



# Mutoshi ASM Pilot

**A**rtisanal and small-scale mining (ASM) provides a critical livelihood for nearly 40 million men and women around the world, many of whom have few other options for supporting their families. These miners are a critically important part of mineral supply chains that span the globe, involve companies and governments, and provide essential components of everyday items from computers and cars to planes and medical devices. For example, some 10% of the world's cobalt is mined by men and women using rudimentary tools in the Democratic Republic of Congo. The value of the minerals in these supply chains is immense. The work is grueling, but offers the promise of a better future for millions in countries that are challenged by poverty and income insecurity.

Pact's Mines to Markets program, or M2M, uses an integrated, holistic approach to help resource-dependent communities improve their lives. We bring together government, industry and miners themselves to make ASM formal, safer and more productive. Pact's efforts are helping to reveal and make the most of ASM's contributions to development.



Photo Credit: Chemaf, SMM/MUTOSHI COBALT

## Project history & Motivation

In early 2018, Chemaf set out to develop the Mutoshi concession near Kolwezi (a city of approximately 500,000 people in the DRC) - initially appointing an artisanal and small-scale mining (ASM) co-operative on a pilot basis.

The ASM pilot project at Mutoshi has drawn extensively on Chemaf's mining expertise, Pact's developmental knowledge and the knowhow of commercial partners in order to respond to increasing global demand for responsibly sourced cobalt.

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## High Standards for Responsible Sourcing from OECD and Trafigura

Since its adoption in May 2011, OECD's Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas has become the leading industry standard for companies looking to live up to the expectations of the international community and customers on mineral supply chain transparency and integrity. There are five steps in the framework, covering the establishment of management systems, identification of supply chain risks, implementation of a risk response strategy, organization of independent audits and annual reporting on supply chain due diligence.

In consideration of these guidelines, and in recognition of the risks associated with transportation and trade of metals and minerals, Trafigura developed its Responsible Sourcing and Supply Chain Expectations to

identify and mitigate salient social and environmental risks in their supply chain, summarized below:

1. Suppliers should not contribute to serious abuses, such as torture, degrading treatment, compulsory labor, the worst forms of child labor or other human rights violations.
2. Suppliers should not engage with upstream suppliers linked to the serious abuses described above.
3. Suppliers should engage with partners to avoid or minimize the exposure of vulnerable groups in their upstream supply chains.
4. Suppliers to screen security forces to ensure that those known to be responsible for gross human rights abuses will not be hired or will be required to demonstrate mitigation measures are in place.
5. Suppliers to implement measures to prevent or mitigate risks of bribery.
6. Suppliers to implement measures to prevent or mitigate risks of money laundering.
7. Suppliers to implement measures to ensure that all required taxes, fees and royalties are paid to governments.

These expectations, along with the Trafigura's other corporate responsibility policies and principles, demonstrate their commitment to partnering with suppliers that are dedicated to continuous improvement and respect for international and host country laws and regulations.



However, ensuring that the minerals extracted by the Mutoshi ASM project meet both OECD due diligence guidelines and Trafigura's expectations would require collaboration from various supply chain actors and DRC government agencies, as well as engagement from Pact and Kumi Consulting.

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## The role of Pact

In January 2018, Trafigura signed a new strategic relationship with internationally respected NGO, Pact. Pact has extensive experience working with artisanal miners in challenging environments. It is a sector leader in the practical implementation of responsible ASM sourcing.

Trafigura has been leveraging Pact's developmental expertise at Mutoshi. This has become a key element in a growing partnership that is now extending to other localities and relationships. The Mutoshi pilot project has yielded important results that are applicable across other business relationships.

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## The role of Kumi Consulting

Assessments conducted by Pact are reinforced on a quarterly basis by Trafigura's appointment of third-party assessor Kumi Consulting whose mandate it is to scrutinize the project in depth and report back on performance to Trafigura, Chemaf and Pact, as well as selected downstream partners.

Performance of the project is assessed against the OECD Due Diligence Guidance for Responsible Mineral Supply Chains, Trafigura's own Business Principles for Health, Safety, Environment and Community performance, and the IFC Performance Standards, among others.

# The Supply Chain

## EXTRACTION

Chemaf, a supplier of cobalt hydroxide to Trafigura, is initially developing its Mutoshi concession on a pilot-basis through the appointment of a single authorized ASM contractor, 'COMIAKOL'. In time, Chemaf intends for the concession to be mechanized, either in part or in full.

Chemaf has appointed a single cooperative, COMIAKOL, authorized by DRC Regulatory Authorities and representing approximately 5,000 ASM workers, to operate as a mining contractor on a designated area of the Mutoshi concession known as 'Mutoshi Cobalt'.



Photo Credit: Chemaf, SMM/MUTOSHI COBALT

## PROCESSING

Having extracted cobalt ore from Mutoshi Cobalt, COMIAKOL then washes and prepares the material for sale in mineral washing basins. Doing so enhances the ratio of cobalt content to waste and, as such, the price that will be realized at point of sale.

All material recovered by ASM workers is handled and processed separately from material originating from Chemaf's mechanized mines.

## PURCHASING

Assisted by Chemaf, COMIAKOL transports cobalt ore from Mutoshi Cobalt to a single Chemaf operated buying station. At the buying station, Chemaf conducts a technical analysis of cobalt ore, prices material according to purity and then provides a payment to COMIAKOL's workers.

All cobalt ore from Mutoshi Cobalt is received by Chemaf's single buying station, situated on the Mutoshi concession.

On arrival at the buying station, bags of ore are marked with a single identification code. That code is logged and a receipt is handed to the COMIAKOL representative responsible for its sale. Material is then crushed by Chemaf staff for sampling purposes, bagged and identified with the same identification code.

Samples are then analyzed for mineral content. Such samples may contain, for example, traces of cobalt, copper and iron.

Chemaf's preferred cobalt content for purchasing purposes is two percent. According to the realized cobalt purity, Chemaf will provide a cash payment to the relevant COMIAKOL representative.

The purchasing process typically takes one day. If the COMIAKOL representative is not satisfied with Chemaf's proposed payment they are permitted to remove material from the buying station for refining purposes. COMIAKOL representatives are not permitted to sell material outside of the concession, or to a buyer other than Chemaf.

## TRANSPORTATION

Cobalt ore leaves the buying station on trucks under tarpaulin that has been secured and tied by tamper-proof metal tags. Material from the Mutoshi ASM Pilot Project remains segregated at all times from material that has been mined at Chemaf's mechanized operations, for example, at their Etoile Mine.

Cobalt ore leaves Mutoshi on trucks under tarpaulin that has been secured and tied by tamper-proof metal tags. A cargo manifest is drawn up prior to departure which is then forwarded to Chemaf's designated processing facility for verification at point of receipt.

On verification and approval, all ASM-sourced material is processed at a dedicated standalone facility, Chemaf's Usoke Plant. All cobalt ore recovered at Chemaf's mechanized mines is processed at its Etoile facility.

Once processed, the cobalt hydroxide produced by Chemaf's Usoke Plant is bagged and branded according to its processing origin (Usoke). For storage, transport and onward export purposes, Usoke origin product (i.e., originally from the Mutoshi ASM project) remains segregated from any other material (e.g., of mechanized mine origin).

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## How we work together to make the Mutoshi project safe

- Workers must be at least 18 years of age. They must present officially recognized identity cards to register with the COMIAKOL cooperative.
- There is a single entrance to the Mutoshi Cobalt site and an electric fence around its perimeter.
- Personal protective equipment (PPE) has been issued free of charge to ASM workers at Mutoshi Cobalt, as well as to all workers at Chemaf's buying center.
- Only registered workers wearing PPE may enter Mutoshi Cobalt.
- Chemaf is distributing identity cards to workers. These will be used both for verification and to facilitate the recording of personal data, such as hours worked.
- Workers are allocated demarcated zones within Mutoshi Cobalt.
- Any pits they dig must be less than 10 meters deep. They are not allowed to dig tunnels horizontally within their assigned zone.
- Chemaf, 'SAEMAPE' (DRC State Regulator for ASM or Service for Assistance and Supervision of Artisanal and Small-Scale Mining), COMIAKOL and Pact conduct regular inspections and report on all incidents within a defined time period.

On a day-to-day basis, ASM workers operate under the observation of the following dedicated personnel:

- Chemaf's Health, Safety and Environment (HSE) staff.
- COMIAKOL's HSE staff.
- Two full-time Pact representatives.
- Representatives of the DRC's State Regulator for ASM, 'SAEMAPE'.

All parties are represented on an official ASM Committee. Its proceedings are also informed by regular community engagement meetings, led by Chemaf.



COMIAKOL and Chemaf celebrated 1 million hours worked without a fatality at the Mutoshi Cobalt semi-mechanized mine site in October 2019.

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## Controls

Conscious of stakeholder concerns about ASM material, Chemaf introduced controls to ensure that any material received from the pilot ASM project at Mutoshi would be handled and processed separately from material originating from their mechanized mines, as required by their commercial partners. These controls, which were required by commercial partners, included the following:

- Ensure that all cobalt ore recovered from the pilot Mutoshi project leaves the site on trucks with tarpaulin that has been secured and tied by tamper-proof metal tags.
- Draw up a cargo manifest that is forwarded to the Usoke processing facility in Lubumbashi for verification at point of receipt.
- The cargo manifest is verified on arrival at the processing unit. In the event that a cargo was to arrive at the facility that did not appear on the manifest, trucks would not be permitted to enter.
- By contrast, all cobalt ore recovered at mechanized mines is transported to and processed at the neighboring Etoile processing facility.
- On completion of processing, all cobalt hydroxide produced by the Usoke Plant is bagged and branded according to its processing origin.
- For storage, transport and onward export purposes, Usoke-origin product (originally from the Mutoshi ASM project) remains segregated from any other material (e.g., of mechanized mine origin).

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## Achievements

In the first six months of operations, achievements of the partnership have included as follows:

- There have been no instances of child labor reported.
- Chemaf and Pact are jointly raising awareness in surrounding communities about child rights and the importance of preventing children from working in mining.
- Chemaf and Pact have seen no evidence of human rights abuses (e.g., forced labour, sexual violence) associated with ASM activities on the concession as a whole.
- Clear signage within Mutoshi Cobalt prohibits alcohol and drugs on site. Chemaf regularly undertakes random alcohol Breathalyzer tests. Anyone that fails a Breathalyzer test is denied access to the site.
- Security at the site is provided by a third party security company. Security staff are supported by DRC Mine Police. Only Mine Police are armed.
- Physical barriers segregate pedestrians and vehicles at Mutoshi Cobalt and at the buying center.
- ASM workers travelling between Mutoshi Cobalt and the buying station are transported by a Chemaf bus to limit pedestrian traffic on connecting roads.
- Drinking water and sanitation facilities have been introduced on site.
- There are two first aid clinics at Mutoshi Cobalt. Medical supplies and health staff (doctor, nurses and a paramedic) are available and free of charge.
- Chemaf's Radiation Officer conducts monthly assessments to ensure exposure of workers to naturally occurring radiation from cobalt remains within safe limits.
- A health and safety committee including Chemaf, COMIAKOL and Pact is raising hazard awareness and safety management capacity amongst the ASM workforce.

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## Mutoshi Cobalt today and into the Future

In 2019, Trafigura continued to support the work of Chemaf, COMIAKOL and Pact in the development of the Mutoshi Pilot. Formal assessments were conducted of the project, against their Responsible Sourcing expectations, on a quarterly basis by third-party assessor Kumi Consulting.

Some of the greatest challenges the pilot faced over the course of 2019 were constraints to finance, resulting in limited capital expenditure, as well as the considerable migration of workers from the controlled cobalt pilot site to exploiting gold and copper in an uncontrolled, unobserved fashion elsewhere on the concession. Chemaf does not purchase this material. Both issues were directly as a result of the dramatically reduced price of cobalt, a situation that in and of itself led to heightened social unease and, at times, unrest.

Trafigura will continue to support the efforts of project partners in 2020. While the future of the project remains under review, and indeed, cobalt ore recovered from the area currently devoted by Chemaf to semi-mechanization will likely be depleted over the year, one the greatest contributions Trafigura can make to advancing responsible sourcing in this context will be in sharing its learning's, both good and bad, with stakeholders.

As noted, by the OECD in Trafigura's 2018 Responsibility Report *“there is a need for even greater awareness within the global industry, in particular that responsible production also means sourcing responsibly from conflict areas and supporting artisanal miners in their efforts to meet the new demands of the market.*

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## Supporting Pact Programs

Specializing in areas including health and safety in mining, human rights, traceability and transparency, economic empowerment among miners, mercury abatement, child labor reduction, mineral certification and ethical sourcing, Pact helps communities gain lasting benefit from natural resources by using them more sustainably. We also improve governance in the countries where we work, strengthening local, regional and national institutions. Other programs that work in the Mutoshi project area include:

### Children Out of Mining

Since 2015, Pact's Children Out of Mining project has been working with local and international partners and private-sector companies to address child labor at DRC mine sites. Children Out of Mining, also known as WIM, has included awareness raising and education and livelihoods and positive parenting skills development. The project has changed attitudes and norms about child labor, increased community awareness of children's rights and improved the enforcement of bans on child labor. With positive, collective action and an integrated package of interventions designed to address root causes, the project achieved a 97% reduction in the number of children working at project mine sites in the first two years.



Recent additions to the project have included targeted interventions to support particularly vulnerable and older children, as well as the expanded use of Pact's signature WORTH for Miners program, which provides literacy, numeracy, savings and financial skills to miners to increase mining families' economic resources and potential. The project has also added local committees in key mining areas, training for local suppliers on international standards, and exchange visits with other mining communities addressing child labor.

## WORTH

WORTH is an award-winning micro-banking program that empowers women to lift themselves and each other out of poverty. In WORTH's 20-year history, nearly 1 million women across 16 countries have increased their income, learned literacy and numeracy, started small businesses, and increased their confidence and social support networks. Pact has adapted its signature WORTH program for artisanal and small-scale miners. The program provides literacy, numeracy, savings and financial skills to miners to increase mining families' economic resources and potential. The program is a critical piece of Pact's integrated approach to development, and serves as a platform for broader impact for families and communities.



## DELVE

The ASM sector faces significant challenges in data availability and quality, which undermines the sector's contribution to global development and perpetuates a widely held public narrative that ASM is dirty, chaotic and unavoidably linked to conflict and environmental and social harm. The World Bank and Pact are partnering with sector stakeholders to develop an unprecedented database, called Delve, that makes accurate, integrated data on artisanal and small-scale mining available online. With initial data, we published the first State of the ASM Sector report in 2019.



