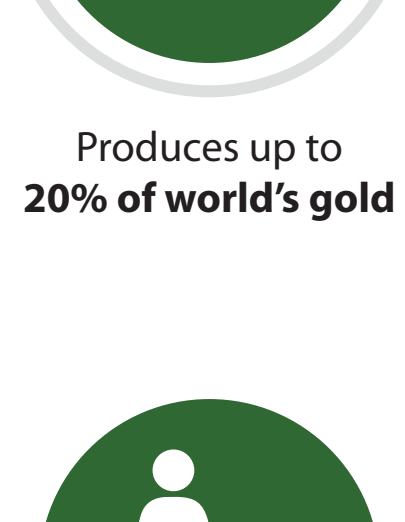


# REDUCING MERCURY USE IN ARTISANAL SMALL-SCALE GOLD MINING

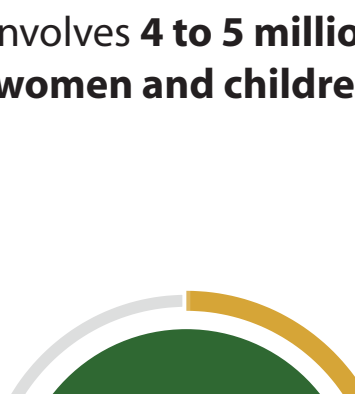
## ARTISANAL AND SMALL-SCALE GOLD MINING



Produces up to **20% of world's gold**



Employs **15 million people** typically in remote **rural areas**



Involves **4 to 5 million women and children**



Takes place in **70 countries** and often in areas where there is **limited economic opportunity**



Releases 35% of all **mercury** pollution to the **environment**

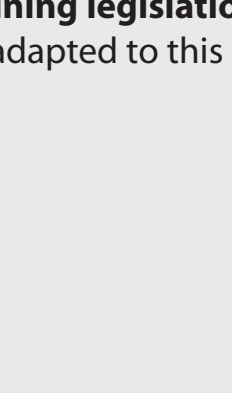


Is often considered as **informal sector**

### WHY IS IT HARD TO FORMALIZE THE SECTOR?



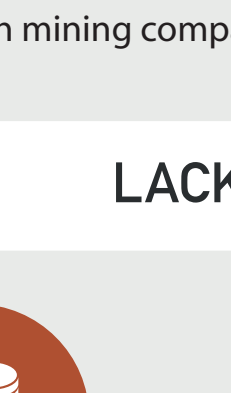
Miners operate in **remote areas**



**Mining legislation** is not adapted to this sector



**Land use** is a source of conflict with farmers

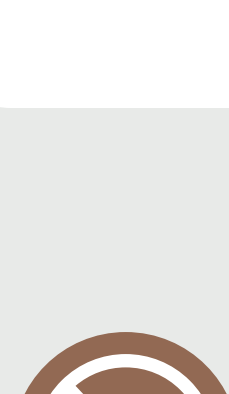


**Land ownership** is a source of conflict with mining companies



Little or no enforcement of legislation because of **Governments' lack of capacity**

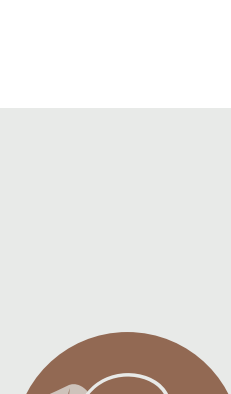
### LACK OF ACCESS TO FINANCE



Miners are not aware of **sources of financing**



Investors are not aware of **miners' unique needs**

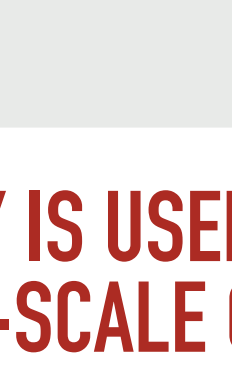


Investors view the **sector as high risk**

### CHALLENGES OF THE SECTOR



Miners are limited or no access to **international gold market**



Difficult to put in place due diligence across the supply chain because **gold is a fungible commodity** – and difficult to trace



Gold buyers do not know how to buy gold **directly from the sector**

## WHY MERCURY IS USED IN ARTISANAL AND SMALL-SCALE GOLD MINING



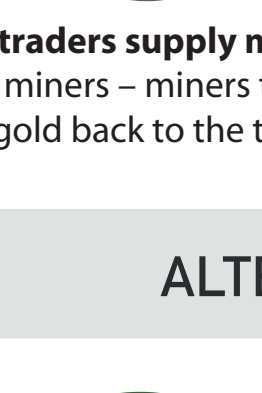
**Amalgamation** is cheap, fast and easy to put in place



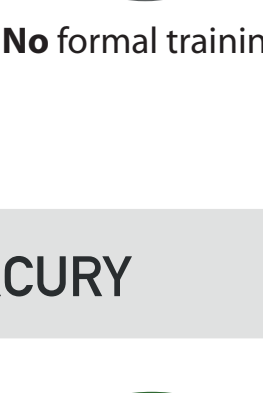
**Widely available**



Little or no awareness of the **risks of mercury**



**Gold traders supply mercury** to the miners – miners then sell the gold back to the traders

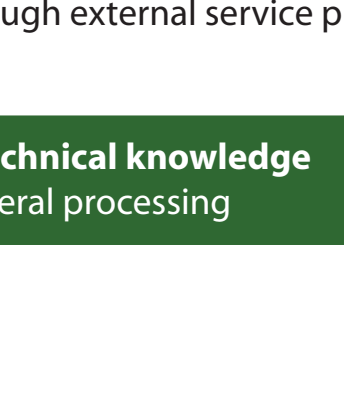


**No formal training**

### ALTERNATIVES TO MERCURY



**GRAVIMETRIC SEPARATION** separating the gold from the ore using panning, sluicing, centrifuges



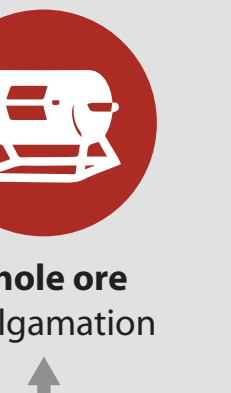
**CHEMICAL EXTRACTION** of the tailings by the small-scale miners or through external service providers

Alternatives involve **increased technical knowledge** of the gold deposit and mineral processing

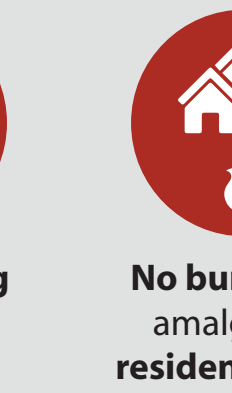
## HOW THE MINAMATA CONVENTION SAFEGUARDS ARTISANAL SMALL-SCALE GOLD MINING SECTOR (ASGM)

**Article 7 and annex C of the convention provide binding obligations on ASGM**

Countries with "more than insignificant ASGM" have the obligation to develop and implement National Action Plans which:



Establish **inventory** of the sector



Establish **strategy for formalizing** the sector

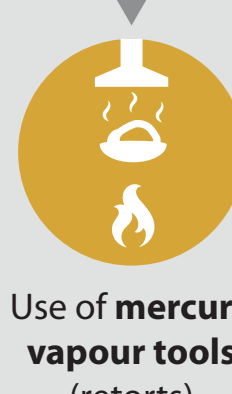


Set **targets** for reducing mercury pollution

### GOVERNMENTS TO BAN WORST PRACTICES



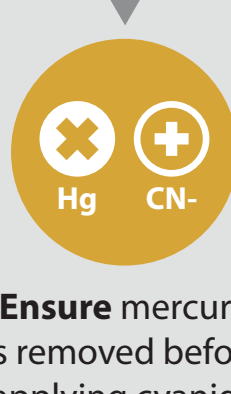
**Whole ore amalgamation**



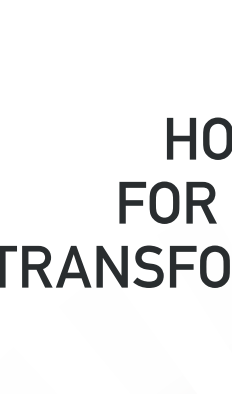
**Open burning of amalgam**



**No burning of amalgam in residential area**



**No cyanide** after mercury has been used



**Mill and concentrate ore**



Use of **mercury vapour tools** (retorts)



Process and extract in **designated work areas** away from the vulnerable population



**Ensure mercury** is removed before applying cyanide

### GOVERNMENTS TO PROMOTE BEST PRACTICES

## HOW WILL GEF GLOBAL OPPORTUNITIES FOR LONG-TERM DEVELOPMENT (GEF GOLD) TRANSFORM ARTISANAL SMALL-SCALE GOLD MINING



Demonstrate and share **best practices on formalization**



Pilot **access-to-finance** options



Provide mining communities with **direct access to international markets** and/or remove barriers across the value chains



**Educate gold consumers** on the social and environmental benefit of cleaner gold



**Show the benefits** of more efficient and cleaner non-mercury techniques