22: Overview of gold mining by state in Nigeria.

Artisanal and small-scale gold mining in Nigeria takes a variety of forms and organisations, and there is no one “typical” gold mine size, degree of mechanisation, or number of workers. During field research in the States of Abuja, Niger and Osun, several artisanal gold mining sites were visited. One alluvial artisanal gold miner in Abuja that was interviewed says he often mines 1 to 2 grams per day, which he sold for \$53 per gram at the time. An artisanal mine operator at another alluvial site in Abuja detailed the site operates about six days a week, with 200 workers, and obtained about 200 grams per day, also at \$53 per gram at the time of the research. At one gold mining site in Niger State, the operations were led by a formal mining company that employed artisanal mining methods: about 50 ASM workers used excavators, shovels and head pans to produce on average 10 to 20 bags of material

in 1 to 5 days. Bags of mined material are then taken to the wet mill, where the gold is processed. Each bag contains 0.5 to 0.6 grams of gold dust, which was also sold at about \$53 per gram at the time.

A gold mining site in Osun State included a licensed mining company using artisanal operations where at least 10 artisanal miners worked daily, producing a minimum of 60 grams per week. On the day of the interview, miners were getting \$67 (N28,000) per gram. Here, they were selling to Chinese nationals who would then take the gold to Ilesa or Lagos for processing. Another mining facilitator and land owner in Osun explained that fifteen workers generally produce 52 to 53 grams per week, at the price of \$55 (N23,000) per gram. A gold trader and artisanal miner in Kwara State, who is also an executive member of a mining association, works at a

site with about 12 daily workers. On the date of the interview, gold was sold for \$66 (N27,500) per gram. The licensed trader described selling to licensed gold buyers in Ilorin, Ilesa, Osogbo and Lagos. The

source stated the amount of gold sold from the site varies; some weeks sales are as high as \$14,400 (N6 million), and other weeks there are no sales at all.



Figure 23: Alluvial gold mining site near Gwagwalada, Abuja state (Photo: Gbenosa 2021)

In 2018, NEITI reports a total of 315 gold titles were issued across 17 states, 86 of which were small-scale mining licenses (NEITI, 2018). The country's first ever large-scale gold mine, Segilola mine operated by Canada's Thor Explorations Ltd., opened in 2021 (Schneck et al., 2021).

Data from UN Comtrade estimates that between 2012-2018, 87,996 kg (almost 88 tonnes) of gold was smuggled out of Nigeria, valued at more than \$3 billion (Government of Nigeria, 2020).

Several events greatly impacted the gold sector in Nigeria in 2020, which has implications for the

implementation of due diligence in gold supply chains. In June 2020, the Dukia Gold & Precious Metals Refining Company Limited and its gold buying scheme was established (KPMG, 2021). The Dukia Gold & Precious Metals Project (DGPMP) strategy entails buying and processing gold locally with the aim of adding value and mineral beneficiation in-country. The DGPMP also aims to address some of the challenges embedded within the gold value chain by providing ongoing support infrastructure (KPMG, 2021). As of November 2021, both Dukia and Kian Smith, another in-country gold refinery, were in the process of being built (Ukpe, 2021).

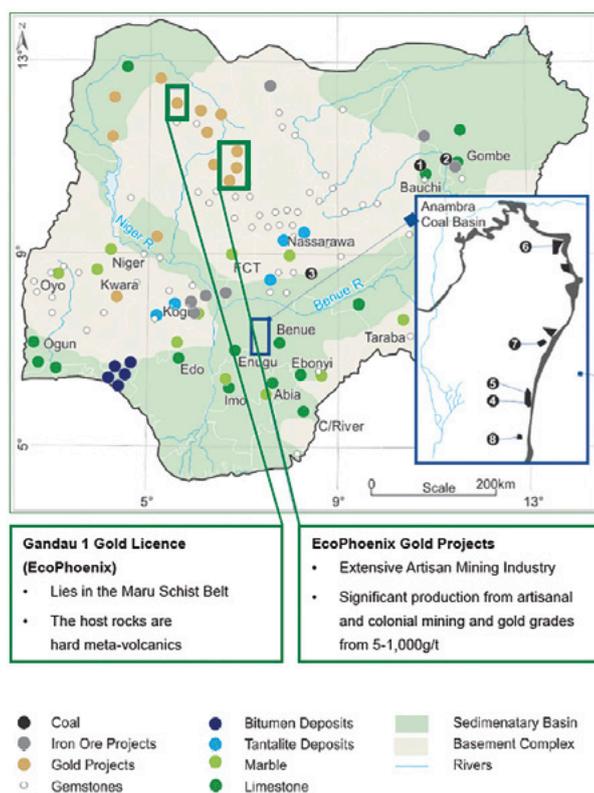


Figure 24: Location of Strategic Mineral Projects and Deposits. Source: Ministry of Mines and Steel Development (2016a)

As part of national planning and as a strategy to formalise artisanal gold mining and the gold supply chain, the Government of Nigeria has recently established the National Gold Purchase Programme. The National Gold Purchase Programme is comprised of three supply chain components: 1) a Federal Gold Reserve pilot programme to establish a gold trading platform and a gold purchasing system; 2) a National Gold Purchase scheme to formalise artisanal gold mining; and 3) the refining of artisanal gold into bars for supply in the National Treasury (Ango et al., 2019). The Programme will be overseen by the Solid Minerals Development Fund (SMDF).

In July 2020, The Central Bank of Nigeria for the first time purchased a locally produced bar of gold from artisanal miners (KPMG, 2021). As part of the newly launched Presidential Artisanal Gold Mining Development Initiative (PAGMI), the bar was purchased for N268million (nearly \$646,000 as of February 2022's exchange rates) and signified the commencement of the National Gold Purchase

Programme. Gold is purchased by the Central Bank under this programme for the purpose of building Nigeria's gold reserve and managing local foreign exchange rates. Headed by Chief of Staff to the President, Professor Ibrahim Gambari, PAGMI is a committee executed by the Presidential Office. The initiative commenced in 2019 and announced the first sale of artisanal gold in 2020.

PAGMI is a comprehensive ASGM formalisation programme developed to integrate the ASGM sector into the economic, legal and institutional framework of Nigeria (The News Agency of Nigeria, 2020). The programme is being piloted in the states of Osun and Kebbi, and as of July 2020, 20,000 artisanal miners had been registered (Aina, 2021). Expansion to the states of Kaduna, Niger, Ebonyi, Sokoto, Gombe, Ekiti and potentially Zamfara¹⁴ is planned after the pilot is complete (The News Agency of Nigeria, 2020; Government of Nigeria., 2020; Ukpe, 2021). Official sources indicate there are plans to accredit 50 gold buying centres currently established throughout Nigeria through a collaboration with the Ministry of Mines and Steels and PAGMI (The News Agency of Nigeria, 2020). States' roles in PAGMI are said to include the provision of support to the programme, including enumeration and biometric registration of artisanal and small-scale miners and support for the development of community agreements (The State House, 2020a). Some States are also partnering with the private sector to set up Special Purpose Vehicles (SPVs) to provide funding for licensed Mineral Buying Centres and artisanal and small-scale miners (The State House, 2020a). The PAGMI programme states that responsible sourcing of artisanal gold is a major objective of the programme, with assurance that gold traded through the programme is aligned with OECD Due Diligence Guidance and LBMA certification.

PAGMI plans to establish gold aggregation centres and support both licensed buying centres and aggregators with responsible sourcing mechanisms, technical expertise, equipment and options for investment and financing as part of the National Gold Purchase Programme (Government of Nigeria, 2020; Ango et al., 2019). These plans include: supporting artisanal miners and the gold supply chain in aligning with international responsible

14 More recent sources no longer list Zamfara as a potential location, likely due to the increased security concerns in the region.

sourcing frameworks, including the OECD Due Diligence Guidance; raising sourcing standards in alignment with LBMA certification; helping ASM workers improve on the quality of their mining operations; and a guaranteed offtake agreement with the Central Bank of Nigeria, which will function as a price guarantee to artisanal miners and shield against gold price volatility in the market. Such a guarantee is also meant as an incentive against illegal smuggling (The State House, 2020b), which often leads to the failure of artisanal miners to capture the true value of their work.

PAGMI's stated goal is to create 500,000 jobs within the artisanal gold mining community, including employment associated with ASM formalisation (Government of Nigeria, 2020). PAGMI is stated to be one part of President Buhari's economic strategy to elevate 100 million Nigerians out of poverty within a decade. PAGMI officials estimate the programme could generate an annual average of \$150 million in tax revenue, \$25 million in royalties and \$500 million accretion to foreign reserves per year as a result of integrating artisanal gold mining activities into the formal economy (Government of Nigeria, 2020). Officials state a major objective of PAGMI is to break the link between armed conflict and artisanal gold mining (Ogunmade, 2020).

By buying artisanal gold directly, the government would create a parallel, formalised gold supply chain by which operators will be able to avoid illicit gold supply chains and supporting armed conflict and other high-risk actors. In addition, the programme aims to support due diligence implementation by supporting the formalisation and modernisation of artisanal miners and by embedding them within legitimate, formal gold supply chains. Similar state-sponsored programmes have been launched in Ethiopia, Ghana, Tanzania, Zimbabwe, Zambia, Mongolia, and the Philippines (The State House, 2020a).

However, on-the-ground implementation of the responsible sourcing programme for artisanal gold is not yet as robust as initially stated. At the time of the writing of this report, there has been no other public sale of gold reported since the programme announced its first sale of artisanal gold in July 2020. Further, interviews with various stakehold-

ers within Nigeria revealed that many within the artisanal gold mining sector are unaware of the government initiative: interviews with artisanal miners; gold dealers; mining associations; and government officials, including those from the Ministry of Mines and Steel Development and the ASM department that oversees the organisation of artisanal miners, found that none of the stakeholders interviewed were aware of PAGMI operations, and none of the stakeholders were participants in the programme. Although PAGMI announced it would be operating in over 50 buying centers across three States, an official from the Central Bank of Nigeria stated only the state government of Kebbi has been financed by the bank to purchase the artisanal gold. Further, interviews with the Miners Associations within Kebbi and Zamfara States disclosed that the associations claim they did not participate in the PAGMI / Central Bank gold purchasing scheme, nor have they entered into any agreements with gold refining companies.

Gold Production and trade data

Production data

NEITI data from 2018 states that only 9.07 kg of gold were officially produced (NEITI, 2018). In its 2017–2018 Minerals Yearbook for Nigeria, USGS reports the gold mining production statistics for the recent years as follows:

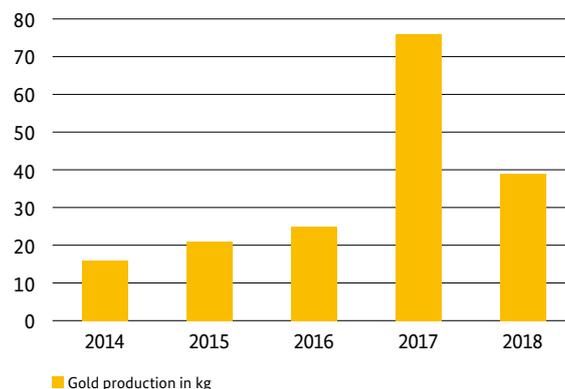


Figure 25: Gold production in Nigeria. Source: USGS (2022a)

Import / export data

In stark contrast with the official production figures above, Comtrade reports that in 2018, four

countries (UAE, Spain, Switzerland and Niger) imported 18,270 kg of gold from Nigeria, at a value of nearly \$600 million.¹⁵ The UAE accounts for over 99% of reported imports at 18,221 kg.

Additionally, although we know from multiple interviews that much of the gold from Nigeria is smuggled across the border to the Republic of Niger, 2018 trade statistics captured a trade value of a mere \$81 of gold imports from Nigeria to Niger, with no quantity listed. This suggests that virtually 100% of the gold crossing the border from Nigeria to Niger is unaccounted for in regard to government royalties, taxes and other public revenues, and is massively unreported in official import & export statistics. This part of the gold supply chain in particular is key for any analysis of due diligence implementation and regulation, as much evidence points to the fact that the Nigerian gold trade to Niger in particular is rife with connections to OECD Annex II risks (smuggling, armed conflict, and in some cases, sexual violence, etc.). Analysing and accounting for the gold that leaves Nigeria via the country of Niger should therefore be a focus of any 3TG due diligence implementation.

Although the statements could not be substantiated, on-the-ground research estimated that much gold from northern Nigeria is smuggled in large quantities (up to 10kg at a time) by road into Niger and then from there on to Dubai, instead of being declared as legal exports from Nigeria. Sources report it is typically more advantageous to export gold from Niger because there are less restrictions and less export taxes for gold. In Dubai, the proceeds from gold are allegedly exchanged for goods, which are then re-exported to Nigeria.¹⁶ “Gold for goods” is apparently a phrase commonly used by those in the Nigerian gold export trade to signify this exchange.

The Nigerian gold export statistics differ considerably from the import statistics for 2018. Compared to the \$600 million reported by importing countries, only \$63,000 of gold exports from Ni-

geria have been captured by Comtrade data. This means that a mere 0.01% of reported country imports have been captured by the Comtrade export data provided. Of the \$63,000 worth of export data available, \$38,000 is credited to the US (no quantity listed), and \$25,000 is credited to the UAE, with 1 kg listed. The discrepancies in import and export trade data available through Comtrade highlights the difficulties in analysing and evaluating supply chains and trade data for countries where smuggling occurs on a massive level. Comtrade export data is based on the Nigerian government’s official declarations, which likely do not reflect minerals that are smuggled, and are therefore not effectively representative of national production volumes.¹⁷

For 2020, the only other year Comtrade has export statistics for gold from Nigeria available between 2015-2020, there is a marked increase in the amount of gold reported to be exported. Although the quantity is not reported, the reported trade value for gold exports is over \$2 million¹⁸, with \$1.6 million of that credited toward exports to the UAE. The only other country for reported exports in 2020 is Turkey, at 30 kg of gold worth nearly half a million USD.

Of the trade data gathered between 2015-2020, European countries listed to be importing gold from Nigeria are Italy, Spain, Switzerland and Portugal, with the US also listed.

Conclusion

It is well documented that gold smuggling is a major issue for Nigeria: In 2021, the Nigerian government launched an investigation regarding the alleged loss of \$9 billion of revenue annually as a result of the practice (Bloomberg, 2021). Other government sources report a loss of \$3 billion between 2012-2018 from gold smuggling (PAGMI, 2020). The trade and production data collected from sources such as Comtrade and the USGS supports the assertion that hundreds of millions of dollars of export taxes a year, if not more, are going undeclared

¹⁵ Actual trade value is calculated to be \$596,938,545.00.

¹⁶ One interviewee claimed that, as gold is currently exported at \$60 per gram (N25,000), goods worth \$60,000 per kg (N25-30 million) are often bought in Dubai and then exported back to Nigeria. Gold is estimated to be exported to Dubai in about 10 kg or more lots, which at current rates would mean, at a minimum, \$600,000 worth of goods at a time is being purchased per 10 kg lot of traded gold.

¹⁷ As can be seen from the UAE/Dubai import statistics, gold trade data does appear somewhere, eventually.

¹⁸ \$2,066,218.00 total trade value in gold exports reported in 2020.

as a result of gold smuggling and the widespread misrepresentation of the origin of Nigeria's gold production. Evidence of these OECD Annex II risks

in the gold supply chain supports greater examination of due diligence efforts linked to the gold trade in Nigeria.

The gold supply chain



Figure 26: This is a simplified illustration of the gold value chain within Nigeria.

For gold production, it is common for artisanal miners in Nigeria to enter a pre-financing agreement with a gold dealer. This type of agreement provides the miner with the necessary equipment for extraction, including a crushing machine and a water pump. An agent hired by the pre-financer (who is also often the dealer) will supervise the artisanal miners on site.

The artisanal miners will take the stones to a wet milling machine to grind the materials. In areas where there is enough water, the wet mill is often located right on the mine site. In some instances, the dealer owns the wet mill machine. Where there is not enough water at the mining site, miners will pack the gold ore into sacks and have them transported by someone else to a wet mill machine by motor bike or small vehicle. Wet milling costs \$6-7 per bag (N2,500-N3,000), and transportation is generally \$2.50 (N1,000). Mercury is often used to amalgamate the gold, which carries environmental and health implications. Mercury is added to the gold concentrate, after the initial gold processing. After wet milling, the materials will be taken to the sluice to separate. Then, at the final stage, the mercury will be added to the gold concentrate.

The agent will buy the gold from the miners at a set price, usually between \$48-60 per gram (N20,000-N25,000). This is dependent on the quality and the amount of karats of gold at the site, as well as the international gold price. Such will have been predetermined by a sample being taken to a gold dealer's shop and assayed. The agent will then

sell the gold to the dealer / pre-financer for a small profit.

Before being tested for its purity, the gold will be taken in its raw form for crude smelting, typically by the dealer. Gold is taken to the goldsmith, where it is smelted to remove impurities. From there, the gold will be taken to an assay machine to verify its karats. In many cases, the gold dealer will own both the goldsmith shop and the testing machine for his or her operations. Others may also bring gold to use the goldsmith or the testing machine for a price. The testing machine is programmed to measure the weight, special gravity and the purity (i.e., the karats) of the gold.

After testing, a receipt is issued, without which the gold cannot be sold or exported. The test receipt contains: the name of the testing company; the date of testing; the name of the owner of the gold; the weight and specific gravity (SG) of the gold; the quality and karat of gold; and the signature of the person who carried out the test. These receipts and data points can be important for due diligence practices and should be considered as an entry point to strengthen chain of custody and due diligence along the gold supply chains. One interviewee at a gold testing location in Niger State said about 50 tests are carried out daily, and even more occur during the rainy season. Tests below 50 grams cost \$0.75 (N300), while weights above 50 grams cost \$1.20 (N500).

After receiving a receipt from the testing centre, the dealer will sell the gold to the exporter. The vast majority of gold from Nigeria will be exported to Dubai, UAE after being smuggled across the border to the Republic of Niger, according to interviews with exporters during field research.

On-the-ground research in Nigeria uncovered several routes for smuggled gold. The majority of gold is thought to be smuggled by road to the Republic of Niger, often through Niger State. Interviews with exporters¹⁹ uncovered multiple trends: Firstly, at least one interviewee stated many of the larger gold exporters who live in Nigeria are actually citizens of Niger. It was stated that many of these exporters are of the Hausa/Fulani tribe and Muslim, thereby sharing some cultural affinity with much of northern Nigeria. For these major exporters, gold is just one of their many businesses, and they tend to be wealthy with several active merchant-based operations.

Sources state many of these gold exporters are located in Minna in Niger State, in northern Nigeria. Others may be found in Abuja, Kano, or Kaduna States. For these “big time” exporters, who often move over 10 kg of gold at a time, it would be difficult for them to export gold through Nigerian airports undetected. Therefore, sources allege, these Nigerian businessmen use land routes to smuggle gold to Niger, and then they take advantage of the less complex export procedures and fewer export taxes there to transport gold by air to Dubai.

Secondly, it is reported that smaller exporters, who generally export less than 10 kg at a time, are more likely to use smuggling routes that lead to Benin and then onward to Togo. These smaller exporters may travel by road to deal with gold buyers in Benin or Togo. Here, again, interviewees say “gold for goods” transactions occur, whereby goods are bought in Benin or Togo and exported back into Nigeria. Interviewees also stated that smaller gold exporters may be more likely to smuggle gold straight to Dubai by flying it, undetected by customs, from Nigeria.

5.1.4 Overview of 3T mining

Tin (cassiterite)

Tin ore, or cassiterite, is found in multiple regions in Nigeria. The Jos Plateau is a major tin producing region, with a reported 80% of production originating there (Schneck et al., 2021). Artisanal mining activities occur primarily in the Plateau, Nasarawa, and Kaduna states (Schneck et al., 2021). Cassiterite is also found to have commercial potential in the states of Adamawa, Bauchi, Ekiti, Kano, Kogi and Taraba (Ministry of Mines and Steel Development, 2016a).

Government oversight of the sector is weak, and detailed data on daily production and employment is not currently available (Schneck et al., 2021). One 2020 study of active and inactive pits in the Jos Plateau estimated mine site production at 200 kg of tin a day, which could generate N660,000 (\$1,440 at February 2022's exchange rates) per 50kg processed tin²⁰ (Schneck et al., 2021). If accurate, these earnings would have the potential to contribute to GDP if formalisation were to occur (Schneck et al., 2021).

Official reports of cassiterite mine sites describe workers, generally men, working in teams of 10 to 15 and using limited mechanisation such as excavators, shovels, wheel and bucket systems to haul cassiterite ore out of pits of 30 to 50 meters in depth. Head pans are used to transport ore to ground sluices, where the ore is concentrated. At some sites, women are reported to be involved in the transportation of the ore from the extraction pits to ponds for processing. In some cases, women are engaged as contractors and sift through lower grade mineral ores known as ‘kwangila’ (Schneck et al., 2021).

¹⁹ Field work in Nigeria included several interviews with persons who were suspected to be gold exporters, meaning they are said to be well-known in their communities as exporters. However, none of them would admit to exporting gold, likely for fear of disclosing the common business practice of failing to declare export taxes and other legal requirements.

²⁰ Using 2018 prices of N165,000 per 50 kg of tin.

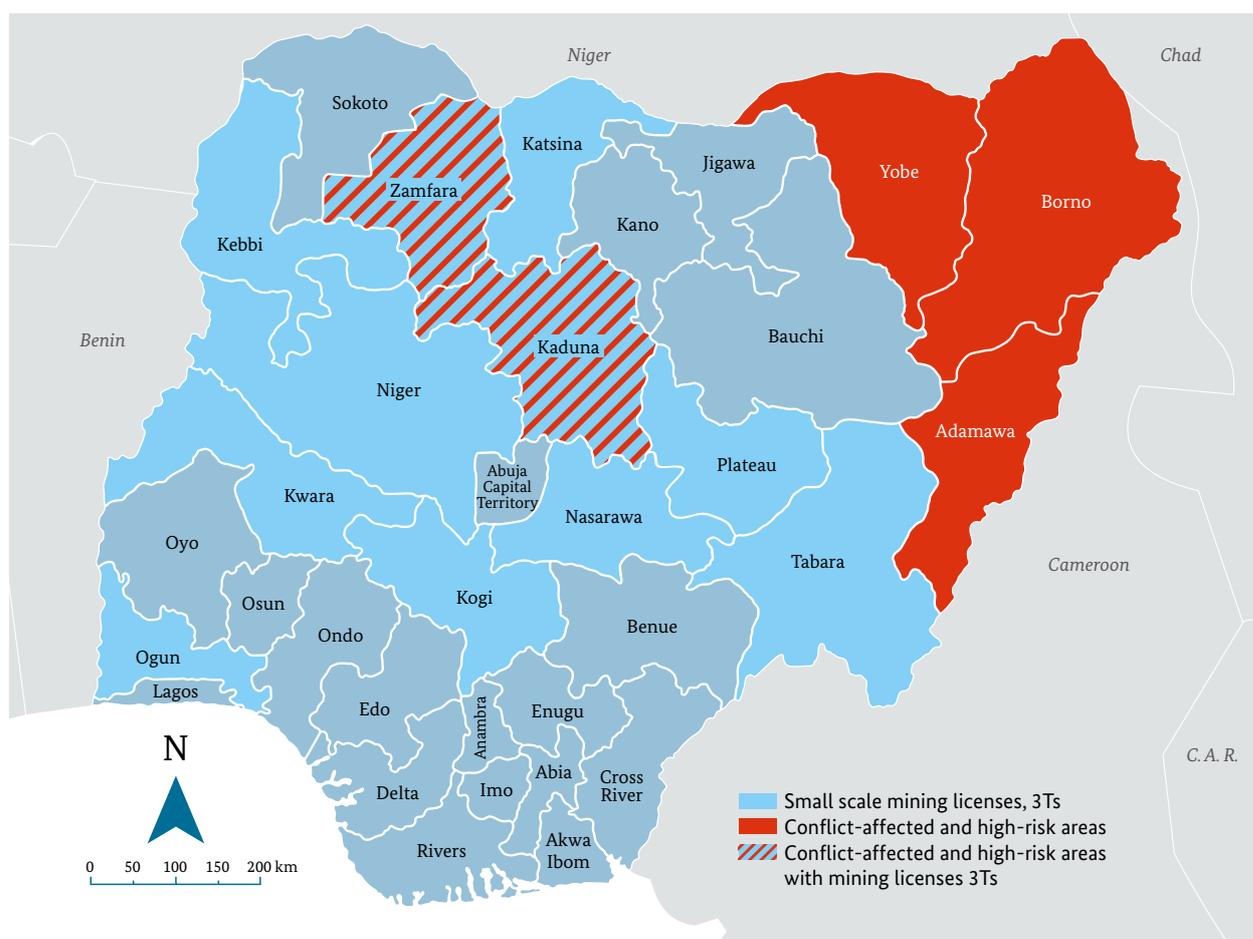


Figure 27: Overview of 3T mining by state in Nigeria.

Production data

According to the USGS, in 2018, over 7,800 tonnes of tin were produced in Nigeria (USGS, 2020). NEITI data from the same year details more than 4,700 tonnes of tin production (NEITI, 2018). Tin is formally produced in the States of Plateau (Jos), Kano, Bauchi, Ekiti, Kaduna, Kwara, Ogun, Kogi, Katsina, Nasarawa, Niger, Adamawa and Jigawa, with 47 government-issued mining and small-scale mining leases as of December 2021. The Plateau State, which includes Jos, is an important region for tin processing and export, as this is the location of many “tin sheds” and exporting centres for tin (more on tin sheds in the “supply chain” section below).

Import / export data

Comtrade data suggests that tin exports are chronically underreported from Nigeria. World import data reads that in 2018, China, Germany and Malaysia reported importing a total of 9,350 tonnes

of tin ores and concentrates, at a combined value of \$128 million (with 9,280,000 tonnes imported into Malaysia alone). That same year, however, Comtrade export data for Nigeria lists that the country only exported 130 tonnes of tin ores and concentrates to China and Malaysia only.

Tantalum (tantalite) and niobium (columbite)

Tantalite is categorized as a metallic mineral mined by the ASM sector, along with gold, cassiterite (tin) and columbite (Schneck et al., 2021).

According to USGS figures, Nigeria is one of the top 5 tantalum producing countries, behind only the Democratic Republic of Congo (DRC), Rwanda and Brazil (USGS, 2021b). Artisanal and small-scale mining represents about 60% of global tantalum production, making it the metal with the highest ASM production share in the world (Schütte & Näher, 2020).

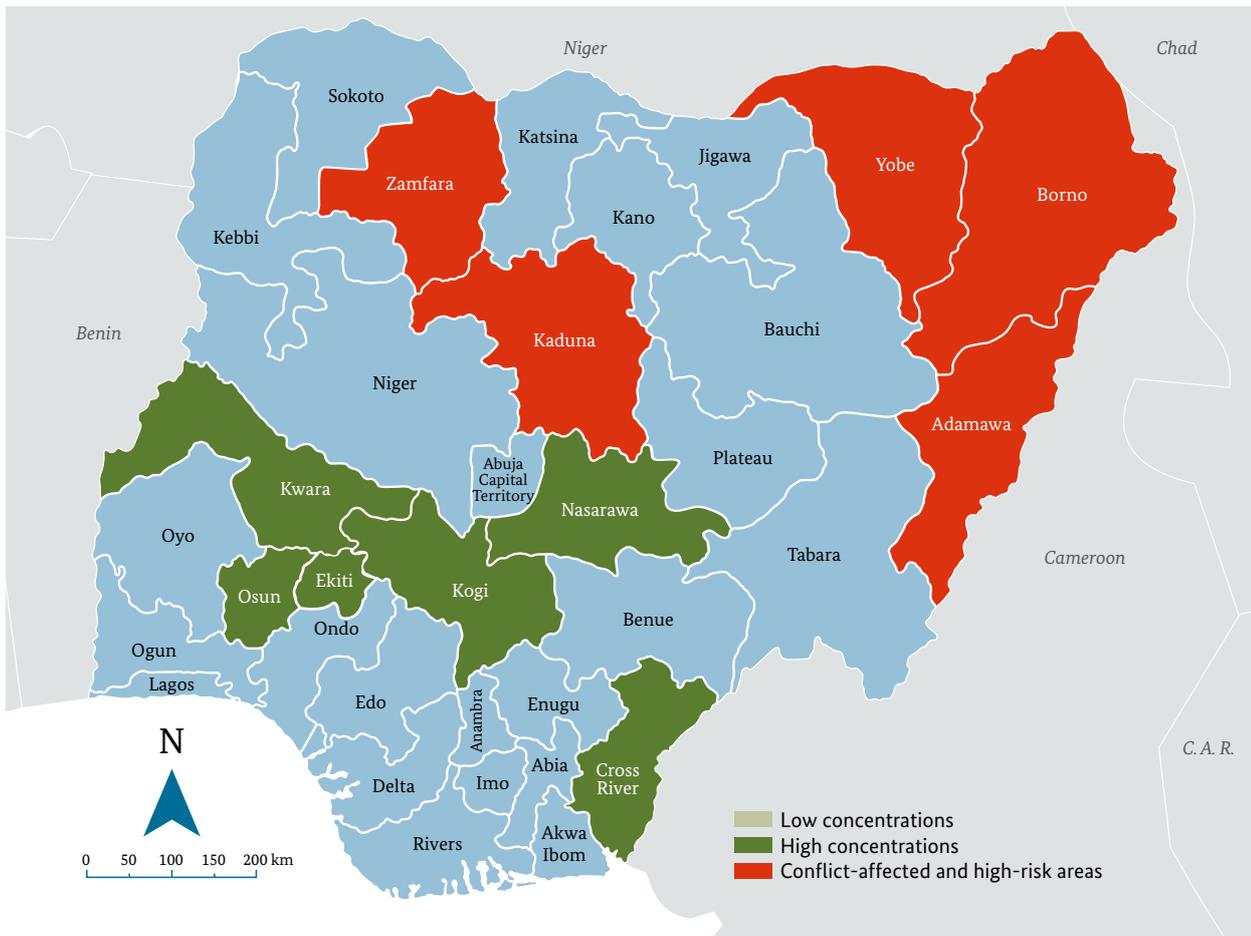


Figure 28: Tantalite Deposits in Nigeria. Source: Finelib (n.d.)

One matter of note is niobium production in Nigeria. Tantalum and niobium are geologically associated and are often exported together in the same concentrate, separated later through the process of hydrometallurgy. The EU Regulation on Responsible Sourcing refers to the combined tantalum-niobium category for imports. In general, columbite and tantalite contain niobium and tantalum. When the amount of niobium in a concentrate significantly exceeds tantalum it is marketed (sold) as a columbite concentrate (paid based on niobium content); when the amount of tantalum approaches or exceeds niobium it is marketed as a tantalite concentrate (paid based on tantalum content), though mislabelling issues pertaining to tin, tantalum and niobium products in Nigeria complicate this classification, as described further below. Artisanal production of columbite in Nigeria is sizeable both in volume and revenue generation, and extraction of the mineral is intricately linked to that of the 3Ts.

For these reasons, columbite production will also be included in the analysis of the Nigeria 3T sector.

Nigeria hosts rich deposits of niobium, particularly in the Jos region, that also include some amounts of tantalum²¹. In previous years, columbite-tantalite was mined in Udegi of Nasarawa State by the Chinese Kenyang Mining Company Ltd (USGS, 2021c). More recently, artisanal miners have produced columbite-tantalite in the Plateau State of Nigeria, on the Jos Plateau (USGS, 2021c). In Jos, cassiterite (tin) and columbite (niobium) are artisanally mined together, and the minerals are separated out at the processing phase. Cassiterite and columbite are processed and separated at privately owned processing centres known as “tin sheds”, owned and operated by Indigenous peoples in Jos. Within the tin sheds, the minerals are separated and exported differently because columbite (niobi-

21 In addition to the Plateau State, which contains the Jos region, niobium may be found in Nasarawa, Gombe, and Kogi States, as well as the Federal Capital Territory (Foraminifera, 2013).

um) garners a higher value and because the different concentrate types are sold to different buyers.

A 3T and gold dealer interviewed in Kaduna State reported buying tantalite at \$21 (N9,000) per kg and selling it for \$72 (N30,000) per kg after processing. He stated he buys up to 200 kg of tantalite per day. He stated he also buys up to 300 grams of gold per day. He described financing ASM 3TG mining operations in Zaria, Zamfara, Nassarawa, Kogi, Ilesha, New-Bussa and supplying major exporters in Abuja, Kaduna and Jos. However, he said he shut down in operations in Zaria and Zamfara due to the worsening security situation with banditry and the kidnapping of miners for ransom reportedly occurring there.

Production data

According to the USGS, in 2018, 180 tonnes of tantalum ores and concentrates was produced in Nigeria (USGS, 2022a). NEITI data declares a mere 6 tonnes of “tantalite crude” was produced that year (NEITI, 2018).

Tantalum concentrate is formally produced in the States of Kaduna, Ekiti, Ogun, Plateau (Jos), Taraba, Oyo, Nasarawa, Kwara and Ebonyi, with 15 official mining and small-scale mining leases issued as of December 2021. Two additional mining leases for tantalite are held by the Laurium Mining Company in Plateau State.

NEITI states 1.1 million kg (1,299.80 tonnes) of columbite ore was produced (NEITI, 2018). No USGS data for columbite ore or niobium was found for 2018.

Columbite is formally produced in the States of Katsina, Kano, Bauchi, Plateau, Kaduna, Nasarawa, Kogi, Kebbi, Jigawa and Oyo, with 55 current mining and small-scale mining leases as of December 2021. The only government-issued license for mining niobium is a small-scale mining lease operated by Felmont Commodities Limited in Plateau State.

Import / export data

Here again, Comtrade data suggests that tantalum and niobium exports are underreported from Nigeria. World import data reads that in 2018, seven countries or regions reported importing a total of 5,600 tonnes of tantalum and niobium ores and concentrates²², with China and Hong Kong receiving the lion’s share at 3,700 tonnes and 1,200 tonnes respectively. Estonia and the US are also listed as importing countries.

That same year, however, Comtrade export data for Nigeria lists that the country exported 4,000 tonnes of tantalum and niobium ores and concentrates, with 2,000 tonnes of that reported to be exported to Spain and 1,800 tonnes to China and Hong Kong combined.

Tungsten (wolframite)

In 2018, NEITI reports 50 tonnes of as wolframite were produced, representing \$3,600 (N1,500,000) in royalties (NEITI, 2018). The USGS does not list Nigeria as a top 10-producing country for tungsten, which is more readily found in locales such as China, Vietnam and Russia (USGS, 2022b). UN Comtrade does not list Nigeria as a reporting importing or exporting country for tungsten ores and concentrates for 2020 (UN Comtrade, 2021).

States where tungsten (wolframite) is considered to have commercial potential include Adamawa, Bauchi, Benue and Kano (Ministry of Mines and Steel Development, 2016a).

The value per kg for tungsten is less than the value of ASM gold, tin or tantalum production (Schütte & Näher, 2020). Most of the interviews with sources revolved around the mining of tin, tantalum or columbite, with only a few sites dedicated to wolframite production, given its lower value. Sources also suggested it may be harder to find buyers for the mineral.

²² Trade Code HS 8103 (tantalum; articles thereof, including waste and scrap) and HS 261590 (niobium, tantalum, vanadium ores and concentrates) contains vanadium, but according to Nigeria’s Mines and Steel Development, vanadium is not currently mined in the country. Trade figures therefore apply to tantalum and niobium only.

Production data

NEITI data from 2018 declares 45 tonnes of wolframite production (NEITI, 2018). No USGS data for wolframite was found for 2018.

Wolframite is formally produced in the States of Niger and Zamfara, with 3 government-issued mining and small-scale mining leases as of December 2021. Artisanal production of wolframite was also noted in Abuja²³, Kwara and Nasarawa States during field research for this study. Currently, the only government-issued license for mining tungsten is a small-scale mining lease operated by Piramen Ventures Limited in Nasarawa State.

Import / export data

Import data from Comtrade declares that in 2018, nearly 50,000 kg of tungsten ores and concentrates²⁴ was imported into 5 countries: China, Malaysia, Brazil, Côte d’Ivoire and Ghana). Export data from the same year states that 24,000 kg of tungsten ores and concentrates were exported from Ni-

geria to Cameroon only. These figures suggest that less than half of tungsten exports are being captured with trade data.

Conclusion

Overall, it seems that export data from Nigeria chronically underreports the amount of 3Ts that are exported from the country. This has ramifications for government revenue from export taxes as well as implications for smuggling and could be due to exporters trying to avoid or reduce the export tax (thus under declaring exports). In addition, misrepresentation of mineral origin, which is an OECD Annex II due diligence risk, may occur, as there is limited to no chain of custody or traceability in the upstream 3T value chains, with ore from different locations being mixed at aggregator level (see further below). Of the trade data gathered between 2015-2020, European countries listed to be importing 3Ts from Nigeria are Germany, the Netherlands, Spain, Estonia, Czech Republic, Portugal, Switzerland and the UK, with Canada and the US also listed.

The 3T supply chain



Figure 29: Simplified 3T supply chain within Nigeria.

As the 3T mineral deposits often naturally occur together in Nigeria, they are often mined together and only separated into different minerals (tin, tantalum, tungsten and niobium) at the point of export. Most 3Ts are artisanally mined in alluvial beds, in sand.

3T mine sites are found in a variety of forms and organisations. Field research for this report included 3T site visits in the States of Nasawara, Kwara, Bauchi and Kaduna. At a 3T mine in Nasawara, women were found digging for material and washing in a nearby body of water. During the

23 The wolframite mine site in Abuja had been abandoned without reclamation. Women now mine gold along the stream near the abandoned wolframite site, as the abandoned site has been noted as dangerous, and the price of tungsten has decreased and there are few ready buyers, according to the field research.
 24 Figures include trade codes HS 2611 (tungsten ores and concentrates) and HS 8101 (tungsten [wolfram]; articles thereof, including waste and scrap).

rainy season, sources said the women miners could produce 7 pounds a week, and about 3 pounds during the dry season. The 3Ts were then sold to a local agent at \$6 (N2,500) per pound. At another site in Nasawara, women were also found working at a 3T site. Other women were present, selling food to the miners. One couple who mines 50 percent of the time and farms otherwise reported producing 11 pounds of 3Ts per week, selling to agents onsite for \$6 per pound. At the same site, a group of four younger men work and produce 4 pounds every two days. They worked under a prefinancing agreement with a dealer to whom they sold their minerals, who supplied a water pumping machine and hose. Another dealer in Nasawara described buying 40 to 50 pounds of 3Ts daily. Under prefinancing agreements, he loaned money to miners and supplied equipment, such as water pumps and hoses for washing the materials, in order to ensure a regular supply of minerals.

One mining cooperative in Nasawara made up of both men and women averages about 100 workers during the dry season and 40 during the farming season, as the miners reported mining part-time and farming part-time. The cooperative stated workers generally work in groups of 4 or 5, and they report producing 16 to 22 pounds in the dry season and 10 to 16 pounds during the raining season. One interviewee stated one pound sells for between \$4.80 to \$6 (N2000 to N2500) on-site, and for the high-grade material, one pound at Jos will receive nearly \$8 (N3200), and one kilogram will receive \$18 (N7500). At a women's cooperative in Nasawara, there are over 100 members. One interviewee stated no men are involved because the quantity and quality of the minerals found at the site are poor. Here, women reported it takes two days to dig and three days to wash to only recover one pound of minerals, which may be individually sold for less than \$4 (N1500). Alternatively, a family working together at the site may receive nearly \$10 (N4000) for 2 kg sold.

A major characteristic of 3T mining in Nigeria is that all of the 3Ts (tin, tantalum + niobium, tungsten) are solely referred to as "tin" at the artisanal mining and extraction stage. The 3Ts often occur together and are not able to be separated until before the export stage. Therefore, 3Ts are colloquially referred to as "tin" by the artisanal miners, and

consequently, artisanal miners generally only receive the value of the price of tin when selling their minerals to agents or dealers. The practical implication of this is that a miner is not able to recoup the higher value of the tantalite or columbite that she extracts.

Field interviews uncovered an even more complex dynamic when exploring the prices 3T artisanal miners are about to receive for their "tin". Some who mine the 3Ts are hardly able to individually produce a pound or two a week, which are then sold on to local agents. Many of these miners are locals, and many of them have other occupations in addition to mining, including farming. Unlike with gold mining, which yields higher profits and attracts migrants who travel across Nigeria from mine site to mine site, sources allege that the low profit margins and high effort of 3T mining means that these minerals are more likely to be mined by vulnerable groups that have few other economic opportunities available to them, such as women.

While miners may often be aware of the price differences between the 3Ts, they are unable to benefit from this because of their small yields. A certain minimum quantity of "tin" is needed to take to the processing plants in Jos (the "tin sheds"), which separate the 3Ts into tin, tantalite + columbite, and tungsten. Artisanal miners, who often live on day-to-day wages and need immediate payment for their minerals, do not have the resources to stockpile minerals and then travel to Jos. Instead, the miners need to sell to the closest market. Even here, sources state markets can also provide difficulties, because it may be a challenge to find a buyer for 3Ts in some instances. Because of the above factors, miners must generally settle for the price of "tin" and sell to whatever buyer is available to them.

Conversely, there are tin miners who produce enough quantity of 3Ts to travel to Jos directly at the end of the month. These miners are typically part of cooperatives, which may be registered. Members of cooperatives gather their minerals together in large enough quantities to be taken to Jos and separated properly. While an individual ASM worker cannot mine 3Ts in large enough quantities, when they work together in cooperatives, they are

able to then receive higher prices for the minerals, once they are processed in Jos.

Tantalite garners the highest price, followed by columbite, then cassiterite (tin), with wolframite (tungsten) being the lowest. 3Ts are bought from artisanal miners by agents or dealers, who then take them for processing. Much of 3T processing occurs in plants known as “tin sheds” in Jos, which are reported to be mostly privately owned. Tin sheds are a relic of the colonial era, when tin was the highest-priced mineral for export in Nigeria. The tin processing plants of today separate the 3Ts into their separate mineral constituents while also removing any dirt and debris. Generally, smaller tin sheds in Jos have the machinery to separate cassiterite from columbite, and the minerals are then sold on for further processing to exporters. Exporting centres are also involved in the processing of 3Ts. Here, high-magnetic separating machines process the ore and separates it into tin, columbite, tantalite and tungsten. After this, the tin sheds pay the dealer per volume of each mineral, and then the minerals are sent to be exported.

One agent and dealer interviewed in Nasarawa State stated he daily purchases 40 to 50 pounds of “tin” (equal to about 15 to 20 kg), consisting of cassiterite (tin), tantalite, columbite (niobium) and wolframite (tungsten). He pays between N2,300 to N2,500 per pound to the artisanal miners for the “tin”. He then takes the materials to Jos to sell to the tin shed at Bukuru, Terminus, Dadinkowa, Building Materials, at the rate of between \$6.70-7.20 (N2,800 to N3,000) per pound, during the time of field research in October 2021. At the tin shed, the minerals are processed and separated according to the different mineral types to prepare for export.

Tin sheds in Jos are a key element of the 3T supply chain in Nigeria. According to field research, there are two major categories of tin sheds: those that are larger and also function as exporting centres, and those that are smaller and function as 3T processors only. The larger tin sheds that also operate as exporters receive their “tin” from multiple sources: they collect 3Ts from ASM workers directly; they collect 3Ts from agents, who bring 3Ts produced by artisanal miners; they collect 3Ts from dealers; and they collect 3Ts from the smaller tin sheds that

do not have the capacity to export. These smaller tin sheds, which sell their products to the larger tin sheds/exporting centres, receive 3Ts directly from miners, dealers or local agents. In addition to the tin sheds that operate as exporting centres, the stand-alone 3T exporting centres are often located near ASM sites. These exporters receive their minerals from smaller tin sheds; from miners based on site; and from 3T dealers.

As a final stage before export, federal mines officers will inspect the 3Ts and weigh them before issuing the export permits. The minerals are then loaded into export containers, about 24 or 25 tonnes per lot. These containers are loaded into trucks and are transported to seaports in Lagos by road, and they are then exported to destinations around the globe from Lagos seaports.

Importantly for due diligence implementation, although tin sheds and exporting centres are mostly located in Jos, these entities collect “tin” from all over Nigeria. Exporters receive 3Ts from multiple sources, including artisanal miners, dealers, agents, and smaller tin sheds. 3Ts from all over the country are mixed together, inspected and loaded into 25-tonne containers for export. There is no chain of custody from the “tin sheds” upstream and so it is not possible to determine the region or mine of origin of the material. This has consequences from a perspective of conflict minerals due diligence, as downstream buyers are not able to determine whether some of their ore was mined in a CAHRA or outside of it.

The 3Ts in their varying mineral constituencies are then exported mainly to China and Malaysia, according to Comtrade data. Some is also exported to the US and Europe. Tin exporters in Jos have allegedly lodged complaints with the Government of Nigeria because they claim that exporting tin to Europe is becoming increasingly difficult. Although unable to confirm these assertions, if true, they may suggest that Europe’s increasing attention to due diligence may be one cause of the increasing difficulties to export to Europe. Other unconfirmed information from tin exporters indicate that some Chinese operators are also implementing increased trade restrictions regarding tin originating from Jos. Unconfirmed statements in-

dicate that some Chinese exporters in the region are delineating maps and areas within Jos from which they will no longer accept minerals for export. However, exporters interviewed during field research in Jos disputed these claims and affirmed they are exporting 3Ts to Europe, including the UK, and the US with no issues.

Many Nigerian exporters in Jos are operating illegally, meaning they do not have the appropriate permits to legally export minerals out of the country. Examination of mineral buying centres for the 3Ts and columbite listed on the Ministry of Mines and Steel Development website displays that, as of December 2021, all of their licenses have expired and are no longer valid. The widespread occurrence of illegal exporting operations compounds the issue in Nigeria of inaccurate export and trade data as well as the pervasive under-collection of export taxes and other royalties and fees for government revenue purposes. Any programme designed to respond to due diligence implementation should have a focused solution to address the issue of the export phase of the supply chain, with the prevalence of illegal or informal practices (including buyer, exporters, processors) and failure to collect appropriate taxes and fees as a widespread practice.

Unlike with gold, the 3Ts are not hand-carried onto flights or walked across national borders, which decreases the avenues for smuggling. In addition, another difference is that gold may be traded in smaller amounts (by the gram or kg, depending on the size of the exporter), while 3Ts are exported at a large scale (by the tonne) and are bulky and heavy to export. The mode of transport data from Comtrade suggests the vast majority of 3Ts are exported through sea vessels, through air, or through other non-sea waterways. However, field research suggests it is very rare for 3Ts to be exported by air due to the large amounts needed for export (tonnes) and the low profit margin such metals earn. Unofficial statements from the field research suggest that, although the demand for 3T smuggling is not as prevalent as with gold, it is likely that the right quantities and export amounts are not being declared. Therefore, the correct amount of taxes, royalties and other fees are not being paid. Such misrepresentation is linked to mineral smuggling, which is an OECD Annex II risk.

5.1.5 Political and legal framework conditions of the sector

The Mining Sector in Nigeria is governed by the 2007 Nigerian Minerals and Mining Act and the 2008 Nigerian Minerals and Metals Policy. The 2007 Act established several sectoral entities, including:

- Mining Cadastre Office (MCO): Responsible for management and administration of mineral titles
- Mineral Resources and Environmental Management Committee (MIREMCO): State-level committee serving at the official intermediary between the state and federal government, mining companies, local communities, and miners
- Solid Minerals Development Fund (SMDF): Launched in 2013 to catalyse investment in the mining sector

The 2007 Act established state ownership of all mineral resources, procedures for acquiring and extracting minerals (reconnaissance permit and exploration license) and the rights and obligations of holders of mineral titles, including the small-scale mining lease, the mining lease, the quarry lease and the water use permit. Incentives for investment were also included. In tandem, the 2007 Nigeria Extractive Industries Transparency Initiative Act (NEITI Act) institutionalized transparency within the extractives sector and its revenue flows (Ang et al., 2019), which is one element in support of due diligence implementation.

Under the 2007 Act, the administration of mineral rights lies with the federal government, which is the sole issuer of solid minerals mining licenses. Established under section 5(1) of the Act, the MCO is the issuing agency for licenses, and it holds the sole responsibility for the administration of mineral titles and management of the cadastral registers. Mining licenses and leases may be granted to body corporates or cooperatives on a first-come, first-served basis (The State House, 2020a). License holders contribute revenue in various ways to the federal government, including through royalties, permits, penalties and taxes (VAT, CIT/WHT, CGT, EDT) (The State House, 2020a).

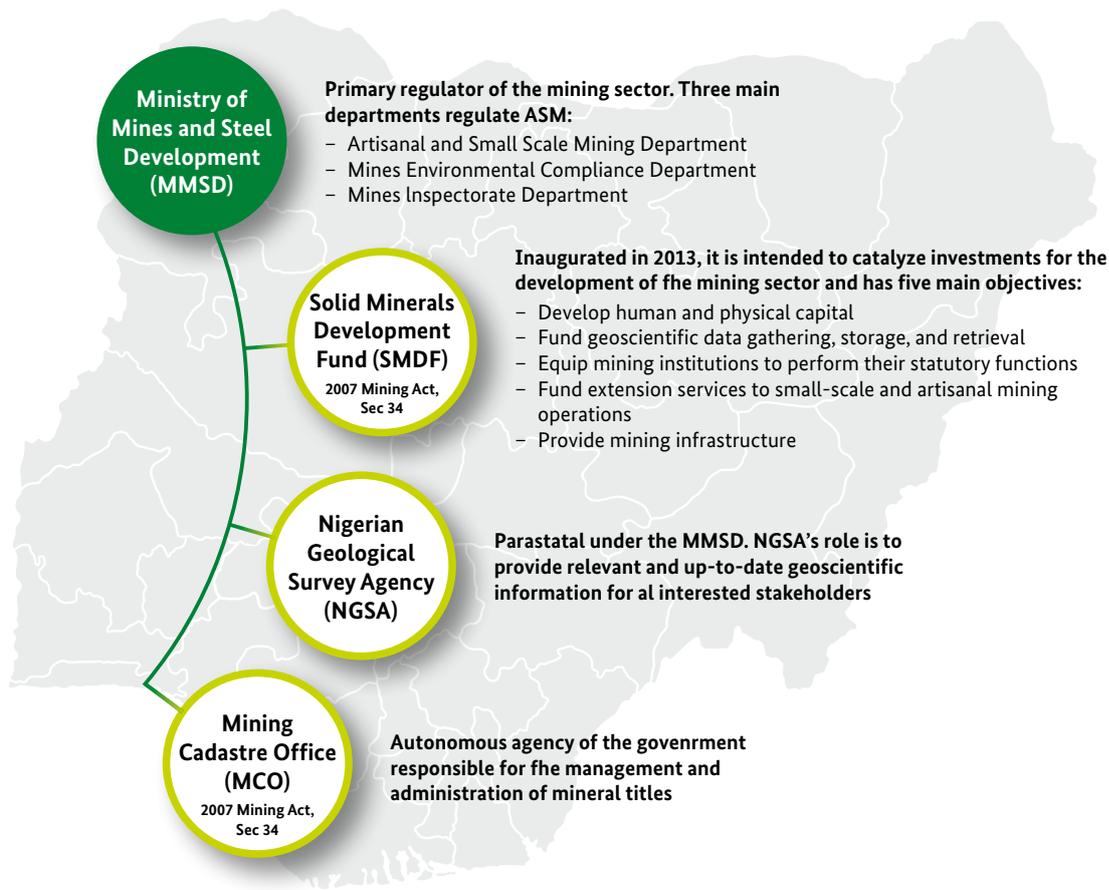


Figure 30: Institutional Framework for Mining in Nigeria. Source: Ango et al. (2019)

Mineral titles granted by the MCO are (Nigerian Mining Cadastre Office, 2019):

- Reconnaissance Permit
- Exploration License
- Mining Lease
- Quarry Lease
- Small Scale Mining Lease
- Water Use Permit

Sections 50, 65 and 66 of the Act govern the issuance of a mining lease, which is valid for 25 years and may be renewed every 24 years (Guidelines on Mineral Titles Application, 2019). The lease is limited to areas no greater than 50 km². Section 49 of the Act governs the rules outlining the issuance of a small-scale mining lease, which is valid for five (5) years and may be renewed every five years. The area of land for a small-scale mining lease may not exceed 3 km². To be considered legal, artisanal miners must be operating under a small-scale mining lease and the accompanying exploration license, mining

lease or quarry lease (Guidelines on Mineral Titles Application, 2019). Sources state the federal government is considering the creation of an artisanal mining license, which would aid the formalisation and further integration of artisanal miners into the country's national mining framework.

The 2008 Policy restructured the Ministry of Mines and Steel Development by creating three main departments: 1) Mines Inspectorate Department; 2) Mines Environment Department; and 3) Artisanal and Small-Scale Mining Department. The 2011 Nigerian Minerals and Mining Regulations provided operational guidelines in correspondence with the 2007 Act, including proscribing the duties of the departments charged with regulating the mining sector, publishing the application procedure for mineral licenses, and outlining the royalties, fees, rents and compensation schedules of the sector.

The Roadmap for the Growth and Development of the Nigerian Mining Sector, published by the

Ministry of Mines and Steel Development in 2016, is a document outlining the government's mining strategy through 2025. It sets goals, such as the objective for mining to become 3% of Nigeria's GDP by 2025. It also differentiates between formal and informal miners in the artisanal mining sector, with informal mining activities being those that are not based on a valid mineral license or are otherwise outside the official legal framework (Ministry of Mines and Steel, 2016). Although there is no artisanal mining license (however, sources interviewed suggested this is under consideration by the government), artisanal miners often work formally for title holders of small-scale mining leases, or they may work on areas of land without any mining title. When miners work for title holders, this is usually done under sub-contracting arrangements. The mineral dealers are usually the small-scale licence holders who prefinance the artisanal miners, who then sell the materials they extract back to the dealer. If the owner of the mining title has not pre-financed the miners, the miners will still sell the minerals they extract to him or her, but at a higher price.

The Nigerian Geological Survey Agency (NGSA) manages the database of geological data, including mineral resources, geological and geochemical maps, radiometric data and aeromagnetic data. Mining rights holders must provide all geoscientific data acquired during their operations to the NGSA (Adeniji & Fajemirokun, 2021). To the Mining Cadastre Office, they must provide records of every mineral found and the calculation of ore reserves within the mining title area (Adeniji & Fajemirokun, 2021).

New mining legislation bill that would replace the 2007 Act is currently being considered by the National Assembly. Two proposed changes of note include the creation of a Nigerian Mining & Minerals Commission, which would be a 'super' regulatory agency of the sector, and the development of separate mineral leases and licencing processes for formalisation of the artisanal mining sector (NEITI, 2018; Ango et al., 2019).

In the past, the government of Nigeria had a leading role in the local mining industry through publicly owned companies such as the Nigerian Mining Corporation, the Nigerian Coal Corporation, and Consolidated Tin Mines (The State House, 2020a). However, these entities have been privatised, and the federal government's role in mining is now largely focused on policy direction, the development of an enabling environment and special interventions (The State House, 2020a). This privatisation occurred at the onset of the new Nigerian mining law of 2007.

5.1.6 Identification of relevant local, regional and national actors

The table below is designed to identify the main groups of actors engaged in 3TG supply chains in Nigeria, as well as those engaged in promoting, conducting or supporting due diligence on Nigerian 3TG supply chains, in particular compliance with the EU Regulation on Responsible Sourcing of Minerals.

Table 8: Stakeholder mapping Nigeria

Stakeholder	Organisation	Mandate Related to 3TG / Due Diligence
Ministry of Mines and Steel Development (MMSD)	Mines Inspectorate Department	Examine mining applications and issue permits for exploration and exploitation of mineral deposits Supervise compliance with the law regarding applications and permitting Registration of mineral processing Collection of royalty payments
	Artisanal and Small-Scale Mining Department	Formalisation of artisanal miners Mineral buying centre registration and renewal Small scale mining operator registration

Table 8: Stakeholder mapping Nigeria

	Mines Environmental Compliance Department	Annual reclamation statement and reclamation of abandoned mine sites Closure/decommissioning plan Community development agreements Compliance audits and environmental audits Environmental impact assessments, environmental protection and rehabilitation
MIREMCO	Mineral Resources and Environmental Management Committee	Established offices in States across the country to address environmental management and safety issues
MCO	Mining Cadastre Office	Management of mining titles and rights Mining investment and promotion of the private sector's investment in solid minerals sector Generation of government revenue from mining
NGSA	Nigerian Geological Survey Agency	Parastatal agency under the MMSD Geosciences information, including geological mapping, mineral exploration and geotechnical & drilling
FME	Federal Ministry of Environment	Environmental standards and regulation Pollution and waste management Climate change and clean energy
FMH	Federal Ministry of Health	Develop and implement health system policies, including conducting public health and institutional assessments on artisanal and small scale gold mining Public Health Strategy of the National Action Plan for Reduction/Elimination of Mercury Use in Artisanal and Small Scale Gold Mining in Nigeria
	Ministry of Finance, Budget and National Planning	Policies and planning for economic growth and national development, including through the mining sector
MIGCAS	Ministry of Local Government and Rural Development	Institution for driving economic development of rural areas, including mining
MESTI	Ministry of Environment, Science, Technology and Innovation	Facilitate the development of science and technology to advance the socio-economic development of the country Oversees the Raw Materials Research and Development Council
SMSTF	Special Mines Surveillance Task Force	Task force developed to address illegal mining activities, in partnership with the State Mineral Resources and Environmental Management Committee
MIRMD	Metallurgical Inspectorate and Raw Material Development	Department of MMSD Oversees inspection of raw materials, including gold

Table 8: Stakeholder mapping Nigeria

SMDF	Solid Minerals Development Fund	Mining investment fund in charge of developing third-party investment and financing in the mining sector Long-term private equity in the SME value chain of the mining sector in Nigeria Artisanal and small scale miners fund
NESREA	National Environmental Standards and Regulations Enforcement Agency	Established to ensure environmental health and safety Creates standards for the mining and processing of ores and industrial minerals
Industry associations	The National Stakeholders Working Group (NSWG)	15-member governing body of the Nigeria Extractive Industries Initiative (NEITI).
	Miners Association of Nigeria	Membership of over 4,000 involved in Nigeria's mining sector Concerned with wealth creation of Nigeria and empowerment of workers in the mining sector
	Women in Mining Nigeria	1,500 member non-profit organisation Objectives include improving employment opportunities and the legal and regulatory framework for women in mining in Nigeria and promoting best practices in mining Community relations on topics such as child labour, sustainability, environment

5.2 Risks to due diligence compliance in the raw material supply chain



Serious abuses in the extraction, transport or trade of minerals



Child labour

The U.S. Department of Labor's 2018 List of Goods Produced by Child Labor or Forced Labor lists gold from Nigeria as a product suspected to be made from child labour (U.S. Department of Labor, 2018). UN Human Rights Council Report A/HRC/18/30 on modern slavery lists children working at mining sites in Nigeria as a human rights risk in the artisanal mining sector (UN Human Rights Council Report A/HRC/18/30, 2011). Child labour has been cited in the ASGM region of Zamfara (Salati et al., 2014).

In-country research found instances of child labour in both 3T and gold mining. In Nasarawa State, interviews with artisanal women miners found that children 12 and older routinely help

their mothers with digging and sorting the cassiterite. They reported that younger children are also found on the tin mining sites, but they are left to play. At another mine site in Abuja, there are accounts of children engaging in alluvial gold panning alongside their mothers in the local streams.

A gendered dimension of mining is exposed where child labour is involved. As women are routinely delegated to the sites with the poorest ore grade and the lowest amount of production and output, children working alongside their mothers may be viewed as one avenue to gain the revenue needed to support the family. Although not explicitly stated within the interviews, childcare (or the lack thereof) may be another reason children are found on mining sites in the region.

Value chains stages: Mining and initial processing/aggregation



Sexual violence

The COVID-19 lockdown in Nigeria saw an increase in sexual and gender-based violence, includ-

ing rape and rape-murders (Global Rights, 2021). Such incidences have occurred among a landscape where civil unrest and a decades-long insurgency from militias such as Boko Haram have already placed women and young girls in certain Nigerian states as vulnerable to kidnapping and rape. While research demonstrates that men have a greater chance of being facing forced recruitment or extra-judicial killings connected to Boko Haram, women and children make up 80% of those displaced by the conflict (UNDP, 2021a). In addition, women are more likely to be the victims of sexual and gender-based violence or abduction by the group, with over 500 women reported abducted by Boko Haram between 2009-14 (UNDP, 2021a). However, research has found minimal evidence of Boko Haram receiving funding from natural resource extraction (van der Merwe, 2017). In addition, gold and 3Ts are not extracted nor traded in the areas where the group operates.

In Osun State, an ASM gold mining facilitator and landowner interviewed reported a recent case of sexual violence that occurred in Ibodi, part of the Atakumosa West local government area. A woman vendor who sold food to miners was allegedly found sexually assaulted and murdered. The source claims the cause to be a result of a recent influx of bandit herdsmen to the area. The source further alleges the men suspected to be responsible for the crime were apprehended, but then eventually freed, by law enforcement. However, the source stated sexual violence is not a regular occurrence here and that this kind of incident is rare in their gold mining community. Such anecdotal evidence must be taken into context given long-standing conflict with herdsmen in the area and the alleged ethnic aspects of the claim.

Value chain stages: All along the upstream value chain



Forced labour and human trafficking, including sex trafficking

No incidences of forced labour, human trafficking or sex trafficking was found during the field research at 3TG mines. Evidence of prostitution linked to gold mining was found in Abuja: Interviews with sources alleged that there, women and

young girls sold food to artisanal gold miners during the day and engaged in prostitution at night in the town of Gugwa. There was no indication the women were being trafficked or otherwise forced to work against their will. However, there has been research that points to Nigerian women being trafficked to work in mine sites located in Burkina Faso.

Value chains stages: Mining and initial processing/aggregation



Direct or indirect support to non-state armed groups

Nigeria's security situation is currently an escalating cause of concern, and it is impacting nearly every region of the country. Widespread insurgencies led by Boko Haram are occurring in the North East of the country. Several regions are experiencing repeated kidnappings for ransom and criminal profiteering from artisanal gold mining. Herdsmen are committing crimes across the South West. Daily attacks against police are occurring in the South East (Igwe, 2021). Amongst this backdrop, the Governor of Zamfara, Alhaji Bello Matawalle, has alleged that foreign forces trade guns for gold in the North West state of Zamfara (Ogunmade, 2020).

The Institute for Security Studies alleges as much as 80% of the minerals mined in North Western Nigeria are mined illegally (Ogbonnaya, 2020a; Enact, 2020) with artisanal miners and local communities serving as targets of groups of bandits who are taking advantage of the security situation in Nigeria to profit off the mining that is occurring outside of formal legal frameworks. Sources interviewed during the fieldwork described artisanal miners as targets of armed bandits, who allegedly operate under the assumption these miners and their families have money for ransom. The miners are then kidnapped and held until the bandits are paid the ransom. This makes artisanal miners vulnerable to risks regarding the escalating banditry situation, and the armed groups are directly or indirectly accruing financial benefit from targeting artisanal miners.

Government officials themselves have been indicted for providing alleged support to violent armed groups in Zamfara. A committee report commis-

sioned by the governor of Zamfara found district leaders, military officers and emirs to be involved in the ongoing security conflict in the state (Nwezeh, 2019). The report estimated over 6,000 people have been killed in the conflict in the North West over a period of 10 years, with almost 200,000 people displaced (Nwezeh, 2019). A more recent report by Global Rights stated nearly 5,000 people have been killed during the intra-state conflict in 2020 alone, a 43% increase from 2019 (Global Rights, 2021).

In 2019, banditry in Zamfara state linked to illegal artisanal gold mining has led the government of Nigeria to mandate suspension of artisanal mining in the region (Reuters, 2019; Ogbonnaya, 2020a). National police officials stated the decision to suspend artisanal mining in Zamfara was supported by intelligence reports that established a “strong and glaring nexus between the activities of armed bandits and illicit miners” (Reuters, 2019). Despite the ban, illegal mining and the associated security risks have continued (Ogbonnaya, 2020), and the ban was lifted in early 2020 (Aina, 2021). More recently, in June 2021, airport officials in Ghana intercepted \$17 million worth of gold bars alleged to be owned by the former governor of Zamfara state, Abdulaziz Abubakar Yari (Igwe, 2021). Around the same time, a no-fly zone was declared by the federal government, and all forms of mining in Zamfara state have been banned, with view to controlling armed non-state actors who were causing insecurity within the region (Igwe, 2021).

Although it is not identified as a CAHRA, the region of Jos in the Plateau State is currently experiencing risks and challenges similar to those identified in the OECD Annex II: throughout 2021, Jos has been beset by security challenges, kidnapping, and banditry. There are reports of ASM miners abandoning ASM sites because of repeated attacks by police and security forces. The region of Jos is also experiencing armed banditry. This has again led ASM workers to abandon artisanal mining sites, mostly those containing 3Ts, due to heightened safety concerns.

In-country sources report that while gold is known to be used to finance armed conflict, the 3Ts are not considered to be used to finance armed conflict in the same way. Much of the conflict in the regions

where the 3Ts are found, particularly in the Jos Plateau and Nasarawa State, are related to aspects of community and ethnicity, and stakeholders interviewed in the region state 3T mining is not used for financing the buying and selling of arms.

Interviewees state the security situation in Nigeria devolved throughout 2021, impacting the operation of the 3Ts. They declared that kidnapping and banditry has become one of the greatest sources of conflict in the country. Beginning in 2015, sources allege banditry and kidnapping began to be carried out by non-state armed groups. As of 2021 and 2022, entire regions have been impacted by the situation. Interviewees claim farms and 3T sites have been abandoned for fear of being targeted. Zamfara, Kaduna, Katsina, Sokoto, Oyo and Niger States have experienced some of the highest levels of this type of violence, and some 3T sites in these regions are reported to have closed their operations. Nasarawa State has also experienced violence related to banditry, and this is a major state for the production of 3Ts. Notably, Zamfara and Kaduna States are on the EU CAHRAs list, but the other States are not listed.²⁵

Overall, due to the difficulties, 3T sites have been shut down, farms have been abandoned, and entire communities have been displaced to internally displaced persons (IDP) camps. Sources report some roads are no longer safe to travel because of continuous banditry and kidnapping. There have also been reports of attacks and kidnappings at public markets.

Value chain stages: All along the upstream value chain



Of the nearly 5,000 casualties cited during the increasingly escalating conflict (from causes such as “violent attacks, clashes, terrorism, kidnappings and extrajudicial killings), nearly 4,000 of those were listed as civilians, and nearly 700 were the deaths of state security agents (Global Rights, 2021). Statistics declare that 1 of every 5.5 deaths in the conflict was that of a security officer (Global Rights, 2021). States with the highest number of fatalities

²⁵ The EU CHARAs list for Nigeria includes Zamfara, Kaduna, Adamawa, Borno and Yobe.

from conflict between civilians and security forces were Borno in the North East and Kaduna in North West Nigeria (Global Rights, 2021). The Southern region of Nigeria saw the establishment of the Western Nigeria Security Network (also known as Operation Amotekun), which has been indicated by researchers as an upcoming security challenge (Global Rights, 2021).

Fatalities have occurred between security forces and members of a secessionist group, the Indigenous People of Biafra (IPOB) (Igwe, 2021). Police offices of the Independent National Electoral Commission have been attacked and set on fire (Igwe, 2021). In the state of Zamfara, the governor has stated that around 3,000 police officers have been disbanded across the state to patrol mining sites (Ogunmade, 2020a). Joint operations have been deployed between security forces to in the North Western states of Zamfara, Kaduna and Katsina and the Western states of Kogi and Niger in an attempt to control the kidnappings, murders, and other security risks in those regions (Reuters, 2019).

In-country sources repeatedly provided examples of public and private security forces being paid by private third parties to attack artisanal miners and force them off gold mining sites. Sources claim that although police units and other security forces generally do not have the budget to enforce sanctioned attacks against artisanal miners themselves, it is reportedly a common practice for a small-scale mining leaseholder to hire police or other security forces to run artisanal miners off a site if the miners are there illegally, without a valid lease or license. Several sources reported instances of Nigerian nationals registering for a lease in their own name and then selling the lease to third-party operators, including Chinese nationals. These actors or other third-party operators then reportedly pay police or security forces to force artisanal miners off the mine site. Reports of such were collected during interviews at gold mining sites in Abuja. Sources allege that after the police or security forces clear away the artisanal miners that were originally at the gold site, the leaseholder or the third-party operator will bring in their own artisanal miners to work the site. Interviews with the miners in Abuja found that gold sites had been abandoned, seemingly due to clashes with law enforcement at the

sites. Interviewees reported many miners moved on to artisanal gold sites in the Niger to avoid such tensions.

Tensions rise when the ASM workers who have good faith agreements with the community are driven off the mining sites by security forces. ASM workers operating under good faith agreements often pay fees to the community where the site is located. The ASM workers may be local miners, or they may be migrants. When these workers are driven off the land by new leaseholders, often these fees go unrecognised and unpaid, depriving the community of social and economic benefits from the mining that occurs within their local areas. Without the valid consent of the communities or landowners or occupiers, the leaseholder may then experience clashes with the surrounding community.

Value chains stages: Mining and initial processing/ aggregation



Bribery, fraudulent misrepresentation, and non-payment of tax

Recent UN Comtrade data reveals that over \$3 billion of gold has been illegally smuggled out of Nigeria within the last decade (Government of Nigeria, 2020). Reports from September 2021 assert that mining officials declare \$9 billion of gold annually is being smuggled out of the country, to the detriment of public revenue (Bloomberg, 2021). However, other sources report closer to \$3 billion of gold in total is suspected to have been smuggled between the years of 2012 and 2018. Gold smuggling has been linked to security concerns and is fuelling much of the violence in states such as Zamfara. The governments of both Zamfara and Katsina states have declared that proceeds from ASGM are funding weapons purchases for violent, armed groups (Aina, 2021). A focus on gold when related to issues of money laundering and non-payment of tax is relevant, as government officials have confirmed that gold is the most smuggled mineral out of Nigeria (Adebulu, 2020).

Gold smuggling and its effect on the loss of billions of dollars of public revenue has increasingly

become a concern of government officials within Nigeria: In September 2021, the Deputy Minister of Mines and Steel Development was quoted declaring that the crime of gold smuggling should be punishable by death, due to the “huge economic sabotage” to the mining sector and to the economy that gold smuggling generates. (Bloomberg, 2021). Interviews with stakeholders at artisanal gold mines confirmed that gold smuggling is indeed rife within the sector. There are reports of gold dealers hand-carrying gold across the border to the Republic of Niger, where gold can be exchanged for goods such as food and used to import used cars, clothes, electronics and other supplies back to Nigeria.

The diminishing value of the naira has also been stated by sources to contribute to the smuggling of gold across the border. Sources state that because the naira has lost so much value, local dealers would prefer to trade and buy goods using gold rather than the naira. Further, sources state the less complicated tax and mineral export regime in the Republic of Niger makes it an attractive option to smuggling and misrepresentation of the origin of gold; therefore, some prefer to declare the gold as originating from the Republic of Niger than from its actual source in Nigeria. Interviews with sources state this has contributed to the current high demand for gold in the region, which has also led to the proliferation of gold smuggling. Sources allege most of the gold makes its way to the UAE because the current mineral importing regime in the UAE generally does not inquire the origin of the gold. However, there are reports the UAE is primed to begin monitoring the origin of gold in line with London Market Bullion Association (LMBA) standards (Bloomberg, 2021b), so it will be important to analyse how this affects the gold trade from African countries such as Nigeria in the near future. For instance, the UN estimates that up to 95% of gold originating from east and central Africa is imported into Dubai (Bloomberg, 2021b).

In the North Western state of Zamfara in particular, the conflict and escalating instability has been critically linked to illegal gold mining (Igwe, 2021). Much of the gold is illicitly transported to the neighbouring countries of Niger and Togo (Reuters, 2019b). Cited as one of the underlying causes of the security conflict, bandits and violent gangs

have been smuggling illegal gold out of Nigeria to fund their causes (Igwe, 2021; Ogbonnaya, 2020a). Sources state coordinated criminal networks instigate community violence to provide cover for the exploitation of the gold deposits (Igwe, 2021; Ogbonnaya, 2020a). Such is alleged to be accomplished in tandem with the assistance of state officials (Igwe, 2021; Ogbonnaya, 2020a).

Bribery of government officials in the attainment of mining leases for gold production arose as a practice in both Abuja and Nasarawa States during in-country research. Under the mining law and regulations, a leaseholder must obtain a letter of consent from the landowner or land occupier as part of the application for a mining lease for a covered area. The formation of a community development agreement is an additional requirement. Sources from Abuja and Nasarawa States alleged instances whereby a potential leaseholder would bribe officials from the Mining Cadastre Office to acquire a mining lease while circumventing the legal requirements to obtain a letter of consent and the community development agreement. This has led to conflict with local communities, who rely on the letters of consent as well as the community development agreements as vehicles to receive the benefits to which they are legally entitled from the mining that occurs within their communities.

Connections have been made between politically connected Nigerians and Chinese nationals, which are allegedly fuelling rural banditry and violent local conflicts linked to artisanal mining in the North West, Northcentral and Southwest regions of the country (Ogbonnaya, 2020). Illegal artisanal gold mining and conflict are reportedly connected in two ways: firstly, ‘sponsors’ funding the mining battle over control of the mines; some of these sponsors are supported by state government actors (Ogbonnaya, 2020a). Secondly, these sponsors funding illegal mining are also funding rural banditry and cattle rustling in local mining communities, resulting in violence and displacement, which creates more land and opportunities for illegal mining operations (Ogbonnaya, 2020a). Meanwhile, foreign corporations are also said to be profiting off the illegal mining and unstable governance landscape of Nigeria. Minister of Mines and Steel Development Olamilekan Adegbite has cited evidence

of foreigners from Burkina Faso, China, Ghana, India and Mali engaging in cross-border gold smuggling, and as of December 2020, 19 foreigners were standing trial for illicit mining activities in Zamfara and Osun states (Ogbonnaya, 2020b). In September 2021, the Minister of State for Mines and Steel Development made claims private jets owners are involved with the smuggling of gold outside of Nigeria (Sahara Reporters, 2021). The allegations were part of the ongoing government investigation related to claims of estimated billions of dollars of government revenue being lost to gold smuggling.

Research has also uncovered a gendered dimension to the issue of gold smuggling in Nigeria: according to recent data, women and girls are increasingly becoming involved in illicit arms deals exchanging artisanal gold for weapons (Ogbonnaya, 2020b). Young girls and women are reported to be used to transport weapons from bordering countries into mining sites in Zamfara while also carrying artisanally mined gold from the mining sites to the national borders (Ogbonnaya, 2020b). Analysts state women and girls are used by armed criminal groups to transport gold and arms because they tend to be paid less than their male counterparts. Similarly, the women and girls have been used to bribe border security officials (Ogbonnaya, 2020b). The use of minors in such activities, especially girls, may be in part fuelled by the large number of children who are not attending school in Nigeria. The UN Children's Fund notes an estimated 11 million school-age youth were not attending school in 2019²⁶, and in some regions, such as North East Nigeria, 75% of those children are girls, making them vulnerable targets for recruitment by arms traffickers (Ogbonnaya, 2020b). The ongoing COVID-19 pandemic may have driven the numbers out-of-school youth even higher, thereby exacerbating the phenomenon.

Discrepancies in import and export figures for 3Ts, comprising data concerning tin, tantalum, niobium, and tungsten, suggests that several thousand tonnes a year of these metal concentrates may be mislabelled or underreported at the point of export. This may be due to a desire to avoid or reduce export taxes, fees and royalties. This can be the result of the bribery of government officials who are

tasked with inspecting, weighing and tagging the minerals. Although interviews with field researchers did not provide any on-the-ground evidence of this, such misrepresentation of taxes, fees and royalties may be one explanation for the extreme differences in import and export data found along the 3T supply chain in Nigeria.

Value chain stages: All along the upstream value chain from mining to export

Other relevant risks



Environment

The use of mercury and lead in gold mining and processing in Nigeria has documented health and safety risks. Use of these chemicals with ASGM has led to widespread incidents of mercury poisoning, including 7,000 incidents of lead poisoning and hundreds of deaths in gold mining communities in Kebbi and Zamfara States from 2010-16 (Government of Nigeria, 2020). Hundreds of children were among the fatalities. Other environmental impacts of artisanal mining include deforestation, soil erosion and water and air pollution, which exacerbates existing land and water shortages (Aina, 2021).

In addition, sources gave examples of abandoned 3T mines, in some cases formerly operated by Chinese foreign nationals, that have been abandoned without proper reclamation procedures and led to environmental devastation. The lack of land rehabilitation and improper mine closure may render the landscape as dangerous for artisanal mining. In one region of Abuja, sources spoke of women miners who today mine gold along the streams because the abandoned wolframite mine is too dangerous to enter and is an environmental hazard.

Value chain stages: Mining and initial processing/aggregation, crude refining

²⁶ According to UNICEF, one out of every five out-of-school children are based in Nigeria (UNICEF, n.d.). Boko Haram activities are said to be one driving force for this (Global Citizen, 2018).



Figure 31: Wet milling and mercury use at gold mining site near Dafa, Abuja state (Photo: Gbenosa 2021)

5.3 Measures to implement due diligence obligations

5.3.1 Due diligence awareness

There was a widespread lack of awareness of due diligence law and regulation on the ground in Nigeria. Of the dozens of stakeholders interviewed, not one was aware of due diligence or responsible sourcing regulations. Some of the sources interviewed expressed familiarity with the domestic mining laws and regulations, but there was a lack of awareness of wider international frameworks and due diligence procedures and processes. This lack of awareness was exhibited by stakeholders at each stage of the supply chain. No government officials in Nigeria responded to requests to be involved in this study, and the minimal interaction with officials that occurred suggest they may be largely unaware of international due diligence regulatory frameworks. However, the Government's efforts at establishing a gold purchasing programme point to an increased awareness of the issues in the gold sector.

Any programme designed to improve due diligence implementation in Nigeria should take into account the foundational awareness raising that

would need to take place. Whether through the development of an awareness-raising campaign, targeted trainings with government officials and other stakeholders along the supply chain, or some other stakeholder engagement strategy, it must be a priority to introduce and socialise the concept of due diligence into the general vernacular and operating procedures of key stakeholders along the 3TG supply chain in Nigeria. It would be beneficial to identify local partners, whether NGOs, community organisations or government agencies, that could assist in the creation of programmes and trainings to instill a knowledge of due diligence throughout Nigeria's mining sector.

5.3.2 Due diligence implementation

Despite the widespread lack of knowledge of due diligence regulations, some supply chain actors did exhibit a knowledge of Nigeria's domestic mining regulatory framework, including the Mining Act of 2007, the Mining Policy of 2008, and the Roadmap for Mining Growth and Development, 2017.

Although they don't mention the terms "due diligence", the forementioned government documents do address related issues such as traceability, mineral smuggling, environmental concerns

and sustainability. Interviews with sources also demonstrated an awareness of the risks related to OECD's Annex II, including issues such as child labour, sexual violence, armed conflict and security sources, even if those interviewed had no prior knowledge of the OECD Due Diligence Guidance. As research suggests many supply chain actors are familiar with the national legislative and regulatory framework, it may be helpful if due diligence requirements became enshrined in national law. Therefore, stakeholders in the mining industry would be more likely to be aware of and compliant with due diligence mandates. The PAGMI gold buying scheme is one area where there may exist an entry point to integrate due diligence into national mineral supply chain frameworks.

The following programmes and initiatives identify and address existing risks and challenges in 3TG supply chains and could thus be entry points for strengthening awareness and implementation of due diligence in Nigeria:

Roadmap for Mining Growth and Development

Nigeria's "Roadmap for Mining Growth and Development" is a progressive blueprint of where the Government of Nigeria is planning the growth and development of the mining sector over the next several years. The Roadmap outlines plans for the Nigerian mining industry's increased supply chain transparency through the development of policies related to 1) effectively monitoring and regulating informal and illegal mining operations; 2) promoting formal small scale operators through expanding access to funding and supporting knowledge development; 3) improving trade and ease of transactions through the set-up and formalisation of metal exchanges and mineral certification authorities (see the section on PAGMI, below); and 4) encouraging wider participation in beneficiation, downstream processing and refining (Roadmap for Mining Growth and Development, 2016a).

The report further declares mineral production data in Nigeria to be "unclear and inadequate," with a "historical under-reporting of production" by both large-scale mining firms and also artisanal miners, who are noted to conduct the bulk of Nigeria's mineral production. Therefore, the report

concludes that official mineral production figures in the country are "understated." Similarly, revenue leakages are named as a challenge of the sector and a result of the under-reporting of production and export figures (Roadmap, 2016).

In line with the findings of the report, one recommendation would be for Nigeria to organise and increase its data collection in the minerals sector. Little on mineral production or trade statistics have been published by the government since the NEITI report of 2018. In addition, the difficulty in obtaining official data from government sources encountered during the field work suggests that the lack of transparency persists. The objective here would be to instill government procedures that increasing transparency around mineral data, which would be recommended.

PAGMI

The PAGMI programme declares a central purpose of integrating the artisanal gold mining sector within Nigeria's legal, economic, and institutional framework, with the goal of creating new and formalised mining jobs, increasing economic diversification, encouraging safer mining activities, reducing occurrences of lead and mercury poisoning, and improving the national gold reserves with the central bank's artisanal gold purchasing programme (PAGMI, 2020). The stated outcomes of PAGMI are promising, including a primary objective to break the link between armed conflict and artisanal gold mining (Ogunmade, 2020). If successful, PAGMI has the potential to institutionalise due diligence practices such as transparency and traceability within Nigeria's gold supply chain. However, a lack of awareness of the presidential initiative combined with a seemingly delay in the programme's implementation suggests its due diligence impact may be limited at the time of the writing of this report.

Central bank domestic artisanal gold purchasing programmes have been lauded as one solution for emerging markets, which face challenges related to currency stability and creating an enabling environment for foreign investment. Nigeria is no exception to this: addressing the devaluation of the naira and obtaining increased foreign investment in the mining sector are both official government

priorities (see Nigeria's Investment Promotion Strategy, as discussed in the due diligence implementation chapter below). While some emerging market central banks around the globe have strategically accrued gold via international markets, a growing number are considering domestically mined artisanal gold to bolster their reserves (World Gold Council, 2021).

According to the World Gold Council, such artisanal and small-scale gold mining (ASGM) purchasing programmes have several advantages, including: promoting economic development and enhancing the livelihoods of ASM communities; encouraging ASM formalization; reducing mercury use and improving environmental results; making ASM producers less vulnerable to bribery, extortion, and other Annex II risks; raising ESG (environment, social and governance) standards in the ASM sector; and supporting due diligence requirements so artisanal gold may meet international standards and qualify to be sold on international markets (World Gold Council, 2021). Case studies of ASGM purchasing schemes from Mongolia, Ethiopia, the Philippines and Ecuador demonstrate some central banks are actively striving to support due diligence implementation and international gold supply chain actors. This includes supporting artisanal gold in meeting the due diligence requirements of leading gold refiners, including those accredited by the London Bullion Market Association (LBMA) (World Gold Council, 2021).

However, there are limitations to artisanal gold purchasing programmes, and they have not proven to be a cure-all for ASM due diligence issues, nor have they always delivered the results promised. Commercial viability can be a major challenge, particularly when costs associated with the formal sector, such as environmental or health and safety compliance, can cut into profit margins. Further, the creation of formal channels for artisanal gold does not guarantee its sale into formal commercial channels. Avoidance of taxation and regulation, infrastructure challenges, financial incentives to source from illegal sources, and suspicion of state actors have all resulted in limiting the volume of gold available to formal domestic purchase schemes (World Gold Council, 2021).

Where artisanal gold does meet ESG standards and is successfully funneled into state purchasing schemes, it has still proven difficult to verify the total volume of artisanal gold. Even for states where central banks hold a theoretical sole legal right to ASGM sources, it has not proven easy to ensure all artisanal gold ends up in the state gold buying programme. Increasing taxes has also led to a downturn in the volume of artisanal gold that enters the government schemes, as was the case in the Philippines after a 2012 court judgement. Finally, ASM communities often face barriers to accessing loans, credit products, and finance and banking, due in part to the lack of mining titles and land rights in the absence of formalisation (World Gold Council, 2021).

Mozambique tried and failed to establish a state-sponsored artisanal gold buying programme when it re-established its Development Mining Fund (Fundo de Fomento Mineiro) in the Ministry of Mineral Resources, updated by Decree no. 17/2005 (Hilson et al., 2021). By 2008, the fund was purchasing gold from 30 percent of the ASM operators in the central part of the country, and the fund was actively financing ASM operations. However, erratic production levels resulted in artisanal miners failing to sell enough gold to the purchasing programme, and they were also defaulting on their loans (Hilson et al., 2021). Therefore, the fund became unsustainable (planetGOLD, 2020).

Nigeria's PAGMI would be well-situated to take on board some of the lessons learned from central bank artisanal gold buying schemes from around the world, as this programme is still in its early implementation years.

Nigeria's Mining Investment Promotion Strategy

In 2016, the Nigerian government published a brochure on its mining investment promotion strategy. Created for the purpose of diversifying the economy away from dependence on the oil and gas sector, the mining investment strategy outlines a blueprint for increasing foreign and domestic investment in the Nigerian mining sector. As part of the investment strategy, the barriers to development of the mining sector are identified.

One barrier identified that relates to supply chain due diligence and Annex II risks is the precarious security situation in the country. The investment strategy describes the Boko Haram insurgency as well as the operation of militants in the Niger Delta region. The government pledges to address these challenges at the highest level. However, minimum additional detail is provided as to the pathways to improve the security situation. As the investment strategy was published in 2016, more than half a decade later, the security situation in Nigeria remains a major barrier of concern, both for supply chain due diligence as well as the positive growth and development of the mining sector (Mintistry of Mines and Steel Development, 2016b).

Another barrier identified is illegal mining and the challenges it may bring to the surrounding community. Here, the investment strategy lists the enactment of the Mining Act as well as the enabling environment for foreign investors with valid permits and licenses to operate legitimately within the country as solutions to this barrier to mining growth and development. It may be relevant here to note that legitimate foreign investors and operators may be a value add to the mining sector. However, the sector is currently suffering from rogue foreign investment (such as from Chinese operators), who interview sources allege pay national leaseholders to use their permits; such activities have been quoted to lead to the bribery of mining officials in the MCO, failure to develop community buy-in by forgoing the procurement of community development agreements or landowners' consent, or the environmental destruction that occurs when land reclamation and proper mine closure procedures are ignored.

5.3.3 Implications for due diligence

There are several implications for due diligence implementation in 3TG supply chains. One major one is that, because the 3T supply chain is so inextricably linked, and the minerals are not separated until the point of export, when examining due diligence risks for one of the minerals, the due diligence risks for all of the minerals must be evaluated. For instance, if a European company is importing tantalum, it would not get a complete picture by analysing the tantalum supply chain only;

the full due diligence picture would require analysing the supply chains for tin and niobium as well.

Another implication of the interconnectedness of the 3Ts in Nigeria is that artisanal miners are not receiving the true value of what they are extracting. Interviews with sources uncovered that artisanal miners are only paid for the price of tin, regardless of the actual composition of the minerals they extract. The price tin procures in the field is less than the price of columbite, which is less than the price for tantalite. Although living wage is not covered under the EU responsible sourcing regulation, international trends are moving away from examining solely OECD Annex II risks to accounting for additional issues such as human rights and environment, as well.

Gendered dimensions are implicated when examining the Annex II risk of serious human rights abuses, including child labour. Interviews with artisanal miners confirmed that in general, where there were women working, there would be children as well. Interviews revealed that while younger children (10 and under) tended to be present on the site playing, children 10 and older on some sites, and 12 and older on others, could be found assisting their parents with the washing and sorting of minerals. The children would go to school during the day and assist their parents after school. Any due diligence support in Nigeria must be aware of any negative impacts that could occur by forcing women out of mineral supply chains and restricting their livelihoods. Any due diligence disengagement that occurs as a result of the presence of children on mining sites should take into account this gendered dimension of artisanal mining.

Another trend evidenced from the fieldwork is that while gold is almost certainly linked to armed conflict and violence, there was not much evidence linking the 3Ts to conflict. Although the EU 3TG regulation considers all four minerals to be "conflict minerals", the country-specific context in Nigeria questions that assumption. Although 3T mining was associated with Annex II risks, in particular fraudulent misrepresentation of mineral origins and the non-payment of taxes and other revenues, little evidence was found that 3T mining is associated with armed conflict.

6 Conclusions

The objective of this study is to conduct an analysis of to what extent due diligence is implemented in supply chains of tin, tungsten, tantalum and gold in Burkina Faso, Mozambique and Nigeria. While each country context is distinct, a number of overarching conclusions have been identified over the course of the research. These conclusions focus on the areas in which extra support on the implementation of due diligence is critically needed in order to improve supply chain transparency and enable responsible sourcing of 3TG from those regions, in particular areas where it is felt that targeted support by BGR can be used to leverage greater positive impact in the sector. The conclusions below are also likely to be applicable to a wider context, and can inform decision-making by actors of the German Development Cooperation in other conflict-affected and high-risk areas. The conclusions in this section feed directly into the recommendations to actors of the German Development Cooperation presented in Section 9.

6.1 Low knowledge of due diligence requirements in all three contexts

The implementation of due diligence and supply chain traceability in Burkina Faso, Mozambique and Nigeria is currently extremely low. The vast majority of actors interviewed in all three countries have never heard of the term due diligence and are not aware of what due diligence requirements entail. Where actors were aware, it was only at the level of government officials. In Mozambique, field research revealed that none of the stakeholders interviewed had knowledge of due diligence processes, bar a few government officials. These were officials who had worked directly in supply chain traceability, such as the UGPK. Even at this level, officials had heard of the OECD Due Diligence Guidance and the EU Regulation, but did not have a detailed understanding of the requirements and

responsibilities of supply chain actors in the implementation of due diligence and supply chain traceability. In Nigeria, the situation was similar. None of the stakeholders had knowledge of due diligence regulations. In addition, cultural challenges related to acquiring interviews with government officials and other actors emerged: in-country researchers found that stakeholders were less likely to agree to an interview if they were unaware of the topic it concerned, such as due diligence.

In Burkina Faso, knowledge and awareness of due diligence was slightly more advanced, due to growing interest of and intervention by international organisations and (gold) value chain initiatives in the country. Some government officials, for example, had attended workshops and training on the OECD Due Diligence Guidance hosted by international organisations. However, there remained a lack of clarity as to whose responsibility it was to implement due diligence procedures, and what state actors in the country should be doing to enable the implementation of due diligence. This highlights a need for further sensitization of mining sectors actors, including on the responsibilities of different actors in enabling and conducting due diligence and ensuring chain of custody on their 3TG supply chains.

The lack of understanding exhibited by supply chain stakeholders also highlights the lack of capacity that exists in the upstream of ASM supply chains with respect to understanding of and therefore implementation of due diligence requirements. The responsibility for due diligence, mandated by downstream stakeholders and institutions, cannot fall on ASM actors with limited resources or influence alone. Artisanal and small-scale miners are at the source of the chain of custody: Therefore, unless they have business partners, subcontractors, or some other sort of formal agreement, ASM workers are not necessarily able or required to conduct due diligence. However, their

role is to provide the necessary due diligence information that can then be used by actors downstream (i.e. the buyers of ASM produce). This monitoring and reporting also requires resources and capacities if it is to be useful in due diligence further downstream.

In addition, the realities of artisanal mineral extraction means there are often hundreds of small mines that are often shifting location, being abandoned, and frequently informal. Formalisation of the sector takes major concerted effort over a long period of time. It is therefore more effective and practical to place the main onus of due diligence on the aggregators and exporters, who are often much fewer in number than ASM mines, are often located in bigger cities or the capital and thus not in as remote and unreachable areas as ASM, and are often at least semi-formalised. The Regional Certification Mechanism of the ICGLR could serve as one example where the due diligence responsibility is put on the exporters, and their due diligence practices are audited and certified with an (inter-)governmental certificate. This means that audit and checks by Government are done at the aggregator or exporter level, and it is on the exporters to conduct due diligence in their own upstream supply chains. This also facilitates capacity building and awareness raising at a more central point; which can then be pushed upstream.

The responsibility for due diligence implementation should be shared along the supply chain, with the point of export being the main point in the upstream supply chain with responsibility to comply with due diligence requirements, and provide support, alongside the downstream, to aggregators, traders and ASM sector stakeholders in improving their operations to a standard of alignment with the OECD Due Diligence Guidance.

6.2 Limited due diligence implementation in all three contexts

Given the widespread lack of awareness around due diligence requirements and chain of custody in supply chains in all three contexts, actual implementation of due diligence and chain of cus-

tody initiatives seems to be limited, but promising developments occur. In Nigeria, the PAGMI state-sponsored gold buying scheme shows promise and carries the specific objective of implementing due diligence in the artisanal gold supply chain. However, its implementation has been limited, and it is not yet at the point of effectively reforming the gold supply chain in any widespread manner. Some other initiatives were also identified amongst local civil society / international organisations whose objective was the prevention of some of the OECD Annex II risks in the mining sector.

In Burkina Faso, while there are no sector-wide due diligence initiatives, there are a number of organisations working on supply chain traceability and commercialization of responsibly-produced ASM gold, as well as other organisations working on the prevention of OECD Annex II risks in the ASM sector. Moreover, government structures in Burkina Faso are increasingly set up to support, in theory, a strong implementation of due diligence in the country's mineral supply chains, in particular in the ASM sector. The creation of ANEEMAS as well as the establishment of both the ASM cards and the licensed individuals structure are promising steps in terms of innovative and inclusive ASM sector management that takes into account the realities faced by ASM sector stakeholders on the ground. However, the reality is that a lack of resources at government level and the growing presence and control of non-state armed groups in the country pose a significant barrier to actual improvements in terms of supply chain traceability from the ASM sector. ANEEMAS, whose mandate is to increase control of the ASGM sector and buy ASM gold where possible, lacks the capital and the structures to buy gold at competitive prices, leaving important amounts to the illicit trade. In addition, a conflict of interest may exist where an agency mandated to monitor and formalise the ASM sector is also mandated to buy gold from ASM. Furthermore, the evidence is mounting that armed groups control increasingly large swathes of the country's artisanal gold mines, likely using the gold produced to finance their insurgency. In parallel, the government's control of the sector appears to be waning, with the existence of areas that government officials can no longer visit due to the deteriorating security situation. Without sufficient monitoring of the sector, the

implementation of supply chain due diligence or traceability initiatives will be very difficult to operate at any scale. In this context, localized due diligence and traceability, such as that currently being conducted by ARM and the AGC, are likely to be the most viable option for enabling the implementation of due diligence on Burkinabé gold.

In Mozambique, initiatives with the specific aim of supporting the implementation of due diligence in the country's 3TG sector were not identified. However, there was evidence in the country of positive steps being taken toward creating an enabling environment that would be beneficial for due diligence, including providing infrastructure that would make it easier for the private sector to engage in due diligence compliance. These include the development of a certificate of origin for precious metals and precious stones, linked to the Kimberley Process, and the ASM census that is currently being conducted. Both could provide much-needed support to private sector actors looking to conduct due diligence on their minerals of Mozambican origin. Firstly, given that the vast majority of gold production, and some tantalite production, is limited to ASM, the census will provide a much-needed foundation of information on production quantities, qualities, location and working conditions, as well as information on the domestic ASM trade. This kind of information is vital for mid- and downstream actors looking to conduct basic due diligence on their suppliers. Secondly, if the certificate of origin can be developed with due diligence requirements in mind, it will prove a vital tool for ensuring that appropriate due diligence can be done on Annex II risks in upstream supply chains of Mozambican mineral exports. For this to happen, the certificate of origin must go far beyond the minimum requirements of the KP. It must provide reliable chain of custody information for all exported mineral lots. This will require a significant amount of infrastructure domestically in terms of ensuring that chain of custody information in the country can be accurately collected and stored. The Mozambican government may want to consider an approach that is similar to that of the ICGLR's Revised Certification Mechanism, where a variety of options are available to exporters wanting to obtain an export certificate – they can either collect chain of custody information themselves,

or use a third-party traceability provider, or use any government-provided traceability initiatives where available (such as ITOA in the DRC).

6.3 Barriers to due diligence and chain of custody implementation

Lack of reliable data

In all three country contexts, import and export data, as well as production data, is scarce, and where it does exist, it is not fully accurate or fully reliable. Accurate, reliable trade and mineral production data are integral to conducting effective due diligence across 3TG mineral supply chains.

Obtaining reliable data from government agencies was a key research challenge in all three contexts. In Nigeria, the researchers were not able to obtain any data at all from the authorities, posing a key challenge to the analysis of 3TG production and trade in the country. The only information available was from the NEITI report released in 2018, and the mineral data that is published within that report seems to be inaccurate when compared to other data sources, such as UN Comtrade. The Ministry of Mines and Steel Development website does contain some data regarding geological deposits and the regional location of different type of mineral licenses, but little to any trade or production data was available. In Burkina Faso, acquiring government data was also a challenge, with ultimately only some statistics on ASGM production over the past ten years provided by ANEEMAS. In Mozambique, data collected by the authorities on 3TG production and exported was provided, but it is clear that the majority of production and trade, which is informal (particularly in the gold sector) was not being captured by the statistics, which represented only a fraction of what is likely traded and reflected in Comtrade import and export statistics for the country. The ASM census is a positive step forward in terms of data collection, but the information needs to be kept up to date.

In terms of improving the availability and usability of data for due diligence implementation and chain of custody, any data that is already collected

must be consolidated and made publicly available by the respective authorities. Here, coordination between different authorities is key – consolidated, publicly available data should include that collected by the Ministry of Mines and any sub-departments, as well as by other relevant government agencies – customs, finance, environment, labour, etc. Data should include production, domestic trade and export, as well as information on pricing, working conditions, and social and environmental impacts where possible. Production, trade and export data should be disaggregated by entity (e.g. production data for each site / producer / trader / processing centre / buying house / exporter), as well as the destination of any exports and both quantities and values produced and traded. One role the German Development Cooperation could play is to support governments in improved data collection and transparency in publishing the official data that is available. Ultimately however, accuracy and reliability of data will only be achieved through increased formalisation of the entire upstream value chains from production to export. Efforts to improve data collection will only fully realise their potential if they are implemented in conjunction with broader programmes that support formalization in upstream value chains.

Illicit trade and smuggling

In all three countries, illicit trading, misrepresentation of origin and cross-border smuggling of minerals was identified as a key barrier to supply chain traceability. This was the case across most of the mineral supply chains, but with a particular prevalence in gold due to its characteristic as a low volume, high value mineral.

Much has been written regarding the illicit trade of artisanal gold between Africa and key international smuggling hubs, in particular the UAE. The data collected for this study indicates that gold produced in Burkina Faso, Mozambique and Nigeria is heavily implicated in this trade. Our research found that many of the patterns identified in other regions are also present in the study's three target countries. This includes, for example, the operation of supply chains actors in both the formal and illicit trade of gold in parallel. Comptoirs in Burkina Faso, for example, tend to declare the minimum

amount of gold to the authorities to allow them to keep their trading licenses, then smuggle and trade the rest of the gold they buy through illicit channels. This allows them to continue to exist in the formal sphere, while allowing them to tap into the far more lucrative informal trade. The same practice has been identified in other contexts, such as the DRC, and represents a strategy undertaken by comptoirs to straddle the parallel systems of formality (where they tend to operate at a loss, but have the benefit of not having to operate completely underground) and informality (where not having to pay formal taxes or fees makes the gold trade commercially viable).

Similarly, our research found that the vast majority of artisanal gold produced in all three contexts – as much as 99% in Burkina Faso – is traded informally using known techniques and smuggling routes. From Burkina Faso, large amounts of gold are thought to flow through Togo, a well-known hub for smuggled gold in West Africa. In Mozambique and Nigeria, smuggling routes are less well-known, yet field research suggests Nigerian gold is being at least partially smuggled through trade routes into the countries of the Republics of Niger and Benin. Reports in Mozambique revealed that the majority of smuggled gold is carried either in private chartered planes to the UAE, or hand-carried on commercial airlines. Gold smuggled out of Togo and Burkina Faso is likely to be taken in a similar way. Government officials investigating the alleged loss of billions of dollars annually to gold smuggling in Nigeria have made claims that private jet owners are implicated in the gold smuggling trade there. This is a pattern that has been observed across Africa, and it is largely due to the lack of stringent checks and information on country of origin for gold that is hand-carried into the UAE. It is believed that many thousands of tonnes of artisanal gold is smuggled into the UAE in this manner. The result of the structure of the illicit gold supply chain is that any actors trying to buy gold formally cannot compete financially with the current illicit structures. However, recent commitments made by the UAE to crack down on the illicit gold trade and implement more stringent due diligence requirements and checks on their own gold sector could be an important entry point for interventions aiming to reduce international smuggling of

ASM gold from Africa. Here, the below recommendations suggest that actors of the German Development Cooperation supports UAE's current efforts to stem the flows of illicit gold into the country by supporting increased monitoring, due diligence and chain of custody requirements.

In the 3Ts sector, smuggling and misrepresentation of minerals occurs in a more limited and slightly different way. Given the bulkiness of many 3Ts exports, smuggling small quantities is not a lucrative trade. However, the under-valuation of (officially exported) mineral lots was reported in Mozambique, and sources claim a similar pattern of underreporting occurs as well in Nigeria. This means that the true value of the production is not declared at the point of export, reducing the amount of tax payable on that export and further diminishing the accuracy of export data.

Inadequate chain of custody on mineral exports

Linked to the challenge of informal trade and smuggling described above, inadequate chain of custody on mineral exports was also found to be a major barrier in all three contexts. A number of challenges to identifying the source of a mineral lot were identified – most of them are connected to the informality of not only the production but also the entire upstream value chains, and actors such as traders and exporters not implementing due diligence practices (for lack of knowledge, but also lack of pressure and investigation from their own downstream customers). This means that conducting due diligence on those supply chains becomes very difficult, as it is not possible to identify the actual risks involved in the production and trade of a particular lot. For instance, tantalite production in Mozambique is forbidden for artisanal miners due to the ore's radioactivity. Artisanal production does exist, however, and is sometimes sold to industrial actors for processing and export. These transactions are conducted informally and are as such not monitored. This means that anyone importing tantalite from industrial producers in Mozambique may not be aware that as well as monitoring risks involved with industrial production, they should also be monitoring the risks involved with artisanal operations.

Another example is the artisanal gold trade in Burkina Faso. Here, the supply chain of artisanal gold – produced in thousands of sites across the country – is aggregated through gold buyers. These include both private comptoirs and government-run ANEEMAS. These entities send pre-financed collectors to ASM sites to buy gold, which they then aggregate and sometimes conduct further smelting, before exporting. However, our research found that collectors and comptoirs do not keep track of how much gold is sourced from which sites, and they do not keep the gold separate. This means that at the moment any international entity with a direct contract with a comptoir or ANEEMAS in Burkina Faso has no way of knowing in which sites the gold they are buying was produced. Given the vast range of risks present at ASGM sites in the country – ranging from armed group control to child labour – this means that conducting a thorough identification of risks in a supply chain becomes essentially impossible for downstream actors. The same can be said for Nigeria, where the 3Ts are aggregated at “tin sheds” in Jos and lots originating from all over Nigeria may be combined before being sent for exporting. In addition, gold exporters in Nigeria spoke of smelting multiple lots of gold together until they had collected a certain amount of kg, invariably from various sites and sources, before exporting in bulk to Dubai.

This speaks to the importance of downstream actors putting increased pressure on the in-country actors such as aggregators and exporters (through their own investigations and appropriate due diligence on such suppliers) and combining this pressure with capacity building programmes on how to implement due diligence for these aggregators and exporters. This can be downstream sector led, but it may also be combined with public support and funding from development agencies or implemented as part of the “accompanying measures” to the EU Conflict Minerals Regulation.

Unhelpful policy responses to Annex II risks

Across the three countries, there is evidence that Government authorities do implement policy responses to some of the Annex II risks. Mostly these policy responses are focussed narrowly on the risks

related to financing of non-state armed groups, and frequently the response is to establish gold mining bans in parts of the country where such risks occur. This is the case in Burkina Faso and Nigeria, where we saw this example with the suspension of artisanal mining in Zamfara State in 2019 and again in 2021, as well as other countries (e.g. in DRC after the Dodd Frank Act came into place). However, such mining bans often have the counterproductive consequence of pushing the mining and value chain further into the informality and thus making it more easily exploitable by illicit actors. Such bans may also increase the likelihood that state public security forces or politically exposed persons then get involved in the value chain, which is also an Annex II risk.

Each of the three countries has also experimented with state gold buying programmes, which in principle could be an entry point for mandating and implementing responsible sourcing and due diligence in the upstream supply chains. In Nigeria, the PAGMI responsible sourcing and artisanal gold purchasing programme is in its early stages. However, such state gold buying programmes, such as the one that trialed and then was abandoned in Mozambique, face many challenges, and examples from the three countries and beyond demonstrated that it is very difficult to get certain aspects right, including gold pricing, cash flow, and mitigating conflicts of interest with the implementing agencies. This suggests that in some contexts, it may be better to implement due diligence requirements through broader policy and market mechanisms, independently of or complementary to a state-led gold buying programme.

6.4 Narrowly defined due diligence does not capture the extent of risks

Key Annex II risks occur widely, including outside of listed CAHRAs

As a follow-on support tool from the EU Regulation, a list of CAHRAs was developed, which is published quarterly by the EU in collaboration with Rand Europe. The list was designed to help companies to identify potential CAHRAs that might ex-

ist in their supply chains, which would raise a red flag to conduct enhanced due diligence on their suppliers in these locations. The EU Regulation defines CAHRAs as '[a]reas in a state of armed conflict or fragile post-conflict as well as areas witnessing weak or non-existing governance and security, such as failed states, and widespread and systematic violations of international law, including human rights abuses' (European Commission, 2017). However, the EU list is indicative only. This means that companies should verify through their own due diligence processes whether a given country or region could be considered a CAHRA, and thus suppliers would require enhanced due diligence checks, even if the country or region is not identified on the EU list.

Our findings strongly support that the CAHRA list can only be an indicative tool at most, as we have found many of the key risks listed in Annex II of the OECD Due Diligence Guidance to be widespread in areas that are not listed on the current EU CAHRA list. While the CAHRAs list seems to focus mostly on conflict and major human rights abuses, areas of high risk exist outside of those named in the list. For example, there is significant fraudulent misrepresentation of the origin of minerals or the non-payment of taxes, fees and royalties due to governments in all three countries studied, and there is widespread indication of (worst forms) of child labour. In the artisanal mining sector, both of these risks are widespread, and do not just occur in listed CAHRAs.

Moreover, the CAHRAs list is not always up to date with the security situation on the ground in a particular country. In Nigeria, for example, the region of Jos is not on the official CAHRA list, but it is currently experiencing levels of conflict, systemic violence and security challenges that could define it as a high-risk area. Such areas, which are not listed as CAHRAs but may be considered high risk, reinforce that heightened supply chain due diligence is necessary for a much wider range of supply chains than those that originate in CAHRAs named on the EU list. This is not a new conclusion – the CAHRAs list is deliberately described as being indicative and non-exhaustive. It is just to say that any support to due diligence implementation that is provided by actors in the German Development Cooperation or

downstream supply chain actors should emphasise that 3TG supply chains in many contexts – including those outside of named CAHRAs – require rigorous due diligence.

Current due diligence approaches do not adequately take into account the additional challenges faced by women in 3TG supply chains

Evidence from the field confirmed that women are often relegated to the lowest-quality mineral sites and perform the lowest-paying activities. This means that women tend to have less earning capacity. In Burkina Faso, cultural differences meant women were rarely involved in ore extraction or as pit owners, which is normally the most lucrative activity. Instead, women are normally involved in the washing and crushing of ore by hand. Where machines are brought in to wash and sort, there is a risk of these women-centred roles being further marginalised. In Nigeria, women were found on sites that had been abandoned by male miners due to the low quality of ore left.

In addition, where there were women, there was an increased likelihood of the presence of children. Lack of adequate childcare facilities in and around ASM sites, as well as gendered norms where

women bear a disproportionate burden for childcare in most households, means that women working in ASM often have no choice but to bring children with them to the mine site. This is particularly the case in instances of forced displacement, for example. It was identified in Burkina Faso, where many miners at the sites visited for this study had been forcibly displaced by the armed conflict in the northeast of the country, and lived in precarious living contexts, removed from communities that might otherwise be able to support childcare. This was a primary reason given by interviewees for the presence of children at the sites – that their parents were displaced and could not leave them behind. Any due diligence efforts that only avoid mine sites where children are present, therefore, is likely to further disadvantage the women who look after them by denying them access to responsible markets. Due diligence efforts, therefore, that aim to eliminate child labour from their supply chains should not just disengage from supply chains where children are present, but instead provide support in the forms of alternative childcare solutions for women who work in ASM sites. More generally, all due diligence programming must seek to understand the specific challenges faced by women in their supply chains and create strategies to address them.

7 Recommendations for the implementation of due diligence

Based on the above conclusions, this section outlines recommendations to address the challenges and barriers described throughout this report. The recommendations are targeted to German Development Cooperation actors (i.e. BMZ, BGR, GIZ, etc). They focus on areas where these actors can best support the creation of a strong enabling environment for due diligence in conflict-affected and high-risk areas, including but not limited to the three target countries of this report.

The recommendations are aimed at providing guidance in line with the wider strategy and policy agenda of the German Development Cooperation. In particular, the recommendations speak to priorities of the German Raw Materials Strategy (“Rohstoffstrategie der deutschen Regierung”)²⁷ such as sustainability and transparency in the raw materials sector. They provide concrete entry points to foster the establishment of more transparency and control in raw material supply chains and enhance compliance with corporate due diligence requirements as set out in the German National Action Plan on Business and Human Rights, and the OECD Due Diligence Guidance. Specifically, the recommendations aim to provide a view on possible accompanying measures to the EU Responsible Sourcing Regulation (hereinafter, ‘EU Regulation’), which could be implemented complementary to or in collaboration with the European Partnership for Responsible Minerals (EPRM),²⁸ where Germany is a member and represented by the BMZ. This would further enable German and European public and private sector actors to implement and com-

ply with the EU Regulation. Furthermore, the recommendations could support the implementation and promotion of the German Supply Chain Due Diligence Act and the Corporate Due Diligence Regulation currently in development by the European Commission. It is to note however that this report and the recommendations are focussed on conflict minerals due diligence as per Annex II of the OECD Due Diligence Guidance and the EU Regulation, and thus have a more limited focus than these regulations, which are set to require broader due diligence in line with the UN Guiding Principles on Business and Human Rights. Lastly, the recommendations may also provide useful insights for Germany’s bilateral engagement with the three focus countries.

Support the improvement of knowledge and understanding of due diligence and traceability requirements in producer countries.

An overwhelming finding from this study was that the level of knowledge and understanding of international due diligence frameworks and supply chain traceability in producer countries was very low. This stands in stark contrast to regions such as the Great Lakes Region, where sustained efforts to implement due diligence initiatives over the past two decades have led to a strong understanding of requirements amongst stakeholders in and around 3TG supply chains. In Burkina Faso, Mozambique and Nigeria, this level of knowledge did not exist. It is likely that other 3TG producers outside of the Great Lakes Region also lack adequate knowledge

²⁷ https://www.bmwk.de/Redaktion/DE/Publikationen/Industrie/rohstoffstrategie-der-bundesregierung.pdf?__blob=publication-file&v=4

²⁸ <https://europeanpartnership-responsibleminerals.eu/cms/view/98fd21da-cd6a-4a71-9e36-5c94b50abac7/eprm-project-locations>

of due diligence frameworks and the requirements for mineral producers that come with them. Even where there was a slightly higher level of knowledge of due diligence frameworks, as in Burkina Faso, confusion remained as to what roles and responsibilities belonged to different groups of stakeholders as far as implementing measures to mitigate the Annex II and other associated risks in 3TG supply chains.

Overall, due diligence practices and their implementation require an “enabling environment,” and they need to be embedded in a larger, fuller formalisation process of the entire upstream value chain. Formalising the ASM sector is already a long-term, large-scale task, and formalisation efforts by Governments must look beyond just the mines to formalising the entire trade, aggregation and export levels too.

Against this backdrop, actors in the German Development Cooperation may want to consider the following recommendations for current and future programmes on supply chain due diligence, responsible mining and responsible mineral sourcing.

Supporting the sensitization of mineral sector stakeholders in international due diligence requirements.

- Development programmes and projects that aim to support the sensitization of supply chain actors on international due diligence requirements should include government authorities who manage the mining sector, in particular the ASM sector, as well as direct supply chain stakeholders and those who work indirectly in the sector such as civil society.
- Sensitization should include clear descriptions of the objectives of due diligence, the benefits of compliance with legislation such as the EU Regulation, and in particular a focus on the responsibilities of each party in ensuring compliance with due diligence requirements.
- Focus of any training programmes should focus not just on the artisanal mining sites, but formalisation of the entire mineral supply chain, including the aggregators, traders and exporters.

Support the gathering and recording of supply chain data in producer countries

As outlined in the conclusions, an important barrier to due diligence implementation in the study’s focus countries is a lack of reliable data on mineral supply chains, at both an industrial and ASM level. Making supply chain data publicly available is critical for creating an environment where downstream stakeholders are able to gain an understanding of the regions they are sourcing from and identify the risks involved in each context. In practice, this could include:

- Encouraging collaboration between government agencies (Ministry of Mines, ASM Department, Finance, Customs, Labour, etc.) to share existing data with each other. Data could be collated into a user-friendly form that would be accessible to upstream and downstream supply chain stakeholders.
- Strengthening government capacity to collect reliable data, including basic data collection, consolidation and analysis methods.
- Encourage the inclusion of the informal sector in data collection efforts, so as to capture informal production and gain a more accurate picture of the country’s minerals sector.
- Ensure that data includes production, domestic trade, beneficiation and exports of minerals produced, including export destinations.

Support collaboration between private sector stakeholders carrying out due diligence and government entities in charge of mining sector monitoring

Due diligence should ultimately be rooted in value chains and conducted by value chain actors themselves, with Governments ensuring an enabling environment and monitoring the implementation of due diligence at key points in the chain. Collaboration between government entities and the private sector can be mutually beneficial. In practice, the role of a government should be to create an environment in which private sector stakeholders from responsible markets are able to conduct due diligence on their supply chains in that producer country. To this end, actors of the German Development Cooperation can encourage collaboration

and information-sharing between the public and private sectors, as well as training and capacity building of both private value chain actors and public authorities tasked with monitoring mining, trade and export of 3TGs.

Encourage collaboration between producer and importer countries

Another key area of collaboration is between producer and importer countries. For importers, in particular those bound by the EU Regulation, knowledge of producer country systems and mineral sectors is critical in their own mandate to support importers of 3TGs to conduct due diligence on their supply chains. Similarly, understanding the main export markets for their minerals is helpful for producer country governments to understand what kinds of requirements their producers will be subject to, and how to support them in complying with these requirements. Communication between the two, therefore, will support due diligence efforts along the supply chain and encourage better practices on a wider scale.

Understand that due diligence implementation needs to be context-specific

This study has shown that the needs of countries in terms of improving chain of custody can be very different from context to context. In Mozambique, for example, the government lacks total oversight of the mining sector, in particular the ASM sector, but is taking positive steps towards the creation of an enabling environment for responsible sourcing and due diligence from the country. In this context, organisations of the German Development Cooperation are probably best placed to support and guide the government's efforts, such as inputting into the development of the UGPK's certificate of origin, or supporting data analysis from the ASM census and any future data collection activities. The government's activities also seem to be moving away from a fully government-controlled ASM mineral trade (with the extinguishment of the state-owned buying entities) and towards a solution that relies more on private sector involvement (the certificate of origin). In this context, German Development Cooperation actors could i) provide international best practice expertise on similar in-

itiatives across the continent, such as the ICGLR Certificates, for example, and ii) support the capacity-building of the private sector to ensure that they are able to comply with any future government requirements.

In a conflict-affected context such as Burkina Faso, on the other hand, government-led supply chain control initiatives, especially in the ASM sector, have not been hugely successful. ANEEMAS' success in buying up artisanal gold has been stymied by a lack of resources and the growing insurgency in the northeast of the country, as well as stiff competition with the illicit gold trade. In this context, where the government has little (and decreasing) control over the mining sector, more localized solutions may be the best option. German Development Cooperation actors could consider supporting, for example, third-party led, responsible production initiatives such as the projects led by the Alliance for Responsible Mining (ARM) and AGC. This kind of initiative provides better oversight on particular supply chains than is possible from a resource-constrained and conflict-pressured government.

In Nigeria, the development of PAGMI and the state gold-purchasing scheme is a real opportunity for the government to institutionalise responsible sourcing of gold supply chains while also further formalising and modernising the artisanal and small-scale gold mining sector. The accreditation of 50 buying centres across the country, combined with the biometric registration of over 20,000 artisanal miners and the adoption of responsible sourcing standards aligned with the LBMA and OECD Due Diligence Guidance are all movements in the right direction for due diligence implementation in the gold supply chain. This displays a strong state willingness to formalise value chains and establish chain of custody through the PAGMI gold buying programme. However, an examination of what has happened in Mozambique and other contexts demonstrates that state gold buying schemes are not without their challenges. Also, interviews with artisanal miners and other stakeholders across Nigeria shows that widespread knowledge of PAGMI is low, so the programme is not yet at the point of making a major difference in the livelihood of the average artisanal gold miner,

nor has it yet been successful in reforming the illicit gold supply chain.

Support efforts to stem the illicit flow of artisanal gold to the UAE

As described in the sections above, significant amounts of gold produced in Burkina Faso, Mozambique and Nigeria, as well as many other African countries, is smuggled out of the producer country, avoiding any taxes and fees associated with export, and taken to the UAE. Much of this gold is thought to be hand-carried on commercial or private airlines. When it reaches the UAE, it can then be declared and enter legally. The exemption of hand-carried gold from customs declarations on the origin of gold mean that smuggled gold can legally enter the UAE without the traders having to provide proof of origin, or any proof of responsible or even legal production or trade. This structure means that informally or illegally produced or traded gold can be ‘cleaned’ upon entering the UAE, and injected into the formal gold trade either in Dubai’s gold souk or to gold refiners based in Dubai. Once aggregated, it becomes impossible to trace the origin of the gold, and therefore to conduct due diligence on its supply chains.

These illicit supply chains are entrenched in the artisanal gold production of many African countries, and in some contexts have become the only commercially-viable method of exporting gold. Inflated prices at mine sites can only be paid by traders if they are then not subject to export taxes and fees. Entrenched smuggling will be very difficult to tackle, given the number of powerful actors benefitting from the status quo. An important entry point for addressing the issue, however, is at the point of entry of the gold into the UAE. If the UAE were to impose more stringent requirements on customs declarations of hand-carried gold that included a certificate of origin and an export certificate for all gold imported, this would create significant challenges to the way gold smugglers currently operate.

In this light, German Development Cooperation and foreign policy actors could consider monitoring and advocating with specialized stakeholders with the goal of encouraging greater restrictions

on the import of hand-carried gold into the UAE. This could include informing other platforms, actors and organisations who are engaged in advocacy on this issue about the consequences of the current UAE legislation for ASM gold producing countries, and raising awareness about the problem with stakeholders with whom the German Development Cooperation is engaged.

Ensure that any efforts towards increasing the implementation of due diligence are gender-sensitive

This study has touched on some of the ways in which women face additional challenges in their participation in the ASM sector. Any intervention by German Development Cooperation actors to support due diligence efforts must take into account these challenges, and must be aware of the potential negative impacts that exclusionary due diligence can have on women in ASM, increasing their marginalization from the sector and cutting off their access to responsible markets. Interventions should be founded on a nuanced understanding of the gender dynamics of a particular context. They should aim to be deliberately inclusive of women’s needs, and to monitor and assess whether impacts of the intervention have been beneficial for women as well as other vulnerable stakeholder groups.

Encourage continued engagement of downstream actors with high-risk supply chains

The conclusions outlined how many more supply chains are ‘high-risk’ than just those listed in the EU list of CAHRAs, and that downstream actors should take a risk-based approach to due diligence, where they seek to identify potential risks in all of their supply chains, not just those that originate from named CAHRAs. This conclusion risks leading to disengagement with potentially risky supply chains, because of the burden of conducting due diligence on them. However, German Development Cooperation actors should work with downstream actors to encourage them that disengagement from potentially risky supply chains (which are normally seen to constitute the whole of the ASM sector) is neither a responsible nor a coherent sourcing choice. Disengagement from the ASM

sector or from fragile economies means that these economies lose access to a much needed responsible market, and are forced to deal with the illicit economy, which often leaves vulnerable groups more exposed. Furthermore, minerals that are easily consolidated like gold will find their way into 'formal' supply chains in any case. Tightening scrutiny on this issue by the international community means that this approach only delays reputational and legal risks to an importer to a time when it is discovered that their supply chains have been 'contaminated' with illicit gold. In this light, German Development Cooperation actors could consider:

- Raise awareness amongst German importers of 3TG about the negative implications of disengagement with high-risk supply chains, and that such a decision can only be a last resort and needs to be thoroughly justified according to international standards and guidances.
- Advocating to the EU for continued and growing support to importers on the issues of due diligence, and in particular on how to conduct responsible due diligence on ASM supply chains.

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9 Annex

Lists of interview partners

Burkina Faso:		
Date of interview	Role	Organisation of the stakeholder
30/09/2021	Representative	Ministry of Mines
30/09/2021	Representative	Chamber of Mines
30/09/2021	Representative	National Anti-Fraud Office
30/09/2021	Representative	ONASSIM
01/10/2021	Representative	Association of several members
01/10/2021	Staff	ORCADE, Network of Journalists in Mining
01/10/2021	Staff	EITI
01/10/2021	Representative	BUMIGEB
01/10/2021	Staff	ANEEMAS
05/10/2021	Advisor	ANEV
04/10/2021	Manager, Agent	Comptoir
02/10/2021	Site Manager	Mine Site
02/10/2021	Site management committee (focus group)	Mine Site
03/10/2021	Site Manager	Mine Site
03/10/2021	Gold panning team	Mine Site
04/10/2021	Representative	AFEMIB
04/10/2021	Coordinator	PADSEM
08/10/2021	Policy Officer	Mining Company
08/10/2021	Representative	National corporation of small-scale miners and craftsmen
08/10/2021	Manager	Counter

Mozambique:		
Date of interview	Entity	Role
17/10/2021	Licensed trader (gold)	N/A
18/10/2021	Artisanal gold producer	Sociedade Mineira de Mimosa
18/10/2021	Artisanal gold producer	Sociedade Mineira de Munhena
22/10/2021	Artisanal gold producer	Associação Mineira de Tsetsera
25/10/2021	N/A	Serviços provinciais de Infraestruturas
26/10/2021	Representative for Human Resources and Company Law	Industrial tantalite producer
26/10/2021	Artisanal tantalite producer	Associação de Mulevala
26/10/2021	Licensed trader (tantalite)	N/A
27/10/2021	Representative for Legal and Administrative issues	Industrial tantalite producer
27/10/2021	Representative for mine operation	Industrial tantalite producer
28/10/2021	Representative for Geological Surveys and Mine Operation	Industrial tantalite producer
28/10/2021	Artisanal tantalite producer	Companhia Mineira Lugela Licungo de Brito e Filhos
29/10/2021	Artisanal gold producer	Associação de Naculue
28/10/2021	Representative	Union for the Protection of Small-Scale Miners
02/11/2021	Representative	Unidade de Gestão do Processo de Kimberly
01/12/2021	Representative	BGR Mozambique

Nigeria:		
Date of interview	Role	Location
20/10/2021	Artisanal miners (2)	FCT, Abuja, Gwagwalada
20/10/2021	Artisanal mining operator	Gwagwalada
20/10/2021	Artisanal mining operator	Gwagwalada
20/10/2021	Community leader	Gwagwalada
22/10/2021	Youth leader	FCT, Abuja, Kwali Area Council
26/10/2021	Artisanal mining operator	FCT, Abuja, Dafa
26/10/2021	Youth leader	Yangoji
30/10/2021	Community leader, youth leader (2)	Nasarawa State
30/10/2021	Women artisanal miners (4)	Nasarawa State
30/10/2021	Artisanal miner	Nasarawa State
30/10/2021	Agent / dealer	Nasarawa State
30/10/2021	Traditional ruler / cheif	Nasarawa State
30/10/2021	Mining cooperative secretary	Nasarawa State
30/10/2021	Women's mining cooperative secretary	Nasarawa State
30/10/2021	Artisanal mining company site manager	Niger State
30/10/2021	Artisanal miners	Niger State
31/10/2021	Gold trader, ASM worker	Osun State
01/11/2021	Artisanal gold mining site manager	Osun State
01/11/2021	Artisanal gold mining company	Osun State
01/11/2021	ASM facilitator / land owner	Osun State
01/11/2021	ASM company managing director	Cross Rivers State
01/11/2021	Managing director of mining and exploration company	Cross Rivers State
02/11/2021	Mines coordinator, Youth leader (2)	Kwara State
02/11/2021	Small scale mining operators (6)	Bauchi State
02/11/2021	ASM pre-financier in gold and tantalite	Kaduna State
02/11/2021	Exploration and small scale mining company	Taraba State
02/11/2021	Site mining engineer	Kogi State
09/11/2021	African Centre for Leadership Strategy and Development	Abuja
09/11/2021	Women in Mining	Abuja
09/11/2021	Miners Association of Nigeria	Abuja
09/11/2021	Nigerian Society of Mining Engineers	Abuja
11/11/2021	Kebbi State Miners Association	Kebbi State
11/11/2021	Zamfara State Miners Association	Zamfara State
13/11/2021	Mining company	Jos, Plateau State
13/11/2021	Minerals Dealer, processor and licensed exporter of 3Ts	Jos, Plateau State
13/11/2021	Mining engineer	Jos, Plateau State
13/11/2021	Mining engineer	Jos, Plateau State
15/11/2021	Gold miner and dealer	Niger State
16/11/2021	Gold miner, processor, dealer	Niger State
16/11/2021	Gold dealer	Niger State
16/11/2021	Operator of gold testing machine	Niger State

