ELLA
Evidence and lessons from Latin America

Latin America has experienced substantial growth and transformation in small-scale mining, meaning it is often no longer small or artisanal, but rather characterised by high informality and an increasing potential to generate conflicts.

SMALL-SCALE AND INFORMAL MINING: A BIG PROBLEM FOR LATIN AMERICAN STATES

SUMMARY

Small-scale and informal mining became a major issue during the late 1970s and 1980s in Latin America. Extensive and easy-to-exploit mineral deposits, especially gold and gems, attracted the interest of small miners and offered an option for earning a living in a context of economic downturn. Large settlements of small-scale and informal miners appeared in Bolivia, Brazil, Colombia, Peru and Venezuela. Countries in the region, however, have not been successful in controlling, regulating or even banning small-scale mining. Poor management of mining rights, overlapping with indigenous land rights, along with environmental pollution, emerging social conflicts and the onset of other illegal activities, were part of the usual set of problems faced by states. Given the complexity of the phenomenon, assessments of the nature of the problem were frequently incomplete, as were the set of solutions to address it. This Brief presents the typical approaches used to address small-scale mining in the region, describing their shortcomings, while also identifying some policy measures that have proven to be more effective. It also presents a new kind of approach that is gaining support in the region, one that moves beyond focusing on the small-scale miners themselves, to addressing higher, more formal links in the mining value chain.

SMALL-SCALE MINING: A GLOBAL PROBLEM

Small-scale mining is not a new challenge. For a long time, small-scale mining has been prevalent in countries with rich mineral endowments, involving large populations of poor people that engage at the very end link of an affluent value chain that is controlled by just a few agents. At the end of that chain, gold, diamonds and other gems are sold in sophisticated markets in the world's most economically important cities. But the impacts of small-scale mining stay behind at the local mining sites, where environmental degradation and informality spread, social problems abound and development possibilities remain limited.

Small-scale and informal mining is particularly widespread in some developing countries of Africa, Asia and Latin America. To get a sense of the extent of small-scale mining, the Mining, Minerals and Sustainable Development Project (MMSD) of the International Institute for Environment and Development published data on the number of people in selected countries working in the small-scale mining sector:

Country	Total Number of Workers
Bolivia	72,000
Brazil	10,000
Burkina Faso	100,000 to 200,000
Ecuador	92,000
Ghana	200,000
India	500,000
Mali	200,000
Mozambique	60,000
Peru	30,000
South Africa	10,000
Tanzania	550,000
Zambia	30,000
Zimbabwe	350,000

Source: Hentschel, T., Hruschka, F., Priester, M. 2002. *Global Report on Artisanal & Small-Scale Mining*. International Institute for Environment and Development (IIED), London.

However, these figures are just gross estimates because there are very few places where a census of miners was conducted. This is part of a larger problem of limited research and writing on the subject of small-scale mining. In Latin America, the little literature produced is typically based on reports of specific projects.[1]

Gold and gems are the minerals that are most commonly exploited by small-scale mining. The technology deployed is simple and with limited mechanisation, thus small-scale mining has low barriers to entry and is prone to attracting informal players.

However, the spike in gold prices has facilitated a capitalisation of operations and an increase in their size, so that in some cases, mining is no longer small-scale, though it remains informal.[2] Environmental and health problems are common, especially for gold mining, in which mercury is used to extract gold from the raw mineral. Informal middlemen are the link between miners and formal agents that will commercialise gold and gems. Informality, lack of state presence and the vulnerability of miners often create conditions for abusive working contracts. Health conditions are very poor and in most of the cases, treatment for injuries sustained in work accidents is limited because of lack of health facilities. Usually, there is a high prevalence of respiratory diseases, mercury poisoning and, in the case of African countries, higher levels of HIV/AIDS.

During the 1980s and 1990s, these characteristics attracted the attention of development agencies that tried to help reduce mercury contamination and the vulnerability of miners via technical and organisational skills. UNESCO, UNEP, the World Bank, the Swiss and German Cooperation agencies, and others, invested heavily in projects directed at increasing the capacities of miners. Even when some of these interventions influenced changes in legislation, such as providing small-scale and artisanal mining with a legal status, implementation proved to be quite difficult and little could be advanced in formalising the sector. Thus by the early 2000s, development agencies reduced and halted their funding for small-scale mining interventions.

THE TYPICAL LATIN AMERICAN APPROACH: ONE LINK IN THE VALUE CHAIN

Effective policy design begins with a clear understanding of the problem to address. Small-scale and informal mining has always been analysed as an economic activity related to poverty that involves massive amounts of people. In Latin America, policies have typically been directed at small-scale miners as the main actors, ignoring the other players that capture the largest part of the rent generated in this value chain. In some cases, comprehensive approaches were implemented to deal with the many different problems stemming from small-scale mining, including measures to deal with its legal, social, economic and environmental aspects. Yet these approaches still also largely dealt with only the small-scale miners themselves, not with actors higher-up in the chain.

This section provides an overview to the informal gold value chain in Latin America, before presenting the main

[1] For example, the most updated literature reported by the Communities and Small-Scale Mining Initiative dates back to the early 2000s. Another source of on-the-ground information is through presentations, such as the 2009 Annual CASM Conference and other recent conferences. This Brief reflects a review of this and other literature produced that, although limited in number, is cited throughout.

[2] Informal mining can be defined as mining that operates without complying with legal regulations, such as operating without permits or not following environmental standards or labour regulations.

approaches used in the region, all of which only focused on small-scale miners. It concludes by highlighting two key obstacles - corruption and conflict - that have not been adequately addressed by the focus on small-scale miners alone.

Overview of Latin America's Informal Gold Value Chain

Latin American small-scale and informal mining exploits mainly gold. Although there are regions that also exploit gems, such as in Brazil and Colombia, these are less common. Gold is produced by both formal and informal producers. The former are usually firms of different sizes that comply with all the legal requirements set to extract minerals. However, geology in these regions is so generous that there exist rich and small deposits that, although not economically attractive for formal miners, can be exploited with less efficient techniques. These are the types of deposits that attract small-scale miners.

When areas rich in gold have been identified in Latin America, it has set off a gold rush, with hundreds of miners flocking to the area. Extraction techniques may vary from rudimentary to partially or completely mechanised. But small-scale miners are not the only ones interested in the new find. With them, other actors appear, such as the middlemen that procure mining inputs like explosives, drills and mercury, as well as the water and food needed to feed the crew. All of these actors are usually immersed in the black economy.[3]

However, some of them are connected to formal companies that neglect to report on this part of their businesses. For example, goods like explosives or mercury and cyanide are usually controlled inputs that can only be purchased by companies that are registered and comply with mining regulations. Furthermore, most of these areas have no infrastructure so these formal firms construct roads to provide access to them. These formal firms send their purchasing agents regularly to pick up the shipments of extracted mineral that they will process in their plants. The transactions are paid in cash, but then big discounts are made for the previously procured inputs.[4]

In those cases where small-scale and informal miners process their own minerals with mercury or cyanide, purchasing agents connected to formal gold exporters or mining firms buy the refogated and carbon-loaded gold. These formal firms underreport these transactions and launder the revenues, protected by legislation loopholes, such as norms that allow the free commercialisation of gold and the waiver of reporting its origins.

As mentioned earlier, increases in gold prices have allowed some small-scale miners in the last five years to scale-up their operations, even exceeding the threshold of what is considered to be 'small-scale', though they still remain informal. Though not all miners are enjoying the bonanza, because increasing the scale of production requires major investments, outside investors, even foreign ones, are financing scale increases of some formerly small-scale operations.[5]

The Focus on One Link in the Chain

During the 1980s, poor economic performance in almost all Latin American countries reduced employment opportunities in traditional sectors such as agriculture and forestry. Small-scale mining became a survival activity for displaced rural workers. Conflicts often arose, such as between informal miners and formal companies over the illegal exploitation of areas granted to the large firms.

Small-scale mining quickly captured the attention of governments in the region, but their focus was on the administration of mining rights. In the 1990s, major economic reforms included the modernisation of mining codes to attract foreign capital and develop large deposits. Although small-scale mining was growing informally, legislation did not recognise it as an alternative form of mineral exploitation. The legal void contributed even further to its informality, thereby aggravating the problem.

[3] Bannock Consulting. 2011. *Vulnerability of Artisanal and Small Scale Mining to Commodity Price Fluctuation: Preface*. Bannock Consulting, London.

[4] United Nations Environmental Programme (UNEP). 2011. Analysis for Stakeholders on Formalization in the Artisanal and Small-scale Gold Mining Sector Based on Experiences in Latin America, Africa, and Asia: Peru Case Study. UNEP, Geneva. UNEP has published similar case studies on Ecuador and 3 other countries, as part of a broader work programme focusing on artisanal and small-scale gold mining. These case study reports as well as other research can be found on the initiative's website.

[5] According to the Peruvian Ministry of Environment, by the end of 2009, there were 14 dredges and 140 dredge boats working in Madre de Dios, a region in Peru's part of the Amazon Rainforest. The daily extraction rate was calculated at around 1,000 tonnes, almost five times the extraction limit for artisanal operations. See: Alvarez, J. *et al.* 2011. *Minería Aurífera de Madre de Dios y Contaminación de Mercurio: una Bomba de Tiempo (Gold Mining in Madre de Dios and Mercury Pollution: A Time Bomb)*. Institute for Research on the Peruvian Amazon (IIAP) and Ministry of Environment, Lima.

In contrast to governments' typical approach, which only focused on legal and administrative reforms, international agencies began to design interventions to improve the technical capacities and health conditions of miners. The Swiss Agency for Development and Cooperation (SDC), for example, began to support programmes to deal with the increase in illegal activities and conflicts, the precarious working and health conditions of miners, and the environmental pollution caused by the massive use of mercury (see Text Box 1 describing one of these programmes).

SDC implemented interventions in Bolivia, Ecuador and Peru. In Bolivia, the MEDMIN (Environment Mining and Industry) Project evolved from an environmental integrated management programme for small mining, to a foundation providing technical assistance and environmental advisory services for different productive sectors, all within the framework of integral management of natural resources and sustainable development. In Peru, the GAMA Project was launched in the late 1990s. The project aimed to control the environmental impact of small-scale mining, which requires not only technical solutions but an integral, community-orientated approach, addressing a combination of social, cultural, organisational, health-related, economic and legal issues (see Text Box 1).

In the best of cases, public policy went along with the international agencies' initiatives to adopt more comprehensive approaches. Some changes in legislation were made to promote the formalisation of small-scale miners. In some countries, like Brazil, Colombia and Peru, technical assistance programmes were launched to help improve efficiency and promote the economic sustainability of small mines. Efforts focused on promoting mining associations and facilitating productive units that could reach a minimum scale to achieve economic feasibility, foster growth and comply with environmental regulations. In Bolivia, for example, miners that once worked for large mining companies maintained their affiliation to their unions and began extracting minerals on a small-scale under contract from state-owned mines.

Brazil presents the best example of this comprehensive approach. With the leadership of the Centre for Mineral Technology (CETEM), small-scale miners received technical assistance to increase their productivity and find solutions to mitigate environmental impacts. Even in countries with little tradition of cooperatives of small-scale miners, like Chile, the government set purchasing schemes and provided basic infrastructure to process minerals. In this way, the government intervenes in the mining phase and avoids the environmental impacts that small-scale miners may otherwise cause.

At present, large numbers of small-scale miners still operate informally, following no environmental standards,[6] although some government interventions have served to set the foundation for some groups of miners to transit into formality. The key condition for success seems to have been working in associative schemes. It has been easier in countries like

TEXT BOX 1: SPOTLIGHT ON A COMPREHENSIVE APPROACH

The Swiss Agency for Development and Cooperation (SDC) implemented an influential intervention, providing technical assistance to Andean governments to better regulate artisanal mining and to ameliorate its environmental impact. In Peru, the GAMA project achieved significant results in the southern part of the country.

The project implemented activities in four thematic areas:

Techno-environmental: testing working systems and efficient technologies for artisanal mining

Health-environmental: improving the working conditions of the artisanal miners

Socio-economic and organisational: training members of institutions and community and productive organisations to actively participate in improving environmental issues and quality of life

Legal-administrative: developing regulatory proposals based on findings from the project's pilot experiences

The project's main achievements were designing a legal framework for small-scale and artisanal mining (Law No. 27651), improving organisation of the small-scale and artisanal mining sector and promoting the use of mercury retorts.

Source: Hruschka, F. 2001. *El Proyecto GAMA - Una Propuesta Integral para la Minería Artesanal Del Perú (The GAMA Project - An Integrated Proposal for the Artisanal Mining Industry)*. GAMA Project, Lima.

[6] A recent study reports that Colombia has the highest level of mercury contamination worldwide, and that in the period 2008-2010, informal mining took place in 44% of the country's municipalities. See: FEDESARROLLO. 2012. *Impacto Socio-económico de la Minería en Colombia (Socio-economic Impact of Mining in Colombia)*. FEDESARROLLO, Bogotá.

Bolivia, where miners maintained their union association or organised themselves in cooperative structures, with the government giving them access to exploiting state-owned mines. COMIBOL, the state mining firm, signed 467 contracts with organised miners to exploit sections of the Colquiri mine, for example.

In Peru, a few groups have managed to organise themselves, but have actually done so by creating firms.[7] AURELSA, MACDESA, *Cuatro Horas* and *Nueva Esperanza* are private firms formed by small-scale miners that received technical and management training from different development agencies. All these firms run feasible operations, both economically and technically. Although they can be considered as solidarity firms, in which their shareholders are small-scale miners, operations are run professionally by qualified technical staff, allowing these firms to obtain profits and target niche markets. Some of them have even obtained the Fairtrade and Fairmined Gold certification, and the others are on their way to obtaining it.

Regulations and legal frameworks often even further complicate the process of scaling-up. In 2010, small-scale and artisanal mining in Peru was regulated by 21 different pieces of legislation, and the formalisation of a small-scale artisanal operation had to comply with 22 different steps.[8] However, there is little knowledge of these requirements amongst beneficiaries, with small-scale miners often operating under the misconception that getting a mining permit is enough. Moreover, in most cases, mining permits are already granted to third parties, so miners are supposed to sign working agreements with the owners if they want to become formal. Even if miners reach such an agreement, the rest of the regulations must also be met. Full compliance thus requires a production scale that allows for meeting the high costs of formalisation.[9] For that to occur, small-scale miners must organise themselves to work together as a production unit, a difficult, though not impossible task, as the previous examples show.

What all of the previous experiences have in common is that they focus on the lowest link in the value chain. Intervention coverage was limited given the massive numbers of miners involved. Productivity boosts as a result of technical assistance may have improved miners' earnings, but it was not enough to cover the overall formalisation costs nor did it push them higher up the value chain. In some countries, governments have tried to intervene in the commercialisation link, that involve the largest rent generation link and a smaller number of agents, via the creation of state-owned enterprises to purchase the gold extracted by the miners, such as the *Empresa Boliviana del Oro* (Bolivian Gold Company) in Bolivia and *Activos Mineros S.A.C.* in Peru, or through existing public organisations, such as the *Banco Central de Venezuela* (Central Bank of Venezuela). However, given the great informality in this kind of mining there is no guarantee that these public organisations can collect an important share of the gold produced, especially if no fiscal intelligence is put in place to identify the domestic transactions in gold purchase and exports.

The limited success of this approach in regulating small-scale mining is forcing some countries to ban what they term 'illegal' or 'criminal' mining, meaning mining that operates in areas where the government has put some kind of limit on extractive industry. For example, Peru has just passed legislation differentiating illegal and informal gold mining and prohibiting the former under the Penal Code.[10] Additional legal decrees cover the confiscation of equipment and inputs used in illegal mining as well as the illegality of their suppliers. Colombia is following the example of Peru, with Colombian President Santos recently making an announcement that he will proceed with the same approach.[11] Moreover, under the Treaty of Amazonian Cooperation, the 8 South American countries with territory in the Amazon Rainforest have recently agreed to collaborate in eradicating illegal mining.[12]

[7] Peruvian legislation permits firms, cooperatives or individual to exploit mineral resources.
[8] Comisión Técnica Multisectorial (Multi-sector Technical Commission). 2011. *Plan Nacional para la Formalización de la Minería Artesanal (National Plan for the Formalisation of Artisanal Mining)*. Comisión Técnica Multisectorial, Decreto Supremo No. 045-2010-PCM., Lima
[9] United Nations Environmental Programme (UNEP). 2012. Analysis for Stakeholders on Formalization in the Artisanal and Small-scale Gold Mining Sector Based on Experiences in Ecuador, Mongolia, Peru, Tanzania and Uganda: A Compendium of Case Studies. UNEP, Geneva.
[10] Legal Decree No. 1100 defined and prohibited illegal mining throughout the country. See: Perú21. 16 March 2012. *Minería Ilegal es Desde Hoy un Delito (Beginning Today Illegal Mining Becomes a Crime)*. Perú21 Newspaper, published online.
[11] ElTiempo.com. 31 October 2012. *La Minería Ilegal Será Tipificada Como Delito (Illegal Mining Will be Classified as a Crime)* . El Tiempo Newspaper, published online.
[12] Los Tiempos. 26 November 2012. *Países Amazónicos Pactan Erradicar Minería Ilegal (Amazonian Countries Agree to End Illegal Mining)*. Los Tiempos Newspaper, published online.

Corruption Constrains Latin America's Approach

Small-scale and informal mining is part of a huge business that involves middlemen and dealers that move millions of dollars. This more formal part of the value chain is the one that controls the rent of the business and responds to clear economic incentives. This is also the less crowded link in the chain, with much fewer people involved. The question, then, is why states continue to design policies aimed at regulating thousands of people that move in informality when these policies have proven to have limited effects, instead of focusing on the few actors that govern the chain? The answer is often corruption.

In Peru, for example, gold production through informal mining is valued at around US$ 2.9 billion. Although the number of people engaged in informal gold mining has increased dramatically, most of them are actually no longer small-scale producers, though their activities remain informal or even illegal. The best examples come from the Amazon region of Madre de Dios, where informal miners have operations valued at hundreds of thousands of dollars. These miners bribe local government officials, police officers and anyone aiming to limit or control their activities.[13] Corruption seems to reach up to the national policymaker level as well. Recently, a huge corruption scandal broke when it was brought to light that a major representative of the Ministry of Energy and Mining was also one of the biggest informal gold dealers in Madre de Dios (see Text Box 2). Finally, some evidence is beginning to emerge about the mechanisms of money laundering associated with informal gold mining,[14] which involves international transactions as well as gold smuggling and tax fraud (see Text Box 2).This kind of corruption makes it easy to understand why more comprehensive policies dealing with the higher levels of the value chain have so far not been preferred by governments.

TEXT BOX 2: CORRUPTION AND SMALL-SCALE GOLD MINING IN PERU AND COLOMBIA

Corruption is probably present in nearly every location where informal and small-scale mining exist. At the local level, government officials receive bribes in exchange for not enforcing property rights or environmental regulations. At the national level, public officials that are supposed to design public policies may be less inclined to implement more comprehensive approaches since they themselves stand to lose.

One notable corruption scandal in Peru illustrates this latter point. In 2012, the Peruvian national press broke a story about Luis Zavaleta, the General Director of Hydrocarbons in Peru's Ministry of Energy and Mines. It turns out that he was the owner of the biggest gold-exporting company in the country and that the company had offices in areas of the country where gold mining is banned. Interestingly, he admitted to being the owner of the company but said he did not perceive any conflict of interests. The day after the story broke, Zavaleta resigned.

Another example comes from Colombia. A captured paramilitary chief revealed in hearings held at a Federal Court in Washington, DC how drug smugglers launder illegal money in Colombia. Gold is bought in Panama and is carried to Colombia where it is distributed to local Colombian mayors. These authorities send the gold to the Central Bank and report it as local production. Then they receive the corresponding royalties and keep most of the money for themselves. The US Office of Foreign Assets Control is trying to assess what percentage of the 1.57 million ounces of gold produced by Colombia is accounted for in these fictitious transactions.

Sources: RPP. 30 March 2012. *Funcionario del MINEM es Dueño de Exportadora de Oro en Zona Ilegal (Public Official of the Peruvian Ministry of Energy and Mines Is Owner of a Gold Export Company in an Illegal Zone)*. RPP Noticias, published online.; Offnews.info. 2 August 2010. *Colombia - Con Oro Lavan Dinero y se Roban Regalías, Reveló el Ex Jefe 'Para' Salvatore Mancuso (Colombia – Former Para-military Chief Reveals that Money is Laundered with Gold and Royalties are Getting Stolen)*. Offnews, Published online.

[13] A recent issue of the magazine *Poder360* reports on the power exerted by a family controlling a large part of the informal economy of Huepetuhe, the major centre of gold production in the Amazon Rainforest region of Madre de Dios in Peru. See: León, R. February 2012. *'Goya', la Reina del Oro en Madre de Dios (Goya, the Queen of Gold in Madre de Dios)*. Poder360, published online.

[14] The South American Group for Financial Action (GAFISUD) has recently prepared a report describing the most common methods of asset laundering in South America, outlining the laundering of money associated with the exploitation and commercialisation of illegal gold. See: GAFISUD. 2012. *Compendio de Tipologías (Compendium of Typologies)*. GAFISUD, Quito.

Poor oversight of small-scale and informal mining often leads to the appearance of illegal activities and induces conflict. Deposits are usually located in remote areas with limited or no state presence. A gold or gem rush that attracts hundreds of people often creates chaos, and fighting among miners to gain control of mines is frequently reported. For example, earlier this year, Venezuela's National Guard *(Guardia Nacional)* took control of the *Bulla Nueva* mine, where five people died and four were injured. In the same state of Bolivar, two gangs - *Banda de los 24* (Gang of 24) and *Marcopolo de Ciudad Bolívar* (Marcopolo of Bolívar City) - are engaging in armed warfare over control of a mine.[15]

The fight to control territories also involves other actors such as large-scale mining firms that are granted mining rights by governments, thereby forcing local communities and small-scale and informal miners to relocate.[16] Conflicts also arise between indigenous peoples, large-scale mining companies and informal miners. Often indigenous peoples' territories are protected areas, but mining authorities have granted mining permits for those areas anyway. Though all sides may claim rights over the territory, there are no clear arbitration mechanisms in place to manage the conflict.

Finally, illegal activities associated with small-scale and informal mining often appear due to lack of government oversight. Inputs, mining goods and gold are sold on the black market. Illegal groups such as guerrilla groups and drug smugglers target gold producing areas to gain assets for money laundering and extortion (see Text Box 3). In general, remote areas with little state presence and weak governments with limited enforcement capabilities are unable to control conflicts and to protect affected populations.

TEXT BOX 3: GUAMACÓ: SMALL-SCALE MINING AND VIOLENCE

Guamocó, located in the department of Bolivar in northern Colombia, is one of the areas of the country hardest hit by illegal armed groups trying to control territory for the extraction and commercialisation of gold. In 1997, a paramilitary group attacked the municipality of Rio Sucio (Dirty River) and murdered 30 people. In an act of brutality, mining leader Juan Camacho Herrera was decapitated and later impaled facing Guamacó. The paramilitaries told the inhabitants they were coming for the mines and that they would hand them out for rational exploitation. From 1997 to 2009, 36,000 people were displaced and more than 700 disappeared. Though there has been increasing international awareness about this systematic violation of human rights, the situation continues. In 2011, more than 40 murders were reported in the mining area in southern Bolivar.

Source: Peace Brigades International - Colombia. November 2011. Guamocó: Oro Para la Vida y No Para la Muerte (Guamocó: Gold for Life and Not for Death). In: Minería en Colombia: ¿A Qué Precio? (Mining in Colombia: At What Price?). *Boletín Informativo* 18 (11) 25-28.

A NEW APPROACH UNFOLDS: INTERVENING IN MULTIPLE LINKS OF THE CHAIN

After more than two decades of development agencies' programmes, there is now a growing consensus in Latin America that little will be achieved with isolated interventions in the small-scale miners' link of the gold value chain. The commercialisation end is beginning to catch the attention of governments, who are realising that they do have tools to monitor activities at this part of the chain. Going after a small number of formal firms is indeed probably easier than chasing hundreds of thousands of atomised small-scale miners that work outside the law.

Improving oversight of mining and taxes can easily identify the unreported transactions of formal gold mining and exporting firms.[17] In almost all Latin American countries, for example, mining firms have to report on their production, purchase of inputs, investments and other information related to their operations. Analysing the firms' reported information can show inconsistencies by those involved in informal mining chains. Recently in Peru, one newspaper identified a major mercury importer and found out that this firm was also registered as a gold supplier in the Ministry of Energy and Mines.[18]

[15] Revista Latinominería. 16 Janury 2012. *Venezuela: Enfrentamiento por Control de Mina en Estado de Bolívar (Venezuela: Showdown for Control of a Mine in Bolivar State)*.Observatorio de Conflictos Mineros de América Latina (Latin American Observatory of Mining Conflicts), online publication.
[16] See: Chaparro, E. 2003. *Small Scale Mining: a New Entrepreneurial Approach*. Natural Resources and Infrastructure Series, no. 9. Economic Council for Latin America and the Caribbean, Santiago de Chile.
[17] Chanduví, E. 2011. *Peruvian Government Targets Informal Mining*, NotiSur, Latin America Data Base.
[18] El Comercio . 30 de agosto de 2012. *Capos del Mercurio Importan y Abastecen a Minería Ilegal en Puno y Madre de Dios (Mercury Mafias Import and Supply to Illegal Mining in Puno and Madre de Dios)*. El Comercio, published online.

However, authorities are still somewhat reluctant to initiate this kind of oversight, with some countries proposing partial measures such as intervening in the commercialisation of minerals. In Chile, the National Mining Corporation (*Empresa Nacional de Minería* - ENAMI) purchases minerals from the small miners, then processes them to add value, and works to prevent the commercialisation of minerals in the black market. In Venezuela, all gold produced in the country is required to be sold back to the state. In Bolivia, state-owned mines subcontract out to small miners and purchase gold that feeds the country's international reserves account. The effectiveness of these policies seems to vary depending on the government's ability to exert oversight and control.

There are also private initiatives to promote the commercialisation of gold in Fair Trade markets. Under the Fairtrade and Fairmined certification system, mining organisations which do not use any chemicals and have high environmental standards can have their products labelled as Fairtrade and Fairmined ecological gold. This means the miners can earn an additional ecological premium when they recover gold through gravity only, without using mercury or cyanide. Currently, there are three projects working under this scheme in Latin America: Cotapata Mining Cooperative in Bolivia, *Oro Verde* (Green Gold) in Colombia and SOTRAMI in Peru. To acquire the Fairtrade and Fairmined certifications, mining organisations must be accredited under strict criteria such as respect for the environment; recognising the rights of women miners; prohibiting child labour in their operations; and implementing safe working practices including the management of toxic chemicals, such as mercury and cyanide, used in the gold recovery process.[19]

These private initiatives, though, are impossible to implement unless the miners are organised and have technical capabilities to run efficient operations. Although limited in numbers, these successful initiatives have been built on the experience of previous international agencies' interventions.

Finally, there have been some initiatives specifically aimed at preventing conflicts between mining firms and small-scale miners that also involve subcontracting and commercialisation. In Peru, *Poderosa*, a medium-scale mining firm operating in the northern region of La Libertad, issues procuring contracts with small-scale miners. Miners exploit the minerals then hand them over to *Poderosa* to process in its processing plant. The mine pays 50% against the delivery and 50% two weeks later. *Poderosa* also pays for the formalisation permits of the miners. At present, *Poderosa* is working directly with 157 miners. Environmental improvements include preventing the use of more than 35 tonnes of mercury. In recognition of its success, in 2011 the Peruvian Mining Association awarded *Poderosa* its Sustainable Development Award.

All of the examples above show alternatives that could be replicated in other locations. What they have in common is demonstrating how small miners must organise themselves in productive units to gain bargaining power, and how they need technical assistance throughout the implementation phase of the project. Organisation with the objective of representation as a homogeneous group is important, but the negotiation about access to mineral resources and the improvement of working conditions must be in the hands of the direct actors. In that sense, the methodology of development agencies that develop projects that have a focus on increasing the capabilities of miners have shown some compelling results. Governments in the region are slowly coming to realise that if they want to solve the many problems associated with small-scale informal mining, they must invest heavily in miners, yet at the same time design policies that control the higher links in the gold value chain.

[19] For more information about the certification, see the Fairtrade and Fairmined Website.

ENABLING FACTORS IN ADDRESSING THE PROBLEMS OF SMALL-SCALE MINING IN LATIN AMERICA

This Brief focused on the evolving approaches of governments and development aid agencies to deal with the problems related to small-scale mining. What are some of the contextual factors that have been relevant?

The spread of informal mining and the large, visible environmental impacts it causes are bringing into sharp relief the fact that small-scale mining is overriding the capacities of national governments to regulate and control it. In particular, the limitations in governments' approaches underscore the weak institutionality found in the Latin America region.

Given this increased awareness, international aid agencies are again including small-scale and informal mining in their agendas. However, they are conscious that previous interventions did not succeed in eliminating informality and mitigating environmental impacts. Thus, new intervention approaches are required.

First, some aid agencies, like the Inter-American Development Bank (IDB), are beginning to stress the role of private actors in this activity. By means of the Multilateral Fund of Investment, the IDB is studying the possibility of providing small-scale miners with loans to formalise their mining activities. This position stresses the idea that small-scale mining is an economic activity that miners invest in.

Second, mass media is beginning to play a crucial role in exposing the major players in small-scale and informal mining. This is helping to expose corruption and is forcing authorities to take action to control the actors that participate in the upper links in the value chain.

Similarly, advocacy groups and environmental authorities are beginning to play an active role in this policy area. More stringent environmental regulations applied to all economic activities have spill-over effects on small-scale mining, given it tends to take place in areas with great biodiversity. For this reason, environmental authorities are reaching out to their counterparts in the mining ministries to coordinate policy measures, and to finally make an effort to address this massive but often neglected problem.

LESSONS LEARNED

1 For a long time, Latin American states have designed policies to deal with small-scale and informal mining by focusing on oversight and regulation of the individual miners themselves. These policies seldom consider other actors involved in the gold value chain that may be easier to track and monitor. The policy outcomes of these interventions have been limited, but success stories have association schemes as a common factor.

2 Most successful programmes to improve the environmental performance of this sector involved an integral approach that combined actions in the technical, social, economic, legal and organisational dimensions.

3 Latin American governments have not dealt head-on with the corruption engrained in the small-scale mining sector that is pervasive at both the local and national level. However, the media is now beginning to play a key role in exposing corruption and pressuring governments to act.

4 Recent initiatives to intervene in the gold value chain are focusing on the commercialisation link because it is where most of the rent is generated and where opportunities exist to divert informal transactions to illegal ones. Although not common on a large-scale, cooperative schemes between formal mining firms and small-scale miners have also proved to be an effective way to prevent conflicts, especially those associated with access to mineral resources. The supervising role of firms and the technical assistance they provide helps miners to improve their environmental impact.

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