Peru

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Gold mining regions shown as 20 km buffer around known small-scale mines and deposits\(^{181}\)

Materials mined by ASM

- Gold: 890,000 ounces in 2016\(^{182}\)
- Copper: Unknown
- Coal: Unknown

\(^{181}\)Map created by Daniel Stapper by applying a 20 km buffer around gold mines (and mineral deposits containing gold) as identified in USGS, 2010a, 2010b.

\(^{182}\)Ministry of Energy and Mining (data from direct communication with country profile author).
Mineral governance framework

Government priorities
- Mitigate deforestation of the Amazon and mercury pollution
- Formalization of the sector and an alternative solution to the high number of miners working outside of the designated “mining corridor” in Madre de Dios

Laws and policy
- The General Law of Mining (1992)
- Law 28611—regarding the environment
- Emergency Decree no. 012-2010 (2010)

Government institutions
- Ministry of Energy and Mining (MOEM)
- Ministry of the Environment

Associations and member organizations
- Federation of Artisanal Miners of Madre de Dios (FEDAMIN)
- National Federation of Artisanal Miners (FENAMARPE)
- Miners Producers of the Middle South and Center of Peru (AMASUC)
- Small-scale Mining National Association (SONAMIPE)
- Association of Women Ore Sorters of Cuatro Horas
Economic and development data

2017 Population\textsuperscript{183}

<table>
<thead>
<tr>
<th>Total</th>
<th>32,165,485</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor force</td>
<td>17,902,590</td>
</tr>
<tr>
<td>Women</td>
<td>45.422%</td>
</tr>
<tr>
<td>Men</td>
<td>54.578%</td>
</tr>
</tbody>
</table>

2017 Classification (GNI per capita)\textsuperscript{184}
- Upper middle income: USD 5,970

2017 Gross Domestic Product\textsuperscript{185}
- USD 211.389 Billion

2016 Poverty headcount ratio (2011 purchasing power parity)\textsuperscript{186}
- Population on/below national poverty line: 20.7%
- Population living on <USD 1.90 per day: 3.5%
- Population living on <USD 5.50 per day: 24.3%

Livelihoods

Employment\textsuperscript{187}
- ASM: 100,000 directly, 500,000 indirectly
- LSM: 174,000 direct employees, 1.5 million indirectly
- ASM informality estimate: >80% informal

Gender participation in ASM
- Women: 15,000

\textsuperscript{183}World Bank, 2017b.
\textsuperscript{184}Ibid.
\textsuperscript{185}Ibid.
\textsuperscript{186}Ibid.
\textsuperscript{187}See Peru country profile text for discussion and data sources under heading “livelihoods.”
FIGURE 6 EXPORTS FROM PERU IN 2016

- Copper, USD 8.8B, 24%
- Gold, USD 6.3B, 17%
- Petroleum, USD 1.6B, 4%
- Zinc, USD 1.8B, 5%
- Lead, USD 1.2B, 3%
- Other metal/mineral, USD 5.3B, 14%
- Food and vegetable products, USD 7B, 19%
- Textiles, USD 1.3B, 3%
- Other products, USD 5.3B, 14%
- Food and vegetable products, USD 7B, 19%

FIGURE 7 PERU GOLD PRODUCTION TOTAL VERSUS EXPORTS, AND ESTIMATED ASM PRODUCTION

188 The Observatory of Economic Complexity, 2018b.
189 Ministry of Energy and Mining, personal communication.
**Mining sector summary**

Peru has a long mining tradition, with mineral revenues having been a major contributor to the country's development. However, while the country's vast mineral wealth is contributing to economic growth, the benefits are not evenly distributed and regional inequality is increasing. This has contributed to the growth of a large ASM sector.

ASM in Peru is mostly of gold, with small numbers of people extracting copper depending on international prices.\(^{190}\) There is also some artisanal coal mining.\(^ {191}\) ASGM experienced a surge in the 1980s due to internal war and economic crises,\(^ {192}\) then again around 2007 due to an increase in international prices. While there are no LSM developments in the Amazon region, there are high levels of ASM activity. Unfortunately, due to the nature of those activities, ASM has become associated with deforestation of the rainforest and mercury contamination, as well as crime and violence. This has contributed to an incoherent policy toward ASM and difficulties in formalizing miners, particularly in the Madre de Dios region of the Amazon.

**Mineral governance framework**

The Peruvian government is very supportive of LSM, promoting foreign investment through Legislative Decree No. 708. Most of the sector has now been privatized, and the marketing of all mineral products is unrestricted. This is even though LSM projects have created significant social unrest and numerous mining developments have had to be postponed as a result of high profile and sometimes violent community protests. Meanwhile, critics have argued that ASM is treated as a low priority and that policy toward the sector over time has been extremely inconsistent.\(^ {193}\)

ASGM operations were encouraged in the 1970s and 1980s, and the government granted concessions and established a national mining bank. However, the closure of the bank in 1991 during a period of economic liberalization meant the government lost its monopoly on gold purchases. Over the next decade or so, this along with the increasing price of gold contributed to an increase in ASM activity. In 2002, the ASM sector was officially recognized through Law 27651, which established an initial framework to regulate, formalize, and promote ASM and outlined conditions, obligations, and rights.\(^ {194}\) In 2006, this process was transferred to regional authorities, but unfortunately this was not accompanied with the necessary budgets, and regional personnel lacked the capacity for successful implementation. Other important laws during this period include:

- General Environmental Law (Law 28611) (2006), which established environmental guidelines applicable to all types of mining. The law made it necessary to apply for an environmental license for mining activity, which for ASM required submitting either a Declaration of the Environmental Impact or a semi-detailed Environmental Impact Assessment
- The Labor Organization Convention No. 169, which requires that indigenous and tribal people are consulted on issues that affect them, including all mining development

Due to increasing ASM activity, the associated strain on the environment, and the sector's links to violence and organized crime,\(^ {195}\) the government has become far less supportive of the sector in recent years. In 2010, the Ministry of the Environment pushed through Urgency Decree No. 012-2010, which suspended new mining petitions, established new mining exclusion zones, and prohibited the operation of dredges and similar machines in rivers. The decree resulted in police and military operations and was met with strike action on the part of the miners. More recently, the government has shown a renewed commitment

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\(^{190}\)UNDP, 2012.
\(^{191}\)International Council of Mining and Metals, 2018.
\(^{192}\)UNDP, 2012.
\(^{193}\)Low, 2012.
\(^{194}\)UNEP, 2012.
\(^{195}\)Sanborn et al., 2017.
to formalization, and data gathered from the MOEM during the author’s fieldwork suggest that some progress is being made in the number of miners completing the process. However, these efforts have continued alongside violent interdictions and police action against miners,\textsuperscript{196} even toward some who are engaged in formalization processes.

Inconsistent ASM policy has led to confusion among miners, particularly because the terms “artisanal,” “informal,” and “illegal” are used interchangeably.\textsuperscript{197} The inconsistency is, in part, due to the internal government conflict that exists between the MOEM and the Ministry of the Environment, which both have very different approaches in dealing with ASM. In addition to these two main government ministries, other institutions closely linked to ASM include:

- Mining and Metallurgical Geology Institute (INGEMMET), which is responsible for granting titles for mining concessions and collecting license fees and penalty payments
- Organisation of Supervision and Environmental Assessment (OEFA), which supervises and imposes sanctions on concession holders who fail to comply with environmental regulations
- National Service for Environmental Certification of Sustainable Investments (SENACE), which approves Environment Impact Assessments

**Economy**

Because Peru is one of the top 10 mineral rich countries in the world,\textsuperscript{198} the country’s economic development has long been associated with the export of minerals and precious metals. Currently, mining accounts for 24% of foreign direct investment.\textsuperscript{199} In 2016, Peru’s total GDP was valued at around USD 192 billion. Of this, USD 36.9 billion (19%) was made up of exports (Figure 6), 50% of which was from mineral revenues.\textsuperscript{200} Thus, mining and oil production represented 14.36% of total GDP.\textsuperscript{201} In 2016, copper was Peru’s biggest export, representing 23.7% of all total exports by value and made up of USD 8.77 billion in ore and USD 1.38 billion in refined copper. Gold exports bring the government a further USD 6.25 billion, making up 16.9% of total exports, while zinc is the third biggest export at USD 1.22 billion.\textsuperscript{202} An increased output of minerals, especially copper, contributed to a surge in exports in 2016, despite the falling global price of these commodities.\textsuperscript{203}

LSM continues to be promoted by the national government, despite mining developments often leading to social unrest, while the economic contribution and benefits of ASM appear to be disregarded. This is certainly in part a result of the lack of good quality data on the total production of ASM. While EY Peru provides data for total gold production up until 2015, this is not disaggregated between large-, medium-, and small-scale mining, making it unclear if ASM production is included in national output. In 2012 it was estimated that the ASM sector produced around 20% of Peru’s gold,\textsuperscript{204} which is equivalent to a staggering USD 3 billion.\textsuperscript{205} UNEP reports gold production from ASM in 2009 was around 1,178,150 ounces compared to just 592,602 ounces in the year 2000.\textsuperscript{206} This represents an increased share in total gold production from 12% in 2000 to nearly 17% in 2009. However, the data are poorly referenced, and the original report the figures are based on does not appear to be available online. Data obtained from the government during the author’s fieldwork in Peru shows UNDP’s estimations of ASGM production based on the difference between official national production against gold exports (Figure 7). These figures suggest that in 2016,

\textsuperscript{196}Salo et al, 2016.
\textsuperscript{197}Low, 2012.
\textsuperscript{198}EY Peru, 2017.
\textsuperscript{199}KPMG Global Mining Institute, 2016.
\textsuperscript{200}The Observatory of Economic Complexity, 2018b.
\textsuperscript{201}EY Peru, 2017.
\textsuperscript{202}The Observatory of Economic Complexity, 2018b.
\textsuperscript{203}EY Peru, 2017.
\textsuperscript{204}Gardner, 2012.
\textsuperscript{205}EY Peru, 2017.
\textsuperscript{206}UNEP, 2012.
ASGM production was around 15.3% of gold production in Peru, compared to just 2.7% in 2005. However, this is slightly lower than the high of 2012, which the government estimates to be at around 19.2%, similar to the figure in the UNEP report.

However, much of the data supplied to the author by the MOEM is inconsistent with that provided in the UNEP report (Table 7). The UNEP report is in kilograms, but when converted to thousands of ounces, the estimates of ASGM production are far higher than the ministry’s estimates. The source that the UNEP cites for its figures is no longer available online. It is also unclear whether calculations have been made based on troy ounces (31.1 grams) or avoirdupois/regular ounces (28.35 grams).

TABLE 7 Estimates of ASGM production, in thousand ounces, 2004–2009

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Energy and Mining estimate</td>
<td>387</td>
<td>189</td>
<td>153</td>
<td>485</td>
<td>635</td>
<td>1,056</td>
</tr>
<tr>
<td>UNEP estimate</td>
<td>818</td>
<td>949</td>
<td>956</td>
<td>1,023</td>
<td>1,023</td>
<td>1,178</td>
</tr>
</tbody>
</table>

Livelihoods

As in other mineral-rich countries, informal gold mining livelihoods in Peru have the potential to provide a higher income than is available in other sectors. ASM dominates national gold production in the Amazonian region of Madre de Dios, where gold deposits are too scattered to attract large-scale investment, and high in the Andean mining town of La Rinconada, which at 16,700 feet above sea level is too inaccessible for large-scale companies. In Madre de Dios in particular, the environmental destruction linked to ASM livelihoods means that research often focuses on the impact of ASM activities on deforestation and mercury contamination, rather than the potential benefits the sector can have on poverty alleviation and local economies. However, some studies do attempt to compare the socioeconomic costs of alternative livelihood options, such as tourism and agriculture.

The data on the exact numbers of people involved in ASM are very imprecise and vary between publications. In 2010, around 300,000 people were estimated to be either directly or indirectly dependent on ASM. This was revised in 2014 to include 100,000 people employed directly and a further 500,000 indirectly. There is no data showing regional breakdowns. While several sources claim that there are more than 30,000 miners operating in Madre de Dios alone, not only is it unclear where this figure comes from, but also whether it refers to miners operating within the designated mining corridor, outside of it, or both. This is important because 64% of mapped ASM activity in Madre de Dios occurs outside the active mining concessions of the mining corridor. There is also surprisingly little clarity regarding the number of concession titleholders. While UNEP reported that by 2012, “many” small mining enterprises had either obtained ownership of mining claims or signed formal contracts with concession owners, more exact figures were not provided, and the report went on to acknowledge that the majority of artisanal and small-scale miners were still working on third-party concessions without contracts.

Data provided to the author by the MOEM suggest that the total number of ASM titleholders in Peru currently in the formalization process was 6,810. However, this does not necessarily reflect the total...
number of concession holders in Peru because additional titleholders may not currently be engaged in the formalization process.

The cost of formalization is prohibitively expensive for most miners, meaning that very few have even begun the process. Evidence puts costs at USD 130,000 per mining entity,215 but official data are difficult to find. Data obtained by the author directly from the MOEM reported that as of July 2017, 1,004 people had completed formalization, but this figure was not disaggregated by region. A recent study showed that 5,500 miners in Madre de Dios had initiated the process of formalization, but only 11 had completed it.216 More regional data are needed on the numbers of miners being formalized.

There is very little data on the livelihoods of women working directly or indirectly in ASM in Peru. Much of the research that does exist focuses on sex workers, particularly those who have been the victims of human trafficking. While some qualitative research explores the experiences of women who work as ore sorters near underground mines, the exact numbers involved are unknown, although it is estimated to be around 15,000 women nationally.217

Fair Trade is also an important aspect of ASM livelihoods in Peru, due to a movement based on theories of underdevelopment that stem from the experience of Latin America.218 It is also here where Fairtrade International’s original Fairmined and Fairtrade Gold Standards were implemented.219 However, because only formal miners working either on their own concessions or on concessions contracted from the holders can gain accreditation, the schemes do not apply to many artisanal and small-scale miners.

**Key data needs**

- There are no reliable estimates on the number of ASM operators, and the interchangeable definitions of legality, illegality, and informality mean that what data do exist are unclear
- More evidence is needed on the values of ASGM production over the last decade and of the contribution this makes to national output
- Reliable data that disaggregate formalization numbers by region is needed
- Far more data are needed on women in ASM in Peru, including the precise number involved and their earning potential relative to that of men
- Many documents are in Spanish and may need translating into English to make them more accessible to non-Spanish speakers. Similarly, many documents, reports, and handbooks on ASM globally are in English and may need translating into Spanish, especially to be of use to small-scale miners

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216 Salo et al., 2016.
218 Hilson and McQuilken, 2016, McQuilken, 2016.
219 Maldar, 2011.


Gonzalez, D. 2016. *Opportunities, not oppression, to stop illegal mining in the Peruvian Amazon*. Available at https://yaleglobal.yale.edu/content/opportunities-not-oppression-stop-illegal-mining-peruvian-amazon


UNEP. 2012. *Analysis of formalization approaches in the artisanal and small-scale gold mining sector based on experiences in Ecuador, Mongolia, Peru, Tanzania and Uganda*. Geneva: UNEP.
