

Central bank domestic ASGM purchase programmes



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Foreword

Gold has been at the heart of central banking for centuries. Once an official currency, it has become a cornerstone of modern reserve management. Emerging market central banks have been particularly active purchasers in recent years, and have occasionally acquired gold from local artisanal and small-scale producers.

This report from the World Gold Council examines how these domestic purchasing programmes work, the benefits they can confer, and the challenges of raising environmental, social and governance (ESG) standards in the Artisanal and Small-Scale Gold Mining (ASGM) industry.¹

Using four case studies we examine ways in which central banks can use these programmes to increase their reserves, enhance the welfare of local communities, and create a more robust and sustainable ASGM sector. We then provide recommendations to encourage responsible ASGM practices and a list of policy options aimed at improving central bank gold purchasing programmes.

Such benefits are, perhaps, more relevant today than ever. ASGM activity provides a livelihood for over 20 million people across developing countries, a number that has more than trebled since the start of the century.² Formalising the sector can increase prosperity and alleviate some of the socially and environmentally damaging issues that beset this industry. Central banks wield market power that can be used to foster and enforce lasting change through implementation of international standards and best practices.

¹ Artisanal and small-scale gold mining (ASGM) refers to the mining of gold with minimal or no mechanisation, often in the informal sector.

² Intergovernmental Forum on Mining, Minerals and Metals and Sustainable Development, Global Trends in Artisanal and Small-Scale Mining (ASM): A Review of Key Numbers and Issues.

Executive summary

Gold is the third most widely held reserve currency after the US dollar and the euro, and is held by more than four in five central banks.³

Not only does gold satisfy the three core principles of reserve management – safety, liquidity and returns – it is also an apolitical asset, which carries no credit risk and is no one’s liability.

Central bank demand for gold has increased substantially since the Global Financial Crisis and emerging markets have been among the most active purchasers. In our view, the rationale behind this is clear. Emerging market countries can face challenges around currency instability and capital flight. Substantial gold reserves foster economic confidence, enhance currency stability and create a more attractive environment for foreign investment. Many emerging market central banks accrue gold via the international market but a growing number have been able to bolster their reserve assets with domestically mined gold, often purchased from ASGM operations.

We believe these programmes have several advantages:

- Central banks can buy gold using local currency rather than diminishing their international currency reserves
- They can spur economic development by supporting the livelihoods of artisanal and small-scale miners
- They can help to formalise small-scale mining, reduce the use of mercury in the production process and, where the purchases are conditional on meeting relevant standards, support due diligence requirements so that artisanal gold can be sold on the international market
- They can provide small-scale producers with greater confidence about the terms on which they trade their gold and make them less vulnerable to extortion or intimidation by criminal groups
- They can foster best practice across the entire gold supply chain

Central banks operating a domestic purchase programme can choose whether to retain their gold or sell it for hard currency in the international market.⁴ Such decisions will reflect individual needs and may alter over time. Today, however, many central banks in gold-producing countries maintain a low level of gold reserves, even though there would be significant advantage in building those reserves to more substantial levels.

This report examines four countries whose central banks actively purchase gold from domestic ASGM production – the Philippines, Mongolia, Ecuador and Ethiopia.⁵ We will also consider lessons learned in formulating policies towards ASGM.

Taken together, the information in this report provides a broad picture of central bank domestic purchase models, the impact they can have on improving practices associated with small-scale gold production, and the benefits of domestic gold buying for reserve management purposes. The World Gold Council believes that this report can serve as a useful guide for governments and central banks that are considering establishing their own domestic gold buying programmes, and a useful guide for policymakers involved in designing due diligence support mechanisms that reduce the marginalisation of responsible ASGM entities.

³ IMF Currency Composition of Foreign Exchange (COFER).

⁴ Hard currency refers to money that is widely accepted around the world as a form of payment for goods and services.

⁵ In the case of the Central Bank of Ethiopia our case study covers the period before the escalation of the conflict in Tigray.

Central bank purchasing programmes and the challenges of raising ESG standards in the ASGM sector

ASGM provides livelihoods for over 20 million people across developing countries. That number has more than trebled since the start of the century, driven by poverty, unemployment, relatively high gold prices, population movements and, in some cases, the activities of organised crime. In some countries artisanal mining is the second most significant rural livelihood after agriculture. Thus it is important both politically and economically. ASGM varies greatly from one area to another – in some cases it is legal and sustains large numbers of livelihoods, whereas in others it is part of an informal economy and may be a seasonal or traditional activity. In other contexts it is explicitly illegal and, at the extreme, associated with the activities of organised crime or armed groups. Part of its value to criminal groups lies in its role as a parallel currency in a wider illicit economy.

In addition, ASGM is often associated with water and soil pollution, environmental degradation, child and forced labour, gender-based violence, hazardous health and safety practices, smuggling and money laundering. The situation of individual artisanal gold miners is often worsened by their exclusion from legal frameworks, leaving them with few property rights and open to extortion. Moreover, they often have no access to banking services, are vulnerable to robbery and unable to realise a fair price for the gold material that they produce. In many situations miners in relatively remote areas have little choice but to buy their mining inputs and sell their gold to middle-men who pocket a disproportionate share of the value. Moreover, gold sourced in this way is unlikely to be able to satisfy the due diligence expectations of international gold refineries and, further down the supply chain, mainstream gold users in sectors like investment, jewellery or technology.

Internationally, a number of initiatives are underway (see **Appendix I**) to address some of these challenges, but there is a tension between the due diligence needs of international gold market actors and the fact that progress towards formalisation is, at best, uneven. In these circumstances it is difficult for leading gold refineries to create a viable business model that encourages due diligence from widely distributed small or micro producers. There are a number of donor-funded or NGO operated ‘closed pipe’ schemes that move small quantities of ‘responsibly produced’ ASGM material through LBMA refineries, but these tend to be of limited duration or lack sufficient scale to be viable once subsidies are removed.

The fact that ASGM exists outside of legal frameworks is not necessarily the result of intentional law-breaking. Indeed, the Gold Supplement to the OECD’s Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas notes that the due diligence framework aims to ‘minimise the risk of marginalisation of the artisanal and small-scale mining sector (ASM)’. It further recognises that some ASGM actors may be regarded as ‘responsible’ where they ‘comply with national legal frameworks’ but also states that ‘when the applicable legal framework is not enforced, or in the absence of such a framework, the good faith efforts of artisanal and small-scale miners to operate within the applicable legal framework (where it exists) as well as their engagement in opportunities for formalisation as they become available (bearing in mind that in most cases, artisanal and small-scale miners have very limited or no capacity, technical ability or sufficient resources to do so) should be taken into account’.

Nevertheless, during the Covid-19 pandemic concerns have been raised that even 'responsible' ASGM actors have been marginalised, with their gold unable to meet the due diligence standards required by leading gold refiners.⁶ This has reportedly led to many ASGM co-operatives and other entities receiving lower prices and diverting their production into illicit channels. Research conducted by the UN Environment Programme's 'Planet Gold' initiative found that during 2020 gold prices paid to ASGM operations held up better in countries like the Philippines and Ecuador, where central bank purchase programmes operate, and in Guyana, where a government supported Gold Board undertakes such 'buying in'. Thus, this report considers the extent to which central bank ASGM domestic purchase programmes can be part of a range of initiatives to support formalisation and to raise social and environmental standards.

One of the striking, albeit unsurprising, messages emerging from the case studies, is the sheer scale of ASGM activities both in relation to the estimated value of production and number of people involved. This is true even in a country like Mongolia, where there is no established ASGM tradition. In Ethiopia, for example, 1.3 million people are estimated to be directly involved in ASGM, with 7.5 million livelihoods depending on it. In the case of the Philippines, the country is estimated to be a top 25 gold producer with the predominant share of its production coming from ASGM. (See **case studies 1, 2 and 3**)

The economic and financial rationale for domestic purchase programmes is explored elsewhere in this report. From the point of view of ASGM policies, central bank domestic purchase programmes have the potential to improve the position of 'responsible' ASGM through:

- Guaranteeing that responsible ASGM actors receive a fair purchase price for their gold
- Leveraging the positive role played by central banks (often in cooperation with other agencies) through their purchase programmes – insisting upon, incentivising, formalising or moving away from damaging environmental or social practices
- Reducing the vulnerability of artisanal and small-scale gold miners to predatory actors or extortion by providing a route to formalisation and the ability to sell their gold into formal gold markets
- Reducing the dominance of illegal actors in domestic and international gold supply chains by providing benefits for those who comply with standards of governance.

The central bank purchase programmes studied in this report have the potential to contribute to all of these objectives; in fact, our case studies show evidence of central bank programmes supporting formalisation objectives. In the case of Mongolia, the central bank is reported to promote adoption of the Fairmined Standard and to be aligned with the OECD Responsible Sourcing Standard. In Ecuador, the bank will only buy gold-bearing material from licensed miners who hold bank accounts with legitimate financial institutions and can issue invoices.

Nonetheless, it would seem that the scope of 'conditionality' (i.e. where a central bank insists on only buying gold that can be shown to meet specific ESG standards), is generally limited relative to the intended ambition of, for example, the LBMA's Responsible Gold Guidance (RGG). Nonetheless, the national action plans for mercury reduction in Mongolia and Ecuador assign clear roles to their central banks, both in relation to their domestic purchase programmes and as regulators of national financial systems, including those applicable to commercial banks.

Central banks are attempting to support the demands of international gold supply chain actors for due diligence. In the case of the Philippines, the central bank's ownership of an LBMA accredited refiner shows that its gold purchases are aligned with the LBMA's RGG and are audited to this standard. In the case of Mongolia, Ethiopia and Ecuador the central banks sell at least a proportion of their purchases to LBMA-accredited refineries, demonstrating that they have been able to satisfy international due diligence expectations. In the case of Ethiopia – before the Tigray conflict intervened – we understand that the central bank was careful to on-sell its gold in segregated parcels. Presumably, this means that since the 'fingerprint' of gold from identifiable areas can be traced, if those areas remain free from the taint of conflict, this provenance information has the capacity to support ongoing due diligence if the right governance arrangements can be secured.

With regard to paying a fair price for gold, in many situations a key financial objective for the central bank is to buy some of its national gold endowment from artisanal

6 Such refineries are accredited by the London Bullion Market Association (LBMA) and appear on the London Good Delivery List.

miners in their domestic currency and to sell in US dollars in the international market. But this is not to the detriment of small domestic producers since they are generally oriented towards the domestic economy. In the case of the National Bank of Ethiopia (NBE) scheme, the intention was to incentivise the sale of gold to the bank by offering a 5% premium relative to the international benchmark. On 2 April 2020 the premium was raised to a minimum of 10% and a maximum of 29% following the signing of a memorandum of understanding between NBE and the Ministry of Mines and Petroleum (MoMP). Conversely, in Ecuador's dollarised economy, purchases have been made at around a 2% discount to the international price in order to compensate for the costs incurred in the number of small ASGM transactions.

Central bank programmes should, in principle, make ASGM groups less dependent on potentially malign 'middle men'. This objective is most likely to be met where buying counters are easily accessible to miners but, even in relatively successful schemes, this is not always the case. For example, although Ethiopia has nine such counters, this must be seen in context of a large landmass; mountainous Ecuador has only two buying centres in Quito and Machala, both distant from mining areas in Southern Ecuador. Mongolia's central bank makes purchases in the capital, Ulaanbaatar, but is otherwise dependent for much of its ASGM feedstock on aggregators and traders. Indeed, Mongolia's national action plan for mercury reduction notes that 'gold supply chain and trading in Mongolia is highly centralised, the Bank of Mongolia purchases gold directly from individuals and entities and there are only two metal assaying divisions and one-stop gold trade centres of the BoM in Darkhun-Uul and Bayankhongor. Gold traders often buy gold at lower prices from ASG miners and re-sell at higher prices to the Bank of Mongolia.'

So what other observations can be made from the studies? First, even where there are state-sponsored purchasing programmes it is often difficult to verify the total volume of gold being produced from ASGM sources. Even where a central bank has a theoretical sole right to purchase ASGM gold they do not always find it easy to uphold this dominance.

Second, the ongoing success of domestic purchase schemes is sensitive to taxation changes. Hence a catastrophic decline in volumes was experienced by the

Bangko Sentral ng Pilipinas programme (BSP, the central bank of the Philippines) following changes introduced as a result of a court judgement in 2012. These changes meant that gold sold to the BSP attracted a 2% excise duty and a 5% creditable withholding tax. Tax changes introduced in the Philippines in March 2020 were intended to reverse the catastrophic decline in volumes handled through the central bank's well-established scheme. It is entirely understandable that national governments should seek to extract benefit for their national treasuries from the depletion of gold resources, but mixing this objective with domestic purchase or formalisation programmes may undermine the realisation of other policy objectives.

Thirdly, the creation of an accessible route for the purchase of ASGM material does not guarantee that gold will be easily diverted into formal, mainstream channels. Suspicion of state actors, fear of taxation and regulation, limited infrastructure and, in some cases, a premium attached to gold from illicit sources, appears to limit the volumes of gold that can be captured by formal domestic purchase schemes. Moreover, testimony from some countries, such as Colombia, indicates that the costs associated with operating in the formal sector – such as adhering to environmental compliance or the supply of PPE – can reduce the commercial viability of some operations. In some cases this can be balanced through introducing technologies that allow miners to improve their gold recovery rates as well as their environmental performance.

Fourthly, ASM entities often face significant barriers in accessing finance and banking systems. With a lack of mining titles and security of tenure – in the absence of formalisation – they cannot borrow against their access to mineral resources. This makes it difficult for them to invest in improved technologies or better safety or environmental practices. The lack of formalisation, understandably, largely excludes ASGM actors from the banking sector, which may also increase their vulnerability to robbery. However, central banks can use their influence with commercial banks to extend loans to 'responsible' ASGM as a means of incentivising formalisation. We understand that in Ecuador a commercial bank, of which the Central Bank of Ecuador (Banco Central del Ecuador) is a majority shareholder, is currently in the process of formalising credit products to improve access to finance for artisanal miners.

Conclusion

Central bank domestic purchase programmes have great potential to address policy problems relating to ASGM. Although they frequently face logistical and financial capacity constraints, a number of the programmes we studied have procured significant volumes of gold. This is material that has been removed from the illicit economy and can, subject to satisfactory due diligence checks, be sold on international markets. In the case of direct purchase arrangements, potentially predatory 'middle men' can be displaced and artisanal mining groups can receive fairer treatment. In addition, as in the case of Ecuador, the central bank purchase programme is a useful lever to facilitate formalisation. On the other hand, there is limited international evidence of purchasing programmes being used decisively to raise safety, social and environmental standards.

A key challenge for the international gold market in relation to ASGM production (which accounts for up to 20% of newly mined annual supply) is how to facilitate the channelling of material produced by 'responsible' ASGM into formal channels. Many LBMA Good Delivery List refineries consider the risks associated with gold from ASGM to be unacceptable since the cost of due diligence in tracking the activities of hundreds of small producers is potentially exorbitant. But where the scope of central bank due diligence and domestic purchase programmes can be demonstrated, there is great potential from widening their use. Such schemes offer a way for national authorities – as part of formalisation strategies – to assist the 'clean-up' of informal or illegal mining activities and weaken the role of illicit actors.

Policy Options

The circumstances surrounding ASM typically vary widely both within countries and across borders. Thus we have not sought to make standard recommendations for strengthening central bank domestic purchase programmes. Nevertheless, the following points may prove helpful:

- Central bank purchase programmes can be used to improve the regulation and condition of 'responsible' ASGM but they are most likely to be successful if their actions are coordinated with other governmental agencies
- Central bank purchase programmes have the best chance of success if purchase counters are easily accessible to ASGM entities; if it proves necessary to work through traders or aggregators then it is important for them to be subject to licensing and close supervision
- With regard to incentivising ASGM actors to seek formalisation, state entities need to recognise that operating in the formal sector can involve significant additional cost; where ASGM actors act in good faith it may be worth providing access to more productive and environmentally benign technologies
- Central bank programmes are more likely to be effective if they offer the domestic equivalent of the international gold price or a small premium
- Central banks can play a vital role in working with Civil Society Organizations (CSO) and international donors to implement international due diligence standards
- Buying programmes at site level need to have tough controls to prevent corruption
- Ideally fiscal regimes for gold should be regionally coordinated to remove incentives for smuggling
- To create peer pressure on ASGM entities to sell to central bank programmes it may be worth considering incentivising communities by allowing them to retain a small proportion of the purchase price
- In some situations central banks may be able to work with large-scale miners who seek cohabitation with 'responsible' ASGM in order to raise safety, social and environmental practices, and can facilitate routes into formal gold markets
- Central banks should consider using their regulatory leverage over commercial banks to support formalisation; encouraging loans to improve ASGM production practices and, where it makes commercial sense, supporting initiatives like shared mercury-free processing plants.

Case Study 1: The Philippines

Introduction

The Philippines is endowed with abundant mineral riches. Deposits of gold, silver, copper, chromite, iron ore, nickel and other natural resources can be found throughout the nation's seven thousand islands.

Recognising that such mineral wealth could materially bolster economic growth, policymakers have developed a number of initiatives over the years to encourage mining development by large-scale, formal gold miners as well as by artisanal producers. These initiatives have met with some success and today the Philippines is the 25th largest gold producer and one of the most significant ASGM producers in the world.⁷ Spanning more than 30 of the country's 40 provinces with recorded gold deposits,⁸ the ASGM sector employs between 300,000 and 500,000 miners and provides for the livelihood of a further two million people.⁹

Nonetheless, the full potential of gold mining in the Philippines has been constrained in recent times as policymakers have sought to balance environmental concerns and financial fairness with industry growth. Looking ahead, prospects seem brighter, potentially allowing the country's gold mining industry – both large-scale mining (LSM) and ASGM – to make a more substantial contribution to GDP over the coming years.

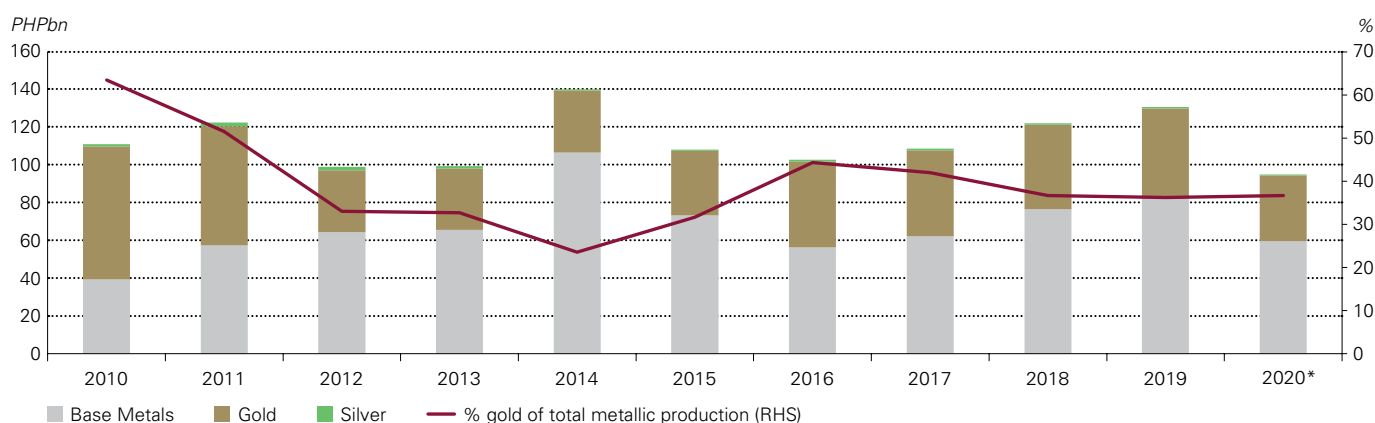
Early promise

The Philippines has long taken an innovative approach to gold production. Almost 50 years ago, in 1974, the country's central bank, BSP, established a domestic refinery under government instruction. Even at that time the Philippines was a relatively large gold producer and exporter, and policymakers recognised that a domestic refinery could spark growth in this strategically important industry.

By 1977, the BSP had received accreditation from the London Bullion Market Association (LBMA) as a Good Delivery refiner, allowing its gold bars to be purchased on the international market. Subject to independent audit, this status allows BSP to deliver gold in compliance with international due diligence standards. Even today, the BSP is the only central bank on the LBMA's Good Delivery List of refiners.

A number of other policies have been formulated to foster the country's mining industry. In 1995 the landmark Philippine Mining Act was adopted into law, providing various tax incentives for local producers. Although it did not come into full effect until 2004, the Act underscored government recognition of the role that gold production can play in economic development.

Chart 1: Philippines' official metallic mineral production



*Q1-Q3 2020. Does not include gold production from unrecorded small-scale gold mining.

Source: 2019 year-end review, Mines and Geosciences Bureau, Department of Environment and Natural Resources, Republic of the Philippines.

7 Based on 2019 gold production values and includes estimated ASM gold production. Source: Metals Focus, World Gold Council.

8 United Nations Environment Programme, 2011 Annual Report.

9 Philippines – Extractive Industries Transparency Initiative, 2016.

The People's Small-Scale Mining Act, introduced in 2001, dovetailed with the Philippine Mining Act. Designed to improve employment opportunities and encourage the equitable sharing of natural wealth, the Small-Scale Mining Act mandated that all small-scale miners must sell their gold to BSP via designated purchase windows (see **Appendix II** for details).

The resultant gold buying programme benefited both gold miners and the central bank. For miners, BSP's role as a primary purchaser guarantees a buyer for gold, regardless of market conditions. For BSP, the programme has allowed it to accumulate gold reserves using domestic currency rather than foreign currency reserves. BSP is also allowed to sell gold from the programme to local jewellers or industrial users.

The gold buying programme saw several years of success. Between 1997 and 2011, the value of small-scale gold sold to BSP surged from 4.5 billion (bn) pesos to 34.6bn pesos,¹⁰ an almost eight-fold increase in less than 15 years.¹¹

Fiscal and environmental challenges

The programme's success halted abruptly in 2012, when gold sold to the central bank became subject to a 2% excise tax and a 5% creditable withholding tax. This policy triggered a dramatic drop in ASGM sales to BSP as small-scale miners sought alternative markets for their gold.

Mining activity has been constrained by environmental concerns too. Even as tax policies were changed, a new act came into force to promote more responsible mining

practices, with stronger provisions for environmental protection, revenue sharing and a moratorium on the granting of new mining agreements.¹² In 2016, the authorities suspended the approval of all pending exploration permits and, the following year, they imposed a blanket ban on open-pit mining. In 2018 miners were once again allowed to seek approval for exploration permits but the ban on open-pit mining remains in force to this day.

These policies have had a marked effect on mining's contribution to the Philippine economy. Metal exports, mining royalties and taxes, mining jobs and share of GDP all peaked in 2013-2014 and declined in subsequent years (see **Charts 2, 3 and 4**).

Recognising these trends, the government passed Act No.11256 in March 2019. Designed to strengthen central bank reserves and reduce gold smuggling, the Act allows registered small-scale miners and accredited traders to be tax exempt when they sell gold to the BSP.¹³ The new law took effect in March 2020 but its effect has thus far been muted. Between the first and third quarters of 2020 the BSP registered just 0.5bn pesos of transactions from small-scale miners, although the COVID-19 pandemic was almost certainly a distorting factor.

The government also took steps last year to reduce the use of mercury in the gold extraction process. Historically, the gold industry has been the largest source of mercury emissions in the Philippines but in July 2020 the government ratified the Minamata Convention on Mercury, committing to ban the opening of new mercury mines in the country, among other initiatives.¹⁴

10 US\$137mn – US\$790mn. Foreign exchange conversion is based on the average USD/PHP rates in both 1997 and 2011.

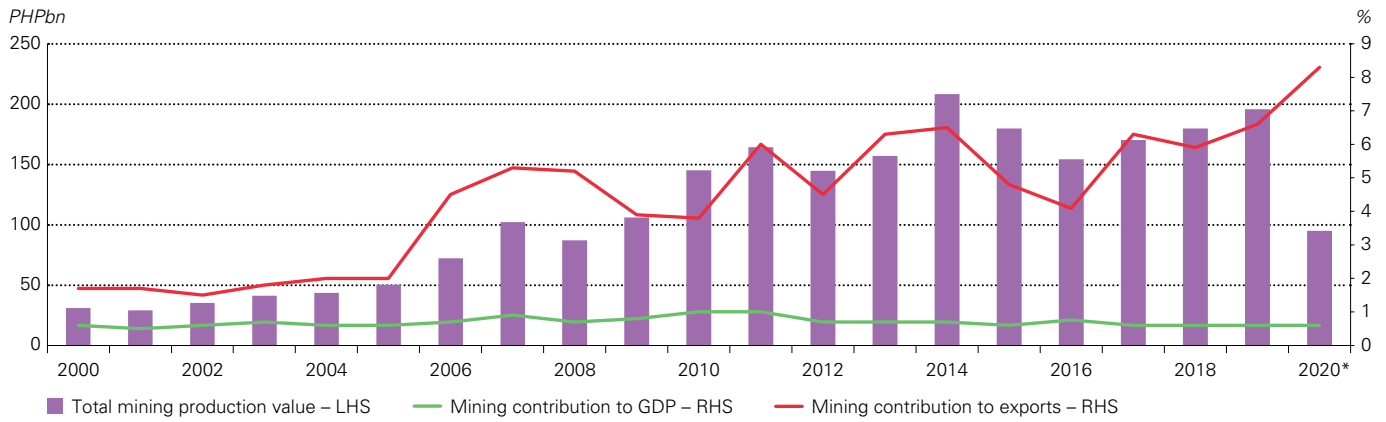
11 Mines and Geosciences Bureau, Department of Environment and Natural Resources, Republic of the Philippines.

12 Republic of Philippines, Executive Order 79.

13 Republic of Philippines, Republic Act No. 11256.

14 Department of Environment and Natural Resources, Chemical Watch.

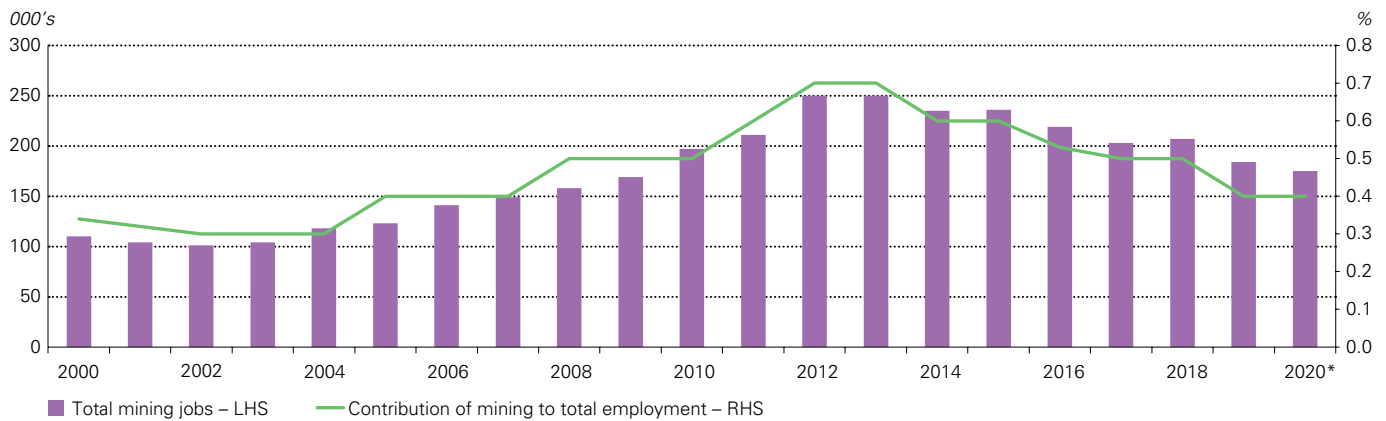
Chart 2: The mining sector's contribution to the Philippine economy



*Q1-Q3 2020. Does not include metallic mining.

Source: Mines and Geosciences Bureau, Department of Environment and Natural Resources, Republic of the Philippines

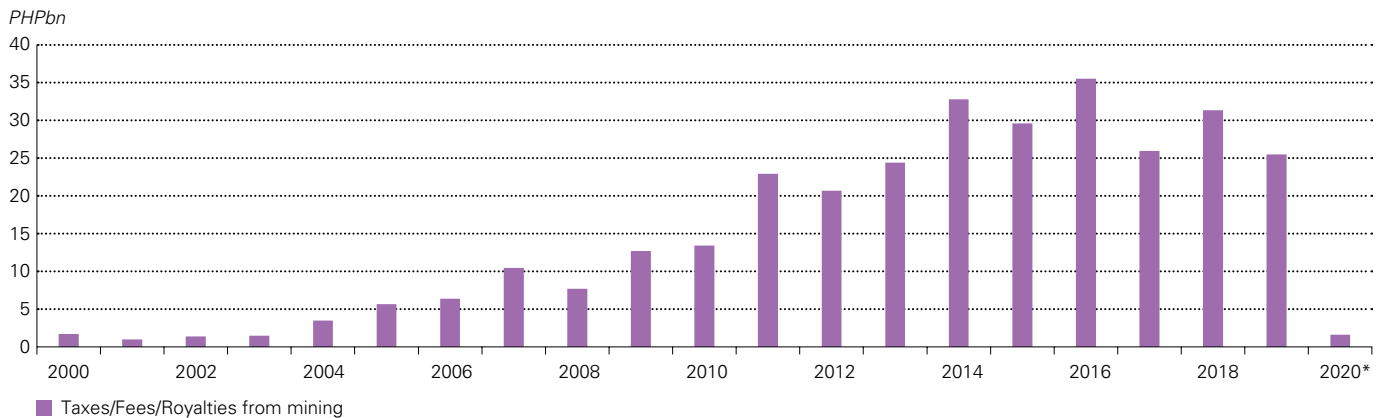
Chart 3: The mining sector's contribution to employment



*Q1-Q3 2020. Does not include metallic mining.

Source: Mines and Geosciences Bureau, Department of Environment and Natural Resources, Republic of the Philippines

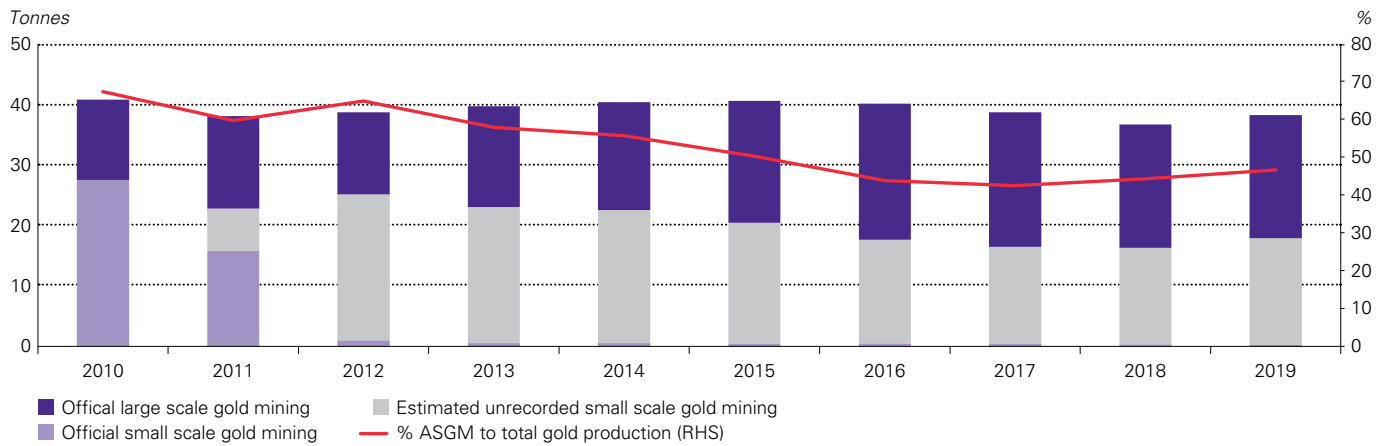
Chart 4: Government revenue in taxes, fees, and royalties from the mining sector



*Q1-Q3 2020. Taxes, fees and royalties from mining only include revenue collected by DENR-MGB.

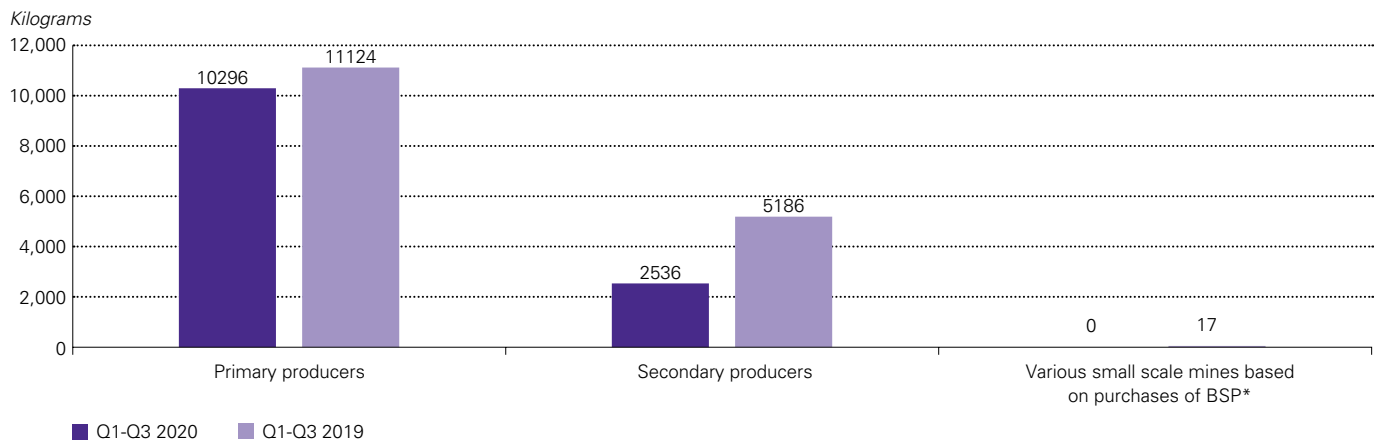
Source: Mines and Geosciences Bureau, Department of Environment and Natural Resources, Republic of the Philippines

Chart 5: Gold production from estimated unrecorded small-scale gold mining has risen in recent years



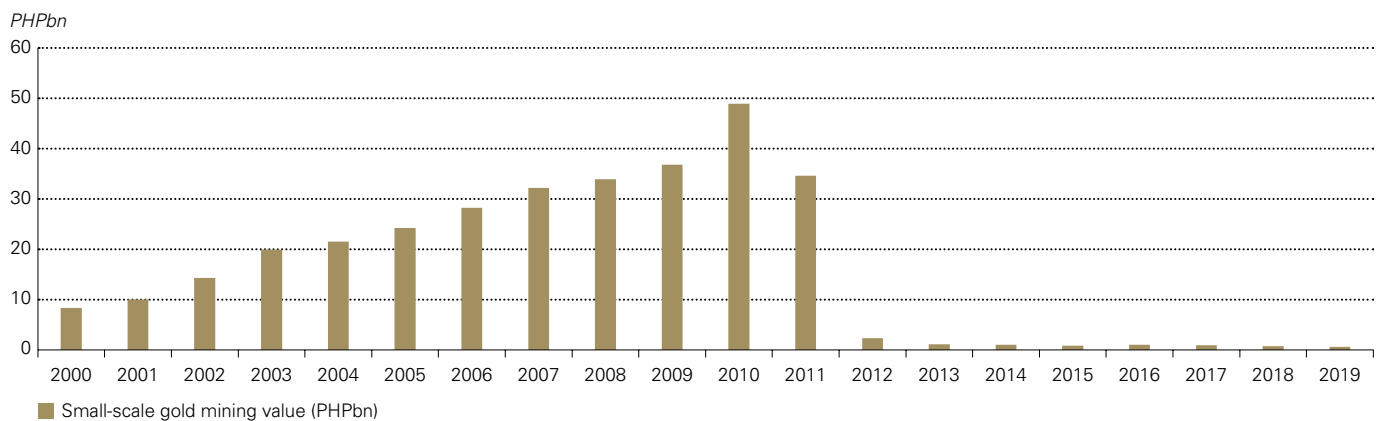
*Estimated unrecorded small scale gold mining values are obtained by subtracting official gold production values from the total gold production values compiled by Metal Focus, which include estimated small scale gold mining output. Data for estimated unrecorded small scale gold mining values only available from 2010.

Chart 6: Gold production by type of producers



Source: Mines and Geosciences Bureau, Department of Environment and Natural Resources, Republic of the Philippines

Chart 7: Official small scale gold mining production fell significantly after taxes were imposed in 2012



Source: Mines and Geosciences Bureau, Metals Focus, World Gold Council

Conclusion

Historically, the mining sector in the Philippines was associated with poor environmental practices and other controversies. But the BSP's gold buying programme has made a tangible difference. By 2010 ASGM accounted for almost 70% of total gold production¹⁵ and considerable progress had been made in formalising the sector.

Such advances have been hampered in recent years as changes in tax policies disincentivised small-scale miners from selling through official channels. By 2019 production from official ASGM activities had fallen to 1.26% of total recorded production, with a value of just 0.6bn pesos (US\$12 million (mn)), while the number of registered small-scale mines also fell sharply from 17 in the first three quarters of 2019 to zero in 2020 (see [Chart 6](#)).

At the same time the unofficial ASGM sector was thriving. In 2011 unofficial ASGM production was estimated at 7 tonnes (t). By 2019, this had risen to 17.6t or 46% of total estimated gold production (see [Chart 5](#)).

Looking ahead, prospects appear better. With an estimated US\$840bn of untapped mineral wealth,¹⁶ natural resources in the Philippines still offer extraordinary economic potential.

Policymakers clearly appreciate this and have taken steps to promote the development of the country's mining sector, balancing industry needs with environmental and ethical concerns. Over the coming years the government will be able to build on its track record for policy innovation and develop a gold mining industry that contributes to economic growth, fosters wealth at all levels of society and protects the environment.

¹⁵ Department of Environment and Natural Resources, Republic of the Philippines.

¹⁶ *Current trends in the Philippine mining and energy sectors*, Financier Worldwide, October 2018.

Case Study 2: Mongolia

Introduction

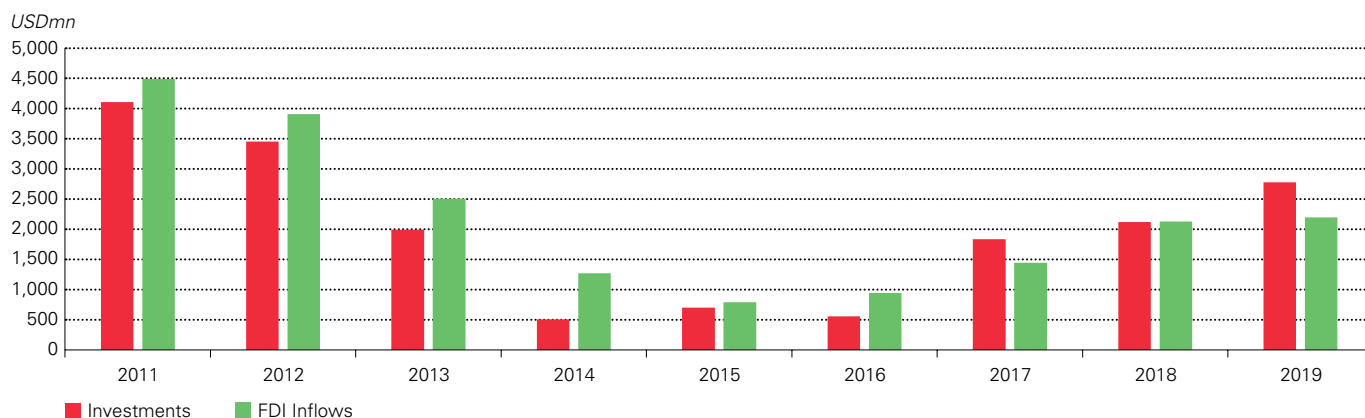
Mongolia is a sparsely-populated nation with an estimated US\$1-3 trillion (trn) of copper, coal, gold and other mineral reserves.¹⁷ In recent years Mongolia has become one of the fastest growing economies in the world, with annual GDP growth reaching 17.3% in 2011. After this, the economy experienced two further years of double-digit expansion and strong foreign direct investment (FDI) inflows to the mining and quarrying sector, but, as commodity prices tumbled and China's economy slowed, the country suffered. By 2016 annual GDP growth had slumped to 1.17% and FDI inflows had plummeted.

More recently, the mining sector has been recovering steadily. FDI inflows have returned, albeit not at levels seen in 2011–2012, and new mining projects are also breaking

ground. Exports of mineral products – in particular to China, which takes in almost 90% of exports from Mongolia – have also been rising, aided in part by sanctions imposed by China on North Korea, the development of China's infrastructure-heavy Belt and Road Initiative, and souring trade relations between China and Australia. In 2020, however, the Covid-19 pandemic reversed many recent gains, as demand for commodities fell and trade with China was interrupted. Nonetheless, gold production proved resilient and the Bank of Mongolia (BoM) purchased more than 19t of gold in the first ten months of 2020 alone.¹⁸

Looking ahead, there are high hopes that Mongolia's economy will recover and that, increasingly, local people will reap the benefits of this resource-rich nation.

Chart 8: FDI inflows and investments in the mining and quarrying sector of Mongolia



Source: National Statistics Office of Mongolia

¹⁷ *Mongolia's Long Road to Mining Wealth*, NPR, July 2019.

¹⁸ National Statistics Office of Mongolia.

An overview of recent gold production

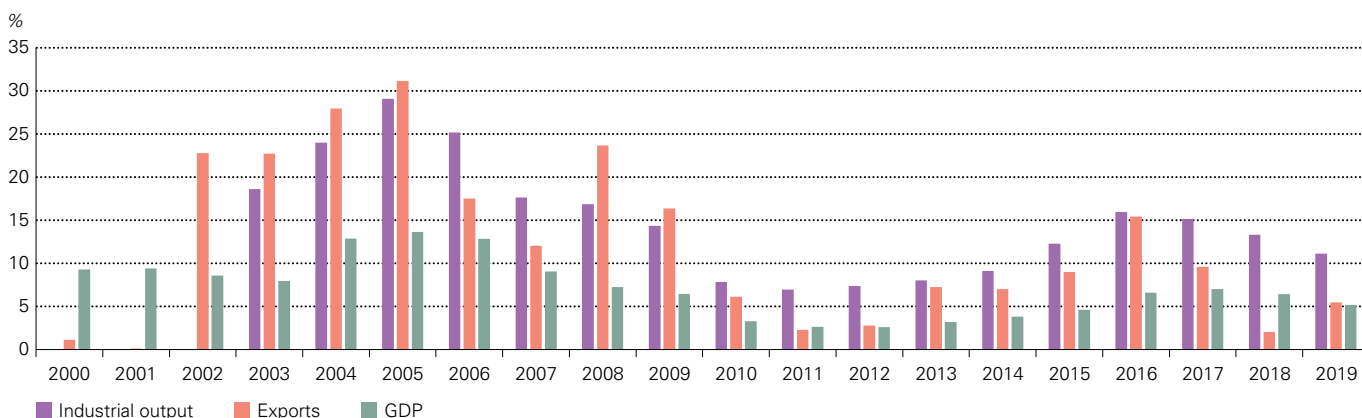
Gold is one of the principal resources mined in Mongolia; in 2019 it accounted for 11.1% of total industrial output, 5.5% of exports and 5.2% of GDP (**Chart 9**). Gold also played a vital role in helping Mongolia transition from a centrally planned to a free market economy. The 'Gold-1' national programme, launched in 1992, boosted gold production and supported Mongolia through a period of hyperinflation, rising unemployment and poverty. The 'Gold-2000' programme further incentivised production, which soared to 24t in 2005, the highest annual production on record¹⁹ (see **Chart 10**).

In 2007, however, the government levied a 68% windfall tax on the industry, followed two years later by the 'Law of the Long Name',²⁰ designed to help protect the country's

ecosystems. The windfall tax was repealed in 2009 and phased out over the following two years. But subsequently the industry suffered from labour strikes, the temporary closure of a major LSM gold mine and an increasing shift towards hard-rock mining. By 2011 gold production had fallen to just 5.46t.

The industry has since recovered, as policymakers have taken steps to liberalise it and reduce bureaucracy. In 2017 the 'Gold-2' national programme was launched, with an objective to increase annual gold production to 25t by 2020 through improved financing for producers, accelerated approval for permits and a streamlining of regulations. Official gold production amounted to slightly under 20t in 2020, so the goal was not met, but the Covid-19 pandemic had hampered progress and the 25t ambition remains.

Chart 9: Gold production as a % of total industrial production, exports and GDP



Source: National Statistics Office of Mongolia

¹⁹ National Statistics Office of Mongolia.

²⁰ Law to Prohibit Mineral Exploration and Mining Operations at Headwaters of Rivers, Protected Zones of Water Reservoirs and Forested Areas.

Gold domestic purchases and the Bank of Mongolia

The BoM has been involved in gold operations since the country's transition into a free-market economy. The bank first conducted domestic gold purchases under the framework of the 'Gold-1' national programme and under the 'Gold 2000' programme it became the sole legitimate buyer of domestically produced gold, while also providing financial support to mining companies. Two years later commercial banks were also allowed to purchase gold, as policymakers strove to promote competition in the market and reduce the BoM's involvement in quasi-commercial activities.

However, the sales process remains complex and multi-layered. Artisanal miners must first deposit gold-bearing ore at local processing plants where the gold is extracted and refined. The material is then sent to the State Assaying Agency in Ulaanbaatar, where purity is tested and officially recorded. Further refining takes place before the gold can be returned to the original miners for sale to the BoM. Gold that the BoM chooses to sell is then exported overseas and cast into Good Delivery bars.

Transportation and logistics create a number of issues. Depending on the proximity of processing facilities to the miners, it is estimated that 60-100% of ASGM miners sell gold directly to processing plants instead of to the BoM, especially if the plants are within a day's journey by car.²¹

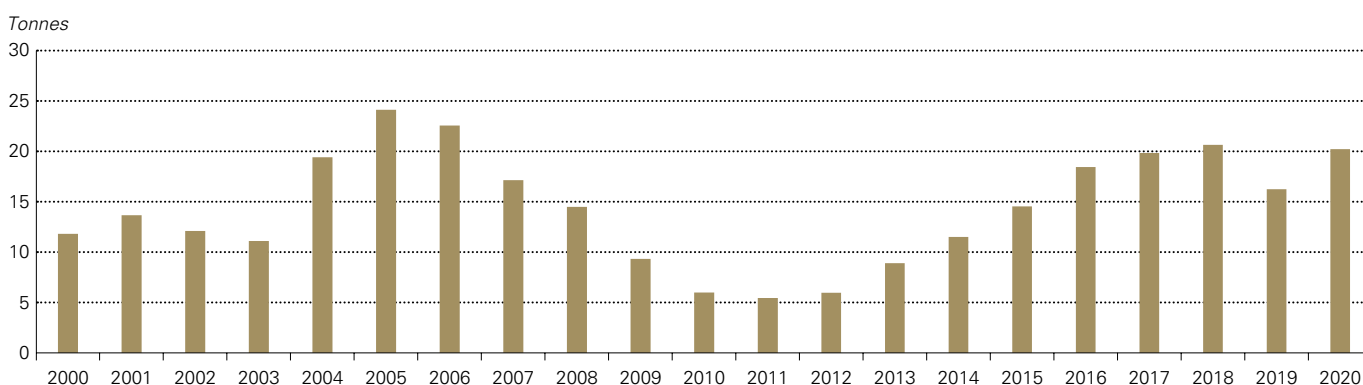
The ASM sector

Mongolia is unusual among gold producing countries in that it does not have a long tradition of artisanal mining. The majority of activity started in the post-communist era and in the years since it has become a significant livelihood in some parts of the country.

Based on a 2016 survey conducted by the National Statistics Office of Mongolia, 5,998 people out of a total of 9,600 survey participants stated that they were directly involved in ASM, while several thousand more were indirectly involved as auxiliary service providers and utility workers. Of these 5,998, 5,108 were involved in ASGM with 27.7% considered as informal miners. The sector produced 212kg of gold in 2016, generating revenues of US\$6.73mn at an average selling price of 68,100 Mongolian tugriks (US\$31.75) per gram.²²

While the survey provides some insight into a largely informal sector, the true size and scope of the industry is almost certainly larger. One study suggests that between 30,000 and 100,000 people could be directly or indirectly engaged in ASM during at least part of the year – climatic conditions make it difficult to undertake mining in the depths of winter. Artisanal miners also benefit from favourable tax rates, so medium-scale miners often claim to be small-scale when they sell gold to the BoM. In 2016, for example, ASGM gold sales to the BoM were estimated at 11.03t, representing 60% of the total gold purchased by the BoM and a significantly higher figure than that suggested by the 2016 survey above.²³

Chart 10: Gold production in Mongolia



Source: National Statistics Office of Mongolia

21 *A Rapid Assessment of Gold and Financial Flows linked to Artisanal and Small-Scale Gold Mining in Mongolia*. Follow the Money: Mongolia.

22 National Statistics Office of Mongolia, *Artisanal and Small-Scale Miners' Survey Report 2016*.

23 The National Action Plan for Reducing Mercury Pollution caused by Artisanal and Small-Scale Mining in Mongolia (June 2020).

Formalisation of the sector

The Mongolian government has taken steps to formalise the ASGM sector. Back in December 2010 the government passed Regulation No.308 entitled ‘Extraction Operations of Minerals from Small Scale Mines’, allowing small-scale miners to form partnerships that are controlled and advised by district governors. In the intervening years, policymakers have also allowed small-scale miners to trade gold, agreed to let ASGM production enter the national treasury stockpiles, and ratified the Minamata Convention on Mercury. And officials have been working with the Sustainable Artisanal Mining project, run by the Swiss Agency for Development and Cooperation, to encourage a more formal approach to ASGM.²⁴

These efforts have had some success. Contributions to the national treasury through official gold sales and royalty payments increased in tandem with ASGM sales to the BoM, which rose from 0.01t in 2012 to 12.66t in 2017 (see **Chart 11**).²⁵ In the 2016 survey conducted by the National Statistics Office of Mongolia, only 12% of miners reported difficulties in selling their minerals. Of those, roughly a quarter said they could not find a formal buyer in the local market, while some 20% said they could not find a local assay unit.²⁶

However, while there is a definite trend towards formalisation, challenges remain. It can be difficult for miners to access formal supply chains and processing facilities are limited in number. Such issues are

compounded because the sale of gold is centralised in the Mongolian capital, Ulaanbaatar, and the BoM is forced to rely on the services of gold traders who buy gold locally and transport it to the bank. This serves to complicate the BoM’s due diligence efforts as the gold supply chain is rendered even more opaque.

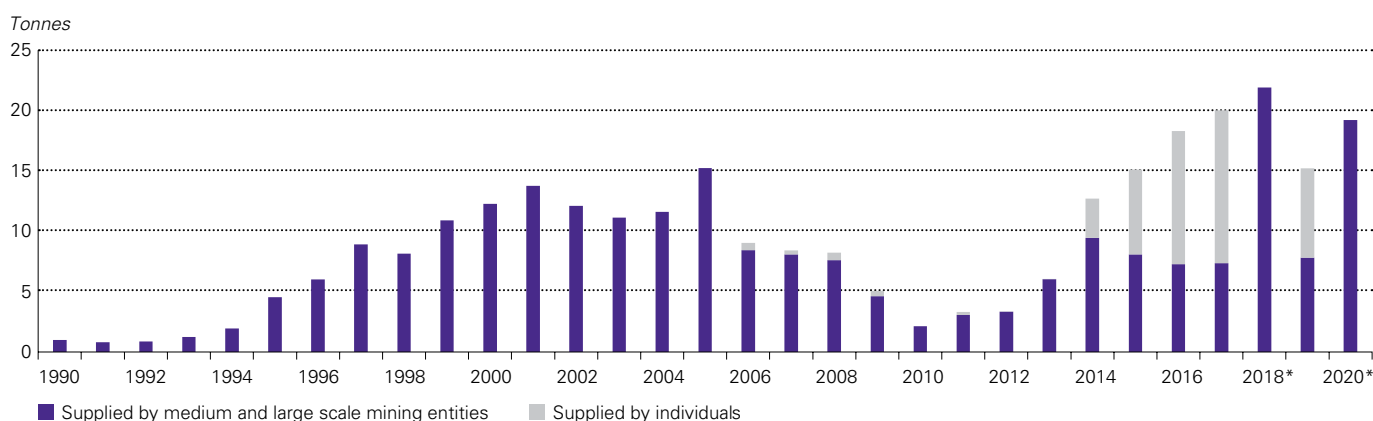
Opacity in the supply chain inadvertently allows medium and large-scale mining companies to pose as ‘individuals and artisanal miners’ in order to avoid taxes. It is possible that gold extracted using mercury is circulating in the legal supply chain, as an estimated 235.4kgs of mercury is reportedly used each year.²⁷ At the same time, a high level of bureaucracy impedes the effective implementation of legislation and reform.²⁸

Policy changes

BoM gold purchases have largely followed the trajectory of domestic production, peaking at 15.23t in 2005 before falling to a low of 2.12t in 2010 following the imposition of the 68% windfall tax (see **Chart 11**).

Sales picked up considerably in subsequent years as taxation became less punitive. First the windfall tax was repealed, then royalties were cut to 5% (an additional rate of 0- 5%) and in 2014 the Amendment to the Minerals Law delivered a further reduction in royalty rates to 2.5% (0% additional rate). This provoked a rapid growth cycle in gold production and, by 2018, the bank was buying more than 20t of gold annually.

Chart 11: Domestic gold purchases by the Bank of Mongolia



*Data on gold sales to the BoM by individuals only starts from 2006. No data available in 2018 and 2020. 2020 domestic purchases are as of October 2020.

Source: Bank of Mongolia, The National Action Plan for Reducing Mercury Pollution caused by Artisanal and Small-Scale Mining in Mongolia (June 2020), Swiss Agency for Development and Cooperation in Mongolia September 2018 Fact Sheet

24 A Rapid Assessment of Gold and Financial Flows linked to Artisanal and Small-Scale Gold Mining in Mongolia. Follow the Money: Mongolia.

25 Ibid 23.

26 Ibid 22.

27 Ibid 23.

28 Ibid 24.

The 2014 Amendment to the Minerals Law expired in January 2019 and a draft law to extend the Amendment by a further five years failed to pass in parliament. A 5–10% royalty on gold (0% additional rate) was imposed and in 2019, domestic sales sank to a five-year low of 15.2t, despite BoM's efforts to drive sales through its 'National Gold to the Fund of Treasures' campaign. In April 2019 the Amendment to the Mineral Law was renewed with a preferential tax rate of 5% and gold sales to the BoM recovered, with the first ten months of 2020 recording 19.2t of domestic gold purchases.

Conclusion

With an estimated US\$1-3trn in mineral reserves and exploration licences covering only 4.5% of the country, Mongolia has vast resources to materially improve the lives of its people. But like many other resource-rich nations, Mongolia has had to balance economic growth and mining production with environmental protection and community welfare.

To that end the government has enacted environmental laws, sparred with foreign miners to ensure the equitable distribution of benefits, established domestic purchase programmes to legitimise and regulate small-scale miners, and reversed laws on gold royalties.

Looking ahead, there is enormous potential to build on work to date, generate wealth from the AGSM sector and change lives for the better. If the mining sector is managed properly, with systems and standards in place to ensure financial fairness and sustainable development, the benefits could be transformative for Mongolia, driving economic growth and raising millions of people out of poverty.

Case Study 3: Ecuador

Introduction

Gold mining in Ecuador dates back to the Inca Empire; its roots can be traced to the Portovelo-Zaruma region in the southern part of the country. Mining was expanded under Spanish colonial rule and in the late 19th century conventional mining operations were established by both British and American companies before an Ecuadorian company, CIMA (Compañía Industrial Minera Asociada), took over operations in 1950. By 1978 bad management had forced the company to go into bankruptcy, causing substantial unemployment in the region. Amidst a backdrop of rising international prices, unemployed miners fought for the right to continue mining, and as the allure of riches attracted more people to the region, ASGM flourished.

Today the ASGM sector continues to thrive, albeit largely informally. According to a report produced by the Ministry of Environment and Water, small-scale mining constituted 78% of total gold production in 2014 while artisanal mining made up the remaining 22%.²⁹ In 2018 an estimated 11,500 miners were involved in the sector with the workforce growing to 20,000 with the inclusion of seasonal workers. 60% of the mining population earned a monthly income between US\$500 and US\$1,000 – above the basic salary of US\$394.³⁰

Official statistics from the Ecuador Central Bank (BCE) indicated that ASGM production averaged 4.45t per year between 2000 and 2012 before rising to an annual average of 7.62t between 2013 and 2016. Gold production fell significantly in 2016, and in particular in 2017, when 6.37t of gold was produced. Gold production then rebounded to 8.21t in 2018. According to the BCE, the decline in gold production in 2016 and 2017 was due to efforts by the Mining Regulatory and Control Agency (ARCOM) to prevent smuggled gold, particularly from Peru, from being included in registries as national production. Contraband gold inflates gold exports in Ecuador and is a source of discrepancy between estimated production and export volumes.

Further discrepancies also arise because artisanal miners are exempt from making tax declarations or royalty payments to the state. Many produce gold without limitations and are under no obligation to sell to the BCE. According to field work conducted by the Ministry of Environment and Water, it is estimated that Ecuador produced approximately 23.6t of gold in 2018 through ASGM activities alone,³¹ which is significantly higher than the total gold production recorded by the BCE.

Nonetheless, the Government has taken a number of important steps to promote an efficient domestic gold purchase programme and formalise the ASGM sector. And these have had tangible results.

Table 1: Total metallic production in Ecuador

Metals	Units	2014	2015	2016	2017	2018
Antimony	Metric tonnes	6	19	6	53	50
Copper	'000 metric tonnes	120	1	40	8	42
Gold	Kilograms	7,322	7,723	6,761	6,368	8,213
Iron and steel, raw steel	Metric tonnes	667,000	720,000	576,000	561,000	583,000
Silver	Kilograms	577	1,494	934	955	1,000

Source: Ecuador Central Bank, US Geological Survey 2017-2018 Minerals Yearbook, Ecuador

²⁹ Please refer to **Table 2** for the differences between small-scale and medium-scale mining operations.

³⁰ *National Action Plan on the use of Mercury in Artisanal and Small-Scale Gold Mining in Ecuador, in accordance with the Minamata Convention on Mercury* (May 2020).

³¹ Ibid 30.

Legal framework

As with the great majority of other jurisdictions in Latin America, the Ecuadorian constitution classifies all mineral and non-renewable natural resources as the property of the state, while allowing the government to grant concessions to individuals or companies to extract those resources.

The Mine Promotion Law of 1974 marked the country's first step towards establishing a framework around artisanal mining. The law included several complex formalisation procedures but amendments followed in the ensuing decades, each delivering incremental changes.

In 2008, a fresh constitution was adopted and the following year a new Mining Law was passed, specifically addressing the needs of artisanal miners. The law underlined Ecuador's commitment to formalising the ASGM sector, declaring that 'the State shall establish and promote technical assistance, training and financing mechanisms for the sustainable development of artisanal mining and small-scale mining'. The Mining Law facilitated the establishment of the Ministry of Mining in 2015, tasked with implementing government policies in the ASGM sector. The BCE, in turn, was made responsible for the commercialisation of all gold produced through ASGM.

Central Bank of Ecuador's gold buying programme

Given the size and scale of informal mining in Ecuador, the government has been keen to encourage greater transparency, governance and revenue collection across the ASGM sector. As part of these efforts, the BCE started a gold buying programme, purchasing gold directly from artisanal and small-scale miners.

In 2014 the BCE began purchasing gold from ENAMI, Ecuador's national mining company, before establishing a general fund of US\$200mn to finance the purchase of gold from artisanal miners in 2016. The fund was depleted by 2019 with US\$140mn deployed between 2017 and 2018. Thereafter, the BCE sought an annual budget of US\$48mn to finance the purchase of gold from artisanal miners.³²

Artisanal miners were initially required to sell their gold at BCE's offices in Quito, some 600km from the southern region of Ecuador where ASGM activities are concentrated. But in 2018 the BCE opened an additional gold buying office in the southern city of Machala. The new office allowed the BCE to be closer to gold production activities and reduced travelling time for miners from three days to half a day.

Table 2: Categories of metallic mining in Ecuador under the mining law

Scale	Artisanal mining	Small mining	Medium mining	Large mining
Production capacity for metallic mining	Up to 10t / day underground and 120 m ³ / day alluvial	Up to 300t / day underground and 1,000 tons / day open pit; and up to 1,500 m ³ / day alluvial	Between 301 and 1000t / day underground; 1001 and 2000t / day open pit; and up to 3000 m ³ / day alluvial	In excess of medium mining in all materials and volume
Origin of title	Domestic	Domestic and / or foreign	Domestic and / or foreign	Domestic and / or foreign
Royalties	0%	3%	4%	5% and 8%
Environment obligations	Registration	Licence	Licence	Licence
Commercialisation	Central bank	Central bank / public bank	N/A	N/A
Period of operation	10 years	25 years	25 years	25 years
Area	Up to 4 hectares (underground) and up to 6 hectares (open pit)	Up to 300 hectares	Up to 5000 hectares	Up to 5000 hectares

Source: Bank of Central Ecuador, World Gold Council

³² Bank of Central Ecuador, World Gold Council.

The Machala office soon accounted for 62% of the central bank's total gold purchases.³³ However, since the Covid-19 pandemic erupted in Latin America, gold purchasing activities have centred once again on Quito, where security is reportedly greater than at Machala. The central bank is also exploring the possibility of opening a new gold buying office in the northern region of Ecuador.³⁴

While artisanal miners are not subject to taxation when they sell gold to the BCE, they are subject to a discount on the internationally published gold price. This is defined and approved by an internal committee and is usually set at around 2%.

ASGM due diligence and sales process

Before selling their gold to the BCE, artisanal miners must deposit extracted gold ore at local refineries where it is refined into non-monetary gold in the form of gold doré bars. The bank purchases these bars and stockpiles them until the export costs become justifiable. The bars are then sent to LBMA-accredited refiners to be cast as Good Delivery bars. According to the BCE, gold exports totalled 169,000 ounces in 2019.

The BCE also conducts extensive due diligence to ensure that the gold it purchases is responsibly sourced. Mining companies, cooperatives and individuals must be registered before they are able to sell their gold to the bank. Counterparties must also have bank accounts with registered financial institutions and be able to issue invoices. They are assessed for compliance with anti-money laundering regulations and local authority requirements before being checked for outstanding tax obligations. A second round of due diligence is conducted for counterparties that have had a relationship lasting six months or more with the central bank. Two days prior to the purchase of gold, counterparties are checked for involvement in ongoing litigation, arms trafficking, terrorism and fraudulent activities. The amount of gold to be sold must also be consistent with the counterparty's past transaction volumes as a check against illicit gold inflows.

These requirements are published on the BCE's website alongside the transaction price, the international gold price and a price calculator ([Appendix III](#)).

The BCE's overarching objective is to promote the formalisation of the ASGM sector. This includes working with the judiciary and regulators, such as the Mining Regulatory and Control Agency (ARCOM), to ensure that counterparties are not involved in any illegal activities. The central bank has also been engaging with public sector banks to encourage further onboarding of informal artisanal miners. BanEcuador, for example, of which the BCE is a majority shareholder, is in the process of formalising credit products that would improve access to financing for artisanal miners.

Nonetheless, miners continue to face logistical challenges in accessing the legal supply chain. The transportation of products to gold buying offices poses security risks and roads can be difficult to access. A long and complex registration process acts as a further disincentive to many miners and there is also a considerable time lag in making payments, which is certainly a major inconvenience for subsistence miners.³⁵

Conclusion

The ASGM sector has a long and rich history in Ecuador and the government has introduced several key policies to formalise the sector. The BCE also recognises the role that gold can play in effective reserve management.

To that end, the bank actively uses its gold reserves to provide liquidity and bolster its financial position when required. Reserve managers frequently employ gold swap transactions, pledging a portion of their gold in exchange for hard currency during a fixed period. Upon repayment of the currency the gold is returned to the BCE. The central bank entered into such a swap in March 2020, raising US\$300mn at a time when additional liquidity was required to address the widespread market stress and extreme financial instability caused by the pandemic. Such active use of gold reserves underscores the importance of the BCE's gold buying programme as a key tool within the central bank's armoury. Looking ahead, there are hopes that the formalisation process will continue to evolve through policies and actions that reduce contraband, facilitate gold transportation and provide effective fiscal incentives to the ASGM sector.

33 www.primicias.ec/noticias/lo-ultimo/banco-central-compra-oro-322-minero-artesanales/

34 Bank of Central Ecuador, World Gold Council.

35 Thomas, M.J. (2019). *Ecuador Gold Supply Chain: Analysis of Government Intervention in the Artisanal Mining Sector*.

Case Study 4: Ethiopia

Introduction

Artisanal mining has been practised in Ethiopia for centuries; a site in the west of the country dates back 6,000 years and is thought to be the oldest gold mine in the world.

Over recent years attempts have been made to formalise ASGM activity and capitalise on the mining sector's capacity to drive economic growth. In 1991 the emergence of a free-market economy initiated legislative changes across the Ethiopian mining industry. Private investors were allowed into the sector, while new laws and regulations helped to establish a competitive framework designed to foster productivity and growth.

These efforts have met with mixed success but more recent policies indicate a renewed determination to deliver positive change.

The ASGM sector

According to the Ministry of Mines and Petroleum (MoMP), total gold production in Ethiopia averaged 3.5t per annum between 2015 and 2018, generating an estimated US\$136mn in revenue (based on the average annual gold price and foreign exchange rates during the period). However, the true scope and size of the sector is almost certainly understated in official statistics.

In-country reports bear this out. In 2016, a study on artisanal mining by the Ethiopian Extractive Industry Transparency Initiative (EITI) estimated that the ASGM sector generated about 65% of Ethiopia's foreign exchange earnings, directly employing 1.3 million people and contributing to the livelihood of a further 7.5 million local inhabitants.

The study also estimated that 18t of artisanal gold was produced in 2014 alone, with the average miner earning 8,000 to 10,000 birr (US\$190-US\$240) per annum.³⁶

Against this backdrop, policymakers are understandably keen to formalise the ASGM sector. The government's Homegrown Economic Reform Agenda, published in 2019, makes mining the third prioritised economic sector after agriculture and manufacturing.

The MoMP also developed the country's first mining policy during 2019 to 2020 following a series of multi-stakeholder discussions. The policy is currently under review for approval but, in the meantime, the Mining Operations Proclamation governs all mining-related activities, adopting the philosophy that mineral resources are the property of the state and the Ethiopian people. The government has the authority to license and administer mining activities and licences are granted for four types of mining: artisanal, special small-scale, small-scale and large-scale.

The National Bank of Ethiopia and gold formalisation

The National Bank of Ethiopia (NBE), the country's central bank, plays a pivotal role in the formalisation of the artisanal gold mining sector. The central bank is charged with buying gold deposits locally and selling them in international markets, while the Ministry of Mines is responsible for verifying the purity of gold purchased by the NBE.³⁷ As such, the NBE acts as a clearing house for artisanal gold, acquiring the gold through nine purchasing centres located in gold-producing areas and selling it on the international market to generate foreign exchange income.

³⁶ *Artisanal Mining Operation and its Economic Values* (April 2016), Ethiopia, Ethiopian Extractive Industries Transparency Initiative.

³⁷ *National Bank of Ethiopia 2017-2018 Annual Report*, section 3(r).

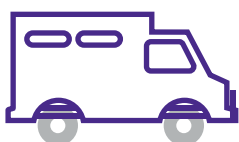
For many years the NBE strove to encourage small-scale miners to sell their gold through official channels by offering them a 5% premium to the prevailing international price for gold. In April 2020, following a memorandum of understanding between the NBE and MoMP, this premium was increased to a minimum of 10% and a maximum of 29%. Updated pricing is published on the NBE’s website. The bank classifies its gold transactions as follows:

Gold commodity



Raw gold that is sourced locally before being refined and sold abroad as gold bullion

Gold in transit



Gold that is held by refineries or is in transit to refineries before it is processed to become gold bullion

Monetary gold

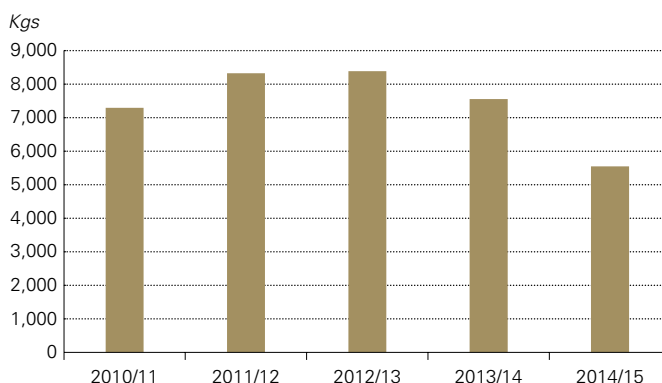


Gold that is held as foreign reserves for monetary policy purchases

Source: National Bank of Ethiopia

The NBE’s gold buying programme primarily channels artisanal gold for sale on the international market and is therefore not specifically designed to facilitate the accumulation of gold reserves. Ethiopia’s official gold reserves are reported only sporadically to the IMF – the most recent figure was 0.25t, reported in January 2020.

Chart 12: Amount of gold purchased by the NBE (Kg)



Source: Ministry of Mining, December 2015

Effectiveness of formalisation efforts

As the NBE has introduced policy incentives, the MoMP has pursued formalisation work on the ground, engaging with key actors in the supply chain to raise awareness of existing legal and regulatory frameworks. The Ethiopian Mineral and Biofuel Corporation has also launched an ASM formalisation process. Taken together, these steps have borne fruit. Gold exports from July to December 2020 were 320% higher than the whole of 2019.³⁸

Nonetheless, an estimated 61% of minerals mined from artisanal sources still enter the informal market³⁹ and are absorbed by domestic demand or exported through sales to tourists and foreign visitors.⁴⁰ There are many reasons for this. First, gold has a potential use as a parallel currency in the informal domestic economy. Second, licensed artisanal miners often have their activities restricted to a specific area, whereas unlicensed miners can conduct their operations wherever they please. Third, road infrastructure is limited, making it difficult to transport mining products. And fourth, despite efforts by the MoMP, miners still have a poor awareness and understanding of mining regulations, and legal enforcement at grassroots level is sometimes weak.

38 Ethiopian Mineral and Biofuel Corporation.

39 Ethiopian Extractive Industries Transparency Initiative: *Artisanal Mining Operations and Its Economic Values, Ethiopia*.

40 Ministry of Mines and Petroleum.

Tigray Conflict

AGSM purchases can be subject to other challenges too, highlighted by recent developments in Ethiopia. The NBE refines its domestic gold purchases through an LBMA-accredited refiner. This means that due diligence needs to be exercised to guard against the risk that ASGM gold has been tainted by the funding or support of armed groups, conflict, or severe human rights abuses. In November 2020, fighting broke out in the Ethiopian province of Tigray – one of the country’s gold-producing zones. This prompted concerns in international markets that Ethiopia’s artisanal and small-scale gold may not conform to OECD guidance around due diligence on the responsible sourcing of minerals from conflict-affected or high-risk areas. Deliveries from the NBE have therefore been suspended. In the interim, a group of international stakeholders has been seeking a means of facilitating due diligence on gold supply from the country. As at the end of Q1 2021 a way forward had yet to be found.

Conclusion

Despite concerted efforts, the Ethiopian government has not been able to reap the full economic benefits of its artisanal mining sector. The vast majority of mining operations remain informal and implementation of legal reforms is weak at grassroots level. Miners’ working conditions are often poor, productivity is low, extraction methods are outdated and inefficient, and mercury is still widely used. The outbreak of hostilities in Tigray has created further challenges. Nonetheless, over time, artisanal mining could make an immense contribution to Ethiopia’s economic and social welfare. The sector is reported to create an indirect livelihood for 7.5 million people, generating almost US\$303mn in revenue in the last five months of 2020,⁴¹ despite the Covid-19 pandemic. Further steps towards formalisation of the sector could and should deliver long-term rewards.

41 Getachew, S. (December 2020). *Ethiopia: Gold mining sees record growth despite Covid-19*. The Africa Report.

Appendix I: International initiatives that address challenges in ASGM

International organisations, national donor agencies and parts of civil society have expressed growing interest in how best to harness the poverty alleviation potential of ASGM whilst addressing some of its negative environmental, social and governance impacts. The leading agencies and international instruments designed to support these objectives are:

The OECD Due Diligence Guidance for the Responsible Sourcing of Minerals from Conflict-Affected and High-Risk Areas

The Guidance was adopted by Ministers in November 2012 along with a Gold Supplement. The Guidance is intended to ensure that supplies of tin, tantalum, tungsten and gold mined in, or transported through, conflict-affected and high-risk areas (CAHRAs) are not tainted by the financing of conflict, the funding of armed groups or human rights abuses. Because much ASGM occurs outside legal frameworks and some may be vulnerable to extortion by armed groups, ASM entities have found it difficult to provide due diligence assurance to downstream customers. The Guidance discourages companies from addressing supply chain risks by placing embargoes on all supplies coming from high-risk locations. Instead, it encourages them to undertake due diligence around the practices in their supply chains. The Guidance is implemented through relevant industry schemes such as the World Gold Council's Conflict-Free Gold Standard and the London Bullion Market Association's Responsible Gold Guidance.

The Minamata Convention on Mercury was adopted in 2013 and is designed to protect human health and the environment from anthropogenic mercury emissions. ASGM is the biggest source of mercury emissions globally, accounting for more than 35% of the total. The Convention has been signed by around 130 countries. A number of United Nations agencies are involved in its implementation and this is led by the UN Environment Programme (UNEP). In particular, the Planet Gold programme, funded through the Global Environment Facility (GEF), is working in 17 countries to address malign ASGM practices and to support formalisation and the improvement of environmental practices.

The World Bank has had long-standing involvement with ASGM. Jointly with the civil society group, Pact, it hosts the DELVE ASGM database programme and, through its technical assistance programmes, the Bank promotes mining sector reforms including those around ASGM formalisation and capacity building in countries such as Ghana, Mali and Tanzania.

Appendix II: Guidelines of the BSP gold buying programme

1. Gold may be sold to the Bangko Sentral ng Pilipinas (BSP) through its Gold Buying Stations (GBS) in the Mint and Refinery Operations Department (MROD) in Quezon City and in the BSP Regional Offices in Davao City (BSRO-Davao), Zamboanga City (BSRU-Zamboanga), Baguio City (BSRU-Baguio) and Naga City (BSRU-Naga) during business days from 9:00am to 2:00pm
2. The BSP shall purchase the refined gold in Philippine pesos (PhP), at the prevailing international gold buying price and prevailing PhP/USD buying rate set by the BSP Treasury Department on a daily basis
3. Gold sellers/small-scale miners/traders/panners intending to sell their gold to the BSP shall address and present to the Office of the Director, MROD (if sold to the MROD GBS) or to the Office of the Regional Administrator (if sold to the regional GBS), their "Letter of Delivery and Sale" (LDS) clearly indicating that the gold is offered for sale for value on the date of delivery and **must be received not later than 2:00pm on the advice date**
4. In compliance with the London Bullion Market Association (LBMA) Responsible Gold Guidance (RGG), gold sellers/small-scale miners/traders/panners intending to sell their gold to BSP shall be required, on an annual basis, to accomplish the Customer Information Packet and to signify conformance to the BSP Responsible Gold Sourcing Policy
5. In compliance with Republic Act 10173 (Data Privacy Act of 2012), gold sellers/small-scale miners/traders/panners intending to sell their gold to BSP shall be required to accomplish an "Authority to Release Information" on an annual basis
6. Gold sellers/small-scale miners/traders/panners shall be required to accomplish a "Supply Chain Assessment Form" for every sale of gold to the GBS
7. If sale of gold to GBS will be through a representative, a "Letter of Authorisation" shall be accomplished by the gold seller/small-scale miner/trader/panner indicating the name/s of authorised representative/s, with their signature/s. For any subsequent change in authorised representative/s, the seller shall accomplish a new "Letter of Authorisation"
8. Forms of the "Letter of Delivery and Sale", "Customer Information Packet", "Supply Chain Assessment Form", "Authority to Release Information" and "Letter of Authorisation" shall be provided by BSP. Reproduced copies shall not be allowed/accepted

Note: Seller and Authorised Representative/s, if any, are required to submit two (2) ID pictures for the Customer Information Packet and Letter of Authorisation
9. Gold sellers/small-scale miners/traders/panners and their representative/s, if any, are required to submit to the BSP GBS photocopies of their government issued identification and Tax Identification Number (TIN)
10. Gold sellers/small-scale miners/traders/panners must submit their registered Bank Account to the Financial Services Group (FSG) for BSP QC GBS or to the BSP Regional GBS
11. Requirements for Acceptance:
 - a. Physical Form
 1. Should be in bar or disc (powder and jewellery are not acceptable)
 2. Should not contain mercury or amalgam in any quantity
 3. Should be free of slag and other foreign matter
 4. Should have no sign of metallic segregation/ layering or poured shortness
 5. Should not be damp or wet
 - b. Maximum Dimensions
 1. Bar: 16.5cm long x 8cm wide x 4cm thick
 2. Disc: 10cm diameter x 5cm thick
 - c. Weight
 1. Maximum weight of bar or disc: @ 5kg
 2. Maximum weight per lot: @ 10kg
 - d. Minimum Preliminary Gold Assay - 30%.

12. Payment Scheme

- a. Initial payment is equivalent to 99% of the value of the delivery based on as-received weight and preliminary assay by specific gravity method
- b. Initial payment shall be credited to the registered bank account indicated in the Letter of Delivery and Sale (LDS) on or before the third business day for first time sellers and on or before the second business day for returning sellers
- c. Final settlement of the balance shall be credited to the registered bank account upon completion of final assay, or not later than thirteen (13) business days from date of delivery/sale
- d. The seller shall be given five (5) business days to file a complaint from the date the final payment is credited to the registered bank account. Otherwise, BSP shall deem that the seller accepted the final assay and the full payment of the sale

e. Deductions:

- 1. 4% Excise Tax and 1% Creditable Withholding Tax
- 2. Processing costs, with a minimum of Php 1,600.00 per lot, and metal recovery factor shall be applied in accordance with the following schedule:

Table 3: Processing cost

% Gold Assay	(Php/ Tr. Oz. of material received)	Metal Recovery Factor (MRF), %
99.5 and above	PhP 34.00	99.8
90.0 to less than 99.5	37.77	99.3
70.0 to less than 90.0	39.37	99.0
50.0 to less than 70.0	42.17	98.9
30.0 to less than 50.0	45.67	98.6

- f. Silver Recovery: For a silver assay of 1% or more, 97% of the value shall be paid; no payment shall be made for silver assay below 1%

Appendix III: Gold purchase requirements of the Banco Central del Ecuador

1. Requirements to grade gold

The gold to be traded must be of legal origin, for which all interested natural or legal persons must meet the following requirements:

- Have mining law registered with the Ministry of Mining
- Be up to date with the tax obligations determined by the Internal Revenue Service (SRI)
- Not be immersed in crimes of money laundering and financing of terrorism, or crimes sanctioned by the illicit production or trafficking of narcotic and psychotropic substances
- Register and obtain authorisation as an Economic Agent at the ECB.

2. BCE gold purchase procedure

Gold purchases will be made at the facilities of the Casa de la Moneda, or at the purchasing office of the city of Machala, after verification of information and coordination with the BCE's Gold Marketing Management Unit.

- The fine gold content will be determined by the density method prior to the casting of the doré bars
- The gold will be received in molten bars according to the following characteristics:
- Bars with a homogeneous surface and without slag
- Presentation weight: minimum 50 grams
- The minimum gold purity per doré bar must be 50%.

3. Ways to pay

Payment for the purchase of gold will be made by direct transfer to the seller's bank account, duly registered as a supplier with the ECB.

4. Gold calculator

This calculator allows the seller to carry out a simulation exercise of the trading of gold based on the formula established by the ECB for the determination of gold, using the density method.

To operate the calculator enter the following data:

- Dry weight in grams (Ps)
- Wet weight discounted hook weight in grams (Ph)
- As a result, the following will be obtained:
 - The percentage of fine gold in the bar (% fine gold)
 - The fine gold content of the bar (in grams) will be determined by multiplying the percentage of gold by the dry weight (Ps)
 - The price will be calculated by multiplying the grams of fine gold by the purchase price established by the ECB.

5. Anti-bribery policy of the ECB

Small and artisanal miners who qualify as economic agents and become suppliers of gold to the ECB must comply with the provisions of the Institution's Anti-Bribery Policy.

In accordance with the aforementioned policy, the following actions are prohibited:

- Offer or give, directly or indirectly, gifts, invitations, hospitality or the equivalent in money to any public servant of the ECB with the purpose of seeking any influence or an effect on a process of the Institution, or if it expects that the favour must be returned seeking to gain an undue advantage
- Accept directly or indirectly gifts, invitations, hospitality or the equivalent in money to any public servant of the ECB in order to gain an undue advantage or that may otherwise give rise to a conflict of interest

- Engaging in any way in an act or possible act of bribery, either directly or through a third party; as well as inducing a person to act illegally or inappropriately
 - Hide, change, omit or misrepresent records to cover up improper activity
 - Ignoring or failing to inform the pertinent authorities of any sign that acts or possible acts of bribery have been carried out at the Institution
 - Make direct or indirect contributions or donations to political parties, government entities, organisations, government officials or individuals involved in politics, in exchange for obtaining advantages over the processes and services of the Institution
- Also, in the event of witnessing an act or possible act of bribery by a member of the Central Bank of Ecuador, I agree to make the respective bribery complaint through the button "Bribery complaints", which appears on the website of the Central Bank of Ecuador.

On the other hand, in case of non-compliance with the Institutional Anti-Bribery Policy, the Central Bank of Ecuador reserves the right to carry out the pertinent legal, criminal, civil and administrative actions, including a possible termination of the commercial relationship that is maintained with the Institution.

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