

# ARTISANAL AND SMALL-SCALE MINING: GLOBAL TRENDS

Artisanal and small-scale mining (ASM) has experienced explosive growth in recent years due to the rising value of mineral prices and the increasing difficulty of earning a living from agriculture and other rural activities. An estimated 40.5 million people were directly engaged in ASM in 2017, up from 30 million in 2014, 13 million in 1999 and 6 million in 1993. That compares with only 7 million people working in industrial mining in 2014.

ASM is generally pursued as a route out of poverty or as an activity to complement insufficient income, especially in communities where alternative employment is hard to come by. ASM is also a very diverse sector. Its main challenges vary from region to region—and often from site to site.

There is a perception that ASM is a “get-rich-quick” activity. This has misinformed legislation and extension programs and led to the application of one-size-fits-all policies. However, people working in ASM are far from the same. They range from those whose livelihoods rely on subsistence farming to skilled workers who migrated from urban areas in search of work.

Despite its low productivity, ASM is an important source of minerals and metals. It accounts for about 20 per cent of the global gold supply, 80 per cent of the global sapphire supply and 20 per cent of the global diamond supply. ASM is also a major producer of minerals indispensable for manufacturing popular electronic products, such as laptops and phones. For example, 26 per cent of global tantalum production and 25 per cent of tin comes from ASM.

## ENVIRONMENT AND HEALTH AND SAFETY

ASM relies on a mostly unskilled workforce using rudimentary tools and techniques. Unsurprisingly, its environmental and health and safety practices tend to be very poor. For example, dust and fine particles resulting from blasting and drilling cause respiratory illnesses. It also degrades crops and farmlands, resulting in lost food production. Streams and rivers often become polluted near ASM sites, which makes water unsafe for drinking and can also affect fish stocks previously relied upon for food.

Artisanal and small-scale mining is also the source of the largest releases of mercury, estimated at 1,400 tonnes per year in 2011 according to the Minamata Convention.

Exposure to mercury can have serious health impacts, including irreversible brain damage. Mercury is also difficult to contain and can be toxic at even very small doses. It can be transported long distances by air or water, poisoning the soil and waterways, and eventually making its way into the food chain. In sub-Saharan Africa, most of these risks are borne by women.

Many attempts have been made to encourage artisanal and small-scale miners to adopt cleaner technologies and safer practices. Many operators are reluctant to change their practices due to higher costs and concerns about the impact on production.



## ASM AND LARGE-SCALE MINING (LSM)

In many parts of the world, ASM and LSM operate in neighbouring—and sometimes on the same—concessions. As mineral governance frameworks tend to favour foreign direct investment by multinational companies over ASM, there are significant power imbalances and clashes over claims. However, their coexistence opens the potential for cooperation.

Current practices and debates about ASM–LSM relations include:

- Removing ASM from LSM concessions, which is unlikely to solve clashes over land in the long run
- Separating ASM and LSM by creating “ASM zones,” with proven geological reserves
- Fostering cooperation between LSM and ASM operators through buy-back arrangements, technical assistance and support for formalization
- Promoting continued dialogue and communication between ASM and LSM, facilitated by governments

## ALTERNATIVE LIVELIHOODS

Moving people straight out of ASM into other sectors is not a realistic strategy, as there are typically few other employment opportunities. Programs aiming to encourage more income-generating activities along the ASM supply chain—such as gemstone cutting and polishing—have shown positive results.

Agriculture and ASM need to be seen as complementary, as opposed to two activities that are fundamentally at odds. Many families turn to ASM to supplement their farming earnings and invest in farming and farm inputs.



## IN NUMBERS

**40.5 MILLION**  
people working in ASM in 2017

**150 MILLION**  
depend on ASM across  
**80 COUNTRIES**  
in the global south

**20 %** of the global gold supply is produced by the ASM sector

**80 %** of the global sapphire supply and **20 %** of the global diamond supply come from ASM

**26 %** of global tantalum production and **25 %** of global tin production come from ASM

**40–50 %** of the ASM workforce in Africa are women

**70–80 %** of small-scale miners are informal



## CERTIFICATION SCHEMES

In recent years, ethical certification schemes and standards have been used to support formalization and to improve social and environmental practices in the sector.

Standards such as Fairmined and Fairtrade Gold aim to foster responsible ASM cooperatives, provide assurance of minimum standards of production, and support the sector's formalization and professionalization. In addition, "chain of custody" initiatives aim to ensure traceable supply chains from mine to market that are free from conflict and human rights abuses. They respond to the need of companies seeking to meet international regulations and/or voluntary codes and to ensure good business practices.

Despite signs of progress, there are concerns about these initiatives. Some argue they are not reaching the most marginalized communities in need of greatest support. Instead, they are believed to be empowering already licensed and relatively affluent cooperatives able to meet the requirements and costs of certification. There are also concerns about longer-term sustainability due to their reliance on Western markets and ethical consumption trends.

## FORMALIZATION

In many countries, 70 to 80 per cent of small-scale miners are informal.

Informality brings along damaging socioeconomic, health and environmental impacts, which trap the majority of miners and communities in cycles of poverty and exclude them from legal protection and support.

Formalization has to be inclusive of miners' views and effective in monitoring and enforcing regulation. It needs:

- Legal frameworks that remove barriers to formalization and are supportive and accessible rather than punitive
- Streamlined licensing processes that make it easy, cost-effective and rewarding to obtain a licence
- Access to finance for miners, potentially using geological information as collateral for loans
- Technical and financial support to meet the licensing requirements and, once licensed, to continue to improve performance

## TOWARDS SUSTAINABLE ASM: WHAT DO WE NEED TO GET THERE?

- **Know-how:** Building capacity through local institutional partnerships
- **Organization:** Encouraging miners to form cooperatives and associations
- **Collaboration:** Encouraging large-scale mining companies to support capacity building
- **Capital:** Using microcredits to lend to organized groups of miners and communities, supported by donors
- **Technology and equipment:** Improving miners' access to efficient and cleaner technologies

