ASGM: GOOD LINKAGES, BETTER OUTCOMES. LESSONS LEARNED FROM THE PERUVIAN CASE

Conference of the Parties – 3
Geneva - Switzerland

Knowledge Labs
Wednesday 27 November
300-400 thousands artisanal miners work in the 24 regions of Peru

1-1.5 millions of peruvians work directly and indirectly in ASGM sector

145 tons of mercury is used in ASGM sector in Peru

65 thousands of hectares deforested between 2010-2017 in Madre de Dios

20% of the 150 ton/year of gold produced in Peru come from ASGM

1kg of gold vs 2.8kg of mercury is the average consume

(*) Fuente: Informe defensorial 167, 2014
<table>
<thead>
<tr>
<th>Exploitation</th>
<th>Benefit</th>
<th>Commercialization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Rock Mining</td>
<td>Crushing and milling</td>
<td>Gold local traders</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td></td>
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<tr>
<td></td>
<td>Amalgamation with Hg</td>
<td>Exports</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td></td>
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<tr>
<td>Ore</td>
<td>Tailing with Hg content</td>
<td>Smuggling</td>
</tr>
<tr>
<td></td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>Alluvial Mining</td>
<td>Amalgamation with Hg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gravimetric process (without Hg)</td>
<td></td>
</tr>
</tbody>
</table>

Current situation:
- 80% Hard Rock Mining
- 20% Alluvial Mining
- 75% Crushing and milling
- 25% Tailing with Hg content
- 99% Amalgamation with Hg
- 1% Gravimetric process (without Hg)
- Benefit Plants
- Exports
- Gold local traders
- Smuggling

The gold route of ASGM
El Perú Primero
Historic gold export and production gap (2000-2018)

Current situation

Average lost of the last 10 years: **35 tons.** of gold annually
Cause: Unregistered production (smuggling),
Cost: USD **1,426** million / USD 100 million of income tax per year not collected

**59 t**
Mercury flow
Trazability

- **At least 145 tons of mercury** per year is used in ASGM in Peru*.
- **Mercury black market**.
- **Lack of control of smuggling** at borders.

(*) Source: UNEP, "Global Mercury: supply, trade and demand", 2017

Source: ADUANAS Peru - Bolivia
Peru signed the Convention

2013

Peru ratified the Convention

2014

D.S. N° 061-2015-RE

2015

Multisectoral Action Plan

D.S. N° 010-2016-MINAM

2016

Entry into force Minamata Convention

2017

National Implementation Plan of the Minamata Convention

D.S. N° 004-2019-MINAM

2018

National Action Plan for ASGM

ASGM strategy

2019

Health strategy

National Environmental Health Surveillance Plan for mercury in prioritized areas and vulnerable populations

2020
Certified Mining
Formal Mining (8k)
Informal Mining (53k)
Illegal Mining

- Support to mining management (MINEM)
- Strategic alliances for access to market & technical assistance (BGI, ARM, etc)
- Best practices and clean technologies (MINAM – PLANET GOLD)
- Access to credits (GEF GOLD)
- RECP-O online (traceability system)

- 100 – 200 requirements
- More than 100 obligations
- Cost of formalization: 70K-100K US$

Cost
100 – 200 requirements
More than 100 obligations
Cost of formalization: 70K-100K US$
National Action Plan for ASGM
8 Strategies, Multisectorial participation

Formalization and post-formalization

Reduction of mercury emissions and releases

Trade management

Participation and communication of stakeholders

Health strategy

Illegal mining prevention

Work conditions

Reclamation / remediation
Image 1: Illegal alluvial mining in Madre de Dios

Image 2: Illegal zone called “La Pampa”, Tambopata buffer.

Image 3: Government, police and army intervened the illegal miners.


Mercury Operation 2019
Illegal mining eradication

759 ha remediation
Tambopata National Reserve
Perú Limpio
Perú Natural

Coordinated Actions
Trade management

Andean Community

Trough Decision 844 created the Andean Observatory responsible for the management of official information regarding Mercury

<table>
<thead>
<tr>
<th>Country</th>
<th>Mercury (ton) used in ASGM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombia</td>
<td>180</td>
</tr>
<tr>
<td>Ecuador</td>
<td>85</td>
</tr>
<tr>
<td>Peru</td>
<td>145</td>
</tr>
<tr>
<td>Bolivia</td>
<td>120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>530</strong></td>
</tr>
</tbody>
</table>

Source: UNEP, “Global Mercury: supply, trade and demand”, 2017

Need to develop a platform to share information about mercury flows in real time.
National Action Plan for ASGM
Best practices and clean technologies

Identification of 05 technologies (Gravimetric System):
- Gravimetric table
- Deslamadora box
- Vertical centrifuge
- Horizontal centrifuge
- Dry concentrator

Clean technologies identification (2016-2019)

13 workshops in 06 departments:
- Arequipa (Arequipa, Secocha, Chala).
- Cusco (Camanti).
- Huánuco (Puerto Inca)
- Ica (Palpa, Nazca).
- Puno (Ananea, Juliaca).
- Madre de Dios (Tambopata y Madre de Dios).

2 internships in 02 departments:
- Puno (Ananea).
- Lima (Carabayllo).

Intervention (2016-2019)

More than 82 mining groups from different departments, training more than 600 people, of which only in the year 2019 about 10% were women.

Beneficiaries

3 internships: Trujillo-Piura, Arequipa-Puno-Ayacucho, Madre de Dios.

Projection 2020

https://youtu.be/DQ67nNRUO5A
Although the role of women in the gold production process is not visible, they have an important participation in the gold value chain, directly and indirectly.

**Direct linking:**
- Mining sorter (recycler, pallaquera or chichiquera),
- Component of hours / man-worker (grinding or refueling stage),
- Mining and marketing holders, Personal administrative.

**Indirect Linking:**
- Secondary activities (Services, provision of food, drink, tools and equipment),
- Gold Marketing

06 workshops in 04 departments:
- Arequipa (Chala).
- Huánuco (Puerto Inca)
- Ica (El Ingenio).
- Puno (Ananea).

More than **15 mining groups** from different departments, more than **300 people** trained (**47% are women**).

3 internships: Trujillo-Piura, Arequipa-Puno-Ayacucho, Madre de Dios.
Peru is the leading producer country of certified gold

<table>
<thead>
<tr>
<th>Certification</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairmined</td>
<td>4</td>
</tr>
<tr>
<td>Fairtrade</td>
<td>13</td>
</tr>
<tr>
<td>RJC</td>
<td>2</td>
</tr>
</tbody>
</table>
National Environmental Health Surveillance Plan for Mercury in Prioritized Areas and Vulnerable Populations

5 steps, Multisectorial participation

Prioritization of activities associated with mercury

Prioritization of regions with predominance of identified activities

Prioritization of zones in the regions identified

Identification of watersheds in prioritized areas

Application of criteria for environmental health surveillance
Challenges and beyond

- **Increase trust among miners** to adopt better practices.
- **There is no place for temporary storage and final disposal for mercury.** Most of the mercury seized is stored in the police’s drawers.
- **Share information about mercury exposure,** especially among vulnerable populations (health, and consumption diet by region).
- **Strengthen intelligence** and regional coordination actions to control the flow of illegal mercury across the border with Bolivia; and prevent smuggling.
- **Increase incentives** for formalization and access to international and responsible markets.
The Better Gold Initiative in a nutshell:

A Swiss Public-Private Partnership between State Secretariat for Economic Affairs (SECO) and Swiss Better Gold Association

Phase I 2013 – 2016: implemented in Peru
Phase II 2017 – 2020: Peru, Colombia, and Bolivia

Official agreement with Ministry of Environment, and Mining Ministry

Technical Assistance, Policy Dialogue and Demand

In coordination with voluntary certification systems (FT, FM, RJC)
Technical Assistance for responsible mining

In Peru more than 20 ASMO supported by BGI

820 kg of responsibly produced gold exported from Peru during the first semester 2019

Peru remain main producer of responsible ASM gold

Way to cleaner technologies can be long, for that reason assistance important (example SOTRAMI)

Market incentives and long term partnership need to contribute to responsible practice

<table>
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<tr>
<th>Mine</th>
<th>Technical Assistance</th>
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<tbody>
<tr>
<td>Oro Puno</td>
<td>Support Fairmined certificate</td>
</tr>
<tr>
<td>MACDESA</td>
<td>Support Fairtrade certificate</td>
</tr>
<tr>
<td>CECOMSAP</td>
<td>GAP Analysis</td>
</tr>
<tr>
<td>CECOMIP</td>
<td>Assistance shaking table and direct smelting of gold concentrate</td>
</tr>
<tr>
<td>SOTRAMI</td>
<td>Assistance RJC certificate, including ICMI certificate</td>
</tr>
<tr>
<td>CENCOMIN</td>
<td>Assistance Fairmined certification</td>
</tr>
</tbody>
</table>
Thank you

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