

# TOWARDS FINANCIAL INCLUSION FOR ASM

A study of the offer and demand for the development of financial mechanisms with regards to artisanal and small-scale gold mining in Peru.

## **Towards financial inclusion for ASM**

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# Acronyms and abbreviations

<b>ASM</b>	Artisanal and small-scale mining
<b>CIIU</b>	Uniform International Industrial Classification
<b>CMAC</b>	Municipal Savings and Credit Banks
<b>CRAC</b>	Rural Savings and Credit Banks
<b>DNI</b>	National Identity Document
<b>DREM</b>	Regional Directorate of Energy and Mines
<b>Edpyme</b>	Development Entities for Small and Micro-enterprises
<b>GREM</b>	Regional Management of Energy and Mines
<b>FI</b>	Financial Institution
<b>Igafom</b>	Environmental Management Instrument for the Formalization of Small-scale and Artisanal Mining Activities
<b>Minam</b>	Ministry of Environment
<b>Minem</b>	Ministry of Energy and Mines
<b>Mintra</b>	Ministry of Work and the Promotion of Employment
<b>MSE</b>	Micro and small enterprise
<b>Reinfo</b>	Integral Register for Mining Formalization
<b>RUC</b>	Single Tax-payers Register
<b>Sunat</b>	National Superintendency of Customs and Tax Administration
<b>SBS</b>	Superintendency of Banks and Insurance
<b>SCTR</b>	Additional Insurance for High-Risk Work
<b>UIT</b>	Tax Unit Obligation

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# Introduction

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In Peru, the artisanal and small-scale mining contributes 20 % of the volume of gold to the national gold production (150 tons), allowing there to be around 300 thousand miners working in this activity in the 24 departments of the country. according to figures from the Ministry of Energy and Mines.

However, the ASM sector is involved in a spiral of informality, and this particularity is not only a characteristic of this important sector of the Peruvian economy with great potential and socio-economic impact in the interior regions of the country, but It also has great structural weaknesses and a poor perception of its activity.

Access to financing, as an economic catalyst, and bankarization are some of the key factors to achieve the formalization of ASM, allowing them to access financial resources for investment, working capital and acquisition of equipment and machinery that allows increasing their productivity, professionalizing their activity, generate decent employment, respect socio-environmental standards, but mainly keep them in formality through sources of financing and credit support.

**Towards the financial inclusion of ASM** is a study carried out within the framework of the planetGOLD Peru project — supported by the Global Environment Facility (GEF), it is executed by the Peruvian Government through the Ministry of Environment and the Ministry of Energy and Mines, with technical assistance from the United Nations Development Program (UNDP). The research analyzes the barriers and limitations of this sector in the regions with the highest incidence or presence of small-scale mining in order to propose financial products and ad hoc services to the reality of ASM that allows them to be included in the formal financial system .





Chapter 1:

# **Overall vision of the study**

The study is a diagnosis and analysis of the offer and demand financial mechanisms available to the ASM with the object of identifying obstacles and opportunities, along with making evident the potential of small-scale and artisanal mining so that the workers involved in this can gain access to a formal system of finance.

## The methodology used

In order to realize the study a methodology was designed which combines three research instruments: **surveys, deep-searching interviews, and focus groups**, with the gathering of both quantitative and qualitative information in regard to the ASM sector of mining.

The instruments were applied to three groups of interest to this study, at both national and international levels.

ASM	Private	Public
<ul style="list-style-type: none"> <li>Artisanal and small-scale miners</li> <li><i>Pallaqueras</i></li> <li><i>Cachorreros</i></li> <li>Collectors</li> </ul>	<ul style="list-style-type: none"> <li>Financial Entities.</li> <li>High-Risk Centres</li> <li>Businesses dealing with value protection.</li> <li>Certificates.</li> </ul>	<ul style="list-style-type: none"> <li>DREM/GREM</li> <li>Minem</li> <li>Minam</li> <li>Sunat</li> <li>SBS</li> </ul>

## The field and sample of the study

The field of the study comprises seven regions of Peru, giving priority to fieldwork by means of surveys in three zones involved in the project: Puno, Arequipa, and Piura, which coincide with the areas of greater mining activity with regards to becoming formal. In Madre de Dios, Ayacucho, La Libertad, and Apurimac, deep-searching interviews and focus-groups took place just as in the other three regions mentioned above.

The sample for the development of a **quantitative study by means of surveys** was **502 artisanal miners in the Puno, Arequipa, and Piura regions**. The size was calculated on the basis of the demographic information in accordance with the statistics given by the Reinfo which, in November 2020, was 88,831 miners in the process of seeking formal recognition, made up of legal entities (either a single person or group) and people with business dealings.

In order to obtain a better analysis of the people involved in the production chain and commerce of the ASM it was decided that there be included a sample of **73 pallaqueras, 46 cachorreros, and 15 purchases**, so that the total survey was of **636 people**.

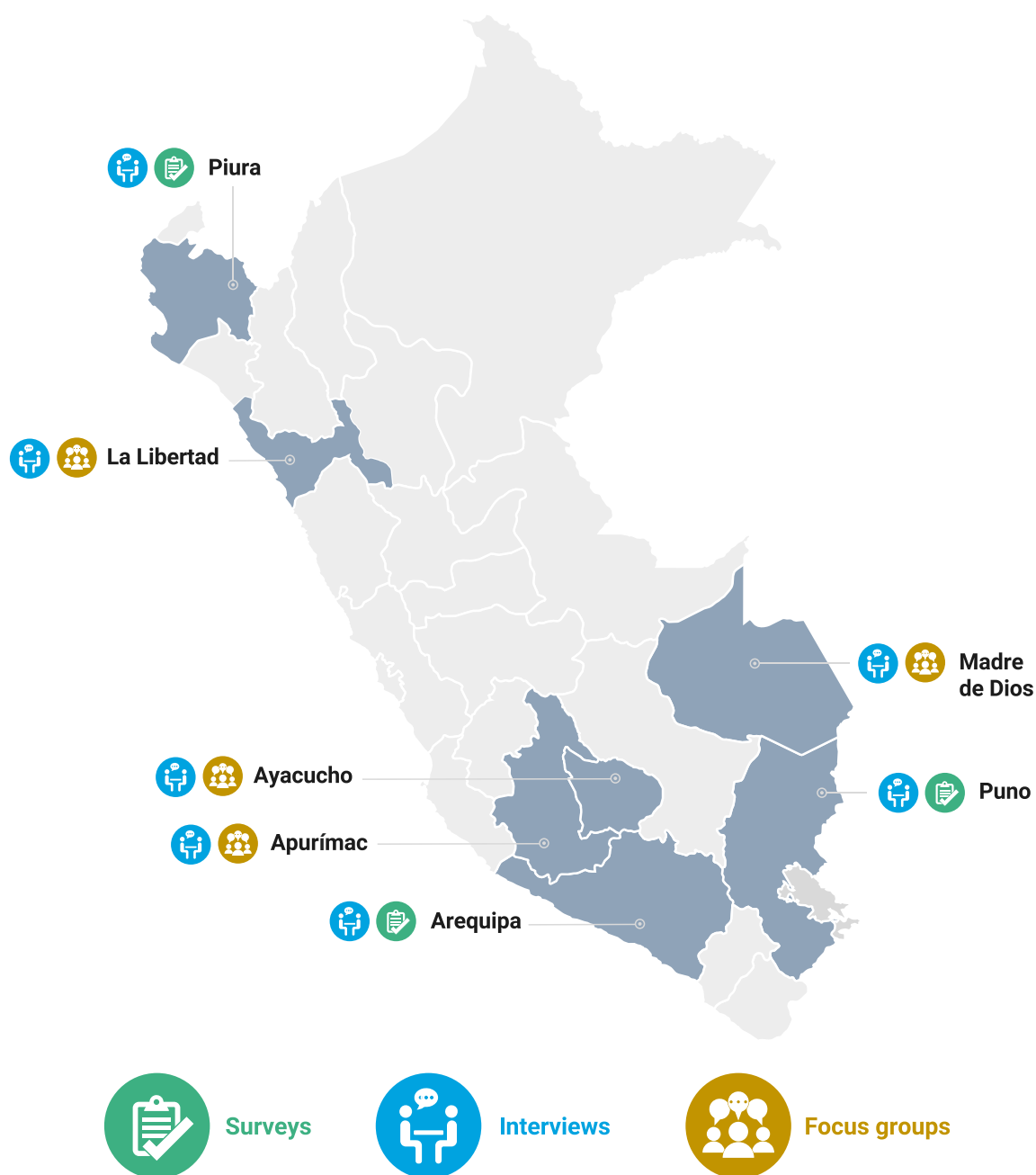
Distribution of the sample questionnaire by region					
Regions	Miners	<i>Pallaqueras</i>	<i>Cachorreros</i>	Purchases	Total
Arequipa	296	40	-	4	340
Piura	47	18	-	3	68
Puno	159	15	46	8	228
<b>Total</b>	<b>502</b>	<b>73</b>	<b>46</b>	<b>15</b>	<b>636</b>

Source: prepared by the GÉRENS consulting.

Here it is to be noted that preference was given to artisanal and small-scale mining centres located in the districts of Chaparra, Huanuahuano, Yanaquihua, and Río Grande en Arequipa. Ananea, San Antonio de Putina, Limbani, and Cuyo Cuyo in Puno. And Suyu y Sapillica in Piura.

With regards to the **qualitative** studies, **in-depth surveys** were carried out on the actors in the area of the value-chain of the ASM, financial entities, public and private institutions involved in the development of the area, plus also international institutions such as the National Mining Bursaries (Enami) of Chile, the National Programme of Chemical Management in Ecuador, the technological platform Trazoro of Colombia, the Fund for financing mining in Bolivia (Fofim), private investment and the certification of local commerce, so as to know and analyse their experiences. The **focus groups** were concerned with the heads of formal mining companies and representatives of the local financial system.

### The regions of the implementation of the methodological instruments







Chapter 2:

# **Profile of the protagonists in ASM**

# THE ARTISANAL MINER AS A “SUBJECT OF CREDIT”

The artisanal and small-scale miner is one in the process of formalizing his mining activity with the Ministry of Energy and Mines, complying with the characteristics according to his level of production and/or the benefit and size of the mining concession (Art. 91 of the TUO of the General Law of Mining), and who works in areas permitted by peruvian law (DL N°1293).

## Technical social record



**93 %** are men and **7 %** are women.



The average age is **42** years.



**13 %** have only primary education, **64 %** have secondary education, **15 %** have a technical education and **8 %** have a university education.



The general family obligation is of **3** people

## Patrimony (multiple replies):



Land (**53 %**)



Property (**47 %**)



Machinery and equipment (**39 %**)



Vehicles (**31 %**)



Savings and other goods (**6 %**)



Nothing (**6 %**)



## 2.1.1 Formal mining

### DEGREE OF FORMALITY:

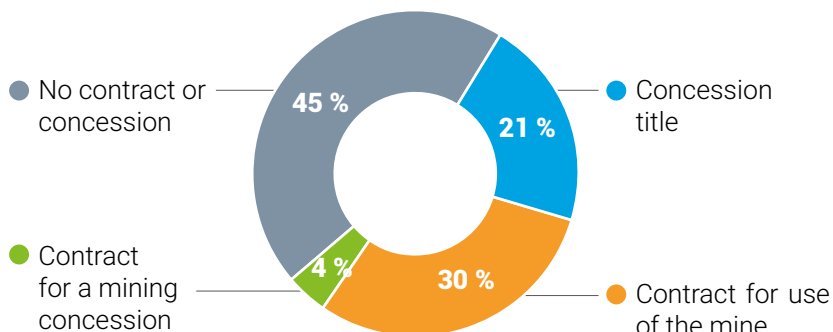


**14 %** Formal

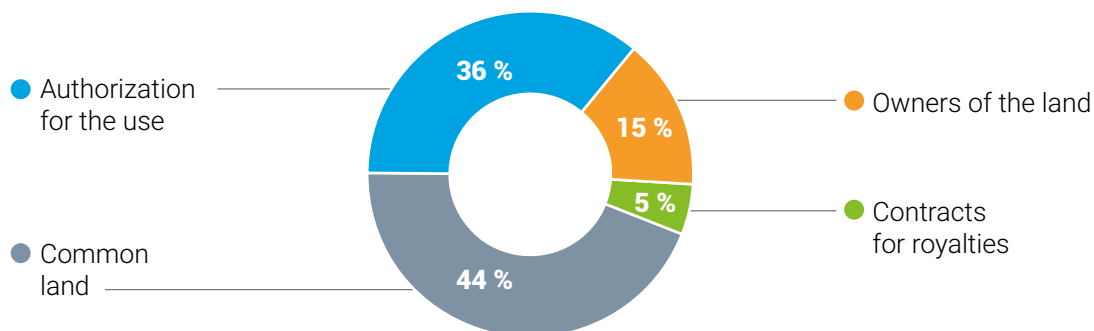


**86 %** Informal

### MINING TITLES:



### AUTHORIZATION FOR THE USE OF A SURFACE AREA:



## 2.1.2 Tax formalities for the ASM miners

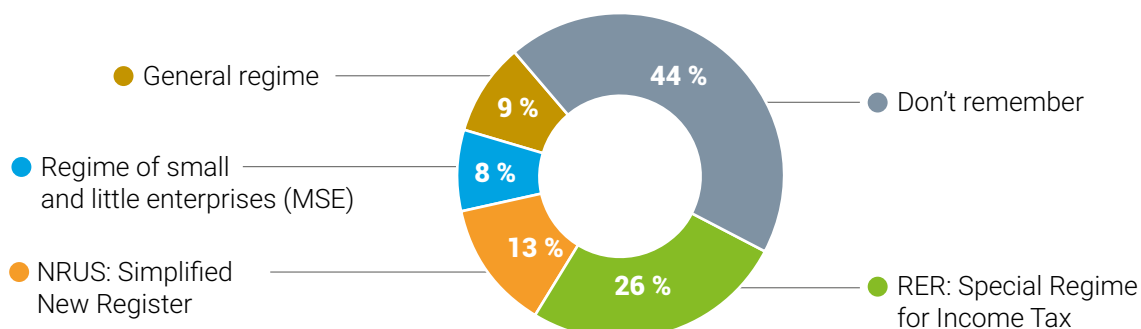


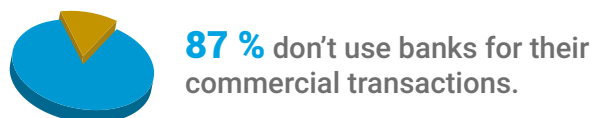
**91 %** are natural persons with a business and **9 %** are legal entities.



**55 % have active RUC** and **45 % with an inactive RUC**, which can be for discharge, temporal suspension, etc.

### TYPE OF TAX REGIME:





### 2.1.3 Labour formalities

The **ASM miner works indistinctively** with partners, family members, or people who are contracted. Generally speaking he is not on a pay scale.

#### WORK DYNAMIC:

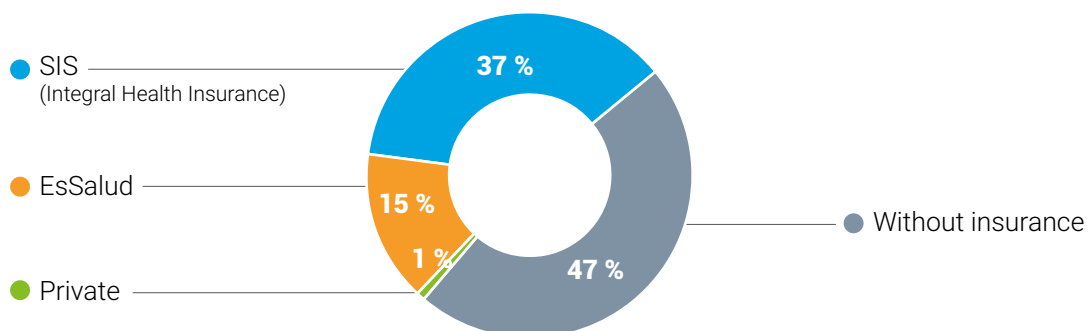


**7 is the average number** of people working together



The average monthly earnings for a worker is **S/ 1,324 (USD 366)\***.

#### HEALTH INSURANCE:



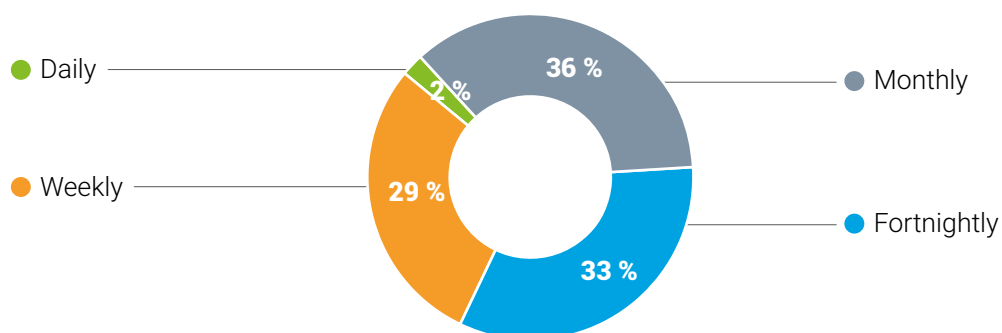
In Puno only **0.6 %** of the miners **have high-risk insurance**.



**92 % are not affiliated** to any pension scheme.

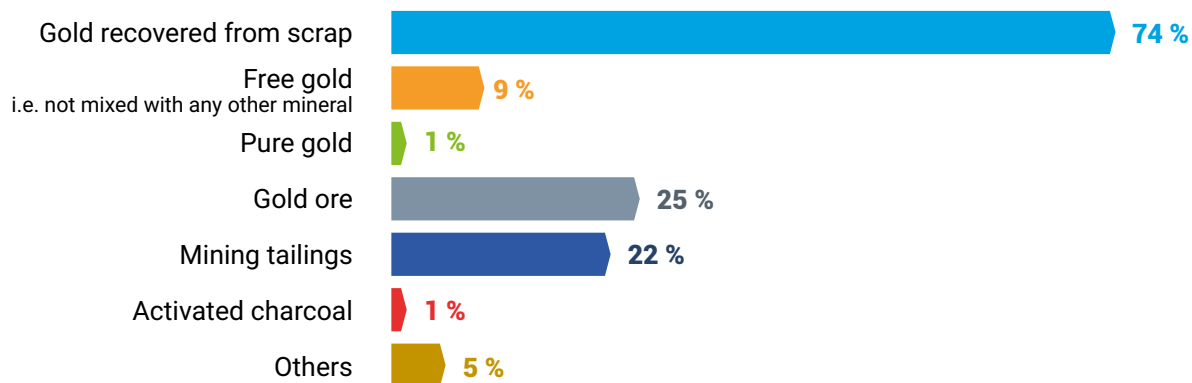
\* The dollar exchange rate is 3.62 soles considered as of November 2020.

### FORM OF PAYMENT OF MINE WORKERS:

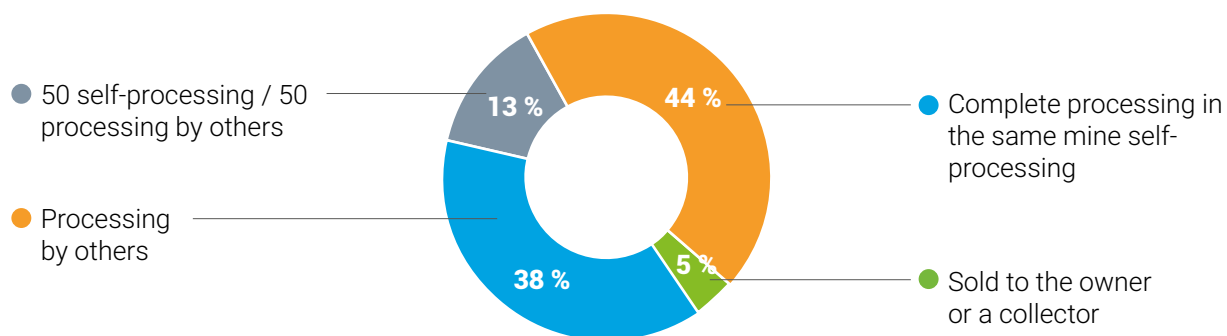


## 2.1.4 Mineral production and processing

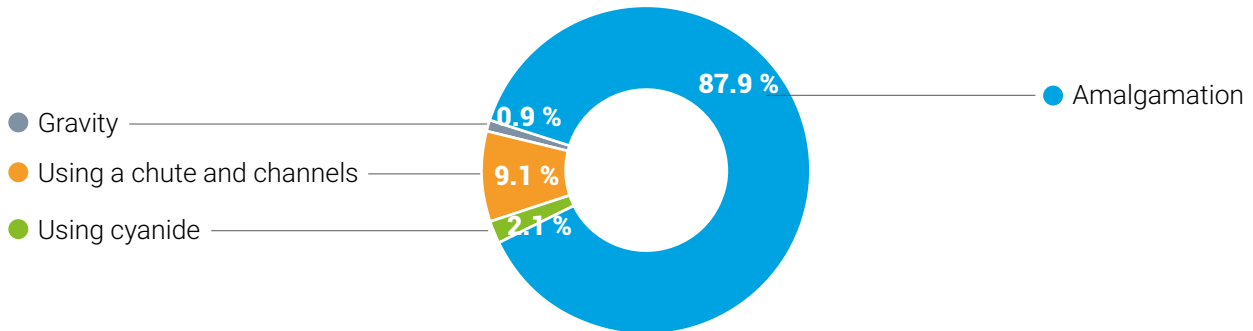
### THE PRODUCT PUT ON THE MARKET:



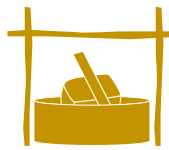
### MINERAL PROCESSING AGENT:



### SYSTEM OF PROCESSING THE MINERAL:



**Mercury** is the chemical component most commercialized (94 %). Only 1.7 % use cyanide.

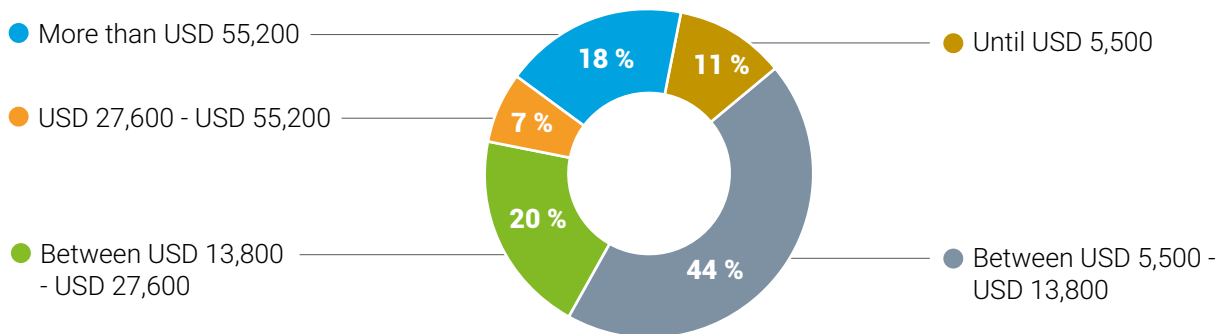


10% know about **clean technologies**. 68 % of them know **gravimetric methods**.



10 % are willing to invest in **clean technology**.

### THE AMOUNT OF MONEY TO INVEST IN CLEAN TECHNOLOGY:



**91.8 % of the ASGM** were not benefitted with credit from "Reactivate Peru" only **32 %** received the "Universal Family Bond".



## 2.1.5 The Level of Banking

The study reveals that the miners are attended to individually by the bank they use through the active<sup>3</sup> and passive<sup>4</sup> products. However, the mining enterprises (natural people with a business or legal entities listed in the Integral Register for Formalizing Mining – Reinfo) should be attended by the bank they use or the MSE bank.

### PRESENT DEMAND



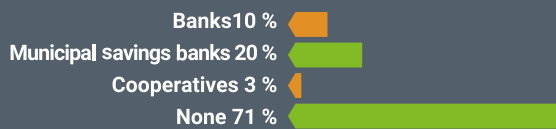
Only **14 %** have a debit card on a bank account.



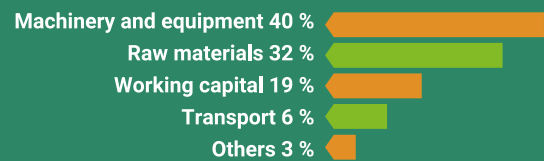
Only **10 %** have current credit.



#### FINANCIAL INSTITUTIONS WHICH ATTEND TO THE ASM



#### TO WHAT ENDS CURRENT CREDIT IS DIRECTED



### PROJECTED REQUIREMENT – PERSONAL BANKING

#### THE NEED FOR A LOAN AND A CREDIT-CARD:

Do need a loan and require a credit-card



Do need a loan and don't require a credit-card

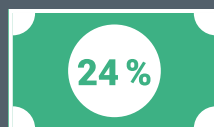


Do not need a loan and don't require a credit-card

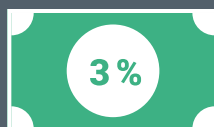


The present demand for financial assistance is **S/ 5,400 (USD 1,492)** per miner.

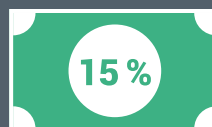
#### PROJECTED DESTINY OF PERSONAL CREDIT:



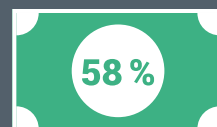
Mortgages



Family expenditure



Credit for vehicles



Freely disposable

### PROJECTED DEMAND FOR ASM INVESTMENT



**78 %** of the miners require financial assistance for their projected investment.

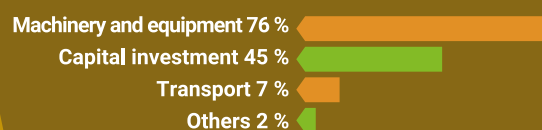


Miners who hope that their investment projects be financed by: banks (**50 %**), municipal savings banks (**47 %**), cooperatives (**3 %**).



The average investment is **S/ 49.8 thousand (USD 13,700)** per miner.

#### FINANCING WOULD BE FOR:



<sup>3</sup> Loans or direct credit according to the needs of the people or the business. There is a risk involved for the financial entities with regards to the payment or return of the money loaned.

<sup>4</sup> These are sight-accounts, savings-accounts, fixed-term deposits which attract investors. There is no risk involved for the financial entities. They are open to the general public and there are no limitations.

# THE *PALLAQUERAS* IN RELATION TO RECEIVING CREDIT

The *pallaqueras* are women miners who are dedicated to manual selection of gold-bearing mineral that has been rejected by the artisanal miners as rubbish and is thrown out on the hillside. The material which they pick-up has little gold content and is of low commercial value. This type of work, known as pallaqueo provides an income that in some cases is the only one in their household.



## Social Data Sheet



Pallaqueo is realized **principally by women (97 %)**.



Average age is **40**.



**60 %** cohabit with their partner.



**37 %** have only primary education.  
**55 %** secondary education,  
**7 %** have technical education, and  
**1 %** have university education.



The average family burden is of **3** people.

## Patrimony (multiple replies):



Land (**41 %**)



Property (**36 %**)



Machinery and equipment (**3 %**)



Vehicles (**5 %**)



Savings and other goods (**5 %**)



Nothing (**23 %**)



## 2.2.1 Formal Recognition

Only **13 %** of the people interviewed are registered in the **Register of Third Natural Parties and Manuals of Gold-Sorters**. According to el DS N° 018-2018-EM, the register is only for the region of Puno and informs that the mineral sorters can well **sell up to 66 grams of gold per month**.



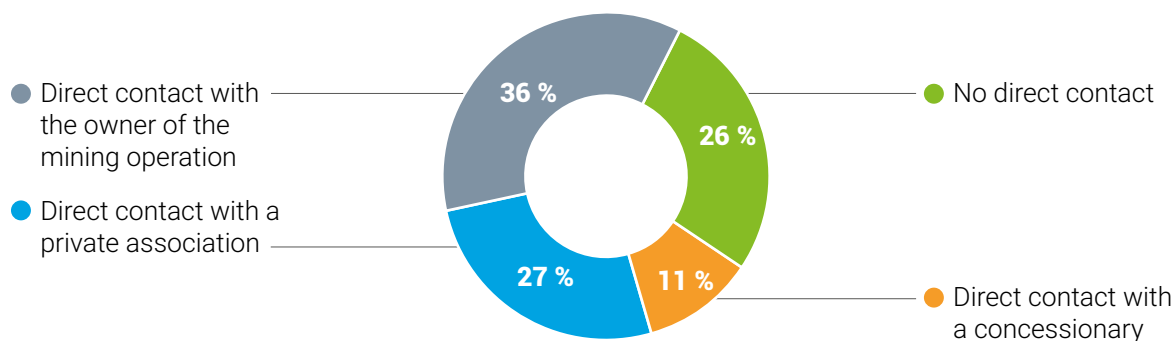
**51 % of the pallaqueras** belong to some organization in order to be better represented.



## 2.2.2 Method of Work

### DIRECT CONTACT WITH THE OWNER OF THE MINING CONCESSION:

The *pallaqueras* request the authorization of the owner of the mining operation or concession holder to be able to carry out their activity, in some cases with a payment in between.

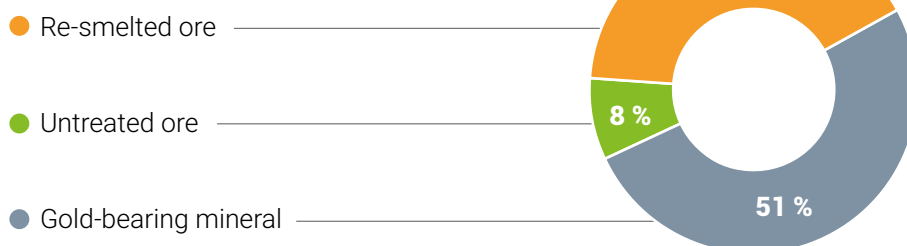


**91 % have simply a verbal agreement** with regards to payment.



**18 % pay for the right** to work through waste material.

### PRODUCT WHICH IS PUT ON THE MARKET:





### 2.2.3 Tax Formalization

In accordance with **DS N° 018-2018-EM**, those who work manually in the search for gold should register on the tax list with just their identity card number. In this case, the purchaser will terminate the transaction by giving a receipt authorized by the SUNAT.



Only **16 % of the *pallaqueras* sign a receipt** given by the buyer, who might be a collector or a benefitting enterprise.



### 2.2.4 Work Formalization



The average time spent working by a *pallaquera* is **2 to 3 hours daily**.

The *pallaqueras*, due to their individual mining activity, and in accordance with the legislation set forth, are not required to have their RUC activated to submit monthly tax returns to the Sunat.



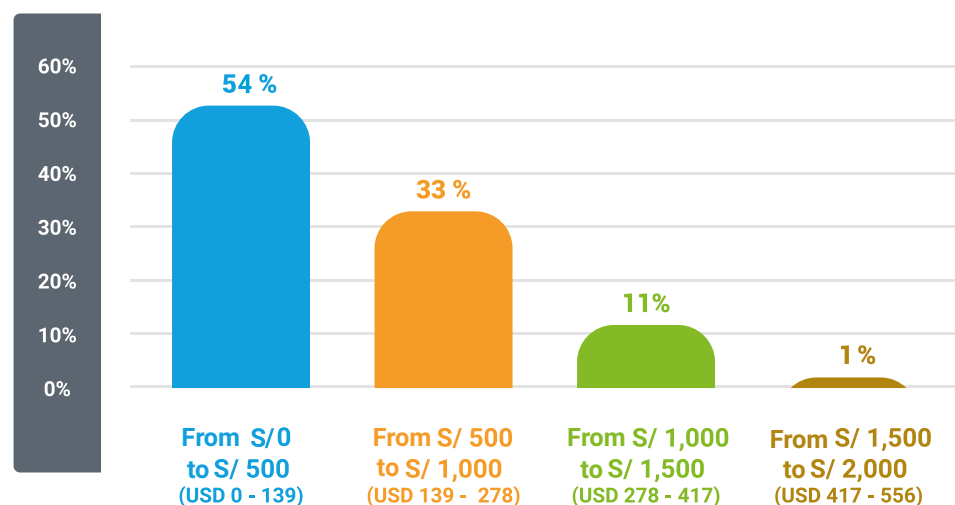
The average monthly earning is **S/ 788 (USD 218)**.



**99 % of the *pallaqueras* are not affiliated** to any kind of **health insurance**.

#### Distribution of monthly earnings:

1 % of the *pallaqueras* indicated that they have not sold their mineral yet.





## 2.2.5 The Level of Banking

### THE USE OF A DEBIT-CARD



**29 %**

of the *pallaqueras* have a debit-card.



**75 %**

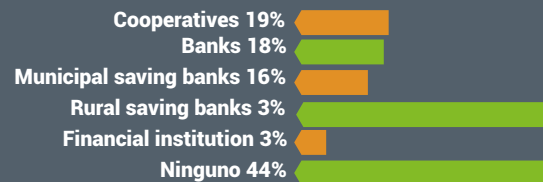
use the card exclusively as a savings account and be able to draw funds at a cash-point.



**25 %**

make transferences and / or payments by internet.

### FINANCIAL INSTITUTIONS WITH THE GREATEST DEMAND



**37 %** of the *pallaqueras* asked for personal credit and 89% of the petitions were accepted.



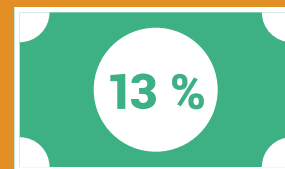
### THE USE OF THE APPROVED LOAN



Free disposal

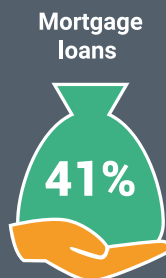


Work capital



Machinery and equipment

### WHY LOANS ARE NEEDED



**71%** seek loans of less than USD 2,200 to employ in other business ventures apart from *pallaqueo*.

**16 %** seek finance for more than USD 2,200 in order to improve their selection method and marketing of the mineral.

**95 %** did not receive any credit from Reactiva Perú and 66 % benefitted from the Universal Family Bond.

# THE CACHORREROS AS “SUBJECTS OF CREDIT”

The *cachorreros* are artisanal miners dedicated to the extraction of gold in accordance with model of days employed on behalf of the owner or concessionary of a mining concession and days employed in work for personal benefit. The cachorreros activity is an ancient practice deeply rooted in the region of Puno.



## Social Data Sheet



Survey carried out only with **regards to men** in the region of Puno.



Average age **41**.



**67 %** cohabit with their partner.



**7 %** have only primary education, **72 %** have secondary education, **15 %** have technical education, and **6 %** have university education.



The average family burden is of **4** people.

### Patrimony (multiple replies):



Land (**57 %**)



Property (**54 %**)



Vehicles (**13 %**)



Machinery and equipment (**9 %**)



Savings (**4 %**)



### 2.3.1 Formal recognition for marketing



**83 %** of the *cachorreros* surveyed who are **registered** in the Register of Third Natural Persons and the Selection Manuals of Gold of the Ministry of Energy and Mines, according to **DS N° 018-2018-MINEM** are only authorized to market up to **66 grams of gold** per month.



### 2.3.2 Work characteristics



**78 %** of the *cachorreros* have **agreements and direct dealings** with the possessors of the mining concessions and **22 %** with the **supervisors of the workers in the mines**.

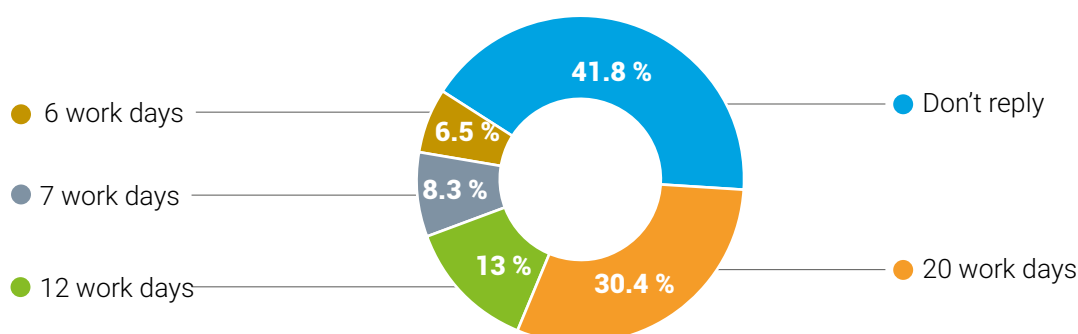


**41 %** have **formalized a contract** with the owner of the mining concession or with the supervisor of the workers in the mine.

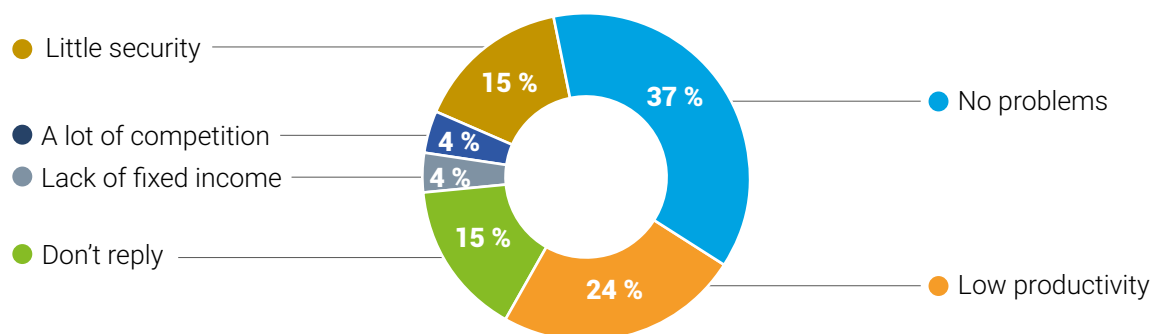


**The average monthly income is USD 423** and social benefits are included in the payment according to what was said in the interviews.

#### NUMBER OF WORK DAYS DEDICATED TO THE OWNER OF THE CONCESSION OR TO THE SUPERVISOR OF THE WORKERS IN THE MINES:



### PROBLEMS IDENTIFIED IN THIS WORK-MODEL FROM THE PERSPECTIVE OF THE CACHORRERO:



### 2.3.3 Commercialization

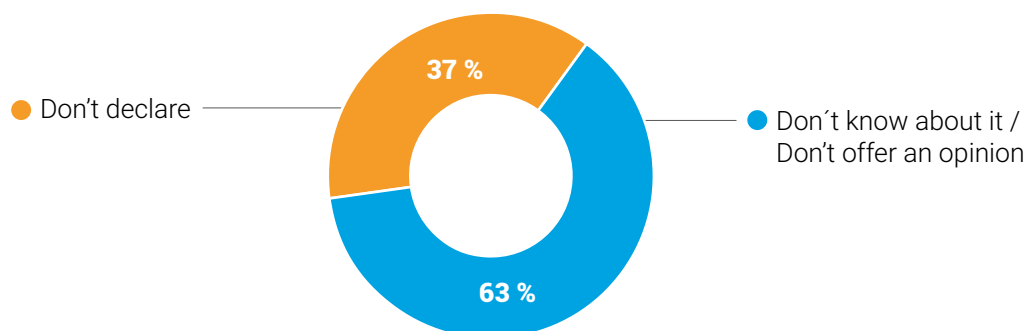


**100 %** of the final product is **re-smelted ore**.

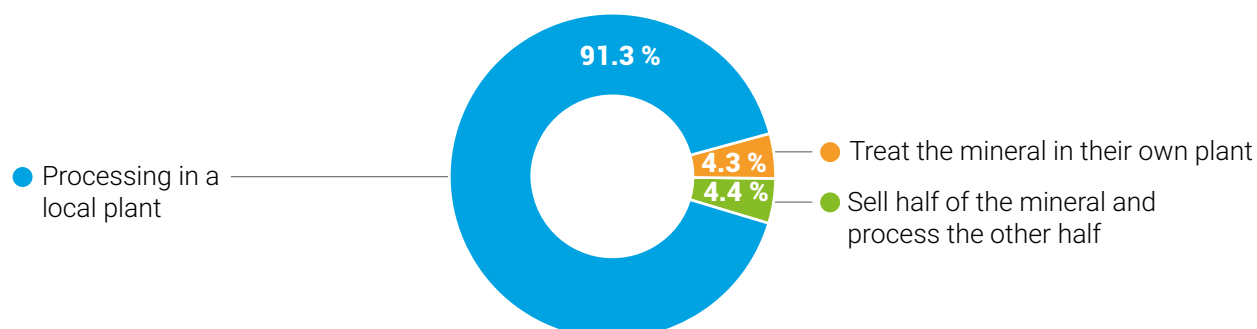


**96 %** do not give receipts.

### MONTHLY TAX DECLARATION:



### PROCESSING THE MINERAL:





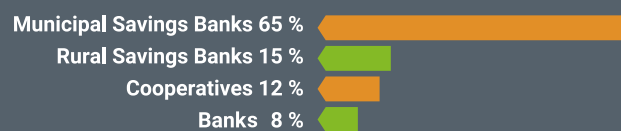
### 2.3.4 Level of banking



**35 %** have one

**65 %** don't have a savings account

#### FINANCIAL ENTITIES WHICH ATTEND



**56.5 %** of the *cachorreros* solicited personal credit and 89% of the petitions were approved.



#### DESTINY OF THE LOAN



Free disposal



Work capital



Machinery and equipment



Average amount of financing or loan  
**S/ 5,196 (USD 1,435).**



**36 %** received the Universal Family Bond.

# THE PURCHASER AS “SUBJECTS OF CREDIT”

These are the intermediaries whom form part of the value-chain. They normally buy the mineral from the artisanal miner at the mine's entrance and then process it in their own plants or they sell it to other plants that will benefit.



## Social data sheet



**80 %** of the collectors are men and **20 %** are women.



Average age **39**.



**13.3 %** have only primary education,  
**53.4 %** secondary education,  
**13.3 %** technical education,  
**20 %** university education.



The average family burden is of **3** people.

## Patrimony (multiple replies):



Land (**40 %**)



Property (**73 %**)



Vehicles (**33 %**)



Machinery and Equipment (**13 %**)

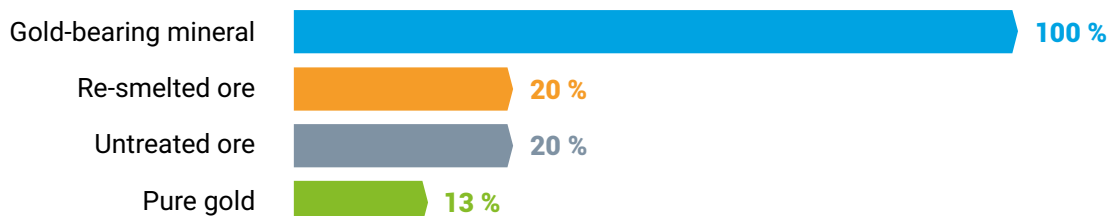


Savings and other goods (**7 %**)



### 2.4.1 Mining commercialization of the purchasers

#### MARKETED PRODUCT:



### 2.4.2 Tax formalities of the purchasers



**73 % of the purchasers are registered as people with a business** and **27 %** as judicial entities.



**93 % don't receive receipts** for buying the mineral.



**80 % don't give a receipt** when selling the mineral.



**80 % don't make tax declarations** to Sunat.



### 2.4.3 Labour formality



The purchasers have an average of **2 labourers** with them.



They don't have any **social benefits**.



**The payment made** to someone working with a collector is **S/ 1,438 (USD 397)**.



### 2.4.4 Banking levels

**87 %** don't use banks in their transactions.



THOSE WHO HAVE SAVINGS ACCOUNTS USE:



**13 %** Banks

**53 %** Municipal Savings Banks

**47 %** Rural Savings Banks

**53 %**

sought loans from banks (13 %)  
and municipal saving banks (40 %).  
100 % of them were approved.

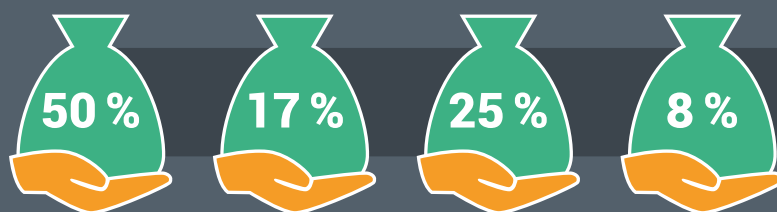


## DESTINY OF THE LOAN:

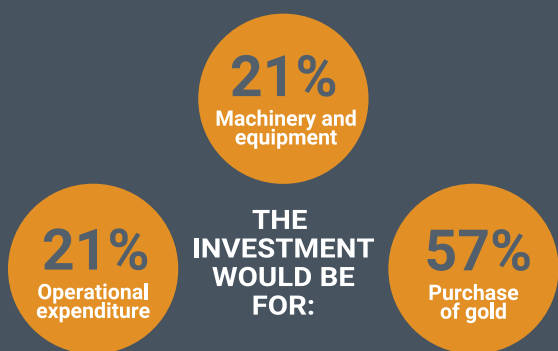


## AMOUNTS FOR FINANCIAL REQUIREMENTS:

Up to 20 thousand dollars    From 20 to 50 thousand dollars    From 50 to 100 thousand dollars    More than 100 thousand dollars



**73 %** require some kind of loan.



Only **27 %** are prepared to invest in clean technology for a sum of between **USD 5,500 – USD 8,200**.



**93.3 %** were not benefitted by REACTIVATE PERU and **46.7 %** received the Universal Family Bond.





Chapter 3:

# **The offer of financial services and products for ASM**

Photo: Solidaridad

The offer of financial services and products was analysed on the basis of the surveys and deep-searching interviews realized with the miners linked to the ASM in both private and public enterprises. Furthermore, statistical information offered by the SBS was checked up to November 2020, and a representative sample of the mines in a risk-centre was analysed.

In accordance with the necessities of the different enterprises the financial system in Peru is divided as follows:



### 3.1. Offers of financial services for the mining sector

Financial Entity	Public	Average amount authorized	Type of credit
Multiple banking	Large and Medium Scale Mining	S/ 3.9 million (1.08 MUSD) per company	Investment projects
CMAC CRAC Edpyme	ASM	S/ 24 thousand 6,600 USD per company	Personal credit MSE credits

Loans are not given to mining projects but as personal loans (credit for personal use) or as MSE credit (without being linked to the ASM).

The ASM enterprises should be attended by MSE banking, but at the present time there hasn't been designed a financial system for this sector.

Financial entities recognize that the ASM mining is informal and represents legal, environmental and economic risks.

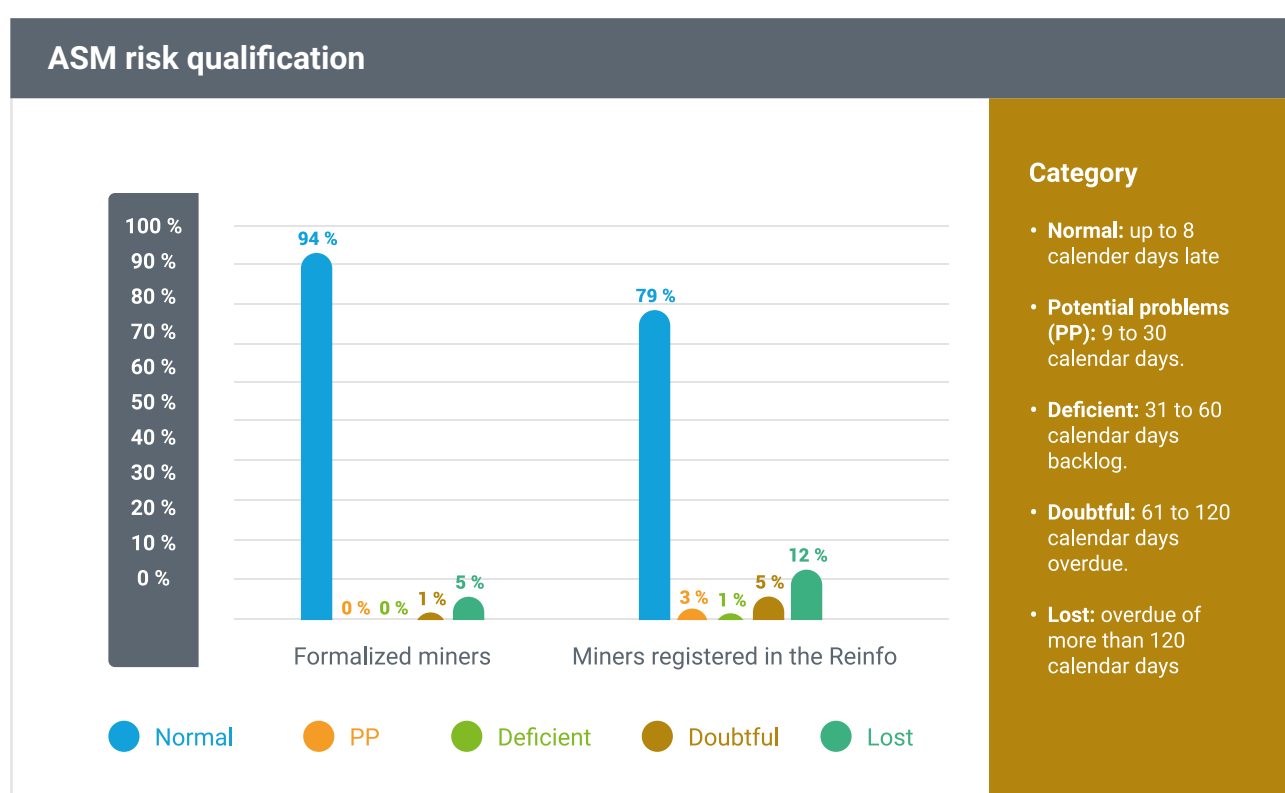


## 3.2 The ASM and its evaluation before a risk-centre

In order to understand **the situation with regards to the payment of miners** an risk-centre was sought to give a portfolio evaluation and the debt situation in the Peruvian financial system of a sample with similar characteristics to the one being examined in this study<sup>5</sup>.

The sample was of **646 miners of the ASM** selected by chance from the Reinfo and the register of miners formalized by the Minem, of whom **345 corresponded to the Arequipa region, 56 to Piura and 245 to Puno**. The search for information was based on the numbers of the DNI and the RUC pertaining to miners linked with the ASM, making use of the information system of the Risk to the Financial System of the SBS, where all the financial entities inform about **the evaluation and credit situation** of their clients.

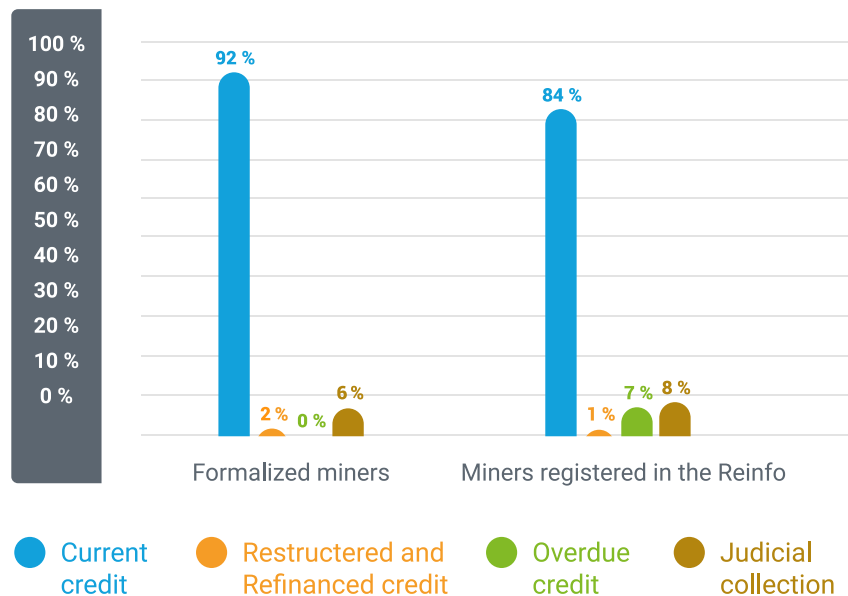
The objective of this information was to know the official figures of the **credits or loans** that ASM miners have in the financial system and to see the relationship that exists with the information from the survey regarding the use of "active financial products" in terms of the number and amount of financing.



The «risk qualification» is used by financial institutions to evaluate MSE, as well as revolving and non-revolving consumer loans that are regulated by Resolution No. SBS 11356-2008.

<sup>5</sup> The forms used in a census and surveys prohibit the use of names and identity documents when seeking information concerning the subject of the survey. For this reason, using the same criteria for the physical sample (the data-base of the Reinfo) and taking into consideration the replies during the survey with respect to how many miners are registered and how many are formalized there came to be obtained another sample, similar to the data-base in the Reinfo.

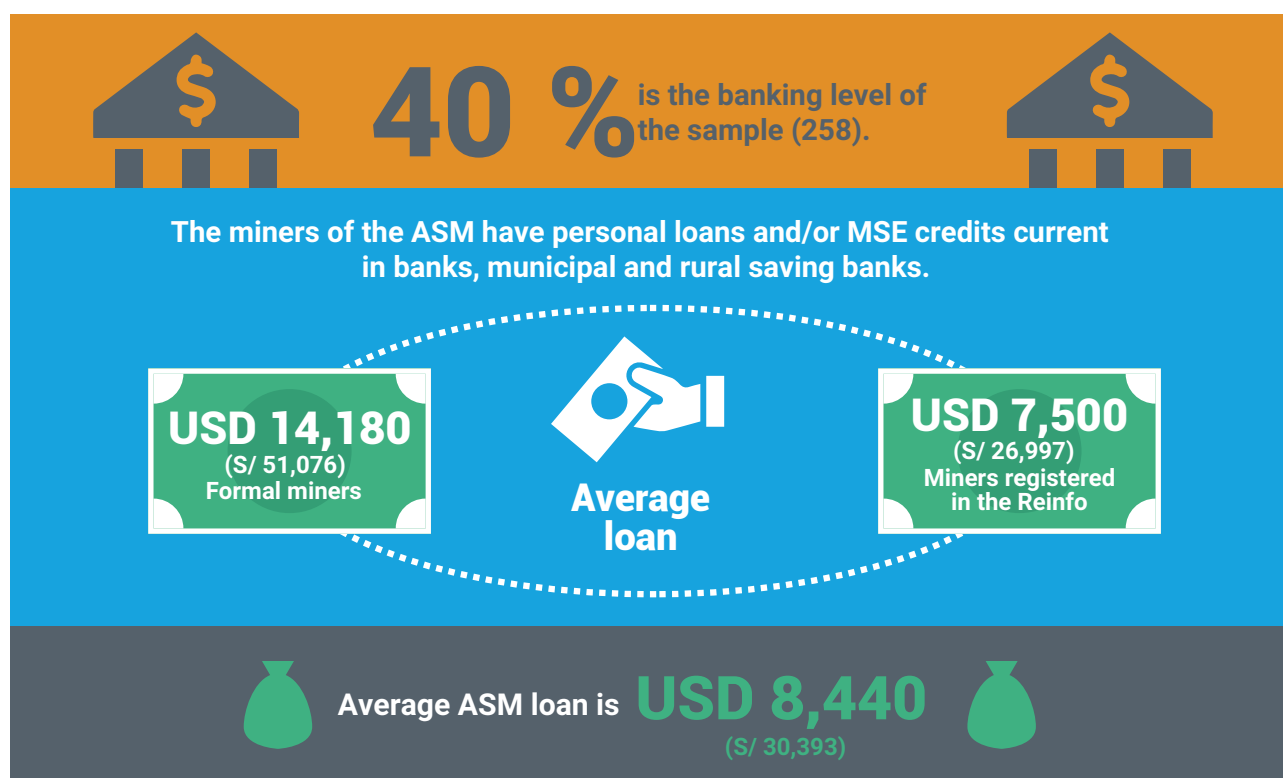
## Credit risk situation of ASM



### Category

- **Current credit:** payments per day.
- **Restructured credit:** rescheduled payment.
- **Refinanced credit:** variations in term or original amount.
- **Overdue credit:** not canceled or amortized.
- **Judicial collection:** recovery in judicial process.

The "portfolio situation" defined by the SBS determines the legal and accountable status of the of the authorized credits to clients and of the financial institutions.





The **qualification and the situation of the portfolio** of the **the formalized miners of the ASM** is better than that of the miners registered in the Reinfo owing to the fact of its better and **longer experience** in the gold-mining sector.

### Risks and limitations that prevent ASM access to the financial system

Risks perceived by FIs in ASM	Legal risk	<ul style="list-style-type: none"> <li>They consider <b>informal mining to be the same as illegal mining</b>.</li> <li>They consider that the financing of an artisanal mining activity is a crime (money laundering, illegal mining and organized crime), according to the normative interpretation of DL N° 1102 and N° 1106.</li> </ul>
	Environmental risk	<ul style="list-style-type: none"> <li>They consider that mining practices <b>do not respect national legislation or international standards for environmental protection</b>.</li> </ul>
	Economic - financial risk	<ul style="list-style-type: none"> <li>High level of <b>informality</b> of ASM impacts the certainty of cash flow.</li> <li>Difficulties to prove the <b>origin of the heritage</b>.</li> </ul>
	Limitations	<ul style="list-style-type: none"> <li><b>Dispersion of mining centers</b> affect the placement of credits, as well as the costs of monitoring and recovery.</li> <li>Limited experience in serving artisanal mining businesses (<b>little specialized human capital</b>, ASM business models).</li> </ul>
ASM limitations to access the financial system	Poor business management	<ul style="list-style-type: none"> <li>Unfulfillment of <b>documentation</b> to apply for a loan.</li> <li>Impediments to prepare a <b>business plan</b> and a credit application.</li> <li>Limited <b>financial education</b>.</li> </ul>
	Perception of rejection	<ul style="list-style-type: none"> <li>Documentary requirements, guarantees and support that justify the formal origin of the accumulated assets.</li> <li>Negative or no <b>credit history</b>.</li> </ul>





Chapter 4:

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# Proposal of financial instruments for ASM

In accordance with the principal discoveries of the study, how the value-chain works and the people involved in the ASM, along with the way in which the financial institutions act in relation to this, a proposal was developed for financial services for this sector.

**Market for ASM credits** is the ensemble of financial institutions which offer products and services (seller) which must satisfy the needs of the ASM enterprises (buyer).

**In order that the market for ASM credits may function it is necessary that the entity seeking credit complies at the very least with the following requirements:**

#### **Mining and environmental formality:**

1. Title of the mining concession, contract for the exploitation of the mine, or the transfer of the mine.
2. Authorization for the use of the land.
3. Approval by Igafom.
4. Permission to start, or re-start, mining activity.

#### **Tax formality:**

1. Have an active RUC and CIU linked to mining activity.
2. Annual declaration of Income Tax or Tax Information for Third Parties.
3. Declaration of weekly production.
4. Three last settlements of mineral sold.

#### **Labour formality:**

Should it be necessary.

## **Characteristics of the subject of ASM credit**

The credit characteristics required by ASM businesses are similar to those of the MSE. According to Supreme Decree No. 013-2013-Produced, which approves the Single Ordered Text of the Law to Promote Productive Development and Business Growth, micro, small and medium-sized enterprises are found in different business categories, depending on their annual sales levels.

Enterprise category	Characteristics	ASM Characteristics
<b>Micro business</b>	The economic production unit which consists of less than 10 people and generates annual sales of less than S/ 660,000 (150 UIT x S/ 4,400) the exchange rate being S/ 3.60 for a USD, equivalent to USD 183,000 per year (USD 15,000 per month).	ASM businesses would be the units of gold-mining production which employs less than 10 workers selling up to S/ 55,000 per month or USD 15,000. This amount is equivalent to <b>255 grams of gold per month</b> at a price of USD 60 per gram in the international market. That is the equivalent of 3.0 kg per year.
<b>Small business</b>	The economic production unit which generates annual sales of less than S/ 7,480,000 ( <b>1,700 UIT x S/ 4,400</b> ), the exchange rate being S/ 3.60, equivalent to USD 2 million per year (USD 173,000 per month).	Small ASM business would be units of gold-production which sell up to USD 173,000 monthly or S/ 623,000 monthly, which is equivalent to <b>2.89 kg of gold per month or 34.68 kg</b> of gold per year.
<b>Medium business</b>	The economic production unit which has more than 100 employees and generates annual sales of less than S/ 10 million. ( <b>2,300 UIT x S/ 4,400</b> ) which at an exchange rate of S/ 3.60 is equivalent to 2 MUSD per year (USD 234,000 per month).	Medium ASM Businesses Would be defined as being a business with an economic production unit for gold-mining which employs more than 100 employees and selling less than S/ 843,000 or USD 234,000 per month. This is the equivalent to <b>3.90 kg of gold per month or 46.8 kg</b> per year.

Adapted from Supreme Decree No. 013-2013-PRODUCE (TUO - Law to Promote Productive Development and Business Growth).

Note: The monthly gold volume values were calculated using the price of gold in March 2021.

## Elements to enable the application of financial instruments

### ▶ **ASM guarantee fund:**

Whose objective is to guarantee the credits authorized by financial institutions which attend to the ASM miners, principally the smallest ones which are in the process of formalization or are registered in the Reinfo. The fund can be public, private, or mixed. In order to activate the fund, you need 15.5 million Peruvian soles or 4.3 MUSD (10 % of total demand). It is also suggested that the Mining Fund acts as a guarantee for the benefit of the financial institutions.

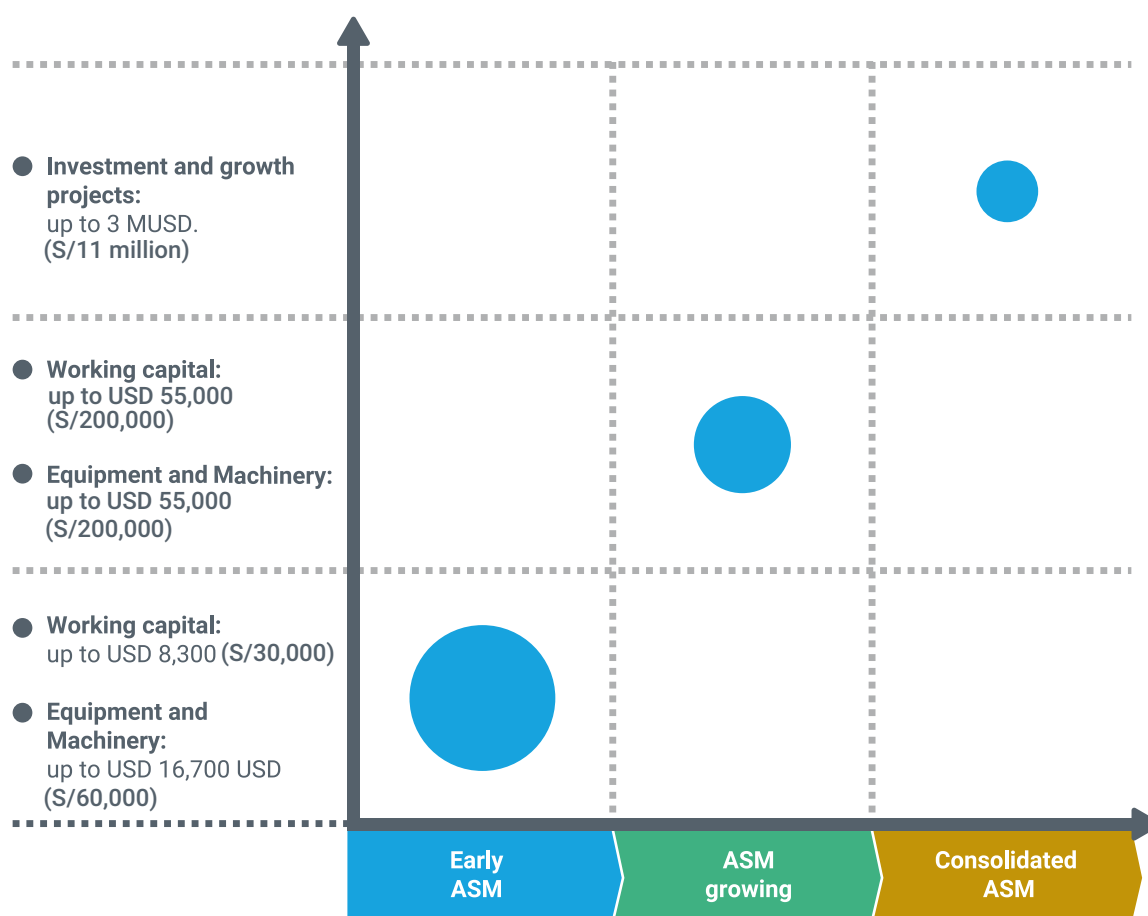
### ▶ **Strategic ASM operator:**

Would enable the articulation of efforts of the public and private sectors with the intention of diminishing the perception of credit-risk of the miner vis-a-vis the financial institutions, beneficent organizations or marketers. It should be financed by the Mining Fund.

### ▶ **An online platform:**

This will permit the interplay of information between institutions such as Minem, Minam, Sunat, Mintra and others, which allows the traceability of gold and contributes to knowing the whereabouts of money and identifying the responsibility of each actor in the chain.

## Segmentation of the ASM according to its financing needs and level of progress in mining formalization



## Proposal of financial instruments for ASM

The financial instruments for ASM miners have been designed on the basis of compliance of the formalities described, so as to provide sufficient confidence to a regulated financial institution.

Product Scope	Early ASM	ASM Growing
Working capital	<p><b>MAPE OPERA 1</b></p> <ul style="list-style-type: none"> <li>• Loan for working capital (includes pallaqueras).</li> <li>• Loan amount: from S/ 10 to 30 thousand (USD 2,700 - 8,300).</li> <li>• Term of validity: set by the FI.</li> <li>• Rate: set by the FI.</li> <li>• Guarantee: Guarantee fund or joint guarantee</li> </ul>	<p><b>CREDIMAPE</b></p> <ul style="list-style-type: none"> <li>• Mining credit card.</li> <li>• Line of credit: from S/ 10 to 80 thousand (USD 2,700 - 22,100).</li> <li>• Term of validity: indefinite.</li> <li>• Rate: set by the FI.</li> <li>• Guarantee: Guarantee fund or joint guarantee.</li> </ul> <p><b>MAPE EXPLORA 1</b></p> <ul style="list-style-type: none"> <li>• Loan or direct financing for mining exploration or prospecting.</li> <li>• Loan amount: from S/ 100 to 200 thousand (USD 27,600 - 55,200).</li> <li>• Term of validity: set by the FI.</li> <li>• Rate: set by the FI.</li> <li>• Guarantee: joint and several guarantee or industrial or commercial pledge.</li> </ul> <p><b>MAPE OPERA 2</b></p> <ul style="list-style-type: none"> <li>• Loan for working capital.</li> <li>• Loan amount: from S/ 30 to 100 thousand (USD 8,300 - 27,600).</li> <li>• Validity period: 12 - 24 months.</li> <li>• Rate: set by the FI.</li> <li>• Guarantee: joint and several guarantee or industrial and/or commercial pledge.</li> </ul>

Product Scope	Early ASM	ASM Growing
Equipment and machinery	<b>MAPE EQUIPADA</b> <ul style="list-style-type: none"> <li>• Loan amount: from S/ 20 to 60 thousand (USD 5,500 - 16,500).</li> <li>• Rate: set by the FI.</li> <li>• Validity period: 12 - 24 months.</li> <li>• Guarantee: ASM Guarantee Fund, joint guarantee, industrial or commercial pledge.</li> </ul>	<b>MAPE EQUIPADA 2</b> <ul style="list-style-type: none"> <li>• Loan amount: from S/ 60 to 200 thousand (USD 16,500 - 55,200).</li> <li>• Validity period: 24 - 48 months.</li> <li>• Rate: set by the FI</li> <li>• Guarantee: joint and several guarantee or industrial or commercial pledge.</li> </ul>
	<b>MAPE CERO MERCURIO</b> <ul style="list-style-type: none"> <li>• Technology transformation loan (green finance).</li> <li>• Loan amount: from S/ 20 to 60 thousand (USD 5,500 - 16,500).</li> <li>• Rate: set by the FI.</li> <li>• Term of validity: set by the FI.</li> <li>• Guarantee: ASM Guarantee Fund, joint guarantee, industrial or commercial pledge.</li> </ul>	<b>MAPE CERO MERCURIO 2</b> <ul style="list-style-type: none"> <li>• Technology transformation loan (green finance).</li> <li>• Loan amount: from S/ 60 to 200 thousand (USD 16,500 - 55,200).</li> <li>• Rate: set by the FI.</li> <li>• Term of validity: set by the FI.</li> <li>• Guarantee: joint and several guarantee or industrial or commercial pledge.</li> </ul>

Product Scope	Consolidated ASM
Investment projects	<b>MAPE EXPLORA 2</b> <ul style="list-style-type: none"> <li>• Loan or direct financing for mineral exploration.</li> <li>• Amount: from S/ 200 to 500 thousand (USD 55,200 - 138,000).</li> <li>• Term of validity: set by the FI.</li> <li>• Rate: set by the FI.</li> <li>• Guarantee: joint and several guarantee or industrial and/or commercial pledge.</li> </ul>
	<b>MAPE ESCALA</b> <ul style="list-style-type: none"> <li>• Direct loan or financing for large projects.</li> <li>• Loan amount: up to S/ 11 million (3 MUSD).</li> <li>• Validity period: 2 - 7 years.</li> <li>• Rate: set by the FI.</li> <li>• Guarantee: mining concession, real estate, equipment, or joint guarantee.</li> </ul>

Note: the range of the proposed interest rate is based on the interest rates reported to SBS of the Municipal Savings Banks as of 2020, which is between 21 and 57 % Annual Effective Rate (equivalent to 1.6 and 3.8 % monthly).

# Conclusions

- 
- ▶ **The 86.7 % of ASM operations are carried out without any reference to the banks** (everything is done with cash-in-hand), whilst **12.9 % operate via financial institutions**; and 0.4 % do it by receiving products to help with their work, the value of which will be discounted from the payment made when the mineral is handed over.
- 
- ▶ The financial system **only attends to 30 % of the ASM**, realized through personal credit. **99 % of the ASM** businesses do not receive the attention of financial entities under the model of MSE banking or banking business.
- 
- ▶ **91.8 % of the ASM did not receive any benefit** from the credit of “Reactiva Perú” and only **31.2 %** benefitted from the “Universal Family Bond” (BFU), a Government subsidy to help cope with the health crisis, whilst **65.8 % of the mineral selectors** received BFU.
- 
- ▶ **There is no financial product to attend to the ASM** in any official financial institution. Nor do the ASM businesses have access to “current account” services owing to their being considered a risk and the internal policy of the official financial entities.
- 
- ▶ **More than 90 % of the official financial institutions that were interviewed have shown interest in financing the ASM sector** in relation to seeing the risk diminish (legal, environmental, reputational), and as the level of formality becomes more evident.
- 
- ▶ The creation of a **guarantee fund** could **encourage/back-up the financial system vis-a-vis the ASM**. It should be noted that no type of limit or ceiling is recommended with respect to the charging of interest since the financial institutions have their own structures of operational costs and logistics which are taken into account when evaluating new credit. **In order to get the fund going S/ 15.5 millions or 4.4 USD millions are needed (10 % of the total of the demand).**
- 
- ▶ Obtaining official **mining permission** constitutes a relevant factor which is causing delay in the process of formalization. According to the survey that was applied **21 % have official rights to their mining concession** and **79 % do not possess any official mining rights** (45 % have no contract, 30 % have an “exploitation contract” and 4 % have an “assignment contract”). This situation constitutes a limiting factor vis-à-vis the financial system since it creates an element of risk with regards to enabling a sustainable flow of cash and at the same time enable the capacity of payment vis-a-vis whatever commitment that has been taken on.
-

- 
- ▶ **94 %** indicate that the material most used is **mercury** and **88 %** improve the mineral by means of a **system of amalgamation**, and following this, **74 %** market the **gold thus treated** as the final product.
- 

- ▶ **73 % of the women mineral sorters don't require financial aid for the *pallaqueo***, their need for credit is of S/ 8,000 or 2,200 USD in order to invest in alternative businesses (shops, restaurants, clothing stores, etc.).
- 

- ▶ The **financial needs of the ASM sector** is for **S/ 1,239 million or 344 million USD**, of which approximately **42.8 %** could be raised by the **financial system** and for the **57.2 %** remaining, according to what the miners themselves indicate, they could use their own patrimony to finance it. On the basis of this necessity of financing it has become clear that 52 % of these requirements involve amounts that are above **S/ 40,000 or 11,110 USD**.
- 

- ▶ Only **1 of every 10 miners ASM are prepared to invest in clean technologies**, thus making it obvious that this **does not constitute an immediate priority** in the face of the need for mining supplies, work capital, machinery and equipment.
- 

- ▶ **The ASM miner is disposed to pay his debts vis-a-vis a financial system and this should signify great importance for the FI.** This has become clear from the results obtained by an analysis-centre with regards to credit risk. Although it is evident that only 40 % of the ASM studied work with FI, even though **more than 82 % of the ASM have a normal qualification and a current debt (daily payments complied with)**. Furthermore, those who have formal status have credit above S/ 50,000 or 13,800 USD, and those who are close to formalized status have nearly S/ 28,000 or 7,700 USD.
- 

- ▶ **The Plan of Access constitutes a joint public-private effort headed by the Minem.** The strategy consists of **generating confidence in the financial sector** with regards to the ASM sector for which we must start by executing a **pilot programme**, selecting those miners who have formal status and from the Integral Register of Mine Formalization (Reinfo), which will constitute part of an initiative of financial inclusiveness with the object of improving their earnings, reduce the use of mercury and permit raising the model to national level. Technical assistance should be bidirectional, as much for ASM as for the financial sector.
- 

- ▶ The **financial products designed** for the ASM are directed in accordance with the **level of development reached** (ASM early in growth and consolidation). So, taking into account the **finality of the product** (capital for work, machinery and equipment, investment projects), the characteristics are different in accordance with evaluation, period, and the requirements needed. The projected demand for credit for investment in mining projects made by the ASM has in mind the financing of **machinery and equipment (76 %), work capital (45 %), transport (7 %), others (14 %)**.
-

# Recommendations

- 
- ▶ Implement for the ASM a **plan of access to the financial system**.
- 
- ▶ Design, develop and implement the **guarantee fund for the ASM** as a back-up vis-a-vis the financial system.
- 
- ▶ Develop a **programme of financial education** for artisanal and small-scale miners and mineral selectors which will enable them to elaborate plans for businesses and to negotiate credit.
- 
- ▶ **Programme of capacitation** with regards to the model of negotiation for the ASM (include internships), directed to functionaries and analysts of credit in the financial entities interested in developing financial instruments for this sector
- 
- ▶ Designing and development of **financial products and services for the ASM** with the technical assistance of the planetGOLD Peru project, Minem, Minam and other institutions.
- 
- ▶ **Implement pilot projects**, with the support of the planetGOLD Peru, to test the products and services of the financial system with mining organizations.
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