A NETWORK TO COUNTER NETWORKS
Organized Crime and Illegally Mined Gold in Latin America

April 2016
Acknowledgments

This report was written by Livia Wagner for the Global Initiative against Transnational Organized Crime. Livia works as the Private Sector Advisor at the Global Initiative and is an international expert on illegal gold mining. Before joining the Global Initiative she worked as Private Sector Focal Point for the United Nations Global Initiative to Fight Human Trafficking (UN.GIFT). She has also worked as a civil servant for the Austrian Foreign Ministry in the department of development cooperation, specialising on African countries. She has written several publications and is a member of the Austrian Association for Sociology.

Livia would like to thank Tuesday Reitano, Head of the Global Initiative Secretariat and Chief Editor of all the Global Initiative publications, for her outstanding guidance, and Nigel Saperia for all his work in organizing the material, providing the data in the appendix, rewriting and editing the report.

The Global Initiative wishes to acknowledge the considerable assistance of Verité for originally shining the light on the link between illegal gold mining and organized crime in Latin America, and for sharing their expertise, especially on Peru, Colombia, and human trafficking in illegal gold mining. The Global Initiative would also like to thank all of the experts who generously shared their experience and valuable insight and all those who fight for the protection of human and labour rights and the environment.

This report was funded by the Government of Switzerland, for which the Global Initiative would like to offer its appreciation.

The analysis, findings, and recommendations set out in this report are those of the Global Initiative and do not necessarily reflect the official opinion of the Government of Switzerland or others consulted for this report.
Executive Summary

In the first decade of the 21st century, two trends intersected: soaring gold prices greatly increased the profitability of gold mining, whilst the US led “War on Drugs”, notably in Colombia and Mexico (‘Plan Colombia’ and the ‘Mérida Initiative’), sharply reduced the profitability of drug trafficking from Latin America to the USA. As a result, there were considerable incentives for the criminal groups that control the drug trade to move into gold mining, and the fragmented nature of artisanal gold mining in Latin America greatly facilitated their entry. These groups were quick to realise that taking control of large swaths of land remote from government attention and dominating the enterprises that mined that land would enable them to generate larger profit margins with much lower risk.

The change of strategy by the drug trafficking groups proved so successful that in Peru and Colombia – the largest cocaine producers in the world – the value of illegal gold exports now exceeds the value of cocaine exports. Even though global gold prices have gradually decreased in recent years, organized criminal groups have continued to drive the expansion of illegal gold mining. The region is now unique in the high percentage of gold that is mined illegally; about 28% of gold mined in Peru, 30% of gold mined in Bolivia, 77% of gold mined in Ecuador, 80% of gold mined in Colombia and 80-90% of Venezuelan gold is produced illegally. Hundreds of thousands across Latin America earn their livelihood as artisanal and small-scale gold miners. ASM is a mechanism of poverty alleviation in developing countries; the great majority in the regions covered in this report work informally, which does not imply they are criminals, but it leaves them very vulnerable to labour exploitation and human trafficking by organized crime.

The Global Initiative Against Transnational Organized Crime carried out desk and field research in Latin America between February and December 2015 in order to investigate links between organized crime and illegal gold mining and to explore the manner in which the nexus between organized crime and illegal gold mining funds criminal and terrorist groups, facilitates money laundering and corruption, forcibly displaces local populations, speeds environmental destruction and creates situations of labour exploitation, labour trafficking, and sex trafficking . Desk research focused on Bolivia, Brazil, Colombia, Ecuador, Guyana, Mexico, Nicaragua, Peru and Venezuela. Field research was also conducted in Colombia and Peru. Field researchers visited illegal gold mining areas and interviewed local and international experts, mine workers and members of local populations affected by illegal gold mining.

Extent of the nexus between organized crime and illegally mined gold

The research findings amply demonstrate the many links between gold mined illegally and organized crime and give considerable detail on the actors involved, the manner in which they have infiltrated the gold production sectors, and how they launder not only the production from illegal mines but also drug moneys. The sums involved are phenomenal:

- Colombian Government authorities estimate that the FARC obtains 20% of its funding through illegal gold mining and the 34th front of the FARC alone earns over USD 1 million per month through extortions of illegal miners;
- the tax authority of Peru estimates that 35 tons of contraband gold worth over USD 1 billion were transhipped via Lima to the USA and Switzerland between February and October of 2014;
- since 2006, about 68 tons of gold illegally extracted from the Amazon and northern border areas have been smuggled out of Bolivia;
- “illegal mining is the easiest and most profitable way to launder money in the history of Colombian drug trafficking” (according to a report by Colombia’s Institute for the Study of Development and Peace).
Effect on the environment and the population

The intersection of organized crime with illegal mining has taken a terrible toll on both the environment and the people of the countries covered by this report. Our report graphically depicts the ways in which the expansion of illegal mining by criminal groups has displaced communities, contaminated drinking water with mercury and destroyed pristine environments, and in so doing endangered the health of people and ecosystems.

Colombia, for example, has the largest population of displaced persons in the world. In 2012, Colombia registered 4.9 million displaced people (about one in every ten Colombians). Studies indicate that 87% of displaced people came from areas with a heavy presence of extractives.

The Carnegie Amazon Mercury Project found that artisanal gold miners dump more than 30 tons of mercury in rivers and lakes in the Amazon region every year, generating levels as high as 34 times the safe limit for women of childbearing age, whose unborn children could suffer from permanent brain damage from the mercury. The highest risk of mercury exposure and associated health effects was connected to high consumption of local, contaminated fish (mercury accumulates in the tissues of fish), to involvement in gold mining, and to inhalation of airborne mercury from gold buying shops.

There has been massive deforestation of the Amazon rainforest. Between 2001 and 2013, approximately 1680 square kilometres of forest were cleared (the area of Greater London). Most forest loss occurred in the moist forest ecoregion of Guyana, the Southwest Amazon moist forest of Peru, the Tapajós–Xingu moist forest of Brazil and the Magdalena Valley-Urabá of Colombia. Over 5% of the total surface area of Colombia has been deforested.

The human cost of the expansion of illegal mining is vast. Our research uncovered numerous instances of labour trafficking and exploitation, sex trafficking and child labour. Amongst many examples, these stand out:

- women and young girls from all over Peru, as young as 12 years old, are recruited through false job offers and trafficked to the mining areas of La Pampa and Delta 1 (both Provinces of Madre de Dios) and La Rinconada (Province of Puno) to work in brothels. It has been calculated that there are approximately 2,000 sex workers employed in the illegal gold mining town of Delta 1 alone, of whom 60% are minors. Peruvian police estimated that in La Riconada there are more than 4,500 Peruvian and Bolivian girls trafficked for sexual exploitation to work in bars frequented by miners;
- research carried out by Verité has identified a large number of indicators of forced labour among workers involved in illegal gold mining in the Peruvian Departments of Madre de Dios, Cusco, Puno, and Arequipa;
- in Sur de Bolívar, Colombia, 1,500 workers were employed at a mine owned by the wife of an ex-AUC leader and were not able to leave the area without being accompanied by the narco-paramilitary group operating in the area;
- in the mining region of Potosí, Bolivia, children can be bought for 3-7 US Dollars;
- the United Nations Special Rapporteur on Contemporary Forms of Slavery highlighted illegal gold mining as one of the four sectors in which slavery was most prevalent in Ecuador;
- illegal miners exploit individuals from the indigenous Yanomami tribe in Venezuela as cheap mining labour and in several communities Yanomami have been found with slave numbers tattooed on their shoulders.

Current status of response

Local governments have largely been helpless to combat illegal gold mining due to the strength of the criminal groups and their willingness to corrupt local officials, either through bribery or intimidation.
The last decade has witnessed the rapid development and acceptance of international standards to combat transnational organized crime, conflict linked to the extraction of minerals, human trafficking, environmental damage, and corruption, though their effectiveness may be somewhat limited. Notable legislation includes:

**Kingpin Act.** The United States continues to target Colombian criminal organizations with Kingpin Act sanctions. Los Urabeños, the largest criminal group operating in Colombia, was identified by President Barack Obama in 2013 as a foreign drug trafficker in May 2013 and recent Kingpin sanctions target those who seek to expand the influence of Los Urabeños abroad, such as the sanctions against Víctor Alfonso Mosquera Pérez and the two companies he controls, De Expominera SAS, a Medellin-based mining company and Joyeria MVK, a Colombian jewellery firm, which the Treasury said was involved in controlling drug trafficking operations for Los Urabeños from Colombia to Europe. Another example is the sanctions placed against Alveiro Feo Alvarado, a financial chief for Los Urabeños involved in forging alliances with the FARC rebels and Los Rastrojos (a rival drug trafficking organization, also subject to Kingpin sanctions). Other groups targeted include the Shining Path, the Zetas, Los Caballeros Templarios, the ELN, the FARC and the Rastrojos, all of which have documented links with illegal mining.

**Dodd-Frank Act.** The U.S. Securities and Exchange Commission (SEC) has approved rules mandated by the Dodd-Frank Act which require companies to disclose their use of ‘conflict’ minerals (particularly gold, coltan, tantalum, tin and tungsten). One rule in particular requires mineral extraction companies to disclose payments they make to foreign governments. Supporters of this act and the SEC implementing rule believe that these disclosures, while not a ban on use of conflict minerals, could have an impact on the amount of violence involved with the mining of conflict minerals.

**EU Conflict Minerals Legislation.** While the U.S. Dodd-Frank Act primarily focuses on sourcing from the Democratic Republic of the Congo (DRC) and surrounding countries, the draft EU Conflict Minerals legislation expands the geographic focus to sourcing from any conflict-affected or high-risk areas anywhere in the world. Some other potential areas include Colombia, Venezuela and Indonesia.

**UNTOC & The Palermo Protocol.** The principal international legal instrument regulating trafficking in persons is the UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children of 2000 (Palermo Protocol), a supplement to the UN Convention against Transnational Organized Crime (UNTOC).

In addition, the UNEP Minamata Convention on Mercury may become an important tool in addressing the mercury trade in Latin America, as well as the implications of mercury waste in relation with the mining industry, and the effects on human health and the environment. The OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (OECD Anti-Bribery Convention) establishes legally binding standards to criminalize bribery of foreign public officials in international business transactions.

Finally, the UN Guiding Principles provide important outreach to the private sector. Most of the international legal instruments are aimed at governments, not corporations, but in 2011 the United Nations approved the UN Guiding Principles on Business and Human Rights. The Guiding Principles, along with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, serve as the two main ground-breaking tools for responsible due diligence in mineral supply chains.

In the last couple of years, there has been an increase in consumer awareness about conflict-free gold and the conditions under which gold is being produced. The gold sector has developed a number of initiatives addressing these concerns. The International Council on Mining & Metals, The London Bullion Market Association, The World Gold Council, The Better Gold Initiative and The Responsible Jewellery Council have all introduced codes of conduct. There have also been initiatives to certify that gold has been sourced responsibly; in Latin America there are two main certification schemes, the Fairmined and the Fairtrade Standards. Notable campaigns against the use of illegal gold have been the Swiss Responsible Business Initiative, No dirty Gold! and the Extractive Industry Transparency Initiative.
Problems with current state of response

Although there is an increased focus on laws and regulations on organized crime, conflict minerals, human trafficking, the environment, and corruption, there still appear to be gaps in their regulation and enforcement. Not all countries, particularly those in which illegal mining is carried out and those out of which mining companies operate, are signatories or have ratified many of these important legal instruments. Several of these laws emphasize criminalization of transnational crime and human trafficking, but do not mandate and prioritize the protection of victims or prevention of trafficking.

The corporate guidance principles are limited due to their voluntary nature and do not result in due diligence across all levels of the supply chain. The industry codes of conduct tend to focus on the large-scale mining sector whilst the problems we have highlighted belong more to the artisanal and small-scale sector. Certification schemes tend to be vague and implementation is often weak. There are too many private sector initiatives with major overlaps and gaps.

Global Initiative recommendations

Our key recommendations to limit illegal gold mining and organized crime activities in Latin America are that:

- **Export Countries** simplify and better fund the formalization process by which informal miners may gain legal status, and ensure that labour inspectors and other relevant institutions have sufficient resources and capacity to protect, remediate and rehabilitate victims of labour exploitation and any other form of exploitation related to gold mining, and hold companies and criminal organizations involved in the extraction and export of illegally mined gold accountable;

- **Import Countries** oblige stakeholders and their subcontractors to comply with both international and domestic standards regarding human and labour rights and environmental standards, enforce legislation such as the ‘EU conflict mineral law’ and hold companies that import and sell illegally mined gold accountable;

- **Corporations** adhere to the UN Guiding Principles on Business and Human Rights and implement improved mechanisms to map out supply chains, responsibly source gold and ensure that gold is not produced illegally and/or under conditions that result in human or labour rights violations.
# Table of Contents

**Introduction** ....................................................................................................................1

**An introduction to Gold Mining** ..................................................................................3  
  - Gold Supply and Demand .........................................................................................3  
  - How Gold is Mined .................................................................................................4  
  - Large-scale Mining .................................................................................................4  
  - Artisanal Mining .....................................................................................................4  
  - Illegal Mining .........................................................................................................5

**Illegal Gold Mining and Organized Crime** .................................................................7  
  - Gold Laundering .....................................................................................................16  
    - Peru ......................................................................................................................18  
    - Colombia ............................................................................................................19  
    - Ecuador ...............................................................................................................20  
    - Bolivia ..................................................................................................................21  
    - Brazil .....................................................................................................................21  
    - Guyana ...............................................................................................................21  
    - Venezuela ............................................................................................................21

**Effects of the Expansion of Illegal Mining** .................................................................22  
  - Displacement ..........................................................................................................23  
  - Deforestation .........................................................................................................23  
  - Mercury Contamination .........................................................................................26  
  - Human Trafficking .................................................................................................27  
    - Peru ......................................................................................................................29  
    - Colombia ............................................................................................................31  
    - Ecuador ...............................................................................................................35  
    - Bolivia ..................................................................................................................35  
    - Guyana ...............................................................................................................35  
    - Venezuela ............................................................................................................36
Introduction

The nexus of organized crime and the illegal mining of gold in Latin America is recent. In a report dated 28th of September, 2011, the Security Service (the DAS) warned the Government of Colombia that 50% of the mines in Colombia were illegal and many were dominated by armed groups, and suggested to the Government that it treat mining as an issue of state importance “as it is provoking grave consequences for the country in terms of security, the economy, the environment and social stability”. The newspaper ‘El Espectador’ saw the report and published an article the following week titled “Mineríá ilegal, en expansion” (Illegal mining growing) highlighting the problem and blaming the FARC and the ELN as chief culprits, which InSight Crime cited on 10th October 2011 “Mapping Where the FARC Controls Colombia’s Mines”. In November 2011, Peace Brigades International, Colombia, published a newsletter “Mining in Colombia: At what cost?” highlighting the environmental damage due to the mining boom.

The murky world of organized crime and illegally mined gold in Peru was first brought to public attention on 31st July, 2012 by the daily newspaper El Comercio of Peru in article “Exporters of Gold to Switzerland finance clans of illegal mining in Madre de Dios”. The story, written by Óscar Castilla, began “According to official figures for 2011, the companies Universal Metal Trading, AS Perú & CIA, E&M Company and Minera Tambopata – with agencies in Huepetuhe, Mazuco and Tambopata – sent to Switzerland some 25 tons of gold of presumably illegal origin”. El Comercio continued to report on illegal mining in Peru and the following year InSight Crime published an article “Breaking Down the Chain of Illegal Gold in Peru” which shed further light on the trade in illegally mined gold.

The NGO Verité issued a 120 page report on the plight of the workers in the illegal mines “Risk Analysis of Indicators of Forced Labour and Human Trafficking in Illegal Gold Mining in Peru” and, in June 2014, SPDA (La Sociedad Peruana de Derecho Ambiental) published a 127 page report “The Reality of Illegal Mining in the Amazon Countries” which covered the situation not just in Peru but also in Bolivia, Brazil, Colombia, Ecuador and Venezuela.

In the last year or two it has become clear that the nexus between organized crime and illegal mining of gold has resulted in a host of bad consequences; it funds criminal and terrorist groups, facilitates money laundering and corruption, forcibly displaces local populations, speeds environmental destruction and creates situations of labour exploitation, labour trafficking, and sex trafficking. In this report, “Organized Crime and Illegally Mined gold in Latin America”, it is our intention to:

- make a wide assessment of this ‘conjunto’ of problems;
- build on the reports of InSight Crime, Verité and SPDA;
- include within the scope of the subject not only the Amazon basin countries but also Mexico and Nicaragua;
- explore whether the 30% drop in international gold prices over the past 12 months has reduced illegal mining;
- see what international mechanisms have been employed to fight illegal mining, and
- make recommendations about what more can be done.

The research on which this report is based was carried out between February and December 2015. Desk research focused on Bolivia, Brazil, Colombia, Ecuador, Guyana, Mexico, Nicaragua, Peru and Venezuela. In Colombia and Peru, the two largest producers of illegal gold, Global Initiative researchers also conducted field research: a total of 47 interviews in Colombia and 29 in Peru, with a variety of government officials, representatives of local and international NGOs, academics and consultants, human trafficking specialists, members of local populations and indigenous groups affected by illegal mining, mine representatives, and workers employed in illegal mines.
The report begins with a **general introduction to gold mining**, moving on to describe the **incidence of illegal mining in Latin America** and to discuss the **links between illegal gold mining and organized crime**. Particular attention is paid to **gold laundering**, the manner by which illegal gold enters the international gold market. The toll illegal mining takes on the **environment** and the **human suffering** it causes is covered in some detail, drawing heavily on the field research carried out in Colombia and Peru. The report then moves on to the way in which the problems of illegal mining are being tackled by and the **actions of governments, international bodies and the private sector**, ending with **our recommendations** on how this process may be strengthened.
An Introduction to Gold Mining

Gold Supply and Demand

Mining is carried out in almost every country in the world and plays an important economic role in both rich and developing countries. Mining and the extraction of oil and gas drives perhaps one third of global GDP (in the China boom, it was nearly one half). The region of Latin America covers one-sixth of the Earth and produces more than its share of the world’s three most important metals – iron ore, copper and gold. In 2013 the region’s share of global production was 21% for iron ore, 45% for copper and 20% for gold.

Gold is an extremely rare commodity. According to a 2009 National Geographic article, “in all of history, only 161,000 tons of gold have been mined, barely enough to fill two Olympic-size swimming pools. More than half of that has been extracted in the past 50 years. Now the world’s richest deposits are fast being depleted, and new discoveries are rare.” Despite that, world production has doubled over the past 50 years, from some 1,500 tons/year in 1970 to approximately 3,000 tons/year in 2014.

Although supply has been increasing, demand has soared at a much faster rate, driven by jewellery demand from emerging market countries (notably China and India) and by investment demand, which took off after the financial crisis of 2008. In 2014, world gold demand was 4,217 tons, of which 58% was for jewellery, 19% for investment purposes, 14% was bought by central banks and the remaining 9% went to industrial use.

The imbalance between demand and supply has pushed gold prices up by an average of 18% per year between 2000 and 2010, resulting in a total price increase of 360% over the decade. Before the September 11, 2001 attacks, an ounce of gold was worth USD 271. After the attacks, people turned to gold as a safe haven, driven by widespread uncertainty surrounding the stock market and currency stability. The price of an ounce of gold rose to USD 1,023 in March 2008 and by December 2012, gold peaked at USD 1,770 per ounce. While gold prices have fallen significantly in the past three years to USD 1,060 as of December 31st, 2015, demand and prices are still relatively high.

Gold prices over the last 20 years

Source: Gold Bullion price, www.bullionvault.com
The skyrocketing prices of the previous decade created a modern-day gold rush. In Latin America, this resulted in the rapid expansion of illegal mining. Especially in countries where the government lacks control over large swaths of land, due to political instability or difficulty of access, organized criminal groups have been able to operate illegal mines with impunity. As criminal groups have gained a foothold in hard-to-access areas and have seen the relatively low risk and high returns of illegal gold mining, they have sought to keep their hold on territory and local populations, while maintaining profit margins. In practice, this generally means that they continuously squeeze more and more profit from small-scale producers and workers, putting local populations at greater risk of exploitation and wreaking havoc on the environment. Field research has shown that illegal gold mining has continued to expand, even despite the recent decrease in global gold prices.

**How Gold is Mined**

Gold deposits are typically found in areas with considerable geological activity, which is why areas that contain the most gold tend to be mountainous regions. Most of the original discoveries of gold were made by accident around stream beds where gold particles and nuggets were found washed down from the mountains (alluvial gold) where the gold veins are located (gold lodes). Gold is mined either through hard-rock or alluvial mining. In hard-rock mining, minerals and metals are extracted from the rocks that contain the gold lodes, which can be done in large open-pit mining or in tunnels that are dug into rock faces. In alluvial mining, minerals and metals are extracted from water. This can be done through panning in rivers, sluicing, in which water is combined with materials such as sand and dirt and is channelled into boxes that sift and separate the minerals and metals from the material, and dredging, in which minerals and metal-laced sediment are sucked up from sediment in bodies of water.14

After the gold is mined, it must be separated from the material that bears it. In hard-rock mining, the rock is often ground into dust. The gold can either be separated using gravity concentration or chemical processes. Hazardous, even deadly, chemicals are commonly used in processing; both mercury and cyanide are used to separate the gold and these chemicals must then be burnt off.15 In artisanal mining, mercury is used. Mercury is highly toxic, causing damage to the nervous system at even relatively low levels of exposure, and miners are often exposed to dangerous levels. The mercury used in these mining activities can also be responsible for the contamination of water and soil, posing health risks for communities near and far. Gold mined by artisanal miners or mined illegally is generally sold to local middlemen or traders, who in turn, sell the gold to processors, trading houses, or exporters.16

**Large-scale Mining**

Much of the world’s gold mining is carried out by large, multinational companies that use advanced technology to extract gold in large-scale mines. There are a relatively small number of large mining companies, whose headquarters are concentrated in the USA, South Africa, Australia, and Canada.17 In 2009, it was reported that open-pit mining controlled by large multi-national companies comprised 75% of the world’s gold production.

The primary requisites for large-scale formal gold mining are a prospect with a sufficient quantity of high quality ore, established and workable mining legislation, political stability, infrastructure, experienced mining personnel, and access to investment capital. Many parts of the world that have significant gold deposits do not meet these requirements. Where these conditions are not met, but gold is available for extraction, the scene is set for active informal or illegal gold mining activity.

**Artisanal Mining**

Artisanal small-scale mining (ASM) refers to mining using simple, usually non-mechanized means of extraction that is typically highly labour intensive.18 ASM is usually conducted by individuals or small groups of people, although it may include larger partnerships or cooperatives.19 The United Nations reported in 2009 that artisanal mining directly
Global Initiative against Transnational Organized Crime
Organized Crime and Illegally Mined Gold in Latin America

Artisanal gold miners in Madre de Dios, Peru

and indirectly employed a total of 100 million people worldwide, including 10-15 million miners, and produced 25% of the world’s gold.\textsuperscript{10} ASM gold mining is generally considered a more dangerous and lower-paid occupation than mining in large, formalized mines, due to a lack of technology or formalized structures of accountability.\textsuperscript{11}

There are five primary types of artisanal mining as described by the International Council on Mining and Minerals and the International Finance Corporation:

- Traditional ASM occurs where local people have been mining for a long period of time, possibly generations. Mineral rights may be passed down within families and mining is often the primary source of livelihood.
- Seasonal ASM provides secondary livelihood support to families during “off-peak” agricultural seasons.
- Permanent co-habitation refers to ASM miners “squatting” around the edges of large-scale legal concessions, who may have a contentious relationship with the multi-national concession holders. These miners may be local or may migrate to the area.
- Shock ASM is driven by catastrophes such as drought, economic depression, armed conflict, the closure of formal mines, or other sudden factors leaving large groups of people without livelihood options.
- Influx ASM is driven by “booms” or discoveries of new mineral deposits. These booms can cause large groups of people to appear at mining sites in a short period of time.\textsuperscript{12}

Illegal Mining

It is extremely important to distinguish between traditional, artisanal miners who work without a license, and illegal miners connected with armed groups and organized crime. By failing to make a distinction between informal and illegal mining, governments wrongly criminalize informal miners and eliminate the livelihood of highly vulnerable populations, increasing their risk of becoming victims of human trafficking or even members of armed groups. There is a great deal of misunderstanding in the region about the differences between informal and illegal mining and a large number of countries lack legislation that clearly delineates the line between informal and illegal mining. However, in general, informal mining is conducted by miners who operate on a small-scale and have begun the process of formalization but have not yet been able to meet all legal requirements.

Generally speaking, illegal mining is carried out in blatant violation of the law. In cases where mines operate in protected areas and/or fail to comply with environmental, tax and labour law, they can be classified as illegal mines. The involvement of criminal groups in mining can also be considered illegal mining, or even criminal
Illegal mines are not necessarily small, and may operate with international capital, with profits that can run into the hundreds of millions. As the use of heavy equipment and machinery is generally prohibited in ASM mining, medium to large-scale mining carried out without a permit and using heavy machinery can be considered illegal mining.23

Definitions of illegal mining vary greatly across countries. For mines to be considered legal and formal in Peru, they must have a title to the concession or an agreement with the concession owner, authorization to work the land, an approved environmental impact study, water rights, a certificate of non-existence of archaeological artefacts, authorization to carry out exploration and/or processing activities, and accreditation as a small-scale or artisanal miner, among other requirements.24 Mines that fail to meet some of these requirements but are in the process of meeting the requirements are generally considered informal, while those that operate in blatant violation of the law or in environmentally protected areas are considered illegal. While Colombia has developed a legal definition of informal and illegal mining, it has as yet failed to ratify a legal definition of “criminal mining,” a term used widely by politicians and law enforcement.

**Definitions of informal and illegal mining**

<table>
<thead>
<tr>
<th>Mining</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal Mining</strong></td>
<td>Meets the requirements and has mining, environmental, social, labor, tax permissions. Comprises all four mining categories (from large-scale to ASM)</td>
</tr>
<tr>
<td><strong>Informal</strong></td>
<td>No permission for mining activities, but operates in permitted zones, has a declaration of commitment and formalization is in process. Operating in ASM</td>
</tr>
<tr>
<td><strong>Non Formal</strong></td>
<td>Operating in ASM</td>
</tr>
<tr>
<td><strong>Illegal</strong></td>
<td>No permission for mining activities, operates in prohibited areas and/or uses of heavy machinery. Is subject to interdiction activities/raids by ACAFMIRA</td>
</tr>
</tbody>
</table>

Source: Peruvian Ministry of Energy and Mines

Precisely because illegal mines operate outside of the purview of the state, the amount of gold that they produce often does not factor into international gold production calculations, so their scale may be greatly underestimated. Because these mines operate clandestinely and fail to abide by the law, the workers employed in these mines are generally poorer, more marginalized, and more vulnerable to extreme forms of labour exploitation, including forced labour and human trafficking.25
Illegal Gold Mining and Organized Crime

The Americas are the epicentre of the global drug trade and Latin America a centre for drug production: the Andean region (Venezuela, Colombia, Peru, Ecuador and Bolivia) is the world’s only producer of cocaine; Mexico and Colombia produce heroin and Mexico and Paraguay are among the main producers of marijuana. In the first decade of the 21st century, two trends intersected. Soaring gold prices greatly increased the profitability of gold mining, while the US led ‘War on Drugs’, notably in Colombia and Mexico (‘Plan Colombia’ and the ‘Mérida Initiative’), sharply reduced the profitability of drug trafficking from Latin America to the USA. As a result, there were considerable incentives for the criminal groups that control the drug trade to move into gold mining, and the fragmented nature of artisanal gold mining in Latin America greatly facilitated their entry. These groups were quick to realize that taking control of large swaths of land remote from government attention and dominating the enterprises that mined that land would enable them to generate larger profit margins with much lower risk. The change of strategy by the drug trafficking groups proved so successful that in Peru and Colombia – the largest cocaine producers in the world – the value of illegal gold exports now exceeds the value of cocaine exports.

Major Drug Trafficking Routes and Major Gold Mining Areas in Latin America and the Caribbean

The major Latin American drug trafficking organizations (drug cartels) are said to generate around USD25 billion per year in wholesale drug proceeds, of which the Mexican cartels account for the vast majority, perhaps USD20 billion. Peru, the single largest producer and exporter of cocaine in the world, produces an estimated 325 tons each year, earning Peruvian organized crime USD1-1.5 billion annually. Colombia has four major drug trafficking cartels and several bandas criminales, or BACRIMs, who between them probably earn a similar amount in wholesale drug proceeds (cocaïne and heroin). In Peru and Bolivia, the drug trade is largely dispersed among a plethora of amorphous, nonspecific groups. These indigenous entities generally confine their focus to the cultivation of local fields, with actual processing and refining taking place in Brazil and, to a lesser extent, Argentina. Between them, they account for USD1 billion or so in drug proceeds.
By its very nature, it is hard to quantify illegal production. The approach we have taken is to calculated implied production from statistics of net exports and demand, and compare that with reported production, assuming that the difference between implied production and reported production is illegal production. The methodology and data are set out in the appendix. The results compare well with other assessments of illegal production:

<table>
<thead>
<tr>
<th>Country</th>
<th>Our Estimate</th>
<th>Other Estimate</th>
<th>Source of other estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>9%</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>28%</td>
<td>22%</td>
<td>El Comercio 16/5/2012</td>
</tr>
<tr>
<td>Colombia</td>
<td>80%</td>
<td>80%</td>
<td>The Comptroller General in an interview on 20/8/2015</td>
</tr>
<tr>
<td>Ecuador</td>
<td>77%</td>
<td>70%</td>
<td>OJO PUBLICO report “Dirty Gold” 09/09/2015</td>
</tr>
<tr>
<td>Bolivia</td>
<td>31%</td>
<td>45%</td>
<td>OJO PUBLICO report “Dirty Gold” 09/09/2015</td>
</tr>
<tr>
<td>Guyana</td>
<td>22%</td>
<td>15%</td>
<td>OJO PUBLICO report “Dirty Gold” 09/09/2015</td>
</tr>
<tr>
<td>Venezuela</td>
<td>91%</td>
<td>86%</td>
<td>El Mundo 27/01/2015</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>13%</td>
<td>n/a</td>
<td>Dept. Of Mineral Production Brazil (data for 2010/11)</td>
</tr>
<tr>
<td>Brazil</td>
<td>10%</td>
<td>14%</td>
<td></td>
</tr>
</tbody>
</table>

At current prices (USD 1,100/oz), 1 kilo of gold is worth approximately USD35,000. At average 2013 prices, it was worth around USD45,000. The exporter would have received about 3% less (USD44,000) and the miner a further 10% discount (USD39,000). By comparison, the wholesale price of cocaine base is USD1,000-2,000/kilo, of pure heroin USD10,000/kilo and of marijuana USD100/kilo.
Peru

The majority of Peru’s gold production comes from commercially operated mines. The most notable mine in Peru is the Yanacocha Mine located north of Cajamarca. Run by Newmont Mining Corp, it is the second largest gold mine in the world. Within Cuzco is the Rio Huaypetue mine, located near the Madre de Dios and Puno regions. Production from Huaypetue peaked in 1998, with estimates that roughly 2% of the world’s gold came from here. Other large gold mines are the Chucapaca Mine in Cuzco and the Lagunas Norte Mine in the La Libertad region.

In 2013, La Defensoría del Pueblo reported that there was informal and illegal mining in 21 of 26 provinces in Peru, directly employing 100,000 workers. Other reports suggest that in addition to these 100,000 people, informal/illegal mining indirectly employed another 500,000 people. In the province of Madre de Dios it is estimated that approximately 90% of the gold produced is extracted illegally or through informal structures and approximately 90% of the population directly or indirectly depends on the mining sector. According to the Peruvian Ministry for Environment, 16 to 18 tons of gold are extracted annually from Madre de Dios. The ministry estimates that in the region, 50,000 to 70,000 illegal miners are active and that the illicit activity is expanding at an annual rate of 6,145 hectares per year.
Verité research found that Peruvian and international organized crime and rebel groups are heavily involved in illegal gold mining in Peru, as they profit from gold extraction and trafficking, and use gold to launder illicit proceeds. These groups include the Peruvian Shining Path, the Colombian FARC, the Italian ‘Ndrangheta, and Chinese and Russian organized crime groups. For example, a phone tap revealed that a key Ndrangheta operative in Peru was looking to purchase a gold mine. Field research found that Chinese and Russian groups were directly controlling gold mines and gold brokerage companies, but it was unclear whether they were organized criminal groups or unscrupulous entrepreneurs who used violence and human trafficking and operated illegally.

According to illegal mining experts, organized crime groups generally do not cooperate with illegal mining groups, but use the same drug and gold trafficking routes, especially between Madre de Dios and Bolivia. One of the few organized crime groups actively merging the two crime forms is the Sanchez-Paredes clan, which operates in the province of La Libertad, owning formal gold mines to generate profits and launder drug trafficking revenues. The clan controls the regional mines, intimidating workers and concessioners to increase their profit when gold prices decline.

In November 2015, Alfredo Ernesto Vracko Neuenschwander, an activist against illegal mining who had received several land and forest concessions from the government, was murdered - presumably by criminal groups involved in illegal mining. Don Alfredo had been interviewed for this report and had revealed that he had lodged countless complaints with the government about the invasion of illegal miners in his concessions, none of which were ever acted upon. He said he was receiving regular death threats by illegal miners. His murder occurred on the very day when an official anti-mining raid had finally been scheduled in response to his requests.

In the province of Madre de Dios it is estimated that approximately 90% of the gold produced is extracted illegally or through informal structures and approximately 90% of the population directly or indirectly depends on the mining sector.

In Colombia the scale of illegal gold mining is staggering. A 2014 study for Colombia's public finance authority indicated that 83% of Colombia's 17,000 mines lacked titles and environmental licenses, and that some 50,000 people worked in these illegal mines. Informal mining reportedly contributed to the livelihoods of at least 15,000 families. In 2015, the government announced that illegal mining was carried out in 233 municipalities, most of which are concentrated in the Departments of Antioquia, Bolívar, Cauca, Chocó, Córdoba, and Nariño. Guerilla groups and BACRIM were reportedly utilizing their own heavy equipment in the Bajo Cauca and Eastern areas of Antioquia, as well as in the Departments of Chocó, Nariño, and Tolima.

The FARC (Revolutionary Armed Forces of Colombia), ELN (National Liberation Army), and BACRIMs (criminal bands) are deeply involved in the vast majority of areas in which illegal gold mining takes place in the country, through the extortion of informal and illegal miners and mining companies, control of illegal mines, and involvement in gold laundering and trafficking. In-country experts reported that a total of 44 criminal networks are involved in illegal gold mining. There have been reports of guerrilla groups with left-wing ideologies collaborating with criminal groups descended from right-wing paramilitary groups, of heavy turf battles among guerrilla and BACRIM groups, that illegal mines are owned by the extradited leaders of paramilitary groups and that illegal armed groups have obtained concessions through shell companies, including in Bajo Cauca and Sur de Córdoba.

Many armed groups obtain money by extorting miners and mine owners, known as charging a “vacuna” (lit. vaccine). According to an in-country expert interviewed for this report, “everyone pays a vacuna” – whether it is a mine owner, a person operating heavy machinery, or small-scale miners who have to pay a percentage of their earnings. The revenue gained through this sort of extortion in illegal mining contexts has financed an array of activities by armed groups in Colombia’s mineral-rich regions.
The FARC and ELN guerrilla groups have increasingly used illegal gold mining to generate revenue. The FARC has a presence in illegal mining areas in Antioquia, Bolívar, Caquetá, Casanare, Cauca, Chocó, Nariño, and Tolima.\textsuperscript{47} Colombia’s president, Juan Manuel Santos, reported that emails from a top FARC commander, Mono Jojoy, showed that the FARC was becoming increasingly involved with illegal mining as a way to finance the group and to obtain arms.\textsuperscript{48} Government authorities have estimated that the FARC obtains approximately 20% of its funding through illegal gold mining.\textsuperscript{49} The 34th Front of the FARC alone reportedly earns approximately USD 1.2 million per month through extortions of illegal miners, the majority of which comes from vacuna payments for the operation of 180 backhoes.\textsuperscript{50}

Funding is obtained by directly controlling mines, as well as by extorting miners and mine owners. In Tolima, for example, the FARC reportedly charges miners a vacuna of 10% of their gold, and the Jacobo Prias Álape column of the FARC reportedly charges one mine USD 9,000 as a “tax.” Meanwhile, in Guainía, the 16th Front of the FARC reportedly charges miners, including a large number of Brazilian workers, 10% of the gold that they extract each day. In Putumayo, the 32nd Front of the FARC reportedly charges a tax of USD 900 per month for each backhoe operating in illegal mining areas. In Caqueta, the FARC both have their own dredges and also charge vacunas to miners. Meanwhile, in Nariño, an alliance between the Daniel Aldana Front of the FARC and the Comuneros del Sur unit of the ELN and drug traffickers is said to control all of the machinery that arrives in illegal mining areas.\textsuperscript{51}
The ELN is reportedly present in illegal mining areas in Chocó, Nariño, Santander, and Sur de Bolívar and generate most of their illegal mining-related revenue by taxing illegal mines, charging miners vacunas and bringing heavy machinery into the areas that they control. Decrypted files recovered by police from ELN computers indicate that the ELN charged excessive protection fees. For example, it charged USD 30 to bulldozer owners for each hour that they operated. Additionally, they forced associations of miners to pay them up to half of their earnings. About half of these fees funded the ELN’s “frente de guerra” (war front). In Mallama, Nariño, the Comuneros del Sur Front reportedly charges a tax of USD 330 per month to each illegal mine. In Sur de Bolivar, the ELN reportedly charges workers 5% of the gold that they extract each day. They also charge each mine a tax of USD 100,000 every six months, in addition to taxes of USD 2,400 per backhoe.

BACRIMs are increasingly becoming involved in illegal gold mining, especially in Antioquia, Cauca, Nariño, Sur de Córdoba, and Valle, where they earn a large amount of money by extorting illegal mining operations. Their forces include a number of criminal bands that have descended from paramilitary groups, including the Urabeños, the Rastrojos (and the breakaway group the Héroes del Nordeste), the Popular Revolutionary Anti-Terrorist Army of Colombia (ERPAC), the Águilas Negras, the Oficina de Envigado, and the Paisas.

In Sur de Bolivar, the Urabeños are reportedly charging artisanal miners and large scale illegal mines alike vacunas in exchange for allowing them to continue mining. In Barranco de Loba, Bolivar, the Urabeños have allegedly been attempting to prevent the rival Rastrojos from gaining access to the Gloria mine, which was obtained from a mining company by a leader of the paramilitary United Self Defence Forces of Colombia (AUC), a precursor to the Urabeños. Meanwhile, in La Guajira, heads of the Urabeños and Rastrojos who were previously linked to the northern block of the AUC, now own illegal mines.

Despite their recent loss of power, the Rastrojos have maintained a hold on illegal mining areas in the Pacific Coast, especially in Buenaventura, El Cargo, Guapi, Tumaco, and Timbiquí, where they have been linked to severe violations of the rights of Afro-Colombians. The Rastrojos also reportedly dominate illegal mining in Valle de Cauca, where they charge miners a vacuna of 10%. In Cauca, the 29th Front of the Rastrojos have reportedly clashed with the FARC over the control of illegal mining areas.
**Ecuador**

We estimate that Ecuador produced 12 tons of gold in 2013, of which only 3 tons were from legal gold mines. Jaime Jarrín, the Director General of Arcom, the Ecuadorian Agency of Regulation & Control of Mining, said in April 2013 that he believed true production was between 15 and 20 tons. Other estimates suggest that only 30% of the gold produced in the last five years originated from legal gold mines and the remaining 70% came from illegal and oftentimes violent mining areas. There are some 10,000 illegal miners.

Since a Colombian military air raid on a FARC camp in Ecuador in 2008 killed the FARC’s leader, Ecuadorian troops have increased border patrols and destroyed FARC encampments in their territory. In 2012 alone, 19 members of illegal Colombian armed groups were arrested, 19 bases and nine hideouts were eliminated, and more than 170,000 coca and 3,000 poppy plants were destroyed. Nevertheless, according to InSight Crime, the FARC was more active in the Ecuadorian border region in 2012 than ever before and routinely crossed between Colombia and Ecuador. FARC operatives used Ecuador as a base of operations in order to obtain supplies, medical services, weapons, ammunition, and explosives, and may have established a permanent presence in Ecuador, adopting civilian dress and blending in with and living in border communities. In August 2013, Ecuadorian troops fought a Colombian group believed to be the FARC, resulting in the deaths of one Ecuadorian officer and five Colombians.

Many of the illegal gold mines within Ecuador are reportedly controlled by the FARC. Their presence in and around the mines has led to elevated rates of homicide and violence in surrounding areas. In 2013, a member of the Shuar, a tribe dating to pre-Inca times, was killed and nine soldiers were seriously injured while the military forces were attempting to conduct an operation to combat illegal gold mining activities within an Ecuadorian province. There have also been reports of the incursion of other Colombian criminal groups into Ecuador, including the notorious Rastrojos, one of Colombia’s most powerful drug trafficking organizations (DTOs) and criminal syndicates. The Rastrojos were especially active in the border area of Esmeraldas, an epicentre of illegal gold mining.

**Bolivia**

Approximately 45,000 people work in illegal gold mining, including some 13,500 children, almost half of whom are unpaid. The main centres of illegal mining activities are the Bolivian-Peruvian border region of Suches and the Yungas-subandino region (both province of La Paz), the province of Santa Cruz and the Bolivian Amazon region (province of Pando). Alluvial Illegal mining is taking place along the Rivers Beni, Madre de Dios, Orthon, Mamore and Madeira.

Bolivia is the main hub used to launder illegally produced gold from Peru, which is flown from Puno in Peru to Bolivia by drug trafficking planes. The criminal groups that operate the illegal mines use bogus companies for the trade and may cooperate with other organized crime groups.

**Brazil**

The 11th biggest gold producer in the world, according to official statistics Brazil produced 80 tons of gold in 2013, to which can be added a further 10-15% in illegal production. Some 75,000 illegal miners operate in the Brazilian Amazon basin. Illegal mining is taking place in nine of 26 states and the main centres of illegal mining in Brazil are located in the states of Pará, Mato Grosso, Rondônia and Roraima.
Illegal Mining Centres of Brazil

Source: Brazilian Geological Service (CPRM)

Mexico

In 2013, Mexico exported gold worth USD 5.4 billion, its 13th biggest export. Mexico’s mines are operated in the main by large legal operations, but criminal organizations are increasingly extorting, stealing from, and threatening mining companies and propagating crime and violence against workers and communities in their territories. In 2013, it was reported that organized crime ‘controlled the right to mine’ in the states of Chihuahua, Guerrero, Michoacán, Morelos, and Tamaulipas.

Although criminal syndicates profit through the extortion of legally operating mines, evidence also exists of the willful collusion between mines and organized crime leaders. In 2013, 12 mining companies located in the state of Coahuila were investigated for possible ties to drug trafficking, as well as money laundering, tax evasion, and breach of federal regulations.

The main cartels associated with the mining sector, controlling the right to mine in some states, are the Sinaloa Cartel, the Zetas, Los Caballeros Templarios, Guerreros Unidos and Los Rojos. In 2012, Mexico’s Attorney General’s Office reported that mining companies are regularly extorted by criminal groups for between USD 11,000 and USD 37,000 per month for the right to mine in criminal groups’ territory. If these payments are not paid, the companies’ directors, family members, and the miners themselves are threatened. Criminal groups not only extort the mining companies, but also the workers themselves, who have to pay individually to work in the mine. In some places, this is referred to as a ‘cooperation tax’. In March, there was a violent attack on a town close to Goldcorp’s Los Filos mine; various reports assert the attack was a reminder to pay cooperation taxes. Following the attack, three of four Goldcorp employees who had been kidnapped were found dead, with signs of having been tortured.
Mexican cartels also steal gold outright. It has been estimated that, between 2008 and 2012, approximately USD 3 million of gold was lost to theft from drug-traffickers.86 There are numerous reports of armed robberies of legal mines. Most notably, 7,000 ounces of gold worth USD 8.4 million were stolen from the Canadian-owned mine El Gallo in Sonora in April 2015. There are also reports that drug cartels have attacked workers to steal gold ore87, which is then used as currency (‘moneda de cambio’) among the cartels, to purchase arms, and to launder money obtained through narcotics, arms dealing, human trafficking and other criminal activities.

**Top six gold producing states**

Organised crime ‘controls the right to mine’ in the states of Chihuahua, Guerrero, Michoacán, Morelos and Tamaulipas.

Source: Geo-Mexico.com

**Guyana**

Guyana has for centuries been known as a producer of gold, but suffered a severe economic depression under the leadership of President for Life Forbes Burnham from 1964 until his death in 1985. In the early 1990’s the country began its climb out of debt and into economic growth and today has a thriving economy centered around mining, oil and gas exploration, rice and sugar exports. The Guyana Geology and Mines Commission (GGMC) oversees the mining industry and has implemented modern mining practices and codes of operation, but for many decades, mining was the domain of small one man prospectors, referred to as ‘pork-knockers’. They worked, and continue working today, in remote parts of the jungle of Guyana. Using basic equipment and living under tarps, these pork-knockers will spend several months recovering diamonds and gold, then carry them to the capital of Georgetown or Bartica where they sell their collection before returning to the interior.

Guyana officially produced 15 tons of gold in 2013, though actual production is believed to be around 19 tons. According to the Natural Resources Minister, up to half of the estimated 17,000 kilos of gold produced by small- and medium-scale miners is subject to tax evasion and gold laundering.88 In 2014, there were media reports that members of the Venezuelan army crossed the Guyana border and attacked a group of illegal miners operating near the border region, who had failed to pay the soldiers a periodical bribe for turning a blind eye to illegal mining activities on Venezuelan soil.89
Nicaragua

Nicaragua exported about US$450,000 worth of gold in 2013, 7% of total exports, and ranking third overall behind insulated wire and knitted goods. The country is known for its three largest gold mines: Bonanza (owned by Hemco), El Limón and La Libertad (both owned by B2Gold). Production from these mines is supplemented by small scale artesanal mining, particularly in the municipalities of Bonanza, Rosita and Siuna in the North Atlantic Autonomous Region (RAAN). These three municipalities are said to make up the “mining triangle”, an underdeveloped, isolated areas that provides its inhabitants with limited sources of income, drawing many to artisanal, or güirisería, mining. Though not technically illegal, it creates great risks for workers. The extreme poverty in the region, in combination with the geographic location on trafficking routes and high levels of criminal activity in the mining triangle, makes the region attractive to criminal groups. The mining triangle possesses the second highest homicide rate in Nicaragua, as well as substantial drug and arms trafficking, due to organized crime operations using the region as a layover on their routes. Local street gangs known as pandillas, hired by transnational organized crime groups to traffic drugs and weapons from Colombia through Nicaragua and on to Mexico, are active in the RAAD region. The increased violence, weapons, and drug trafficking over the past four years can be attributed to these gangs. In addition, heavily armed Mexican and Colombian criminal groups operating on the northeastern and southeastern borders, involved in drug and arms trafficking, money laundering and gold mining, are beginning to infiltrate Nicaragua. Although the connection between illegal or informal mining to criminal organizations has yet to be widely documented in Nicaragua, it follows the South American pattern – regions associated with gold mining are also regions where criminal activity is prevalent.

Venezuela

Venezuela has Latin America’s largest gold reserves, yet it remains very underexploited due to a challenging jungle environment and a hostile regulatory framework. Between 2000 and 2010, Venezuela produced some 10 tons per year from formal mining, but according to the USGA production has since dropped steadily. In 2011 President Chávez ordered the nationalisation of the gold mining industry. Producing mines were placed under the control of Minerven, the state mining company. Production from the formal sector dropped steadily under Minerven’s stewardship, from 1.981 tons in 2012 to 1.691 tons in 2013 to 0.867 tons in 2014. The reasons for the decline were lack of investment, shortage of supplies and theft of equipment by the informal (artesanal) sector, which is producing about 10 tons, of which almost all crosses the border as contraband.

An estimated 4,000 illegal miners are working in the area near the borders with Colombia and Brazil, often clashing with indigenous groups and challenging the government's efforts to stop deforestation. In 2015, 100 miners were killed as a consequence of 'mafia violence, corruption of military and police officials, and abuse of power' by local authorities who were complicit with organized criminal group structures. The principal organized crime group in Venezuela is the ‘Cartel de los Soles’ (Cartel of the Suns), allegedly headed by high ranked members of the Venezuelan army, but better known for cocaine smuggling than for any involvement in gold mining.

Gold Laundering

Before gold produced illegally can make its way into international markets, it needs to have its true origin concealed (‘laundered’) or the buyers may become liable to prosecution under various laws and regulations designed to combat transnational organized crime.
After extraction from the earth, gold ore is processed locally then transported to refiners who purify it to the qualities required by end users. Latin American gold is generally sent to refiners in either the USA, Switzerland or Canada:

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports to USA</th>
<th>Exports to Switzerland</th>
<th>Exports to Canada</th>
<th>Exports to Others</th>
<th>Total Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity tons</td>
<td>Value USD mln</td>
<td>Quantity tons</td>
<td>Value USD mln</td>
<td>Quantity tons</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>81</td>
<td>3,600</td>
<td>13</td>
<td>526</td>
<td>11</td>
</tr>
<tr>
<td>Peru</td>
<td>58</td>
<td>2,600</td>
<td>78</td>
<td>3139</td>
<td>47</td>
</tr>
<tr>
<td>Colombia</td>
<td>47</td>
<td>1,980</td>
<td>11</td>
<td>393</td>
<td>0</td>
</tr>
<tr>
<td>Ecuador</td>
<td>10</td>
<td>403</td>
<td>2</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>Bolivia</td>
<td>10</td>
<td>432</td>
<td>1</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>Guyana</td>
<td>7</td>
<td>340</td>
<td>0</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Venezuela</td>
<td>3</td>
<td>136</td>
<td>10</td>
<td>383</td>
<td>0</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>3</td>
<td>140</td>
<td>0</td>
<td>7</td>
<td>294</td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
<td>65</td>
<td>24</td>
<td>1064</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>221</td>
<td>9,696</td>
<td>139</td>
<td>5,645</td>
<td>80</td>
</tr>
</tbody>
</table>

Source: USA, Swiss & Canadian Customs data, Comtrade data for Others.

The U.S. Mint is the main buyer of gold in the USA. It spent USD 3.5 billion in 2013 on precious metals in primary form, buying from six principal suppliers, of which the largest, Coins 'N Things of Massachusetts, provided 40% (USD 1.4 billion) of the total spend. Massachusetts is one of the major gold hubs in the USA, largely on account of the Metalor refinery. Florida is also a major hub, due to the refining activities of Republic Metals Corporation (RMC) and Kaloti Metals & Logistics.

Switzerland refines about 50% of all refined gold in the world, and is itself the world's eighth-largest holder of gold. Gold that remains in Switzerland is used as gold bullion in Switzerland's immense banking sector, or in the manufacturing of jewellery, silverware, and watches. In 2013 Switzerland enacted the Better Gold Initiative with the intention of increasing transparency and traceability in its gold supply chain.

For illegal gold to be exported from Latin America, it needs certificates of origin and purchase receipts, which are generally supplied to the bigger traders by chains of acopiadores (consolidators), who purchase directly from the small mines or from informal gold buyers who operate in cities and in hardware stores that advance supplies to miners in exchange for repayment in gold. Illegal gold is also laundered by formal and informal processing plants, which claim the gold as their own with help from facturadores (intermediaries who provide fraudulent purchase receipts) or simply by exaggerating their production. Each of these processes obscures the actual origins of gold produced illegally.

Criminal organizations are increasingly using illegal gold mining to launder illicit proceeds as, unlike cocaine, once gold is "laundered" it becomes legal and can move freely across international borders, making its way into the formal consumer market. There have been numerous cases in which criminal groups use illegally mined gold to launder their profits by buying up stakes in gold mines, using the bank accounts of gold companies to launder money, or using gold extracted from illegal mining areas that they control as currency.

In October 2012, Manhattan's District Attorney (DA) seized over USD 31 million from nine U.S. bank accounts allegedly connected to the Peruvian Sanchez-Paredes drug trafficking organization (DTO). The DA alleged that they used the bank accounts of their own shell companies and the accounts of two major international gold refiners, the U.S.-based Republic Metals Corporation and the Italy-based Italpreziosi SPA, to launder proceeds obtained from cocaine trafficking. The DTO allegedly used this laundered money to finance mining companies, including two gold mining companies that were allegedly used as fronts to produce cocaine.
CASE STUDY 1 – The Kalotis: demonstrates how illegally mined gold made its way to Dubai and Florida and became legal.

Peru

Formal gold miners in Peru reported 178 tons of gold for export with the Ministry for Energy and Mines in 2014 but Peruvian customs registered gold exports for a total of 290 tons - a difference of 112 tons, worth more than 3 billion US Dollars. According to authorities' examination, the mineral had a purity of 92.56%, a similar composition to the gold mined in Madre de Dios and therefore with a high degree of probability illegally extracted gold.

The Peruvian authorities acknowledged that due to the lack of police and customs enforcement staff, contraband gold has increased exponentially in the region of Madre de Dios. SUNAT officials (National Customs and Tax Administration) indicated that illegally extracted gold from Madre de Dios and Puno in Southern Peru was smuggled to Bolivia, then on to Lima, before being shipped to the US.

Between 2011 and 2013 about one ton of Bolivian gold transited Lima. However, between February and October of 2014, SUNAT accounted a record figure of 35 tons of gold, equivalent to the production of Bolivia in the last four years. In July alone commercial planes transported 5.2 tons in bars. Despite the suspicious load, SUNAT officials could not intervene because goods under transhipment are not subject to physical examination. The destination countries and companies were the international refining corporations Metalor Technologies and MKS Finance from Switzerland and Northern Texas Refinery (NTR Metals) and Republic Metals Corporation (RMC) from the USA. Italpreziosi from Italy and the Dubai based Kaloti group were also suspected of buying hundreds of tons of presumed illegally sourced gold.

The judicial authorities of Peru have accused these six companies, of which four are part of the London Bullion Market Association, of 25 criminal acts arising from the seizure of one ton of gold in Callao between 2013 and 2014 and the money laundering of the proceeds of illegal mining.

Metalor and MKS sent many millions of dollars to Lima to buy tons of gold from a group of exporters in regions troubled by illegal gold mining: the main ones are Universal Metal Trading (UMT, among the 500 largest companies in Latin America until 2012), AS Peru, E & M Company, Minera Tambopata, Sociedad Minera Rinconada, Minerales del Sur, Ananea Mining Corporation and Titan General Contractors.

The investigative journalism network Ojo Público revealed that Peruvian trading companies exported to these refineries more than 180 tons of gold between 2008 and 2014, more than the entire Bolivian and Ecuadorian gold production for the same years, and more than last year’s exports from Brazil and Colombia combined. The trading company Universal Metal Trading (UMT) exported gold, largely stockpiled by Leonardo Callalli, currently on trial and convicted of money laundering from illegal mining, directly to MKS Finance in Geneva.

Currently the Peruvian authorities are investigating illicit advance payments made by some foreign companies to acquire gold and to cover the costs of exports and transportation from the gold mining areas. Ojo Público was able to confirm bank transfers from Switzerland and the US to accounts of legal persons in Madre de Dios, Cusco, Puno and Lima. Some of these payments were seized in police operations against illegal mining mafias. Peruvian law punishes the financing of illegal mining with terms of imprisonment of up to 12 years.
Investigations carried out by the customs agency of Peru, the financial crimes unit and money laundering investigators have exposed 60 of 120 Peruvian gold exporters as being involved in the illegal trade of gold. Three of the companies are connected to the same parent company, Axbridge Corporation, which is registered in the tax haven of the British Virgin Islands.

Gold laundering is not solely the province of foreign operators: one of the biggest gold buyers in Puerto Maldonado (Province of Madre de Dios), where 90% of the extracted gold is derived from informal or illegal mining activities, is Activos Mineros S.A.C - a state-owned company under the supervision of the National Fund for Financing State Enterprise Activity’s (FONAFE).

Colombia

Colombia’s President Santos recently stated that illegal mining had surpassed drug trafficking to become the main generator of violence, as well as the principal generator of dirty money in Colombia. The export of gold mined illegally by armed groups is made possible by their laundering of the gold that they directly extract, receive as vacunas, steal, or receive in exchange for money generated from drug trafficking or other illicit activities. The groups are able to launder this gold by purchasing or creating fake documents, claiming that the gold was extracted from legal mines, selling it through front export companies that they own, selling it to unscrupulous gold brokers, or by smuggling it across borders. They may bribe or intimidate government officials in order to obtain documents showing that illegally produced gold was produced legally, or pay off or intimidate the owners of legally registered mines to claim that the gold was extracted legally from their concessions. They also sell gold to unscrupulous gold brokers or exporters, who falsify the documentation. Sometimes they even create their own export companies through which they can launder and export their gold. Finally, they may also smuggle gold mined illegally in Colombia out of the country, or smuggle gold illegally mined in other countries into Colombia, where they are able to launder it through one of these mechanisms. There are also allegations that armed groups have even sold hundreds of ounces of gold to Colombia’s Banco de la República.
According to experts interviewed, a particular loophole enabling the laundering of illegal gold is the Free Trade Zone of the Pacific. A large number of gold buying and exporting companies are located in this zone, which is heavily guarded and subjected to limited government oversight. Colombia’s National Tax and Customs Directorate (DIAN) does not register exports from the free trade zone, which allows companies that purchase illegally mined gold to transfer the gold to export companies within the free trade zone, who then send the gold abroad.

**Case Study 2 – Goldex:** gives a detailed account of the ways in which illegally produced gold can be exported to major refineries that supply some of the biggest electronics and jewellery companies in the world.

A report on the link between illegal gold mining and paramilitary groups, launched by Colombia’s Institute for the Study of Development and Peace, indicated that “illegal mining is the easiest and most profitable way to launder money in the history of Colombian drug trafficking.” Illegally mined gold has also been used by BACRIMs (bandas criminales) to launder US dollars obtained through illegal activities, including drug trafficking. A study recently carried out by Colombia’s Contraloría General found that about a quarter of all money laundering in Colombia was carried out through illegal mining.

**Ecuador**

Up until October 2015, the Financial Action Task Force (FATF), the body that sets the global standards for anti-money laundering and combating the financing of terrorism, listed Ecuador as a uncooperative country in enforcing international standards against money laundering. In a 2010 report, the FATF indicated that approximately 20% of Ecuadorian land was registered as mining territory, from which area Ecuador estimates that it produces approximately 15 to 20 tons of gold a year. However, these estimates do not include the six to eight tons of gold that the FATF estimated were produced illegally within Ecuador each year. This gold is laundered within Ecuador by bribing government officials, creating false records, or selling illegally produced gold to legal gold mines who claim that the gold came from their own concessions.

Illegal gold is also smuggled across the border into Colombia and Peru where it can be sold much more easily as gold sellers in these countries do not need to have a permit. In March of 2015, police in Arenillas, El Oro stopped two armoured vehicles coming from the Peruvian border. Within the vehicles they found ten armed private security officers who were tasked with protecting 90 gold ingots valued at USD 2.5 million. Although the men within the vehicle were able to show the officers a waybill for the gold shipment, they were unable to verify that the gold had been produced legally. This lack of verification likely means that the gold was mined illegally and was meant to be transported across international borders as a way of laundering it, allowing it to then be exported legally from Ecuador.

The Ecuadorian Defence Minister has linked arms trafficking and money laundering to the illegal gold mining industry in northern Ecuador. In 2011, an unlicensed gold mining operation was raided and shut down by the Ecuadorian army because the operation was being used to launder money for Colombian criminal groups.
Bolivia

Between January and August 2014, Bolivia officially exported 24 tons of gold, which is six times the amount of gold produced in the first seven months of 2014 and more than double the total amount exported in all of 2013. This suggests that contraband gold from Peru is being diverted through Bolivia. It is estimated that since 2006, about 68 tons of gold illegally extracted from the Amazon river and the northern border with Peru has been smuggled out of Bolivia, with a value of USD 3 billion.

Brazil

Some illegal miners pay those with the permissão Garimpeira Lavra (small scale mining permit) to launder their gold for a 10% commission. Brazil does not have an institution with specific remit to control illegal mining and to date there are no studies or statistics to estimate sales volumes, so it is difficult to establish precisely the illegal gold production.

Guyana

According to the Natural Resources Minister, police and other government authorities have to deal with extensive gold smuggling operations to the neighbouring country of Surinam. He stated that up to half of the estimated 17,000 kilos of gold produced by small- and medium-scale miners was subject to tax evasion and gold laundering.

Venezuela

In 2011, then President Hugo Chávez decreed that “all gold that is obtained through mining activity within national territory would be handed over to the Bolivarian Republic of Venezuela.” All exports were banned, and plans to repatriate gold reserves held in the U.S. and in Europe were announced. Chávez said the move was being organized in a bid to shield the country from debt problems and economic turmoil in many developed economies and to enable Venezuela to take advantage of the metal’s surging price, which he said was likely to continue rising.

Venezuela also established military zones using the National Guard in a bid to cut down on illegal mining operations. Despite the export ban, according to the Swiss Customs data, Venezuela has been exporting very large quantities of gold to Switzerland - 15,301 tons in 2012, 10,161 tons in 2013 and 2,243 tons in 2014. It is probable these quantities are very largely illegally produced gold, though given that the Swiss record the origin as Venezuela rather than the country the gold was smuggled to and subsequently sold from, they could be official sales sanctioned despite stated policy.
Effects of the Expansion of Illegal Mining

Gold mining is one of the most destructive industries in the world. It can displace communities, contaminate drinking water and destroy pristine environments. It pollutes water and land with mercury and cyanide, endangering the health of people and ecosystems.

Responsible gold mining companies now take great care to minimize the impact of their operations on the environment and to follow policies that preserve the local biodiversity and water quality. In particular, the industry has developed strict guidelines for the management of cyanide, which is used to extract gold from ore but can be toxic to humans and wildlife at high exposure levels. They work to conserve water supplies, maintain water quality, protect biodiversity and minimize their impact on the landscape.

Artisanal mining in general and illegal mining in particular can be far more destructive to the environment. Of particular concern are displacement of local populations from mining land, deforestation and mercury contamination.

Reality of illegal mining in Amazonian countries

Displacement

Peru In November 2015, the Peruvian environmental organization SPDA confirmed that illegal mining activities were detected in the Tambopata National Reserve. Having expanding to the buffer zone (La Pampa) of the protected natural area, miners are operating now at the banks of Malinowski River and already approaching the limit of the Reserve, one of the places with the highest biodiversity in the world: the Bahuaja Sonene park contains unique species and is also home to the ethnic community Ese Eja, ancestrally linked to the territory.
Colombia In 2013, the Internal Displacement Monitoring Centre (IDMC) reported that Colombia had the largest population of displaced persons in the world. In 2012, Colombia registered 4.9 million displaced people (about one in every ten Colombians). In 2012 alone, 230,000 Colombians were displaced, 9,000 families were forced to leave their homes, and there were 137 mass displacements (more than double the amount from 2011). Troublingly, the actual number of displaced people is probably much higher due to backlogs in registering displaced persons. While much of the displacement in Colombia has to do with its long history of conflict and violence, linked to drug trafficking organizations, BACRIM, the military, paramilitaries, and rebel groups such as the FARC, studies indicate that 87% of displaced people came from areas with a heavy presence of extractives. In 2015 the Colombian government reported that forced displacement is linked to illegal mining.

The highest levels of displacement were registered in the departments of Antioquia, Córdoba, Nariño, Cauca, and Valle del Cauca, the last three of which are bordering or close to Ecuador. In 2014, the United Nations Office for Coordination of Humanitarian Affairs (OCHA) reported that 2,600 indigenous Colombians were displaced from 27 communities in the western coastal areas of Chocó due to fighting between the ELN and the Urabeños.

Ecuador The Ecuadorian government has declared all stages of the mining process to be “in the public interest”, signifying that indigenous peoples can be forced from their lands and relocated at will (involuntary displacement). The Shuar, for example, had their ancestral homes destroyed to make room for international mining operations. The mining company EcuaCorriente has also reportedly caused major displacement, especially in the Zamora Chinchipe province; the International Federation for Human Rights reported that "(by) adding thousands of hectares of land to its concessions and areas of influence, EcuaCorriente has heightened the vulnerability of hundreds of families.”

Mexico The violence in mining areas, particularly Guerrero State, has caused many to flee their homes. Whole communities have been displaced at gunpoint as cartels have sought to control access to gold resources. Fears of forced recruitment by criminal syndicates have also led people to flee mining regions, leading to even greater levels of internal displacement. As there are no assistance or protection programs, many internally displaced people are wrongly categorized as economic migrants.

Deforestation

The countries studied in this report are signatories to the Convention on Biological Diversity, by which they commit and have the obligation to preserve protected areas, notably the Amazon rainforest. However, the legal framework is not enough if not accompanied by surveillance to detect and counter the presence of illegal activities, and unfortunately illegal mining has already penetrated 80 protected areas.

To date, there is no accurate information on deforestation rates linked to illegal mining in any of the countries covered by this report. However, data on deforested areas exist for following countries:

<table>
<thead>
<tr>
<th>Country</th>
<th>Deforestation Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombia</td>
<td>Between 1990 and 2010 an average of 310,349 hectares was deforested per year, a total loss of 6,206,000 hectares, equivalent to 5.4% of Colombian surface.</td>
</tr>
<tr>
<td>Ecuador</td>
<td>A 2011 study estimated 140,000 deforested hectares as a result of illegal mining in the canton Eloy Alfaro and San Lorenzo in the province of Esmeraldas.</td>
</tr>
<tr>
<td>Peru</td>
<td>In September 2012, it is estimated that deforestation caused by illegal and informal mining in Madre de Dios Region, amounts to 50,000 hectares.</td>
</tr>
</tbody>
</table>
Other studies\footnote{143} show that between 2001 and 2013, approximately 1680 square kilometres of forest were cleared and most forest loss (89\%) occurred in the following four regions:

- Guianan moist forest ecoregion (representing 41\% of the gold mining deforestation)
- Peru, Southwest Amazon moist forest ecoregion, (representing 28\% of gold mining deforestation)
- Brazil, Tapajós– Xingú moist forest ecoregion, (representing 11\% of gold mining deforestation).
- Colombia, Magdalena Valley-Urabá region (representing 9\% of gold mining deforestation).

The construction of the Interoceanic Highway, connecting the west and east coast of the South American continent between Peru and Brazil, is facilitating expansion of informal and illegal mining by improving access of mine workers to the exploration areas.

Peru Alluvial gold mining and any mining activity in natural reserve areas is not allowed in Peru, therefore any mining activity in the Amazon region is illegal. In alluvial mining, huge swaths of forest are cleared and burnt and the land is flooded, turning lush tropical rainforests into deserts: A study from 2011 found that deforestation in Madre de Dios was growing exponentially at a rate of 1,915 hectares per year, in direct correlation with rising gold prices.\footnote{144}
Interviewed environmental experts indicate that the gold rush and the resulting expansion of illegal gold mining started in 2004/2005 led to a massive deforestation of the Amazon rainforest: between 2005 and 2012 twice as much rainforest was deforested compared to the previous 20 years.

According to government officials, around 170,000 hectares have been deforested in all of Peru in the last five years, of which 50,000 hectares of are in the province of Madre de Dios. According to the National Ombudsman (Defensoría del Pueblo) illegal gold mining destroys 5-10 hectares of national protected rainforest areas per day in Madre de Dios - modifying the landscape and causing irreversible and unprecedented environmental disaster in the Amazon rainforest.

Colombia In the Department of Antioquia, illegal and informal mining was carried out on approximately 45,000 hectares of land, 35,927 of which had been degraded, as of 2012. In 2015, the government reported that half of the epicentres of deforestation in Colombia were located in illegal mining areas. These areas were located in North-eastern Antioquia, Northern Chocó, Nariño, and Norte de Santander. Illegal gold mining, and deforestation linked to mining, can also result in landslides, which killed 11 people in the Pacific area of Colombia in the first eight months of 2014 alone. Colombia’s Minister for Biodiversity reported that it would take approximately USD 10.8 billion and 25-40 years to reverse the damage caused by mining.

Brazil Illegal deforestation due to illegal gold mining activities is an alarming environmental threat: the Tapajós–Xingu forest region lost 183 square kilometres. Significant forest loss also occurred inside 14 strict environmental protection areas, of which the Rio Novo National Park had the greatest loss of 12 square kilometres. Brazilian law does require forest recovery after mining activities, but illegal mining areas are left behind as abandoned deserts in the middle of the rainforest.

Ecuador When Ecuador began loosening their tight political controls on mining in 2005, the possibility of great mineral wealth was confirmed. Aurelian Resources Corporation discovered the Fruta del Norte deposit in the Zamora-Chinchipe province in the southeast, which proved to be one of the largest gold-silver deposits in the world, with resources of approx. 6.8 million ounces of gold and 9.1 million ounces of silver. However, due to frustrations with the political regime, Kinross Gold Corp, the mining behemoth
that acquired the site in order to develop a new mine, discontinued the project and sold it off. The shock-waves from their pull-out may have been the catalyst for a political change of tune. In 2013, an adjusted mining law was passed to ease mining investment terms, in the hopes that the untapped mineral resources of the country would finally be unearthed.

To this day, the Andean nation remains largely unexplored, but should Ecuador make the appropriate moves to develop their mining sector, that could rapidly change. A biologist that has studied the region said that "unleashing industrial-scale mining in the (Amazon region of Ecuador) is a catastrophe equal to using the Galapagos Islands as a bombing range".¹⁵⁰

Note - though the comparison may sound ridiculous, there was an US airbase in the Galapagos Islands during World War II.

**Guyana** The Guyana rainforest ecoregion has the largest rate of deforestation of 41% amongst the four neighbouring countries of Suriname, Guyana, French Guiana and Venezuela. Formal and illegal gold mining has been a major cause for deforestation totalling 68% between 2001 and 2010.¹⁵¹

**Mercury Contamination**

Mercury is highly toxic to human health, particularly to the development of fetuses and small children. Studies have shown that for every kilo of gold produced, an estimated 1.3 kg of mercury are released into waterways, polluting water, aquatic organisms and human populations that consume water and fish. Miners exposed to mercury on a regular basis show adverse neurological effects, the most common symptoms being reduced motor skills, poor concentration and depression, balance and aggressiveness issues, problems with hearing and sight, and taste.

In informal and illegal mining, powdered ore is mixed with mercury to create an amalgam that workers burn to evaporate the mercury and collect the gold. Women and children often complete this task at mining camps. This process is detrimental to the worker’s health, as exposure to mercury can cause developmental and neurological problems, especially among children.¹⁵² Mercury may be ingested (accidentally during work or when it contaminates water), absorbed through the skin (when it is handled with bare hands or miners have to swim in mercury contaminated water), or inhaled (when the mercury is burnt off of pieces of gold). This can result in inflammation of vital organs, the inability to urinate, shock, and death. It can also result in skin lesions, irritation to the lungs, difficulty breathing, and permanent damage to the nervous system.¹⁵³

**Peru** The amount of mercury used in gold mining in Madre de Dios is estimated to be 30 to 40 tons per year. It is burned off after amalgamation, generally without even rudimentary technology to protect workers’ health or capture waste or fumes.¹⁵⁴ The Carnegie Institution for Science has conducted research in Madre de Dios since 2008 and has found that the levels of mercury have been increasing in line with the amount of gold production in the region. A study from March 2013 reveals that in the city of Puerto Maldonado, 60% of the species that are sold in the food markets of Puerto Maldonado exceeds international mercury concentration limits for consumption.¹⁵⁵

**Colombia** has had the highest levels of mercury contamination in the world for various decades due to unregulated mining.¹⁵⁶ In 2015, the government reported that 170 tons of mercury were released per year, and in the Department of Antioquia alone the damage caused by mercury was equal to 250% of the department’s gross domestic product (GDP).¹⁵⁷
Colombia’s Environmental Police say it takes about two grams of mercury to produce one gram of gold. This mercury is used by miners to separate out gold from sediment and about 80% is then discarded, generally dumped in waterways after use. In Northern Colombia, there have been reports of birth defects linked to mercury exposure linked to illegal gold mining.

Cyanide and mercury used in illegal gold mining makes its way into Colombia’s water, soil, and air. If a river passes through an illegal gold mining area at any time, all areas downstream will be contaminated with mercury, affecting fish and the humans that eat them. Mercury linked to illegal gold mining has reportedly affected the Andágueda, Apartadó, Atrato, Bebará, Bebaramá, Quitó, and San Jorge, and San Juan rivers. In 2015, the government reported that 60% of Colombia’s 41 hydrographic regions had been affected by illegal mining.

Bolivia It is estimated that for each kilogram of gold produced in Bolivia, 36 kilos of mercury are released into the environment, probably one of the highest levels of pollutant recorded worldwide. According to official numbers from 2013, illegal mining has been identified in eight natural protected areas resulting in heavy pollution of rivers with mercury and sediment affecting both fish and human populations downstream.

Ecuador Although mining in Ecuador has not yet reached the level at which it occurs in other countries, if mining were to become more prevalent in Ecuador, Ecuador would undoubtedly see much of the same deforestation, waterway diversion, and water contamination that its neighbours Peru and Colombia have suffered.

Brazil A research project at the Tapajós River from the University of Pará (Belem, Brazil) and University of Québec at Montréal (UQAM) showed that mercury not only contaminates rivers, air and soil surrounding the mining areas, but that people 400 km downstream were just as exposed to mercury contamination as people 50 km downstream. Furthermore, researchers found exactly the same amount of mercury in the river water whether 50 km or 400 km downstream. Other studies in the late 1990s which analysed the mercury concentration in human hair of river communities in the Rio Madeira region revealed levels of 300 micrograms mercury per gram of hair compared to a normal level of 4,1 mg/g.

Nicaragua Mercury used in small scale mining escapes into the air, water, and soil. Toxic waste from mining is generally inadequately contained due to limited government regulation, and is a hazard to the environment, as well as to residents in the area. In Bonanza, the waste from mining operations has accumulated over time in artificial ponds. The risk of leaks from the poorly maintained ponds is high and spills have caused displacement and loss of property.

Venezuela According to studies conducted in mining communities in Las Claritas, Santo Domingo, El Manteco, El Callao and Bajo Caron, only 13% of the examined women and 32% of the examined children had mercury levels below the safety limit.

Mexico There is no alluvial mining at all in Mexico and thus little or no environmental impact from illegal mining.

Human Trafficking

The UN Palermo Protocol defines Human Trafficking as the recruitment, transportation, transfer, harbouring or receipt of persons by improper means (such as force, abduction, fraud, or coercion) for an improper purpose including forced labour or sexual exploitation.

Illegal gold mines are typically located in remote areas where the government lacks the capability to monitor conditions and enforce laws. When these mines are directly controlled by criminal groups, or in areas controlled by organized crime, there is an elevated risk of human trafficking. In Colombia and Peru particularly, and to a lesser extent in the other countries studied, our research uncovered numerous instances of labour trafficking and exploitation, sex trafficking and child labour.
The mines themselves may even contribute to the destruction of traditional livelihood activities such as agriculture and fishing by their adverse environmental impact. In some mining contexts, workers flock willingly to mining sites, drawn by the perceived rewards. In other contexts, where conditions are especially hazardous or otherwise undesirable, deception may be prevalent in worker recruitment. Workers are recruited in their hometowns via recruitment intermediaries and are given advances of money, clothing, tools and transport, which they are led to believe are gifts. The recruiters describe the opportunity for workers to strike it rich, providing little to no accurate information about the conditions of employment or the length of contracts. Once they arrive at the worksite, many workers are told they have to work for a certain amount of time before they can leave the mines, and are prevented from leaving by recruitment-linked debt (debt bondage), physical isolation, and threats. Some workers are even sold by family members, who receive a payment for recruiting them, with the workers subsequently told they are required to work off this fee.

Even self-employed small-scale miners may become victims of debt bondage, especially when organized crime comes into play. They are vulnerable to cycles of indebtedness, forced to borrow from middlemen in order to pay for their basic living expenses or to buy supplies at inflated prices. Often, these miners have no choice but to sell their goods to an intermediary located in their region, which means they may be forced to accept prices significantly lower than what they could fetch on the open market.

**Hazardous Conditions**

Illegal mining is particularly hazardous due to its unregulated nature. Most artisanal miners are working on a subsistence level, without access to protective equipment or to safety training. Where regulations do exist, they may be created for the context of large commercial mines and, according to the International Institute for Environment and Development, “exaggerated safety requirements tend to discourage small-scale miners, inspiring them to simply ignore all safety advice.” Accidents are common and rarely reported, and workers lack social security and health insurance so receive no compensation in the event of injury.

**Child Labour**

Though children may work voluntarily in gold mining at their parent’s behest, in many cases they are trafficked for forced labour. The ILO notes that about 20% of children engaged in artisanal mining work for adults who are not
their parents. They are trafficked into mining work through a recruiter; recruitment often occurs through informal networks of extended families and acquaintances. Older juveniles may migrate to mining areas to look for work and become vulnerable to exploitation and forced labour when on-site.

Due to the extremely hazardous nature of the work, mining is considered a Worst Form of Child Labour (WFCL). Children are commonly used to enter mine shafts too narrow for adults, or are tasked with cleaning gold using mercury. They may have to dig pits and carry heavy bags of ore, leading to musculoskeletal injuries. The isolated nature of illegal gold mining and its intensive nature often require children miss school, another indicator of WFCL.

Sexual Exploitation
There is a strong link between illegal gold mining and sexual exploitation. Whenever there are large migrations of men to an area for employment, there is a high demand for sexual services, which often generates sex trafficking. Field research suggests that there are a large number of cases in which women and girls are trafficked into illegal gold mining areas for sexual exploitation through deception or after being sold by family members into the sex trade; the United Nations Special Rapporteur on Contemporary Forms of Slavery echoes this finding. Many women and girls respond to advertisements for jobs or are directly recruited by middlemen who offer well paid work in mining camps as cooks, store clerks, or waitresses. Once the victims agree, their identification documents are confiscated and they are given fake IDs and new identities and are told what to say if questioned by authorities. Some women are required to provide sexual services to clients at restaurants and stores in mining camps, while others are trafficked into brothels. Women working as cooks are also often forced to provide ‘sexual favours’ to miners.

Peru
Forced Labour
Verité found a number of indicators of vulnerability to forced labour across multiple Departments. In Madre de Dios, they detected the largest number of indicators of unfree recruitment, work and life under duress, and barriers to leaving employment. Although workers employed in mines in Cusco generally faced fewer vulnerabilities to forced labour than in Madre de Dios, workers reported that criminal gangs directed by Chinese, South Korean, and Colombian nationals were involved in exploiting Ecuadorians and Peruvians in gold mines in Cusco. Verité identified a number of ‘indocumentados’, Peruvians who lack a DNI (National Identity Document). For many indocumentados, the illegal mining sector constitutes their only chance for employment, as formal sector employers require that their workers possess a DNI. In some cases, the indocumentados are indigenous people who never obtained a birth certificate and have thus been unable to acquire a DNI. In other cases, the indocumentados are criminals or people suspected of having committed a crime who seek refuge in the lawless environment of the mining camps. Indocumentados reported feeling vulnerable to denunciation to authorities.

In Madre de Dios, it is very common that representatives of the mine owners hold ‘lightning’ recruitment drives in the markets of Andean provinces such as Cusco and Puno, offering to transfer workers straight to the mines the same day. A local NGO revealed that the representatives offer workers an advance payment and suggest that they will earn as much as USD 3000 on a monthly basis, without revealing that the advance payment is in fact a loan, and that their income will derive only from one day in a seven-day working week. In rural areas, traffickers are paid for each worker they recruit. Some workers know about the inhuman working and living conditions, and that life is only about working and surviving, but young workers often are tempted by the advance payment and subsequently are trapped until they can pay back their ‘debts’. About 20% of children engaged in artisanal mining work for adults who are not their parents.
Verité also found some indicators of forced labour among self-employed gold producers in Cusco who had to keep working to pay off moneylenders with a percentage of the gold that they found. In Puno, Verité found ample evidence of an employment system (cachoreo) in La Rinconada that made workers vulnerable to forced labour linked to payment in kind. Under this system, workers had to work for no pay for their recruiters (cooperative members) for a certain amount of time before they could extract gold for themselves, with this gold serving as their payment. Workers reported that in some cases, they extracted little to no gold during the days when they were extracting gold for themselves, in which case they had to borrow money to make it through until the next payday. In Arequipa, Verité found a system under which workers are hired under 30-day ‘contracts,’ and employers deduct from workers’ wages the cost of overpriced merchandise in company stores. Some years ago, workers had contracts for at least 90 days (los noventa) and were only paid after the three months, but overestimating the merchandise provided and underestimating the quantity and quality of the gold handed over led to debt-bondage situations. Nowadays, workers have neither a fixed period contract nor a fixed salary, only a maximum of 6% of the daily mining activity’s proceeds.

Frequently workers’ DNIs are confiscated and they are held captive in the isolated mining area, with no monetary means to leave the exploitative situation. Violence and death threats are part of the informal regulation system of the community and it is highly dangerous even for the police to enter the mining area. According to informal reports, mining workers have disappeared when attempting to denounce the inhuman working and living conditions. Workers have also reported that when trying to leave their work situation, they were forced to traffic drugs in order to receive their payment. The only national authorities frequenting the zone are representatives from the office of the regional Ombudsman, the Regional Directorate for Health and some local non-governmental organizations.

Labour Conditions
Interviewed experts reported that mine workers usually don’t have the financial resources to work independently, therefore mine workers, traders, individuals owning the engine, the concession and the land for exploration activities form so called production networks (actividades tecnicas productivas). Four workers (invitados) work per motor and 10% of the revenues pertain to the engine owner, 10% to the landowner, 25% to the four workers and the remaining 55% to the concession owner. The value of one gram of gold is approximately 34 USD and sometimes up to 30 grams can be mined per engine and day. However, the average is around five grams. Miners who have not been formalized are forced to sell the extracted gold for lower prices, thereby reducing their incomes.

Workers interviewed by Verité in Peru reported a large number of fatal accidents in illegal gold mines, with some workers being buried in unmarked graves without any information or compensation being provided to their family members.186

Female and Child Workers
To date it remains a challenge to obtain accurate numbers on children being exploited in illegal gold mining. Organizations like Save the Children Peru have to rely on numbers conveyed through media, surveys and cases of children being assisted.

Women are generally relegated to less desirable and lower paying jobs, for example as pallaqueras, grinding down and extracting rocks with small amounts of gold deposits that are discarded by men who enter the mining shafts. In many cases, women are relegated to these positions due to cultural norms and laws that restrict women from working underground. This decreases their earnings, and places them in the vulnerable position of being dependent upon men for their discarded rocks.
**Sex Trafficking**

The scale of sex trafficking into mining camps is staggering. Women and young girls from all over Peru, as young as 12 years old, are trafficked to the mining areas of La Pampa and Delta 1 (both Provinces of Madre de Dios) and La Rinconada (Province of Puno) to work in bars, which constitute also their place of residence. An NGO in Madre de Dios, Asociación Huarayo, calculated that there were approximately 2,000 sex workers employed in 100 brothels alone in one mining area (Delta 1) in 2010, of which 60% were minors – implying that there were 1,200 underage victims of sex trafficking in Delta 1. According to Asociación Huarayo, almost all of the girls trafficked to Madre de Dios are deceived, kidnapped, forced into debt bondage, and/or face threats if they complain or try to leave their employment. In October 2011, the police announced that they had rescued 293 female victims of sex trafficking, including seven minors, in Madre de Dios.

Peruvian police estimated that in La Riconada there were more than 4,500 Peruvian and Bolivian girls trafficked for sexual exploitation to work in bars frequented by miners. In the illegal mining area of La Pampa there are more than 150 bars, each hosting 10-15 girls. A Peruvian academic who carried out a year-long rigorous field study in 2011 on sex trafficking on the Ucayali River in the Peruvian Amazon found that many girls are trafficked along the river to mining camps. The river serves as an ideal channel for traffickers, since thousands of people move along the river each day and there is only one maritime authority to police it.

Victims are afraid to leave or are unable to do so because of isolation, physical confinement, or a lack of money to pay for transport. Many victims are reportedly under constant surveillance, making them virtual prisoners. They are prohibited or discouraged from leaving their place of employment or talking to strangers, and are told stories of women being raped or killed on the lawless streets.

Even if they do have money and try to leave, many boat and car drivers who transport people to and from the camps are complicit with brothel owners and human traffickers and may work as informers, or may even be the same people who trafficked the victims to the camps in the first place. CHS found a high level of complicity between brothel owners and people who worked in the camps as informers and reported to brothel owners when the victims of sex trafficking tried to flee or “misbehave.” Some women were reportedly explicitly threatened with violence against themselves or family members if they left. As there are no authorities in many of the camps and the victims do not have access to communication, they have little choice but to endure their circumstances.

The Regional Action Plan Against Trafficking in Persons foresees a shelter for victims of human trafficking, however this facility is planned for 2016 and will be provided by the Peruvian Ministry for Women and Vulnerable Population and therefore most probably focusing on victims of sexual exploitation only.

---

**Case Study 3 - The Bars and Brothels of Madre de Dios:** describes how women are trapped into working and the conditions under which they live and work in Colombia.

---

**Colombia**

**Forced Labour**

In 2015, the U.S. Department of State reported that forced labour was widespread. Criminal and illegal armed groups reportedly subjected individuals to forced labour, including in illegal gold mining. A recent Reuters report linked human trafficking and forced labour to illegal gold mining, especially in the western rainforest area and the...
Department of Chocó, known hotspots for human trafficking. In 2014, Colombian victims of trafficking mostly originated from the departments of Antioquia, Cundinamarca, Valle del Cauca, Risaralda, Cauca, Caldas, Tolima, Sucre, Putumayo, Bolívar, and Quindío.

According to an UNODC representative in Colombia, men and boys are subjected to forced labour in illegal gold mines, and the Colombian government and the Defensoría del Pueblo (human rights ombudsman) have reported that an increasing number of women and children are being recruited for labour exploitation in illegal mining areas. These women and children are subjected to labour and sexual exploitation, and may also be trafficked for engagement in illegal activities, such as drug trafficking and extortion. This labour exploitation is especially common in Bajo Cauca, Antioquia, Northern Cauca, and Barranco Minas, Guainía.

In-country research carried out in 2015 indicated that a large number of workers were employed in illegal gold mines by guerrillas, paramilitaries, and BACRIM. Both male and female workers interviewed were found to be in situations of forced labour. Indicators of forced labour reported by workers interviewed included deceptive recruitment, forced overtime, limits on freedom of movement, degrading living conditions, forced engagement in illegal activities, induced or inflated indebtedness, isolation, and the menace of penalty of violence and denunciation to authorities.

There are reports that some armed groups have forcibly recruited workers to work in their mines. For example, a 2012 report indicated that the Águilas Negras forced artisanal miners to work in their mines in Valle de Cauca. There are also reports in Sur de Bolívar that 1,500 workers were employed at a mine owned by the wife of an ex-AUC leader and were not able to leave the area without being accompanied by the narco-paramilitary group operating in the area. An expert interviewed reported that, “you never know who you’re working for, but know not to ask.”

In Bebará and Bojayá, Chocó, it was reported in 2015 that the FARC required that anybody who works in mines purchase an identification card (carné) for USD 9 and provide a photocopy of their personal identification document (cédula) and a photograph. Workers have also reported that in some cases they have to pay monthly fees to the FARC of up to USD 1,050 regardless of whether they find gold or not.

CASE STUDY 4 – Male and Female Labour Migration from Segovia: describes how men, women and children in a small town in Colombia survived in mining employment

Extortion of miners may also lead to indebtedness. The FARC reportedly charges miners a vacuna of 10% of their gold in Tolima, as well as Guainía, where there are a large number of Brazilian workers. In Sur de Bolívar, the ELN reportedly charges workers 5% of the gold that they extract each day, and the Urabeños are reportedly charging vacunas to artisanal miners and large scale illegal mines alike in exchange for allowing them to continue mining. The Águilas Negras reportedly charge workers 10% of their earnings in Valle de Cauca. This leads to a reduction of the already low earnings of many workers, and can lead to a cycle of indebtedness.

Because of the unpredictability of mining and the fact that some groups require miners to pay them a certain amount each month regardless of whether they find gold, many workers become indebted and are forced to borrow money from criminal groups. Worker and expert interviews carried out in mining areas in Colombia indicated that money lending was linked to criminal groups in mining areas, especially the Urabeños and the Oficina de Envigado, which was subcontracted to collect payments and carry out assassinations. According to workers and experts interviewed, these groups generally charge interest rates of 25-30% per month, and there were reports of interest rates of up to 45 to 60% per day.
In general, there has been very little press attention to labour trafficking in gold mines, and little government action on the issue. One of the reasons for the lack of government action is that illegal gold mines are located in extremely remote areas in which there is a weak police and labour inspectorate. In 2014, the U.S. Department of State reported that while the Colombian government had tried harder to investigate labour trafficking cases in general, it lacked the capacity to identify and prosecute forced labour or to provide adequate services to victims of trafficking. The Government also reportedly failed to provide victims of trafficking with adequate services or protection when they testified against their traffickers.

In-country research carried out in Colombia in 2015 indicated that government authorities lacked training and awareness regarding forced labour and labour trafficking. While the government carried out operations to combat illegal mining in 2014 and 2015, Verité research indicated that authorities did not treat workers as potential victims of trafficking, but rather as criminals. This could result in victims of trafficking being prosecuted for crimes committed as a result of being trafficked, in violation of the Palermo Protocol, dissuading victims from reporting exploitation for fear of being prosecuted for engagement in illegal mining activities.

**Sex trafficking**

While there has been more press and government attention to sex trafficking than labour trafficking, a great deal of additional attention and action is needed to combat sex trafficking given the scale and impacts of the problem. A UNODC representative interviewed by Reuters reported that organized criminal networks bussed women into illegal gold mining areas during weekends in order to serve miners. In-country research carried out in Colombia found that illegal gold mining was one of the two sectors with the highest incidences of sex trafficking, due to the control of illegal gold mining areas by criminal groups already linked to sex trafficking, the presence of a large number of single young men in illegal mining areas, and the lack of a government presence in these areas.

The Colombian newspaper El Tiempo carried out an in-depth investigation of sex trafficking linked to illegal gold mining in Colombia. It found widespread sex trafficking, including of minors, due in large part to a “complete lack of a State plan to save them from exploitation.” Criminal groups reportedly set up camps close to mines to provide miners with sex services, including of minors. Some miners reportedly spend most of the money that they earn during the week on the weekends on alcohol and prostitutes.
A national sex trafficking expert said in an interview that the biggest destination for victims of sex trafficking in Colombia is illegal mining areas, followed by mega-construction projects. She reported that sex trafficking is especially prevalent in illegal gold mining camps in remote Chocó, where indigenous and Afro-Colombian women are especially vulnerable.

Field research also demonstrated that sex trafficking is widespread in illegal mining areas and that female victims of sex trafficking live in “situations of slavery.” A national expert, who has aided hundreds of victims of sex trafficking employed in illegal mining areas in Colombia, reported in an interview that of all of these victims, only five said that they had received pay.

According to in-country experts, women employed in illegal mining areas in Colombia are routinely forced to work long hours and are unable to refuse clients or insist that clients use a condom, resulting in high rates of sexually transmitted diseases. In some cases, they are forced to consume drugs or to have abortions. There are also multiple reports of torture at the hands of clients and traffickers, including cigarette burns and needles inserted under victims’ fingernails.

Sex trafficking has been reported on the border area of Chocó and Antioquia; Bajo Cauca, Antioquia; and Nudo de Paramillo and Ayapel, in Córdoba. An official from military intelligence reported that he had documented the recruitment of minors for sex trafficking through recruitment offices in Armenia, Cali, Cartagena, Pereira, and Medellín.

One of the trafficking routes reported by El Tiempo involves victims from Cartagena transported through Turbaco by express bus to Caucasia, from where they are transported on public transport to illegal mining areas in El Bagre, Nechí, and Zaragoza, Antioquia. There is reportedly another route by which young women from Medellín, Antioquia are brought to illegal mining areas in northeastern Antioquia (Segovia and Bajo Cauca) and Chocó.

In Medellín, criminal groups involved in extortion charge fees to prostitutes to allow them to stand on corners in their territory and to provide them with security. Members of these groups reportedly serve as contacts with armed groups operating in illegal mining areas to send them “merchandise,” and are involved in the recruitment of trafficking victims. There are also indications that sex traffickers prey on displaced individuals to recruit them for sexual exploitation in mining areas. Experts interviewed in Medellín reported that sex traffickers were able to obtain data from the Registry of the Displaced and contacted displaced individuals desperate for a source of income to offer them employment, and subsequently traffic them to mining areas. One expert interviewed also reported that sex traffickers sat in on meetings of displaced individuals, in which they recruited women and girls for fake jobs before sending them to brothels in illegal gold mining areas.

A government investigator reported that, “without a doubt, the business [of sex trafficking] is controlled by the Urabeños in the majority of mines.” They reportedly purchase girls in Cartagena and Medellín, some of whom are sold by their own mothers. Jhon Jairo Restrepo, an ex-member of the ELN who is now an Urabeños boss, is reportedly one of the individuals involved in trafficking women and girls.

Press reports indicate that while government officials are often hesitant to discuss in public sex trafficking in illegal mining areas, they have disclosed privately that it is a problem. A government official from the Centre for Attention to Victims of Sexual Violence (CAVAS) in Medellín reportedly stated that sexual exploitation did not exist in Medellín, a key source area of victims of sex trafficking. In Segovia, Antioquia, a key destination spot for victims of sex trafficking and one of the epicentres of illegal gold mining, the mayor said that there was not even any prostitution, let alone sex trafficking, in Segovia because “the women are so hot (“calientes”) that you do not need to pay them.”
In-country research demonstrated a failure among government officials to recognize the existence of sex trafficking. Interviews with experts and the attendance of meetings of officials responsible for the enforcement of trafficking laws demonstrated that government officials lacked an understanding of the definition of trafficking. They further exhibited sexist attitudes and police believed that if women knowingly got on a bus to an illegal mining area that they could not be considered victims of sex trafficking, independent of whether their conditions of employment changed or they endured abuse or impediments on their freedom of movement. Government officials have admitted that the government’s efforts to combat armed groups tend to be focused on arms and drugs trafficking, as opposed to human trafficking.

**Ecuador**

Colombian refugees that fled to Esmeraldas and other areas of Ecuador bordering Colombia did so to escape guerrillas, paramilitaries, and criminal groups. However, many of these groups have followed refugees into Northern Ecuador and have begun to prey on Colombian migrant communities. In-country research indicates that Colombian refugees are extremely vulnerable to human trafficking, especially in illegal gold mining areas. The United Nations High Commissioner for Refugees (UNHCR) has corroborated this finding. UNHCR reported that Colombian refugees were subjected to poor living conditions, unpaid labour, and a lack of respect for their rights. The fact that many Colombian refugees lived in isolated areas, lacked legal status, and feared deportation made them extremely vulnerable to extortion, fraud, and deceit at the hands of human traffickers, according to UNHCR.214

The United Nations Special Rapporteur on Contemporary Forms of Slavery highlighted illegal gold mining as one of the four sectors in which slavery was most prevalent in Ecuador. According to the Special Rapporteur, Colombian migrants to Ecuador were subjected to sex and labour trafficking by transnational organized crime groups. During a country visit to Ecuador, the Special Rapporteur interviewed experts and workers and found ‘slavery-like labour exploitation’ in the illegal gold mining sector. She received reports of labour exploitation, debt bondage, and workers being forced to engage in dangerous work due to extreme poverty. Workers in illegal gold mines were reportedly subjected to dangerous working conditions without personal protective equipment and were exposed to chemicals that pose risk to their lives and the environment. The Special Rapporteur highlighted the need for government enforcement to combat these abuses.215

**Bolivia**

It is estimated that there are 45,000 people working in illegal gold mining, about 13,500 of whom are children and half the children are not paid. In 2011, the Bolivian National Ombudsman, Rolando Villena, warned that in the mining region of Potosí, children can be bought for 3-7 US Dollars. No investigation took place due to lack of resources.216

Human trafficking for sexual exploitation of women and adolescents in the mining area is an increasing problem, especially in the border regions with Peru and Brazil.218 Around 2500 Bolivian minors are trafficked for sexual exploitation just to La Rinconada, a Peruvian mining area in the border region.217

**Guyana**

There are high rates of prostitution, drug trafficking, human trafficking, and violence in illegal mining areas.218 Traffickers are attracted to interior mining communities because there is limited state supervision. Men and boys face labour exploitation in the illegal mining camps and, according to a media report in November 2012, a child was murdered while working in the mines; supposedly his death was linked to his attempt to collect wages due to him.219 Where mining camps are far outside government control, women are trafficked from mining camps
as well. Female workers, including child workers, are frequently exposed to sexual harassment and forced involvement in the commercial sex industry, leading to an increased risk of sexually transmitted infections.

Indigenous community organisations blame illegal gold mining for an increase in prostitution, drug trafficking and human trafficking. Traffickers are attracted to interior mining communities because there is limited state supervision. Men and boys face labour exploitation in the illegal mining camps and according to a media report in November 2012, a child was murdered while working in the mines, and supposedly his death was linked to his attempt to collect wages due to him. Young women and girls are lured into sexual exploitation in mining sites, making false promises about their job situation and wages. Women and girls from rural and impoverished regions are particularly vulnerable to trafficking to mining areas.

**Venezuela**

In 2013, indigenous rights groups reported that illegal miners exploit individuals from the indigenous Yanomami tribe as a cheap workforce for their mining activities and that in several communities they have found Yanomami with numbers tattooed on their shoulders like slaves.
Current Response to Organized Crime and Illegal Mining

The last decade has witnessed the rapid development and acceptance of both domestic and international standards to combat transnational organized crime, conflict linked to the extraction of minerals, human trafficking, environmental damage, and corruption. These standards are particularly relevant to companies involved in the extractive and mining industries, including companies that purchase gold linked to illegal gold mining.

Legal Framework

Traditionally, international law applies to state and not private sector corporations like mining and metal companies. However, international principles are increasingly being imposed on private sector companies through a combination of factors, including:

1. State adoption of national mining and metals law reform
2. Corporate adoption of codes of conduct, operating principles, best practices, etc.
3. International “soft law” developments by international government organizations, international financial organizations, and other entities that are hardening into law, and
4. Judicial rulings in cases challenging mining and metals company practices

International law typically is split into “hard” and “soft” laws. Prior to 1970, international law left the mining and metals industry, and the connection with the environment and human rights, largely alone. The 1972 Stockholm Declaration Principle 21 recognized that “States have ... the sovereign right to exploit their own resources.” However, States can voluntarily give up portions of their absolute sovereignty and create a legally binding, international “hard law” through several mechanisms:

1. State practice of legal customs (customary international law)
2. Entering into binding treaties (conventional international law)
3. Evolution of comparable legal principles in many States’ national laws (general principles of international law), and
4. Judicial decisions and expert commentary (subsidiary means of determining international law)

States can also engage in “soft” international law, aiming to achieve certain goals and norms of conduct, though many of these agreements are not immediately legally binding. “Soft” laws can be over time become “hard” laws by being accepted as international customary law or becoming incorporated into international conventional law. These laws can be found in:

1. Resolutions, declarations, principles, agendas, draft rules, guidelines, etc., promulgated by the UN, EU, and other international governmental organizations (IGOs)
2. Policies, guidance, conditions, etc., of the World Bank and other international financial organizations (IFOs), and
3. Codes of conduct, standards, operating rules, best practices, etc., of private sector corporations, industry associations, international standards organizations, financial organizations, insurance underwriters, etc.

Below, we provide an overview of select general international legal frameworks and country laws on transnational organized crime, conflict mining, human trafficking, the environment, and corruption, which are relevant to illegal gold mining.
Traditionally, origin, transit and destination countries have attempted to tackle transnational organized criminal activity by focusing on the groups and individual perpetrators operating domestically within their borders. Increasingly though, we are seeing governments request international assistance in investigating cases and extraditing individuals, using the UN Convention against Transnational Organized Crime (UNTOC) as a framework.

**UN Convention against Transnational Organized Crime (UNTOC)**

On November 15, 2000, the United Nations General Assembly adopted the UN Convention against Transnational Organized Crime (UNTOC)\(^{224}\) (at times referred to as the “Palermo Convention") to combat cross-border, organized criminal networks. The UNTOC entered in force on September 29, 2003 and applies broadly. It is supported by three protocols, the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children; the Protocol against the Smuggling of Migrants by Land, Sea and Air; and the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their Parts and Components and Ammunition.

The UNTOC marked a major breakthrough in the global fight against international criminal activity, reflecting the shared view of the international community of what organized crime looks like, and that the United Nations has a fundamental role to play in helping States to prevent and combat the global challenge of transnational crime. The UNTOC defines an “organized criminal group” quite broadly to include a “structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes” in order to obtain some financial benefit. UNTOC notes that a “structured group” need not have formally defined roles for its membership, and that a “serious crime” is simply defined as an offense that is “punishable by a maximum deprivation of liberty” of at least four years or a more serious penalty.

The UNTOC sets forth minimum legal and regulatory tools that countries should have in order to combat all forms of transnational organized crime. It provides a mechanism to enhance international judicial cooperation between countries working together to fight transnational organized crime. The UNTOC offers international law enforcement support in cross-border investigations within the scope of the Convention, for example, requiring State Parties to “afford one another the widest measure of mutual legal assistance in investigations” (article 18); allowing the UNTOC to form a basis for extradition even in the absence of an extradition treaty (article 16); and encouraging State Parties to consider joint investigations across borders (articles 19 and 27).

While the UNOTC has not generally been applied to illegal mining, it is very relevant for a number of reasons. For one, human trafficking can be connected to illegal gold mining in a number of countries, and in some countries it can also be connected to human and arms smuggling. Further, the laundering and smuggling of gold is an international criminal activity that necessitates transnational action. The UNOTC can provide a valuable framework and guidance for countries seeking to combat illegal mining, including countries that produce and import illegally mined gold.

**“Doha Declaration” by Thirteenth UN Congress on Crime Prevention and Criminal Justice**

On April 12, 2015, the “Doha Declaration” was unanimously adopted by the delegates at the opening of the Thirteenth UN Congress on Crime Prevention and Criminal Justice. The Doha Declaration outlines the crime policies of the United Nations for the next five years. Member States acknowledge, among other things, that sustainable development and the rule of law are strongly interrelated and mutually reinforcing. Member States endeavour to adopt comprehensive and inclusive national crime prevention and criminal justice policies and programs that fully take into account evidence and other relevant factors, including the root causes of crime. Article 9(g) explicitly discusses commitment to adopting effective measures to prevent and counter the problem of crimes that have an impact on the environment by strengthening responses to transnational organized crime, corruption and money-laundering linked to such crimes, including trafficking in precious metals and stones and...
illegal mining. Article 10 includes the commitment to establish or build upon existing practices and measures to encourage the public, especially victims, to report and follow up on incidents of crime and corruption, and to develop and implement measures for the protection of whistleblowers and witnesses.\footnote{225}

As evidenced by this report, illegal mining causes devastating damage to the environment. The responses included in the Doha Declaration, such as regulation of corruption and money laundering would be effective in combatting illegal gold mining, as well as the laundering and smuggling of illegally mined gold.

**Foreign Narcotics Kingpin Designation Act and the Specially Designated Nationals and Blocked Persons List**

One of the tools the USA uses to combat the financing of organized crime and foreign money laundering is the Foreign Narcotics Kingpin Designation Act (Kingpin Act) Specially Designated Nationals and Blocked Persons List (SDN List).\footnote{226} The Kingpin Act, which became law on December 3, 1999, was passed with the intention to deny significant foreign narcotics traffickers; their related businesses; and their operatives’ access to the U.S. financial system and to prohibit all trade and transactions between the traffickers and U.S. companies and individuals.\footnote{227} Congress modelled the Kingpin Act on the sanctions program that the Department of the Treasury’s Office of Foreign Assets Control (OFAC) administers against the Colombian drug cartels pursuant to Executive Order 12978 issued in October 1995 (Executive Order 12978) under the authority of the International Emergency Economic Powers Act (IEEPA).\footnote{228}

The Kingpin Act authorizes the President to take action when he determines that a foreign person or organization plays a significant role in international narcotics trafficking. Under the Kingpin Act, the President may identify foreign entities as well as foreign individuals as Significant Foreign Narcotics Traffickers, or “kingpins”: a foreign person is defined in the Act as “any citizen or national of a foreign state or any entity not organized under the laws of the United States, but does not include a foreign state.” The Kingpin Act requires that the Secretary of the Treasury, the Attorney General, the Secretary of State, the Secretary of Defence, and the Director of the Central Intelligence Agency coordinate to identify drug kingpins and propose them to the President for sanctions. The Department of Homeland Security and the Directorate of National Intelligence are also included in the process. The act also allows the Treasury Department to freeze any assets and interests in assets within the United States or within the possession or control of any U.S. person, of the designated individuals or entities found in United States jurisdictions.\footnote{229}

It also allows for criminal prosecution for those who violate the Act or any American who helps the individuals or criminal organizations designated as kingpins to launder their money. Criminal penalties for individuals include up to 10 years in prison and/or significant fines. Entities that violate the Act face criminal penalties in the form of fines up to USD 10 million; officers, directors, or agents of an entity who knowingly participate in a violation of the Kingpin Act are subject to criminal penalties of up to 30 years in prison and/or a USD 5 million fine. The Kingpin Act also provides for civil penalties of over USD 1 million against individuals or entities that violate its provisions.\footnote{230}

Those who are designated kingpins, along with other individuals and entities, are added to what is called the Specially Designated Nationals and Blocked Persons List (SDN List), maintained by the Treasury Department’s Office of Foreign Assets Control (OFAC).\footnote{231} Those on the SDN List include individuals and entities that OFAC deem to reasonably pose a threat to the U.S. economy, foreign policy, or national security. OFAC prohibits any U.S. citizen, legal permanent resident, U.S. foreign nationals, and U.S.-based businesses and corporations from taking part in most transactions with those on the SDN List. This includes but is not limited to commerce, business, trade, or finance. The SDN List also serves as a notice to the aforementioned U.S.-based individuals and businesses of their obligation to block any property or interests in property belonging to those on the SDN List that may come into their possession or control. Violation of these prohibitions or failing to fulfill these obligations may result in sanctions and criminal and civil penalties.\footnote{232}
The SDN List and Kingpin Act establish “strict liability” in that they do not take into account whether executives had knowledge of payments being made to individuals or entities on these lists or whether these payments were made by sub-agents of U.S.-based companies. Once a violation occurs, OFAC will look at whether a business has mitigated risk and whether they have a compliance program. This means that a company could be held accountable if a local agent of the company unknowingly purchased gold that was produced by an illegal mine connected to any individual or entity on one of the lists, which include a large number of entities with documented links to illegal gold mining in Latin America. With this in mind, supply chain accountability and transparency for upstream suppliers is more important than ever.

The United States continues to target Colombian criminal organizations with Kingpin Act sanctions. Los Urabeños, also known as Clan Usuaga, was identified by President Barack Obama in 2013 as a foreign drug trafficker to be placed on the SDN List in May 2013. Los Urabeños are now the largest criminal group operating in Colombia engaged in cocaine and arms trafficking, money laundering, extortion, and drug-debt collection. They are organized by a network of smaller, loosely affiliated groups. Recent Kingpin sanctions target those who seek to expand the influence of Los Urabeños abroad. One recent example is the sanctions against Colombian national Victor Alfonso Mosquera Perez and the two companies he controls, De Expominera SAS, a Medellin-based mining company and Joyeria MVK, a Colombian jewellery firm, which the Treasury said was involved in controlling drug trafficking operations for Los Urabeños from Colombia to Europe. Another example is the sanctions placed against Alveiro Feo Alvarado, who it said is a financial chief for Los Urabeños and was involved in forging alliances with the FARC rebels and Los Rastrojos, a rival drug trafficking organization (also subject to Kingpin sanctions). Both men were indicted in Florida federal court in 2014 on drug-related charges. Other groups on the lists include the Shining Path, the Zetas, Los Caballeros Templarios, the ELN, the FARC, and the Rastrojos, all of which have documented links with illegal mining.

Human Trafficking

As demonstrated by this report, illegal gold mining is closely tied to organized crime and human trafficking. In its recently released report for the U.S. Department of State’s Office to Monitor and Combat Trafficking in Persons (JTIP), Verité identified the presence of organized crime as a key “red flag” indicating a high risk of human trafficking, as it indicates a high level of general lawlessness and corruption, both of which contribute to trafficking risk in their own right and because workers may be fearful of leaving their jobs before paying off their debt or completing their contracts due to a fear of violent reprisal. According to the U.S. Department of
State 2015 Trafficking in Persons report, gold is produced with forced labour or forced child labour in Peru and Suriname.\textsuperscript{238} The Department of Labor’s List of Goods Produced by Child Labor or Forced Labor notes that forced labour in gold production is found in Peru and that child labour is found in Bolivia, Colombia, Ecuador, Peru, and Suriname.\textsuperscript{239} Forced labour in gold production can be linked to migrant workers and debt-bondage.

Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children

The principal international legal instrument regulating trafficking in persons is the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children of 2000, sometimes referred to as the Palermo Protocol, a supplement to the UNCTOC. Article 3 (a) of the Palermo Protocol defines “trafficking in persons” or “human trafficking” as “the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs.”\textsuperscript{240} Article 3(c) broadens the definition’s applicability, stating “the recruitment, transportation, transfer, harbouring or receipt of a child for the purpose of exploitation shall be considered ‘trafficking in persons’ even if this does not involve any of the means set forth in subparagraph (a).”

This definition can be more simply broken down into three key parts: the act, the means, and the purpose. The act of human trafficking involves recruitment, transportation, transfer, harbouring and/or receipt of a person. The means involves the threat or use of force, deception, abduction, the abuse of power or a position of vulnerability, or other forms of coercion. The purpose of human trafficking is exploitation, which can include the prostitution of others, forced labour, slavery or servitude.

A European Union Framework Decision makes a distinction between human trafficking for “labour exploitation” (also known as “labour trafficking”) and human trafficking for “sexual exploitation” (also known as “sex trafficking”). “Labour exploitation” is defined as a “person’s labour or services, including at least forced or compulsory labour or services, slavery or practices similar to slavery or servitude.” This can be taken to refer to forced labour or slavery.\textsuperscript{241}

The Trafficking Protocol has been criticized over the years for several reasons. First, the Trafficking Protocol was designed to reflect the international community’s political will to combat organized crime, rather than to combat human rights violations inherent within the trafficking of human beings.\textsuperscript{242} It has also been criticized for perpetuating gender bias and misconceptions of trafficking as a female problem, creating the expectations of a “perfect victim,” and prioritizing criminal action over the protection of victims of human trafficking.\textsuperscript{243} Article 5 of the Trafficking Protocol establishes that “[e]ach State Party shall adopt such legislative and other measures as may be necessary to establish as criminal offences the conduct set forth in [the definition of trafficking in persons in Article 3].” However, in contrast, the Protocol includes qualifiers to states’ responsibilities when addressing the protection of victims and does not contain any mandatory provision under which state parties are required to protect the victims or conduct prevention initiatives. Further, the Trafficking Protocol does not include articles relating to enforcement and must rely on the UNTOC in Article 32 to implement and review implementation.

Executive Order Strengthening Protections Against Trafficking in Persons in Federal Contracts

Companies can face consequences for purchasing gold linked to human trafficking. President Obama’s Executive Order – Strengthening Protections Against Trafficking in Persons in Federal Contracts – clearly prohibits federal contractors, contractor employees, subcontractors, and subcontractor employees from “directly supporting or promoting trafficking in persons, the procurement of commercial sex acts, or the use of forced labour in the performance of the contract or subcontract,” and tasks the Federal Acquisition Regulatory (FAR) Council to amend the Federal Acquisition Regulation to reflect this.\textsuperscript{244} Therefore, companies that fail to address the presence of illegal
gold mining in their supply chains may also be failing to address the risk of human trafficking in their supply chains, thus opening themselves up to liability under the Executive Order Strengthening Protections Against Trafficking in Persons in Federal Contracts.

Verité has developed guidance for companies to identify and address human trafficking risk in their supply chains in order to come into compliance with the above-mentioned Executive Order by carrying out focused risk assessments, developing detailed compliance programs, communication and training, monitoring and remediation, and conducting periodic reviews. These same steps can help companies to identify and address links to organized crime, corruption, and conflict minerals in their supply chains.246

California Transparency in Supply Chains Act
The California Transparency in Supply Chains Act, Cal. Civ. Code, § 1714.43, went into effect in January 2012. It is a state law and the first of its kind that applies to all retailers and manufacturers with annual global revenues of more than USD 100 million that do business in the state of California. The Act requires these businesses to disclose information about their efforts to eliminate slavery and human trafficking from their direct supply chains where they make tangible goods for sale.247 The Act requires businesses to publicly post information on their websites describing the extent to which they engage in verification, auditing, certification, internal accountability, and training to address human trafficking and slavery in their supply chain. Businesses are required to post their disclosure with a “conspicuous and easily understood” link on their website homepage leading to the required information. If the business does not have a website, it is obligated to provide consumers with written disclosure within 30 days of receiving a written request. The penalty for non-compliance with the Act is injunctive relief by the California Attorney General, which essentially would allow a court to order a company to provide a disclosure.248

There are concerns that the law only requires that companies disclose how they deal with their ‘direct suppliers,’ and does not directly touch upon sub-contracted business partners that provide first-tier suppliers with hired labour or materials (including the materials that go into stores and other facilities). This may be problematic as human trafficking may occur frequently in the second and lower tiers of the supply chain, including at the commodities and raw-materials level.249

Nonetheless, the law represents positive developments in tracing slave labour and human trafficking in supply chains. While there is no private cause of action created by this law, there has been increased litigation over representations made pursuant to the Act seeking to identify false or misleading representations or omissions that might form the basis of a claim under other California statutes. Furthermore, this law has become the model for a similar federal law250 as well as Section 54 of the United Kingdom’s Modern Slavery Act, which goes beyond this law and applies to sectors beyond retail and manufacturing to include all trades and professions.251

Supply Chain Litigation
Another method of enforcing the eradication of slave labour and human trafficking in supply chains is to bring civil litigation based on state business laws. Recently, several class action lawsuits were brought against large corporations based on California business and competition laws on the basis of their statements that their businesses were human trafficking and slavery free, sometimes based on requirements of the aforementioned California Transparency Supply Chain Act.

On August 19, 2015, a California resident sued Costco Wholesale, a corporation incorporated in Washington State.252 The federal action filed in San Francisco also alleges that Costco knows that the feed meal for farmed prawns is the product of pirate fishing and the use of "ghost ships." On August 27, 2015, a class action lawsuit was...
brought against Nestlé for the use of seafood harvested by trafficked workers in its pet food. On September 28, 2015, a class action lawsuit was brought against Nestlé on the basis of the use of child slave labour and trafficked labour in the production of cocoa used in their chocolate products. In all three lawsuits, the causes of actions alleged that the corporations violated the California Business and Professions Code prohibitions against unlawful business acts and practices by sourcing products like seafood or chocolate that actively contributes to the use of illegal slave labour, and by falsely claiming the company enforces its policies against such slave labour. The lawsuits also all claim that the corporations violated the California Business and Professions Code prohibitions on misleading and deceptive advertising and the California Consumer Legal Remedies Act prohibitions against unfair and deceptive competition by products that are tainted by the product of slave labour.

It remains to be seen if more supply chain litigation cases based on general state business code practices will occur and be an effective means of encouraging corporations to enforce trafficking-free practices in their supply chains. However, as of November 2015 Nestlé announced in a report, based on research conducted by Verité, that its seafood was indeed tainted with rampant labour abuse and that it intends to implement a plan to address these problems. In response to this announcement, the law firm bringing both lawsuits against Nestlé declared that it would nonetheless continue litigation against Nestlé for failure to disclose directly that slave labour was used in the making of certain products.

Conflict Minerals

The concept of “conflict minerals” has generally only been applied to the African context, especially the Democratic Republic of the Congo (DRC) and bordering countries. Whilst illegal mining in Latin America is intrinsically linked to conflict, there are few initiatives in place to address this intersection.

Dodd-Frank Act

In July 2010, the U.S. government introduced the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act, also known as the Conflict Minerals Act). The law was originally passed in order to reduce violence linked to mineral extraction in the Democratic Republic of the Congo (DRC) and a specific list of adjoining countries. It contains a whistleblowing provision, and allows people to be rewarded for reporting information on security violations to the U.S Securities and Exchange Commission (SEC). Specifically, and more recently, the SEC approved rules mandated by the Dodd-Frank Act in Section 1502 requiring companies to disclose their use of
"conflict" minerals (particularly gold, coltan, tantalum, tin and tungsten), many which are used in electronics. One rule in particular requires mineral extraction companies to disclose payments they, or entities under their control, make to foreign governments. Supporters of this act and SEC implementing rule believe that these disclosures, while not a ban on use of conflict minerals, could have an impact on the amount of violence involved with the mining of conflict minerals.

There have been reported difficulties for companies to comply with the reporting requirements with the SEC rule. In part, it is difficult to collect data from smelters and processing centres abroad. In fact, in September 2014, the U.S. Commerce Department declared that it could not meet its obligations under the Dodd-Frank Act to publish a world-wide list of refiners and smelters that are being used to fund militia groups. The Commerce Department in part blamed the difficulty in tracking artisanal miners in the eastern Congo that smelt small amounts of these metals, and locating guerrilla operations where makeshift smelters process metals to ship overseas. While the rule allows companies to have some space in presenting a "reasonably reliable representation" from players in their supply chain, even this representation may be difficult to make in long and complicated mineral supply chains that can be sourced from single, small-scale miners to large vendors of scrap metal. Smelters and refiners that purchase ore from a variety of sources and process it for multiple suppliers that then in turn sell various finished parts to companies themselves may become the point of obscurity in the supply chain.

These difficulties are apparent in a U.S. Government Accountability Office (GAO) report on the SEC rule. Major tech firms were among the best at reporting whether conflict minerals were in their supply chain, while a handful of smaller companies did not even file their reports by the June 2014 deadline, or left out required details about their supply chain. According to a generalized sample that the GAO reviewed, company disclosures filed with the SEC for the first time in 2014 indicated that most companies were unable to determine the source of their conflict minerals. Around 87% of the companies that filed with the SEC in response to the rule were based in the United States. Around 99% of the companies reported performing country-of-origin inquiries for conflict minerals used, and around 94% of the companies reported exercising due diligence on the source and chain of custody of conflict minerals used. However, 67% of those companies were unable to determine whether those minerals came from the DRC or adjoining countries, and none could determine whether the minerals financed or benefited armed groups in those countries. Because of the difficulty in tracing the origins of minerals, corporations may fear legal liability for making public statements that they are not using slave or trafficking-sourced minerals in deceptive business practices and false advertising laws. This fear of legal liability may further complicate incentives for full disclosure and corporate compliance with the rule.

The companies were given a two-year phase-in period during which they could declare that they could not determine if conflict minerals were in their products. Now that the phase-in period has expired, companies will need to be more specific when they next file by June 2016, and will have to hire outside auditors to inspect their reports.

The law has also been met with other forms of opposition and criticism. Opponents have argued that arbitrary and capricious disclosures are required, some of which violate the First Amendment guarantee of freedom of speech, and corporations are forced to state their innocence or be considered guilty in sourcing conflict minerals. In April 2014, a three-judge panel of the D.C. Circuit struck down a portion of the SEC’s conflict minerals rule on First Amendment grounds in the case National Association of Manufacturers, et al. v. Securities and Exchange Commission, et al, 13-5252 (D.C. Cir. April 14, 2014). The Court held that the Conflict Minerals rule and Section 1502 violated the First Amendment to the U.S. Constitution via “compelled speech” of corporations, to the extent Section 1502 requires companies to report to the SEC and state on their websites that any of their products have “not been found to be DRC conflict free.” This opinion was reaffirmed in August 2015. In response, on May 1, 2014 the SEC issued an order that formally stays certain provisions of the rule. This development in the law draws attention to the fine line laws must make in requiring companies to be transparent about the sourcing of their materials without violating First Amendment rights in the United States.
In addition, while the law was originally passed to aim at the violence in the Democratic Republic of the Congo (DRC), some have argued that the shutting down of mines in the DRC to be conflict-free has led to the loss of jobs, leading individuals there to join militias and aggravating the situation. Critics maintained that studies have shown that the Dodd-Frank Act unintentionally shut out all minerals mined in the Democratic Republic of Congo (DRC), including those not linked to illegal mining or conflict, creating negative consequences for workers and companies involved in legal mining.

**European Union Conflict Minerals Legislation**

The European Parliament of the European Union (EU) recently passed major legislation that builds on U.S. efforts with the Dodd-Frank Act to prevent illicit conflict minerals from entering the global market, but with some important changes. While the U.S. Dodd-Frank Act primarily focuses on sourcing from the DRC and a specific list of adjoining countries, the draft EU regulation expands the geographic focus to sourcing from any conflict-affected or high-risk area (not just countries) anywhere in the world. Some other potential areas include Colombia, Venezuela, and Indonesia.

On May 20, 2015, the European Parliament voted to reject the proposal of the European Commission and the Parliament’s Committee on International Trade (INTA) for a voluntary system of self-certification for importers of tin, tantalum, tungsten, and gold (defined as ‘conflict minerals’) into the EU. The amended draft regulation now calls for mandatory compliance by all importers of conflict minerals from conflict-affected and high-risk areas around the world. The amended regulation now also calls for a mandatory system of due diligence for smelters and refiners. The amended proposal is broader in scope than the Dodd-Frank Act and would compel European companies to disclose whether any companies in their supply chains are sourcing conflict minerals. This law applies to mining companies, companies that purchase gold from a smelter or refiner, component manufacturers, product manufacturers, and retailers. According to the European Parliament, amending the regulation to apply to these downstream companies would expand the scope of the regulation from just 400 European importers, as originally proposed, to approximately 880,000 European companies. It would also require rigorous third-party audits of all metal smelters and gold refineries and includes provisions for on-the-ground capacity building for communities impacted by the regulations, including development aid and assistance in marketing non-conflict minerals.

The EU draft regulation does not prohibit or limit the importation or use of conflict minerals altogether. The regulation, as originally proposed and as amended, would require companies to disclose what steps they take to address risks in their supply chains for conflict minerals and ensure that their purchases of conflict minerals (or products or components that contain conflict minerals) are from legitimate sources. The rule is designed to allow
consumers, investors, and "upstream" companies to take account of this information in making their purchasing decisions and for NGOs to monitor corporations for ethical sourcing of their products and human rights practices.\(^{275}\)

**Environment**

Mercury is used as a catalyst in several production processes but in Latin American countries its main use is to extract gold and silver from ore. Once mercury enters the environment it is extremely harmful to both the environment and human health.\(^{276}\) The Carnegie Amazon Mercury Project found in a study that artisanal gold miners dump more than 30 tons of mercury in rivers and lakes in the Amazon region every year. This has generated levels as high as 34 times the safe limit for women of childbearing age, whose unborn children could suffer from permanent brain damage from the mercury. The highest risk of mercury exposure and associated health effects was connected to high consumption of local, contaminated fish (mercury accumulates in the tissues of fish), to experience in gold mining, and to inhalation of airborne mercury from gold buying shops.\(^{277}\)

**UNEP Minamata Convention on Mercury**

After various assessments recognizing the urgent need for international action, in February 2009 the UNEP Governing Council initiated the negotiating process for a legally binding instrument on mercury. The text was agreed upon at the UNEP Minamata Convention on Mercury in January 2013.

The United States was the first and for a while the only party to have ratified the Minamata Convention, primarily because during negotiations it lobbied for the Minamata Convention to mirror its already existing internal domestic laws regulating mercury, immediately bringing it into compliance with all of the treaty’s obligations.\(^{278}\)

The Minamata Convention may become an important tool in addressing the mining industry because of the potential rise in mercury trade in Latin America, as well as the implications of mercury waste in relation with the mining industry, and the effects on human health and the environment. However, critics point out that it still allows mercury in artisanal and small-scale gold mining, and although it encourages state parties to reduce or phase out its use, there are no targets or dates included.\(^{279}\)

**Corruption**

Many international and domestic laws target corruption, particularly in conjunction with extractive sectors like the mining and metal industry. This is partly because most of the countries targeted by mining and metals companies for extraction are perceived to have high levels of corruption. A December 2014 OECD Foreign Bribery Report found that in a study of reported enforcement actions for foreign bribery from 1999 to 2014, the highest percentage of the cases were in the extractive sector, and involved paying bribes to obtain public procurement contracts.\(^{280}\) The mining industry also operates in some of the most corrupt countries in the world, and in difficult locations where companies in other industries would not choose to invest.\(^{281}\)

Bribery and the involvement of public officials in extracting and exporting illegally mined gold has been documented. In Peru, for example, a judge

---

### Mercury used in small-scale and artisanal mining (2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>140</td>
</tr>
<tr>
<td>Brazil</td>
<td>60</td>
</tr>
<tr>
<td>Colombia</td>
<td>120</td>
</tr>
<tr>
<td>Ecuador</td>
<td>80</td>
</tr>
<tr>
<td>Peru</td>
<td>20</td>
</tr>
<tr>
<td>Venezuela</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: http://www.spda.org.pe/?wpfb_dl=414
is being investigated for accepting bribes in exchange for releasing a confiscated shipment of illegally mined gold headed for the U.S. In March 2012, the Director of Hydrocarbons for the Ministry of Energy and Mines (which is responsible for combating illegal gold mining) admitted that he owned the company, Universal Metal Trading Company SAC, which exported 19.2 tons of gold worth USD 901 million to Switzerland in 2011 and constituted the tenth-largest mining company operating in Peru in terms of exports. This gold was reportedly illegally mined and transported directly to major international gold ingot producers in Switzerland, including Metalor. He was removed from office, charged with tax evasion, and faces eight years in jail. In 2011, it was revealed that a Congressman from Madre de Dios owned various illegal gold mines and backhoes through frontmen. He was nicknamed Comeoro (gold eater) after he said that the profits he turned from the gold mines were barely enough for him to purchase food. In 2010, it was reported that another Congressman was a stockholder in mines in Puno and it was alleged that he was involved in laundering illegally-produced gold and tax invasion. He was one of Peru’s largest tax debtors, owing PEN 550 million (USD 14 million) to SUNAT.

**Organisation for Economic Co-operation and Development Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (OECD Anti-Bribery Convention)**

The OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (OECD Anti-Bribery Convention) entered into force on February 15, 1999, and establishes legally binding standards to criminalize bribery of foreign public officials in international business transactions. By establishing an international framework to combat the bribery of foreign public officials, the OECD Anti-Bribery Convention aims to avoid distortions in international competitive conditions. Before the adoption of the OECD Anti-Bribery Convention, bribing foreign public officials in international business transactions was considered the normal way of doing business in many parts of the world. As stated in the OECD Policy Brief dated October 2009, this OECD Anti-Bribery Convention and related instruments were established due to serious moral and political concerns about such business practices, and their negative effect on good governance, economic development, and a level playing field for international competition. To this day, the OECD Anti-Bribery Convention remains the only multilateral instrument in the world focused on the supply-side of foreign bribery.

**Inter-American Convention against Corruption (IACAC)**

The Inter-American Convention against Corruption (IACAC) of the Organization of American States (OAS) is the first international judicial instrument dedicated to fighting corruption. The IACAC obliges States who have ratified the convention to implement a series of measures related to their judicial systems and public policies to promote the development of the necessary mechanisms to prevent, detect, prosecute, and eradicate corruption as well as to promote, facilitate, and regulate cooperation between State Parties on these matters. Its structure consists of two parts: one dedicated to preventing corruption in Article 3 and the other to repressing certain corrupt practices. In order to assist State Parties with the implementation of their IACAC obligations and to evaluate the levels of State Party compliance with their obligations over time, the IACAC created the Mechanism for Follow-Up on the Implementation of the Inter-American Convention Against Corruption (MESICIC). MESICIC observers periodically compile information on State Party implementation of the IACAC and create reports detailing each State Party’s compliance with the IACAC recommendations and requirements.

**UN Convention against Corruption (UNCAC)**

On the heels of the conclusion of the UNTOC in November 2003, the United Nations decided to pursue the negotiation of a global convention focused solely on the issue of corruption, the United Nations Convention Against Corruption (UNCAC). It was recognized that even though corruption was inherent to the matters included in the UNTOC, it was far too complex a problem to be exhaustively covered by UNTOC alone. UNCAC represents an attempt to establish universal anti-corruption standards, including a common set of obligations on the part of countries around the world to cooperate in investigations and enforcement. The UNCAC entered into force on December 14, 2005.
The UN Convention is by far the broadest in scope, as well as the most detailed, complex, and far-reaching, of any of the international anti-corruption treaties to date. It covers a range of activities, from those that fall within typical notions of corruption to those that are more similar to concepts of criminal fraud. Its scope includes criminalization requirements, obligations regarding preventive measures in the public and private sectors, international cooperation in investigations and enforcement, and technical assistance and information exchange.

The main purpose of UNCAC is to ensure that all party states criminalize and put in place measures against corruption, including: bribery of national and foreign public officials including officials of public international organizations (Articles 15 & 16), embezzlement or misappropriation or other diversion of property by a public official (Article 17); abuse of position by a public official for obtaining undue advantage (Article 19), trading in influence (Article 18), illicit enrichment (Article 20), bribery in the private sector and embezzlement of property in the private sector (Articles 21 & 22). Besides criminalizing these activities, UNCAC also criminalizes the laundering of their proceeds (Article 23). The criminalization of laundering of the proceeds of crime is further consolidated with provisions on measures to prevent money laundering in Article 14.

Implementing and enforcing an instrument of the magnitude of the UNCAC is not without difficulties. The concept of corruption itself creates enforcement difficulties due to the lack of consensus as to its legal definition, which can change over time and varies in different countries, cultures, and legal systems. For example, facilitation payments, which are payments made for the purpose of expediting a routine performance by a public official, and not to obtain or retain business or other undue advantage, have evolved and only in recent years have more international agreements and domestic laws moved to criminalize them all together.

Most of the UNCAC's provisions are not self-executing and therefore require national implementation on the part of its state parties. The review mechanism was finally established, creating the first peer review mechanism for a UN convention, in November 2009. The debates about the mechanism were extremely heated, particularly concerning the role of civil society in the process. Although Article 13 of UNCAC officially recognizes the role of civil society in promoting the UNCAC, subsequent proposals to enhance the role of civil society were presented in October 2011, such as a mandatory inclusion of civil society, obligatory country visits, and the required publication of country reports. These, however, met with considerable opposition and were ultimately rejected. To date, it remains problematic that measures to include civil society in the review mechanism are still optional.

Foreign Corrupt Practices Act (FCPA)

The United States first enacted the Foreign Corrupt Practices Act (FCPA) in 1977 and amended it to criminalize the bribery of foreign public officials in international business transactions in 1994. The FCPA has two primary sections: the first section makes it illegal to bribe foreign officials, and the second section imposes record keeping and internal accounting requirements upon publicly traded U.S. companies. The FCPA's anti-bribery provisions make it illegal to bribe foreign officials in order to obtain or retain business or to secure any improper advantage. Specifically, the FCPA prohibits payments, offers or gifts of money or anything of value, with corrupt intent, to a “foreign official.”

The Department of Justice (DOJ) and Securities and Exchange Commission (SEC), who enforce the FCPA, construe its requirements very broadly. The DOJ's recently issued guidance on the FCPA reaffirms that payments to foreign government officials such as border control, immigration, or law enforcement to gain an improper business advantage or to secure or maintain business can give rise to liability regardless of whether there was actual knowledge of wrongdoing or purposeful avoidance of such knowledge. The FCPA makes it clear that "wilful blindness" or "deliberate indifference" to red flags will be sufficient to establish criminal knowledge of corrupt practices.
U.S. companies including foreign subsidiaries, franchisees, joint venture entities, or even suppliers run the risk of potential FCPA liability. It is important to note that under the FCPA, a parent company may be liable for bribes paid by its subsidiaries, agents and others working on its behalf under a variety of legal theories, including traditional agency principles. This means that a U.S. company can be held accountable for the actions or failures of its subsidiaries, agents, and employees, and that its U.S. officers and directors can also be held personally liable. Companies subject to the FCPA need to understand that the agents and brokers they hire may be paying bribes to an assortment of players in order to launder and export illegally produced gold, including border control, judges, and law enforcement.

The DOJ consistently takes the position that FCPA responsibilities extend to a wide range of third parties in supply chains, including agents, business partners, and even suppliers through whom an “improper business advantage” accrues to the U.S.-connected company. The concept of improper business advantage is very broadly defined and can include indirect or direct financial benefits such as cheap labour used in the manufacture of its products. Companies cannot afford to ignore signs that suppliers, agents, or intermediaries may be engaged in bribery to facilitate the export of illegally mined gold. Avoiding knowledge of the conduct of third parties in the supply chain will not reduce a company’s potential liability.301

The FCPA continues to be one of the most commonly used legal instruments in the world to enforce against foreign bribery schemes. The 2014 OECD Foreign Bribery Report found in its study that the United States, using the FCPA, had sanctioned the most cases of foreign bribery at 128 per country. Germany was second at only 26 schemes, Korea at 11, and Italy, Switzerland, and the United Kingdom each at 6 cases each.302

**Private Sector Initiatives**

In 2011, the United Nations approved the UN Guiding Principles on Business and Human Rights (also known as the Ruggie Principles), a global standard for preventing and addressing the risk of adverse impacts on human rights linked to business activity. They outline:

- The state duty to protect human rights
- The corporate responsibility to respect human rights
- Access to remedy for victims of business-related abuses
The responsibility of corporations to respect human rights refers to the two internationally recognized human rights frameworks, the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work. The use of the term responsibility clearly shows that there is no intention that businesses are obliged by law to respect human rights, unless reflected in domestic law of countries where business operations take place.

In order to identify, prevent, mitigate and account for how companies address their adverse human rights impacts, the Guiding Principles propose that a business enterprise should assess actual and potential human rights impacts as well as integrating and acting upon the findings, tracking responses, and communicating how impacts are addressed. Therefore it:

- Should cover adverse human rights impacts that the business enterprise may cause or contribute to through its own activities, or which may be directly linked to its operations, products or services by its business relationships;
- Will vary in complexity with the size of the business enterprise, the risk of severe human rights impacts, and the nature and context of its operations;
- Should be on-going, recognizing that the human rights risks may change over time as the business enterprise’s operations and operating context evolve.

The Guiding Principles, along with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, serve as the two main ground-breaking tools for responsible due diligence in mineral supply chains. The OECD notes that “Due diligence is an on-going, proactive process through which companies can ensure that they respect human rights and also observe international law and comply with domestic laws, including those governing the illicit trade in minerals. Through effective due diligence, companies can mitigate the risk of illegally extracted gold in their mineral supply chains, violations of human rights and decent labour conditions as well as circumstances of illicit trade or handling.”

It suggests that for an effective due diligence in mining operations, corporations should:

1. identify potential risks involved in the extraction, transport, handling, trading, processing, smelting, refining and alloying, manufacturing or selling of mineral resources originating from conflict-affected and high-risk areas;
2. identify and assess potential risks by evaluating the circumstances against standards set out in the company’s supply chain policy;
3. prevent or mitigate the identified risks by adopting and implementing a risk management plan.

Furthermore, the OECD recommends undertaking a five-step process for risk-based due diligence in the mineral supply chain:

1. Establish strong company management systems.
2. Identify and assess risk in the supply chain.
3. Design and implement a strategy to respond to identified risks.
4. Carry out independent third-party audit of supply chain due diligence at identified points in the supply chain.
5. Report on supply chain due diligence.

All companies involved in the process of exploring for and producing minerals need to address potential risks, not just mining or refining corporations. For example, in the illegal mining area of the Peruvian Amazon region, the strong presence of the construction machinery company Ferreyros illustrates that the company failed to conduct due diligence and contributed to an illicit exploration process.
In the last couple of years there has been an increase in consumer awareness about conflict-free gold and conditions under which gold is being produced. As a consequence, the gold sector has developed a number of initiatives addressing the concerns about labour conditions and compliance with international standards. However, most of these initiatives focus on the large-scale mining sector.310

The International Council on Mining & Metals (ICMM)
The ICMM requires its members to perform a due diligence process for their mineral supply chain and manage human rights issues responsibly, as this contributes to a strong relationship with communities, customers and other stakeholders, based on trust. 311

The London Bullion Market Association (LBMA)
The LBMA has developed a set of guidelines and recommendations for refineries, the so-called LBMA Responsible Gold Guidance.312 All refiners who want to be part of the LBMA’s trusted refiners must comply with this LBMA Responsible Gold Guidance in order to remain on the LBMA Good Delivery List (GDL). Any company accredited after 1 January 2012 must pass an audit for a period of 12 months, prior to becoming a member of the Good Delivery List. The requirements include five steps:

- Establish strong company management systems
- Identify and assess risk in the supply chain
- Design and implement a management strategy to respond to identified risks
- Arrange for an independent third-party audit of the supply chain due diligence
- Report on supply chain due diligence

The World Gold Council (WGC)
The World Gold Council is the market development organisation for the gold industry. The WGC works within the investment, jewellery and technology sectors and also engages with governments. By developing the Conflict-Free Gold Standard313, the WGC provides its members with a mechanism by which responsible gold extraction can be assured. In case a gold producer is operating in an area assessed as ‘conflict-affected or high-risk’, the WGC strongly recommends to put in place measurements that ‘do not cause, support or benefit unlawful armed conflict or contribute to serious human rights abuses or breaches of international humanitarian law’. The Standard has also been developed to support refineries in their due diligence process. Although the WGC supports the formalisation process of artisanal and small-scale miners, their recommendations refer mainly to large-scale gold production.

The Better Gold Initiative (BGI)
This private-public partnership launched by the Swiss Better Gold Association and the Swiss State Secretariat for Economic Affairs. It aims at improving the social and environmental condition of Artisanal, Small and Medium Scale Gold Mining (ASM) by improving transparency in the gold supply chain, enabling traceability in the value chain through a chain of custody system, enabling compliance with private voluntary standards & best practices, facilitating access to capital for ASM-related investment at fair conditions and providing access to market and supporting sustainable development of mining in the production countries.

Case Study 5 - the BGI pilot project: describes an initiative to promote responsible mining in three sites in Peru.
The Responsible Jewellery Council (RJC)
As a non-profit organization counting over 450 companies from different levels of the jewellery supply chain, which created the Code of Practices (CoP), launched in 2006, and the Chain of Custody (CoC) Certification, launched in 2012. While the CoP focuses on supply chain issues, such as business ethics, human rights, social and environmental performance and is mandatory for all RJC members, the CoC Certification is a voluntary standard and builds on the Code of Practices to focus on the flow of precious metals through the supply chain.\textsuperscript{315}

Certification Schemes
To avoid that illegally produced gold makes its way up in the supply chain, there have been many initiatives to certify that gold has been sourced responsibly; in Latin America there are two main certification schemes, which are primarily implemented in Peru, Bolivia and Colombia.

Until 2013, the Alliance for Responsible Mining (ARM) and Fairtrade International worked together to develop two certification mechanisms, the Fairmined and the Fairtrade Standards. After April 2013, the organisations ended their cooperation and split into two separate labels.

The Alliance for Responsible Mining (ARM)
The ARM is a non-profit organization, which developed the world’s first certification system for responsible artisanal and small-scale gold mining, the so-called Fairmined Standard. This Standard enhances the traceability of sourced gold and assures the buyer that the gold was produced in a socially and environmentally responsible manner, that is to say there was no use of child labour, no link to conflict situations, and an intention to promote safer and more stable jobs, gender equality, wellbeing in the community, safe handling of and reduced use of chemicals, to protect water supplies and ensure a positive environmental legacy.

The Fairmined Standard requires all actors in the supply chain to be licensed and certified and also includes a business-to-business model for sustainability reporting.\textsuperscript{316} To date, it has been implemented in mining communities in Peru, Colombia and Bolivia. In the case of Peru, NGOs have reported that there is a great deal of overlap between the new government requirements and the Fairmined standards and, as a consequence, miners who comply with the government requirements may also meet the Fairmined standards and be able to receive the premium on the certified gold.\textsuperscript{317}

Fairtrade International developed a certification scheme that ensures that the Fairtrade gold has been extracted, processed and traded in a fair and responsible manner. This means: \textsuperscript{318} 

\begin{itemize}
  \item \textbf{Strengthened miners’ organizations} - Miners have the right to form groups to give themselves better bargaining power with traders, to get a fairer return for their produce and to gain greater control over the jewellery supply chain.
  \item \textbf{Improved working conditions} - Fairtrade certification requires mandatory use of protective gear and health and safety training for all miners.
  \item \textbf{Freedom of association and collective bargaining} - Certified miners’ organizations must recognise the right of all workers to establish and join trade unions and collectively negotiate their working conditions.
  \item \textbf{Responsible use of chemicals} - Certified miners must use safe and responsible practices for management of toxic chemicals in gold recovery, such as mercury and cyanide. Chemicals have to be reduced to a minimum, and where possible eliminated over an agreed time period.
\end{itemize}

In autumn 2014, The Max Havelaar Foundation Switzerland (Fairtrade International network) introduced fairtrade gold in Switzerland to selected jewellery companies as well as to over 30 registered goldsmiths. Since November 2015, fairtrade gold has been introduced as an investment product for the first time to a bank in Switzerland - the Zürcher Kantonalbank offers certified gold from the Peruvian mine Macdesa.\textsuperscript{319}
Other Initiatives

The Voluntary Principles on Security and Human Rights (VPs) are a set of principles designed to guide companies in maintaining the safety and security of their operations within an operating framework that encourages respect for human rights. They are the only human rights guidelines designed specifically for extractive sector companies. Participants in the Voluntary Principles Initiative - including governments, companies, and NGOs - agree to proactively implement or assist in the implementation of the Voluntary Principles. The VPs provide a framework to manage risk effectively by:

1. Conducting a comprehensive risk assessment associated with safety and security
2. Engaging with public and private security service providers
3. Capacity building for public and private security forces on human rights issues
4. Addressing communication challenges, such as reporting of human rights abuses

The Swiss Responsible Business Initiative (Konzerninitiative.ch) calls for the UN Guiding Principles on Business and Human Rights to be included in the Swiss law. They would oblige companies with Swiss headquarters to ensure that their activities do not lead directly or indirectly to human rights violations or environmental damage. This would require companies to apply a reasonable due diligence process, determining the risks associated with their activities, acting to remediate the damage, and reporting on the identified risks and the measures taken.

No Dirty Gold! The No Dirty Gold campaign was initiated by the non-profit organization Earthworks. It developed the ‘Golden Rules’, a set of criteria for jewellery retailers to pledge to ensure that their gold providers have a supply chain meeting human rights and environmental standards, such as to:

- respect basic human and workers’ rights and labour standards;
- obtain the free, prior, and informed consent of affected communities;
- ensure that gold is not sourced from conflict-zones or protected areas, fragile ecosystems, or other areas of high conservation or ecological value;
- refrain from dumping mine wastes into the ocean, rivers, lakes, or streams and ensure no water, soil, or air contamination
- Cover costs of closing down and cleaning up mine sites
• Transparent communication about social and environmental effects of projects
• Third-party verification of the above

So far, more than 90 retailers have signed the ‘Golden Rules’, including international brands such as JCPenney, Sears, Target, Tiffany & Co., and Wal-Mart.\(^\text{323}\)

The Extractive Industry Transparency Initiative (EITI) is an international initiative, which elaborated the EITI Standard consisting of the Implementation of the EITI Standard and the Governance and management part.\(^\text{324}\) The aim of this standard is to assess the levels of transparency regarding countries’ revenues from oil, gas and mineral resources. Companies in countries participating in EITI are required to publish revenues paid and received for a country’s natural resources. This multi-stakeholder group includes representatives from government, industry and civil society.
Weaknesses in the Current Response

In the Legal Framework

Although there is an increased focus on laws and regulations on organized crime, conflict minerals, human trafficking, the environment, and corruption, there still appear to be gaps in their regulation and enforcement.

1. **Signature and ratification of international legal instruments**: Not all countries, particularly those in which illegal mining is carried out or out of which mining companies operate, are signatories to or have ratified many of these legal instruments.

2. **Implementation of review mechanisms**: Some international conventions and treaties are still without review mechanisms, or as in the case for both UNTOC and UNAC, may not have robust enough presence from civil society in these processes.

3. **Evolving nature of transnational crime**: Many of these laws do not necessarily capture the ongoing and evolving nature of transnational crime, particularly transnational organized crime, nor do they have a way to track its operation across border lines.

4. **Prioritization of criminalization over protection of victims**: Several of these laws emphasize criminalization of transnational crime and human trafficking, but do not mandate and prioritize the protection of victims or prevention of trafficking.

5. **Unintended consequences**: Some laws, like the Dodd-Frank Act, may lead to mining operations being shut down, leading to job losses and further instability, poverty, and violence among miners abroad.

6. **Linking environmental concerns to human rights**: Some of the international environmental laws for the mining industry do not necessarily link their targets and goals to human rights concerns. For example, while the Minamata Mercury Convention is ideal in nature and recommends phasing out mercury use, whilst making exceptions for small-scale gold mining, it lacks concrete and specific targets and dates and fails to draw the connection to the health hazards in places like Peru.

7. **Challenges in defining corruption**: The definition of corruption is ever-evolving, and despite the creation of international instruments, many countries continue to have different ideas and concepts of corruption and bribery. While international agreements may help harmonize these terms in the long-run, the use of international legal instruments to do so may cause conflict in joint and cooperative efforts by governments to enforce laws against corruption.

8. **Whistleblowing protections**: While many of these legal frameworks have whistleblower protection frameworks, there may be reluctance to use whistleblower channels in many cultures and a general misunderstanding of how to use these protections and to whom to report infringements.

9. **Regulating corporations**: Most of the international legal instruments are aimed at governments, not corporations, and were created to authorize governments to take action against corporations. There remains a need to address the difficulties that those in the mining industry face and to decide how to solve these problems rather than relying solely on criminal prosecution. In this regard, the involvement of civil society and business stakeholders is helpful. Non-criminal legislation, such as the SEC regulations, may also help regulate the private industry.
In the Private Sector

The response of the private sector is varied, but without exception aim for the overarching goals of due diligence, respecting human rights and compliance with environmental standards. However, structural weaknesses and challenges arise when putting the guidelines into practice.

Therefore, private initiatives have increasingly tried to enhance responsible mining in the ASM sector. The creation of fairtrade certified gold, tied to significant costs for the acquisition of the certification, has supported artisanal and small-scale miners in their entry to the global gold market. However, demand for certified gold remains unpredictable and sometimes ASM miners have to sell their gold, which has been produced within the certification regulation, to regular buyers without reaping the benefits of the certification.325

Certification schemes tend to be vague and implementation is often weak. The Responsible Jewellery Council (RJC) has developed two certification schemes; one of them, the Chain of Custody (CoC) Certification is only a voluntary standard and builds on the Code of Practices to ‘focus on the flow of precious metals through the supply chain’. The CoC certification shows some flaws in terms of vague definitions and the subsequent risk of allowing questionable gold as ‘eligible material’ within the RJC standard. It is also not clearly defined if minerals from ASM operations may enter the CoC supply chain without necessarily meeting RJC performance or audit requirements. (Eligible material: Conflict-Free Material produced by a CoC Certified entity, or by ASM on the concession of a CoC Certified entity, or under a Recognised Responsible Mining standard.326)

Another weakness is the compliance with the industry-induced standards to mitigate the risk of gold sourced from ‘conflict-affected or high-risk’ areas. For example, the London Bullion Market Association (LBMA) requires all refiners who want to be part of the LBMA’s trusted refiners to comply with LBMA Responsible Gold Guidance in order to remain on the LBMA Good Delivery List (GDL). In the case of the Swiss refinery Valcambi, an accredited LBMA member, the Swiss non-profit organization Bern-Declaration has alleged that the refinery has been buying gold from conflict-affected areas and using child labour.327 Although Valcambi has explicitly enshrined in its ‘Code of Conduct’328 the voluntary review of its supply chain, the accusations highlight the insufficient and weak nature of voluntary measures by the industry to prevent human rights violations.

Even though the numerous initiatives are making significant efforts to avoid human and labour rights abuses as well as complying with environmental standards, a more coordinated endeavour has to be undertaken. The in-depth approach for responsible supply chain management remains a challenge for most of the stakeholders.
Recommendations

Illegal gold mining contributes to human rights violations and threatens ecosystems. Illegal gold finds its way into global trade, providing the raw material for bullion, watches, jewellery, and electronics. Corporations involved in the commercialisation of gold that do not take adequate measures to mitigate the risk of illegally extracted gold in their supply chains will be implicated in any such human rights violations.

The private sector, sometimes under international pressure, has made some attempts to prevent illegally mined gold from entering corporate supply chains. The refining sector, for example, has received heavy criticism for buying presumably illegal gold from the region of Madre de Dios in Peru and as a result, in 2014 the Swiss refining company Metalor stopped gold imports from that region. However, the Peruvian investigative journalism network Ojo Público reports that gold from Madre de Dios has since been exported to US based refining companies.

Certification schemes, such as Fairtrade, Fairmined and the Responsible Jewellery Council, are a good first step towards a responsible gold mining framework, but companies and countries alike must continue to take concrete steps for a comprehensive and structural improvement.

Recommendations for Export Countries

1. Almost all countries covered in this report have a National Ombudsman entity, providing recommendations how to improve the fight against illegal mining:
   - Simplification of the formalization process;
   - Allocation of adequate funds for an efficient formalisation process and sufficient authority to the respective ministries to ensure control over mining sector;
   - Enhance a democratic and inclusive process with the civil society and affected communities; and
   - Create a Truth Commission to address human rights violations related to natural resources exploration.

2. Provide groups vulnerable to forced labour with improved access to viable livelihood alternatives, and promote their integration into the labour market.

3. Ensure that labour inspectors and other relevant institutions have sufficient resources and capacity to protect, remediate and rehabilitate victims of labour exploitation and any other form of exploitation related to gold mining.

4. Draft legislation for obligatory Codes of Conduct for mining, trading and manufacturing companies. Although there are promising practices regarding compliance with voluntary responsible mining standards, human and labour rights standards, mandatory minimum standards are the most effective. Furthermore:
   - Create incentives for companies that comply with standards and simplify their supply chains;
   - Establish monitoring systems for local refining companies;
   - Trace the commercial provision of production inputs, such as mercury, on local, regional and national level;
   - Draft legislation requiring companies to disclose whether gold in their supply chains is linked to forced labour or human trafficking.

5. Elaborate national plans to identify where ASM activities are best suited. Peru is the only country in Latin America with an established body to review and approve detailed environmental impact studies of projects of public, private or mixed investment. These reviews address activities, buildings, operations and other commercial services and investment activities that could cause significant environmental impacts (National Service for Environmental Certification -SENACE).

6. Create special police forces (such as in the case of Colombia) to enhance law-enforcement presence in specific areas to protect natural reserves.
7. Establish a system to enhance traceability of illegally sourced gold from alluvial mining.

8. Build bilateral and regional agreements to counter illegal gold mining and smuggling of illegally produced gold. The agreements should include measures to rescue and rehabilitate victims that have been exploited for labour and sexual purposes in a neighbouring country.

**Recommendations for Import Countries**

1. Draft legislation that obliges any stakeholder with registered office, central administration or headquarters in an importing country to:
   - Comply with both international and domestic standards regarding human and labour rights and environmental standards;
   - Ensure that all subsidiaries or sub-contractors respect relevant standards;
   - Hold companies accountable for the damage caused by subsidiaries or sub-contractors in the performance of their business operations;
   - Conduct appropriate due diligence, determine the actual and potential impact on the internationally recognized human rights and environment standards;
   - Take appropriate measures to prevent and counter violations of such rights, and report on actions taken.

2. Require private sector stakeholders to regularly publish independent reports by an observer from the importing country’s government.

3. Enforce the ‘EU conflict mineral law’ from 2015 and promote similar legislations, such as the US Dodd Frank Act from 2010 and the California Transparency in Supply Chain Act to ensure that companies certify to the government that the minerals they source do not fuel violent conflict and human rights abuses.

4. Establish an independent body (such as a National Rapporteur) and/or a multi-stakeholder reporting mechanism to address human rights violations related to natural resources exploration.

5. Enhance demand for Fairtrade gold from importing countries through consumer awareness and/or incentives for companies introducing Fairtrade gold.
Recommendations for the Private Sector

1. Adhere to the international recognized due diligence guidelines, such as:
   - UN Guiding Principles on Business and Human Rights (Corporate Duty to Respect);
   - London Bullion Market Association's Responsible Gold Guidance;
   - World Gold Council's Conflict-Free Gold Standard; and
   - Responsible Jewellery Council's Chain of Custody (CoC) Certification.

2. Regulatory bodies such as the London Bullion Market Association and the Responsible Jewellery Council should review their audit guidance on a regular basis and ensure it meets the highest standards, especially in relation to public disclosure.

3. Increase purchases of Fairtrade and Fairmined gold.

4. Implement improved mechanisms to responsibly source gold and to ensure that gold is not produced illegally and/or under conditions of human or labour rights' violations through the following mechanisms:
   - Conduct due diligence processes for all supply chain segments, especially in relation to gold suppliers;
   - Align operations with national and international legislation and use sustainable/responsible mining practices to avoid environmental destruction;
   - Initiate third-party inspections to ensure compliance with national and international legislations;
   - Establish Codes of Conduct targeting forced labour, human trafficking, child labour, and other forms of labour exploitation and clearly communicate these policies to all suppliers. Make compliance with Codes of Conduct a condition of future business.

5. Enable the traceability of gold and publish names of gold providers and due diligence assessments of suppliers. Furthermore:
   - Carry out and fund risk assessments to determine the risk of purchasing gold that is produced illegally associated with human and labour rights violations;
   - Carry out risk assessments and audits to determine the risk of sourcing gold from certain companies, refineries, and suppliers.
Conclusion

Throughout history, man has venerated gold. Gold was the first of the three gifts of the Magi to Jesus. For much of the 19th and 20th centuries, the values of world currencies were fixed in terms of gold (the Gold Standard). Olympic athletes vie for gold medals and the best footballer in the world is awarded the Ballon d’Or. An extremely well-behaved child is ‘as good as gold’ and a generous person has ‘a heart of gold’. It is only natural to think positively about gold, just as it is equally natural to think negatively about narcotics. But illegally mined gold is now more important to organized crime in some countries of Latin America than narcotics:

- In Peru and Colombia – the largest cocaine producers in the world – the value of illegal gold exports now exceeds the value of cocaine exports.
- Illegal mining is the easiest and most profitable way to launder money in the history of Colombian drug trafficking.

Beyond the financial element, gold mining is one of the most destructive industries in the world and illegal mining in particular can be catastrophic for the environment as it ignores legal requirements and restrictions. It displaces communities, contaminates drinking water and destroys pristine environments. It pollutes water and land with mercury and cyanide, endangering the health of people and ecosystems:

- Colombia has the largest population of displaced persons in the world, of which 87% come from areas with a heavy presence of illegal mining.
- Artisanal gold miners dump more than 30 tons of mercury in rivers and lakes in the Amazon region every year, poisoning fish and causing brain damage to humans living as far as 400km downstream.
- There has been massive deforestation of the Amazon rainforest, the “lungs of the planet”.
- The human cost of the expansion of illegal mining is horrifying. Our research uncovered numerous instances of labour trafficking and exploitation, sex trafficking and child labour.

Although there is an increased focus on laws and regulations to combat organized crime, reduce the use of conflict minerals, fight human trafficking, protect the environment and reduce corruption, there still appear to be gaps in regulation and enforcement. Corporate guidance principles, whilst a welcome development, are limited due to their voluntary nature and do not result in due diligence across all levels of the supply chain. Industry codes of conduct tend to focus on the large-scale mining sector whilst the problems we have highlighted belong more to the artisanal and small-scale sector. Certification schemes tend to be vague and implementation is often weak. There are too many private sector initiatives with major overlaps and gaps.

Global Initiative believes that it is critical to limit the involvement of organized crime in the illegal mining of gold and recommends urgently that:

- Export Countries simplify and better fund the formalization process by which informal miners may gain legal status, ensure that inspectors have sufficient resources and capacity to protect, rehabilitate and remediate victims of exploitation, and hold companies and criminal organizations involved in the extraction and export of illegally mined gold accountable;
- Import Countries oblige stakeholders and their subcontractors to comply with both international and domestic standards regarding human and labour rights and environmental standards, enforce legislation such as the ‘EU conflict mineral law’ and hold companies that import and sell illegally mined gold accountable;
- Corporations adhere to the UN Guiding Principles on Business and Human Rights and implement improved mechanisms to map out supply chains, responsibly source gold and ensure that gold is not produced illegally and/or under conditions that result in human or labour rights violations.
Case Studies

1. The Kalotis

This is the story of two Kaloti companies, Kaloti Precious Metals (KPM) and Kaloti Metals & Logistics (KML). The two companies are separate and independent, though the owners have a family relationship and KPM describes KML as an affiliate company. The principal asset of KPM is a very large gold refinery in Dubai, where it has its headquarters. KML is a trading company based in Miami, Florida. It buys gold, mainly from Latin America, and on-sells it; its biggest customer is KPM.

Both KPM and KML claim to be fine, upstanding companies. KPM say they “uphold the highest standards of integrity, excellence and compliance” and KML that it is “committed to conducting business in accordance with the highest ethical values and in support of all applicable laws and regulations.”

In 2013, Ernst & Young (E&Y) audited KPM’s 2012 business. E&Y found significant shortcomings:

- that Kaloti had paid out USD5.2 billion in cash-for-gold deals without making adequate checks on the sellers;
- had taken millions of dollars of gold knowing it was plated in another metal and seemed to have been smuggled out of Morocco;
- had accepted 2.4 tonnes of gold in more than 1,000 transactions with customers who provided no paperwork; and
- had paid cash to Sudanese suppliers who had hand-delivered gold sourced from small-scale, artisan mining operations without checking whether the operations had approved mining licences.

Despite that, under pressure from the DMCC (Dubai’s Regulator), E&Y signed off KPM as “fully compliant”, and certified the refinery as offering conflict-free, responsibly sourced gold. Amjad Rihan, the E&Y partner in charge of the inspection division, was so disgusted by this that he leaked the papers to the press, saying “The DMCC, Ernst & Young and Kaloti were all aware that the risk of conflict gold entering Dubai had been very high. In my opinion, the way they acted is appalling, amoral and extremely unethical.”

Postscript: In April 2015, the DMCC removed Kaloti from Dubai Good Delivery list for failing to meet gold sourcing standards.

Now, in the KPM investigation, no-one had questioned KML’s credentials as a supplier. But KML was having its own problems. In 2014, SUNAT, the Peruvian National Customs and Tax Administration Authority, seized two shipments of gold as being of suspicious origin: one of 127 kilos and another of 99 kilos. In each case the seller was a Peruvian trading company Sumaj Orkro and the buyer KML of Florida. Chemical tests on the seized gold bars show purity comparable to the gold ore mined in illegal camps of Madre de Dios rivers. To complicate matters, the legal owner of Sumaj Orkro proved to be a Peruvian gold trader Pedro Pérez Miranda, alias ‘Peter Ferrari’, who is part of a suspected organized crime group and in the early 90s was accused of money laundering of drug trafficking operations for the Colombian North Valley Cartel. To date, he has not been able to prove that the gold was extracted legally and KML denies having any connection to ‘pseudo entrepreneurs’ linked to illegal mining.

Both Kaloti Precious Metals and Kaloti Metals & Logistics continue in business, have surely learnt a great deal from these unfortunate episodes and will be a lot more careful in the future.
2. Goldex Case Study-Colombia

In 2014, a joint effort between the Directorate of Taxes and National Customs (DIAN), the Information and Financial Analysis Unit (UIAF), and the Attorney General of Colombia indited CI Goldex SA on charges of money laundering, illegal enrichment, and criminal conspiracy. Founded in 2001 by John Uber Hernández Santa, Goldex had quickly climbed the ranks of Colombian gold exporters to become the second largest gold exporter in the country. From 2008 until it was shut down in 2014, Goldex exported over 47 tons of gold, worth more than USD 1.4 billion. While hearings are still ongoing in Colombian courts, details that have emerged paint a picture of a group of businessmen and women who laundered over USD 1 billion in an attempt to cover up the illegal, and oftentimes violent, gold mining that they were funding and its connections with the narco-paramilitary groups that control parts of the country.

As an exporter, Goldex was required to provide proof of the origin of its gold in order to show both government officials and purchasers abroad that the gold was mined and acquired legally. This proof most often takes the form of receipts that state the price and origin of the gold. The investigation into Goldex revealed that approximately 90% of the people identified on receipts as having sold gold to Goldex have no connection to mining at all; "some of the people listed as Goldex’s suppliers were dead, others were homeless, and some of the companies existed in name only." Additionally, many of the corporations that Goldex bought gold from were "ephemeral supply companies whose life cycle rarely exceeded three years." Goldex used these fake suppliers to cover up the real source of their gold: illegal gold mining camps controlled by narco-paramilitaries.

Goldex’s CEO, John Uber Hernández Santa, admitted that between 2007 and 2009, he bought nearly USD 7 million in gold from Jairo de Jesús Rendón Herrera, the brother of Daniel Rendón Herrera, also known as “Don Mario,” the founder of the Urabeños, one of Colombia’s strongest criminal groups. He is also the brother of Freddy Rendón Herrera, also known as “El Alemán” (the German), a high-level commander of Colombia’s largest paramilitary group, the precursor to the Urabeños, the United Self-Defence Forces of Colombia (AUC). In 2008, El Tiempo reported allegations that Jairo de Jesús Rendón Herrera, who was known by two aliases in illegal mining areas, “Don Germán” and “Monsalve,” was the third in command among the brothers and was in charge of "legalizing" their activities by buying up large amounts of gold, which he used to launder money. Hernandez claims their business relationship ended when he became aware of Rendón Herrera’s criminal connections, but in reality he continued to buy from Rendón Herrera until he was taken into custody by the United States on money laundering and drug trafficking charges in 2009. Statistics from DIAN show that of the 47 tons of gold that Goldex exported in the final six years of the company’s operations, more than 97% was purchased by Republic Metals Corporation (RMC) and Metalor Technologies USA, based in Florida and Massachusetts respectively.

Republic Metals Corporation (RMC), which describes itself on its website as “one of the largest full service primary precious metal refiners in the world,” was established in 1980 and has a Miami-based headquarters. The corporation, which also has offices in New York, Los Angeles, and Toronto, is a very large refinery with the capacity to refine over 1,200 tons of gold and 3,000 tons of silver per year. Although RMC claims to have always operated “in accordance with its stringent and proactive compliance program,” which prohibits the company from buying gold in transactions where money laundering or conflict could have been involved, their transactions with Goldex have been far from clean. Republic Metals is also alleged to have purchased gold from Pedro Pérez Miranda, also known as “Peter Ferrari,” a Peruvian gold trader who reportedly exported 13 tons of illegally-mined gold worth over USD 637 million between early 2012 and early 2014. He has also been accused of laundering money for the Colombian Norte de Valle cartel. Additionally, Republic Metals was named in a 2012 Manhattan District Attorney complaint against the Peruvian Sanchez-Paredes DTO. The family allegedly laundered over USD 31 million through nine U.S. bank accounts, including Republic Metals’ account.
Metalor Technologies USA is based in North Attleboro, Massachusetts, not far from Boston. Metalor, which claims to be “a market leader, trusted business partner and supplier of choice,” also has a strict compliance policy, which similarly prohibits the company from sourcing gold and other metals through transactions where money laundering is present, or from areas where conflict might be involved in the mining process. Metalor Technologies USA is one of 17 subsidiaries of the Swiss-based Metalor Technologies SA, the biggest gold refining company in the world, which has also been linked to a major gold laundering scandal in Peru.

Both RMC and Metalor continued to be heavily involved with Goldex even after multiple money laundering and criminal involvement reports surfaced. Neither company stopped buying from Goldex after it became known that Goldex had been sourcing gold from Rendón Herrera just prior to when he was brought to the U.S. on money laundering and drug trafficking charges. Metalor continued to buy from Goldex for nearly a year after Colombian officials publicly stated that they suspected Goldex of money laundering in August of 2013. RMC failed to cut relations with Goldex even after it was contacted by Colombian tax authorities who asked about two transactions in which Goldex reported receiving nearly USD 200,000 more from RMC than the USD 5.7 million it actually received—a classic money laundering technique.

The gold imported and refined by RMC and Metalor has been used in millions of consumer electronics products, pieces of currency, jewellery, and other consumer goods throughout the U.S. and the world. In order to comply with section 1502 of the Dodd-Frank Act, companies that use conflict minerals, including gold, in their products are required to report where they source them from. In their most recent conflict mineral reports, tech giants Apple and Hewlett Packard (HP) included both Metalor Technologies and RMC as sources of their gold. Fellow technology companies Philips, IBM, and Intel also listed Metalor as a gold supplier. Tiffany & Co, one of the most iconic jewellery companies in the world, also listed Metalor as one of the sources of gold used to make their jewellery.

Although the conflict mineral declarations that have become necessary under the Dodd-Frank Act have allowed consumers a partial view into the complex supply chains of major companies, the world of gold buying has continued to remain largely secretive and hidden, particularly upstream from the refinery stage. In March of 2015, however, the public was allowed an unprecedented look inside one of these supply chains through an unusual event: a highway robbery. Just after dark on the night of March 1, 2015, three armed men were able to force their way onto a truck, tie up the guards and steal the gold bars being transported from Miami to Massachusetts. According to court documents, the truck, which was carrying nearly USD 5 million worth of gold bars and nearly USD 5 million worth of silver bars was traveling at the time from the Miami base of RMC to Bridgewater, Massachusetts. Within Bridgewater, only one company that has the capacity to make purchases of precious metals on such a large scale, Coins ‘N Things (CNT), a privately held company that is currently the largest seller of raw gold to the U.S. Mint; in 2013 alone, the U.S. Mint bought USD 1.42 billion worth of gold from CNT.

Ironically, the U.S. Mint is administered by the U.S. Department of the Treasury, the Federal entity responsible for enforcing the Foreign Narcotics Kingpin Designation Act and the Specially Designated Nationals (SDN) List, which prohibits all trade and commerce with entities or individuals listed under these laws. Groups on the lists include the Urabeños, along with other Colombian armed groups closely linked to illegal gold mining, such as the ELN, the FARC, and the Rastrojos. Companies and their executives can face steep sanctions for doing business with, or in any way financing, these groups or individuals linked with them. According to a representative of the Treasury Department’s Office on Foreign Assets Control (OFAC), the SDN and Kingpin Act establish “strict liability” in that they do not take into account whether executives had knowledge of payments being made to individuals or entities on these lists or whether these payments were made by sub-agents of U.S.-based companies. Once a violation occurs, OFAC will look at whether a business has mitigated risk and whether they have a compliance program. This means that the electronics and jewellery companies listed above could face steep sanctions even if they were unaware that their gold purchases were funding armed groups, unless they can prove that they carried out thorough due diligence along their supply chains.
3. The Bars and Brothels of Madre de Dios

The wives of miners in the illegal mining sector are themselves the principal recruitment agents of new girls for the bars and brothels. Often they come from the same provinces as their victims or even sometimes being former victims themselves. They make false promises of high wages and of legitimate work in restaurants, but once the victims are transferred to the mining area, their IDs are confiscated and they are told that they have to pay immediately for the clothing, transportation, and lodging that they thought was provided free of charge. If unable to pay, they may have to accept “el pase” (selling their virginity) under threats that their families could be harmed.\textsuperscript{368} Expert interviews indicated that new arrivals at the camps, especially virgins, are auctioned off to the highest bidder the first Friday or Saturday after they arrived at the camps.

The girls who are employed to work in the bars are told that if they “fichar” (accompany men while they drink), they will receive half of what men pay for any drinks the women serve and that their transportation and lodging will be free. In practice, they discover that they will receive half the price of only certain drinks and that they will be charged for clothing, food, lodging, fines, and other expenses. The prices of the goods provided are generally inflated and the record keeping is not transparent, allowing for fraud.\textsuperscript{369} The NGO CHS has reported that if the women do not drink alongside the men, they can face fines of up to PEN 200 (USD 78) and may face other fines for trying to talk to family members or strangers.\textsuperscript{370} In addition, many women and girls do not suspect that “accompanying” the men means that they are also required to provide them with sexual services.

Victims have no chance of leaving the area due to isolation, physical confinement, or social control in the mining camp, as many car, boat and motorcycle drivers (transportistas) who transport people to and from the mining camps are complicit with the brothel owners.\textsuperscript{371} The children born into this environment of sexual exploitation are called the ‘hidden victims of human trafficking’ as very often end up as abandoned street children. The regional government and local NGOs do not dispose of sufficient financial resources and shelters to rescue these underage girls from their exploitative situation.

The poster below displays the house rules and timetable for a brothel in the Madre de Dios region of Peru and the fines for breaking the rules. The fines are expressed in Peruvian soles; 1 sole = USD 0.30 (approx). Translation as follows:

---

**RULES**

*No fighting between the girls S/.300*
*No thieving from each other (loss of all privileges) S/.300*
*No badmouthing coworkers S/.300*
*No trying to escape (ask permission) S/.300*
*No falling in love with other staff members S/.300*

**TIMETABLE**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.00 PM</td>
<td>Lunch</td>
</tr>
<tr>
<td>1.30 PM</td>
<td>Go out to work</td>
</tr>
<tr>
<td>6.00 PM</td>
<td>Dinner</td>
</tr>
<tr>
<td>7.00 PM</td>
<td>Normal Entrance</td>
</tr>
</tbody>
</table>

**WARNING**

Keep your rooms clean
Tell a cashier and security where you are going when you go out.
4. Male and Female Labour Migration from Segovia

Interviews with male and female workers in illegal mining areas showed that both groups of workers were vulnerable to labour trafficking. For example, male workers between the ages of 21 and 24 were interviewed in an illegal mining area in Western Antioquia. They were born in Segovia, in Northeastern Antioquia, to families involved in mining and had worked in informal and illegal mining since they were children, during which they earned COP 10, or a few cents, per hour. They reported that many children were still employed in Segovia.

In some illegal gold mines in which they had worked they had to pay up to USD 66 to get jobs, and in other cases they had to pay a percentage of their earnings. In general, they worked in groups of 7-8 miners, and had to give 70-75% of the gold that they found to the criminal group controlling the mine, and they divided the remaining 25-30% amongst themselves. They reported that they could earn up to USD 4,500 per month, and had heard of people earning as much as USD 150,000, which fueled a “gold fever” and migration to new mining areas.

However, in many cases, they did not find any gold for months, and they knew of people who had not found gold for up to two to three years. During this time, they became indebted and had to take out loans from informal money lenders for which they were charged interest rates of 10% per month. They had to hand over collateral in order to obtain the loans and also reported that if they failed to pay back the loans that they would “be hurt.” They reported that people were “killed every day in Segovia” by mining accidents and hired assassins.

Female workers were also interviewed in an illegal mining area. They too were from Segovia, where females have worked for generations as “pallaqueras,” grinding and extracting gold from rocks discarded by the male miners who enter the mining shafts. Women have historically been relegated to this poor paying occupation due to cultural norms and Colombian law prohibiting women from carrying out underground work. However, recently some mining companies operating in Segovia have changed their policies and now collect and process even rocks containing small amounts of gold deposits, taking away a large number of women’s only source of employment, albeit precarious and poorly compensated. The women interviewed reported that they had children to support in Segovia, and when the companies changed their policies, they had to migrate to an illegal mining area since they were not allowed to engage in underground mining and there were no other employment opportunities, and the only trade that they had learned was mining.

They reported that their earnings depended on how much they found each day, but that in many cases they found little or no gold. On the day that they were interviewed, one reported that she had found less than USD 1 worth of gold, less than the price of transportation from the mining area to the town where they were staying, and another reported that she had found no gold. They also reported that in many cases, the rocks that they recovered were “confiscated” by police and soldiers, who had their own gold processing area used to extract gold from the rocks. This made them even more vulnerable to falling into debt bondage.
5. BGI Peru Pilot Project

The Better Gold Initiative (BGI) is a private-public partnership launched by the Swiss Better Gold Association and the Swiss State Secretariat for Economic Affairs. It aims to improve the living conditions of the (mining area) population by developing responsible mining, to encourage artisanal mining as a motor of sustainable development and to help the artisanal miners to gain certification and thereby be able to sell their production at a fair price. The first BGI project took place in Peru, in combination with the Peruvian Ministry of the Environment, at three locations, Sotrami SA (Santa Filomena), in Sancos, province of Lucanas; Comunidad Aurífera Relave SA - Aurelsa, in Pullo, province of Parinacochas; and Macdesa Minera Aurífera Cuatro de Enero SA, in Cháparra, province of Caravelí. In total, the three sites process some 100 tons/day of ore and produce about 35 kilos of gold per month.

The BGI project has four components:

1. To create a simplified, inclusive supply chain for more transparency and traceability. Here one of the main partners is the Swiss refiner Metalor.
2. To amplify certified ASM supply, including the dissemination of best practices.
3. To support the policy dialogue between Government and mining associations in the planning and local implementation of the formalization process.
4. To match suppliers with consumers; linking brands, retailers and investors with the sustainable sourcing options.

Source: Better Gold Initiative

Excess FM / FT mine is the gold of a Fair Mined and / or Fairtrade certified small business, which does not flow into the global gold market due to lack of demand. Since FM or FT pay a higher premium for the certified gold, it has a higher priority over regular sourced gold.
## Appendix - Gold Supply and Demand Data

### (1) BACI GROSS Exports

<table>
<thead>
<tr>
<th>USD mln</th>
<th>to USA</th>
<th>to Switzerland</th>
<th>to Canada</th>
<th>to Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>$3,700</td>
<td>$749</td>
<td>$470</td>
<td>$771</td>
<td>$5,690</td>
</tr>
<tr>
<td>Peru</td>
<td>$2,140</td>
<td>$3,010</td>
<td>$2,030</td>
<td>$1,110</td>
<td>$8,290</td>
</tr>
<tr>
<td>Colombia</td>
<td>$1,700</td>
<td>$433</td>
<td>$0</td>
<td>$147</td>
<td>$2,280</td>
</tr>
<tr>
<td>Ecuador</td>
<td>$374</td>
<td>$79</td>
<td>$39</td>
<td>$3</td>
<td>$495</td>
</tr>
<tr>
<td>Bolivia</td>
<td>$321</td>
<td>$54</td>
<td>$1</td>
<td>$376</td>
<td>$803</td>
</tr>
<tr>
<td>Guyana</td>
<td>$318</td>
<td>$436</td>
<td>$49</td>
<td>$803</td>
<td>$136</td>
</tr>
<tr>
<td>Venezuela</td>
<td>$136</td>
<td>-</td>
<td>$0</td>
<td>$136</td>
<td>$440</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>$150</td>
<td>$289</td>
<td>$1</td>
<td>$440</td>
<td>$3,020</td>
</tr>
<tr>
<td>Brazil</td>
<td>$82</td>
<td>$948</td>
<td>$216</td>
<td>$1,774</td>
<td>$3,020</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$8,921</td>
<td>$5,273</td>
<td>$3,480</td>
<td>$3,856</td>
<td>$21,530</td>
</tr>
</tbody>
</table>

BACI is the World trade database developed by the CEPII at a high level of product disaggregation.

Original data are provided by the United Nations Statistical Division (COMTRADE database). BACI is constructed using an original procedure that reconciles the declarations of the exporter and the importer.

### (2) Customs Data of Importing Countries

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports to USA</th>
<th>Exports to Switzerland</th>
<th>Exports to Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity tons</td>
<td>Value USD mln</td>
<td>Quantity tons</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>81</td>
<td>3,600</td>
<td>13</td>
</tr>
<tr>
<td>Peru</td>
<td>58</td>
<td>2,600</td>
<td>134</td>
</tr>
<tr>
<td>Colombia</td>
<td>47</td>
<td>1,980</td>
<td>11</td>
</tr>
<tr>
<td>Ecuador</td>
<td>10</td>
<td>403</td>
<td>3</td>
</tr>
<tr>
<td>Bolivia</td>
<td>10</td>
<td>432</td>
<td>2</td>
</tr>
<tr>
<td>Guyana</td>
<td>7</td>
<td>340</td>
<td>0</td>
</tr>
<tr>
<td>Venezuela</td>
<td>3</td>
<td>136</td>
<td>10</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>3</td>
<td>140</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
<td>65</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>221</td>
<td>9,696</td>
<td>197</td>
</tr>
</tbody>
</table>

Source: USGS 2015, Swiss Customs Admin, Govt. Of Canada
### (3) Implied Prices of Customs Data of Importing Countries

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports to USA</th>
<th>Exports to Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity tons</td>
<td>Price $mln/ton</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>81</td>
<td>44.23</td>
</tr>
<tr>
<td>Peru</td>
<td>58</td>
<td>44.52</td>
</tr>
<tr>
<td>Colombia</td>
<td>47</td>
<td>42.13</td>
</tr>
<tr>
<td>Ecuador</td>
<td>10</td>
<td>40.79</td>
</tr>
<tr>
<td>Bolivia</td>
<td>10</td>
<td>45.24</td>
</tr>
<tr>
<td>Guyana</td>
<td>7</td>
<td>46.32</td>
</tr>
<tr>
<td>Venezuela</td>
<td>3</td>
<td>43.59</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>3</td>
<td>45.75</td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
<td>45.03</td>
</tr>
<tr>
<td>Total</td>
<td>221</td>
<td>43.83</td>
</tr>
</tbody>
</table>

(1) Note the very low prices for exports from Peru, Ecuador & Bolivia to Switzerland. We think there is an error in the data and in the following table adjust the quantity to reflect a price of USD40mln/ton.

(2) We calculate quantities for exports to Canada assuming the average price is the same as for exports to the USA (USD43.83/ton).

(3) We calculate quantities for exports to other countries assuming a price of USD40mln/ton.

### (4) Global Initiative Export Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports to USA</th>
<th>Exports to Switzerland</th>
<th>Exports to Canada</th>
<th>Exports to Others</th>
<th>Total Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity tons</td>
<td>Value $USD mln</td>
<td>Quantity tons</td>
<td>Value $USD mln</td>
<td>Quantity tons</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>81</td>
<td>3,600</td>
<td>13</td>
<td>526</td>
<td>11</td>
</tr>
<tr>
<td>Peru</td>
<td>58</td>
<td>2,600</td>
<td>78</td>
<td>3139</td>
<td>47</td>
</tr>
<tr>
<td>Colombia</td>
<td>47</td>
<td>1,980</td>
<td>11</td>
<td>393</td>
<td>0</td>
</tr>
<tr>
<td>Ecuador</td>
<td>10</td>
<td>403</td>
<td>2</td>
<td>78</td>
<td>1</td>
</tr>
<tr>
<td>Bolivia</td>
<td>10</td>
<td>432</td>
<td>1</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>Guyana</td>
<td>7</td>
<td>340</td>
<td>0</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Venezuela</td>
<td>3</td>
<td>136</td>
<td>10</td>
<td>383</td>
<td>0</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>3</td>
<td>140</td>
<td>0</td>
<td>7</td>
<td>294</td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
<td>65</td>
<td>24</td>
<td>1064</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>221</td>
<td>9,696</td>
<td>139</td>
<td>5,645</td>
<td>80</td>
</tr>
<tr>
<td>USD mln</td>
<td>Ecuador</td>
<td>Peru</td>
<td>Turkey</td>
<td>USA</td>
<td>S. Arabia</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td>------</td>
<td>--------</td>
<td>-----</td>
<td>-----------</td>
</tr>
<tr>
<td>Mexico</td>
<td>$88</td>
<td>$15</td>
<td>$48</td>
<td>$151</td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>$46</td>
<td>$1</td>
<td>$47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
<td>$274</td>
<td></td>
<td>$535</td>
<td>$849</td>
<td></td>
</tr>
<tr>
<td>Ecuador</td>
<td>$42</td>
<td></td>
<td>$42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bolivia</td>
<td>$11</td>
<td></td>
<td>$37</td>
<td>$48</td>
<td></td>
</tr>
<tr>
<td>Guyana</td>
<td>$0</td>
<td></td>
<td>$0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venezuela</td>
<td>$0</td>
<td></td>
<td>$0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicaragua</td>
<td>$0</td>
<td></td>
<td>$0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>$4</td>
<td></td>
<td>$4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$274</td>
<td>$11</td>
<td>$535</td>
<td>$88</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>tons</th>
<th>Ecuador</th>
<th>Peru</th>
<th>Turkey</th>
<th>USA</th>
<th>S. Arabia</th>
<th>(others)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
<td>7</td>
<td>13</td>
<td>1</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bolivia</td>
<td>0</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guyana</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venezuela</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicaragua</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>7</td>
<td>0</td>
<td>13</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Converted to tons assuming 1 ton is worth $40mln.

Turkey is the world’s 4th largest importer of gold. It is very unlikely that it exports to Colombia, and the data doesn’t appear as an export for Turkey, so in the subsequent table we delete the datum.
### (4) Global Initiative Import Data

<table>
<thead>
<tr>
<th>tons</th>
<th>Ecuador</th>
<th>Peru</th>
<th>Turkey</th>
<th>USA</th>
<th>S. Arabia</th>
<th>(others)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Peru</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Colombia</td>
<td>7</td>
<td>0</td>
<td></td>
<td></td>
<td>1</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Ecuador</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Bolivia</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Guyana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Venezuela</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nicaragua</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>15</td>
<td>23</td>
</tr>
</tbody>
</table>

### (7) Global Initiative Estimates of Net Exports

<table>
<thead>
<tr>
<th>TONS</th>
<th>Exports to USA</th>
<th>Exports to Switzerland</th>
<th>Exports to Canada</th>
<th>Exports to Others</th>
<th>Imports</th>
<th>Net Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>81</td>
<td>13</td>
<td>11</td>
<td>19</td>
<td>-4</td>
<td>120</td>
</tr>
<tr>
<td>Peru</td>
<td>58</td>
<td>78</td>
<td>47</td>
<td>28</td>
<td>-1</td>
<td>210</td>
</tr>
<tr>
<td>Colombia</td>
<td>47</td>
<td>11</td>
<td>0</td>
<td>4</td>
<td>-8</td>
<td>54</td>
</tr>
<tr>
<td>Ecuador</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-1</td>
<td>12</td>
</tr>
<tr>
<td>Bolivia</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>-1</td>
<td>10</td>
</tr>
<tr>
<td>Guyana</td>
<td>7</td>
<td>0</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Venezuela</td>
<td>3</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
<td>24</td>
<td>4</td>
<td>44</td>
<td>0</td>
<td>74</td>
</tr>
<tr>
<td>TOTAL</td>
<td>221</td>
<td>139</td>
<td>80</td>
<td>96</td>
<td>-15</td>
<td>522</td>
</tr>
</tbody>
</table>
(8) Gold Demand

Gold is not consumed in the sense that petroleum is, for example, but there is demand for jewellery, for investment purposes, by central banks for reserves and for industrial use (basically dentistry and electronics). Almost all investment gold is bought by Gold ETFs (exchange traded funds), which does not apply in Latin America. The following table, using World Gold Council Data, shows demand for jewellery & industrial purposes and changes in central bank reserves:

<table>
<thead>
<tr>
<th>Year</th>
<th>Jewellery Demand</th>
<th>Industrial Demand</th>
<th>Total Demand</th>
<th>Change in Reserves</th>
<th>Total Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity tons</td>
<td>Quantity tons</td>
<td>Quantity tons</td>
<td>Quantity tons</td>
<td>Quantity tons</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>21</td>
<td>2</td>
<td>23</td>
<td>-1.4</td>
<td>22</td>
</tr>
<tr>
<td>Peru</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0.0</td>
<td>2</td>
</tr>
<tr>
<td>Colombia</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0.0</td>
<td>4</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0.0</td>
<td>1</td>
</tr>
<tr>
<td>Bolivia</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.2</td>
<td>0</td>
</tr>
<tr>
<td>Guyana</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Venezuela</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>1.9</td>
<td>6</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td>25</td>
<td>2</td>
<td>27</td>
<td>1.9</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>4</td>
<td>61</td>
<td>1</td>
<td>62</td>
</tr>
</tbody>
</table>

We could only obtain demand data for Mexico & Brazil; we estimated for the other countries using similar percentages of GDP but adjusting for presence (or not) of electronics manufacture.

(6) Implied Production = Demand + Net Exports-Recycling

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Demand</th>
<th>Total Net Exports</th>
<th>Recycling</th>
<th>Implied Production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity tons</td>
<td>Quantity tons</td>
<td>Quantity tons</td>
<td>Quantity tons</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>22</td>
<td>120</td>
<td>-10</td>
<td>131</td>
</tr>
<tr>
<td>Peru</td>
<td>2</td>
<td>210</td>
<td>-1</td>
<td>211</td>
</tr>
<tr>
<td>Colombia</td>
<td>4</td>
<td>54</td>
<td>-2</td>
<td>56</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
<td>12</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Bolivia</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Guyana</td>
<td>0</td>
<td>19</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Venezuela</td>
<td>6</td>
<td>13</td>
<td>-2</td>
<td>17</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Brazil</td>
<td>27</td>
<td>74</td>
<td>-13</td>
<td>88</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>522</td>
<td>-28</td>
<td>555</td>
</tr>
</tbody>
</table>

Recycled gold is basically gold jewellery sold by consumers to be melted down. We assume recycling = 0.5 * jewellery demand (average figure for 2013 according to WGC).
(7) Reported Production

<table>
<thead>
<tr>
<th>Year</th>
<th>Production acc. USGS</th>
<th>National Production</th>
<th>Production GI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity tons</td>
<td>Quantity tons</td>
<td>Quantity tons</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>98</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Peru</td>
<td>151</td>
<td>152</td>
<td>152</td>
</tr>
<tr>
<td>Colombia</td>
<td>56</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td>Ecuador</td>
<td>3</td>
<td>n/a</td>
<td>3</td>
</tr>
<tr>
<td>Bolivia</td>
<td>7</td>
<td>n/a</td>
<td>7</td>
</tr>
<tr>
<td>Guyana</td>
<td>15</td>
<td>n/a</td>
<td>15</td>
</tr>
<tr>
<td>Venezuela</td>
<td>2</td>
<td>n/a</td>
<td>2</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>9</td>
<td>n/a</td>
<td>9</td>
</tr>
<tr>
<td>Brazil</td>
<td>71</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td>411</td>
<td>442</td>
<td></td>
</tr>
</tbody>
</table>

We take the production reported by the country or, if not available from the national statistics, from the USGS (Us Geological Survey).

(8) Unreported (Illegal) Production

Now we compare the derived production figures with the reported production to give a measure of how much production is unreported (and presumably illegal).

<table>
<thead>
<tr>
<th>Year</th>
<th>Implied Production</th>
<th>Reported Production</th>
<th>Unreported Production</th>
<th>Unreported Production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity tons</td>
<td>Quantity tons</td>
<td>Quantity tons</td>
<td>Percent of Implied</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>131</td>
<td>120</td>
<td>12</td>
<td>9%</td>
</tr>
<tr>
<td>Peru</td>
<td>211</td>
<td>152</td>
<td>60</td>
<td>28%</td>
</tr>
<tr>
<td>Colombia</td>
<td>56</td>
<td>56</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Ecuador</td>
<td>12</td>
<td>3</td>
<td>9</td>
<td>77%</td>
</tr>
<tr>
<td>Bolivia</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>31%</td>
</tr>
<tr>
<td>Guyana</td>
<td>19</td>
<td>15</td>
<td>4</td>
<td>22%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>17</td>
<td>2</td>
<td>16</td>
<td>91%</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>10</td>
<td>9</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Brazil</td>
<td>88</td>
<td>80</td>
<td>9</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>555</td>
<td>442</td>
<td>113</td>
<td>20%</td>
</tr>
</tbody>
</table>
In the case of Colombia, the reported production figures, produced by the Agencia Nacional de Minería de Colombia, include production from mines without legal title. The Comptroller General, Edgardo Maya Villazón, said on 20/8/2015 that close to 80% of all the gold produced in Colombia comes from illegal miners. 373 Allowing for this, our final table becomes:

<table>
<thead>
<tr>
<th>Year</th>
<th>Legal Production</th>
<th>Illegal Production</th>
<th>Illegal as Percentage</th>
<th>Value of Illegal production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>120</td>
<td>12</td>
<td>9%</td>
<td>0.5</td>
</tr>
<tr>
<td>Peru</td>
<td>152</td>
<td>60</td>
<td>28%</td>
<td>2.6</td>
</tr>
<tr>
<td>Colombia</td>
<td>11</td>
<td>45</td>
<td>80%</td>
<td>2.0</td>
</tr>
<tr>
<td>Ecuador</td>
<td>3</td>
<td>9</td>
<td>77%</td>
<td>0.4</td>
</tr>
<tr>
<td>Bolivia</td>
<td>7</td>
<td>3</td>
<td>31%</td>
<td>0.1</td>
</tr>
<tr>
<td>Guyana</td>
<td>15</td>
<td>4</td>
<td>22%</td>
<td>0.2</td>
</tr>
<tr>
<td>Venezuela</td>
<td>2</td>
<td>16</td>
<td>91%</td>
<td>0.7</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>9</td>
<td>1</td>
<td>13%</td>
<td>0.1</td>
</tr>
<tr>
<td>Brazil</td>
<td>80</td>
<td>9</td>
<td>10%</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>397</td>
<td>158</td>
<td>28%</td>
<td>6.9</td>
</tr>
</tbody>
</table>
List and description of common terms and acronyms

**Accopiadores:** Middlemen who buy gold and sell it to others for a higher price.

**Alluvial Mining:** A process by which gold is extracted from sediments along rivers, lakes and coastlines. This can include gold panning, sluicing, and dredging.

**Artisanal Mining:** Very small-scale mining that uses primitive techniques. In Peru, artisanal mines are mines of less than 1,000 hectares with a production capacity of less than 25 metric tons per day.

**ASM:** Artisanal and small-scale mining

**Buzos:** Divers employed in alluvial mining who go underwater with hoses to create holes in the earth and flood them with water, so that gold-bearing particles of sand can be sucked up by motores (pumps).

**Indocumentados:** Peruvians who lack a National Identity Document (DNI), generally because they never obtained a birth certificate or because they are criminals running from the law.

**Cachoreo:** A payment system used in La Rinconada, Puno, under which "cooperative" members recruit workers to work for a period for no pay before they can extract gold for themselves.

**Carreteros:** Unskilled workers who are hired to transport rocks and dirt in wheelbarrows or on their backs.

**CSR:** Corporate Social Responsibility

**Facturadores:** Intermediaries who facilitate gold laundering by providing fraudulent receipts for gold produced by informal and illegal gold miners.

**Hard-Rock Mining:** A process whereby gold is extracted from rock, which can be done in large open-pit mining or in tunnels that are dug into rock faces.

**Macheteros:** Unskilled workers, including children and adolescents, who are employed to clear trees in Madre de Dios.

**Maraqueros:** Semi-skilled workers employed in alluvial mining who operate the pumps that mix mercury with water in order to cause the microscopic gold particles to condense into globules and then sort through the mercury covered particles with their bare hands to pick out the gold.

**Quimbalete:** An artisanal gold processing method using rock basins and mercury.
Endnotes


9. 2015 World Gold Council Supply & Demand Statistics


17. World Bank, Monika Weber-Fahr; John E. Strongman; Ramani Kunanayagam; Gary McMahon; Christopher Sheldon: Mining. http://dx.doi.org/10.1787/9789264185050-en


Salon, Alexander Zaitchik: To get the gold, they will have to kill every one of us. 10 February 2013. http://www.salon.com/2013/02/10/to_get_the_gold_they_will_have_to_kill_every_one_of_us/


Global Initiative against Transnational Organized Crime


136 Salon, Alexander Zaitchik: To get the gold, they will have to kill every one of us. 10 February 2013. http://www.salon.com/2013/02/10/to_get_the_gold_they_will_have_to_kill_every_one_of_us/
150 Salad, Alexander Zaichick: To get the gold, they will have to kill every one of us. 10 February 2013. http://www.salmond.com/2013/02/10/to-get-the-gold-they-will-have-to-kill-every-one-of-us/
165 Today’s Chemist, Randall C. Willis: Mercury Rising: Deforestation and gold mining in the Amazon basin cause the release of toxic metal. 2001. http://pubs.acs.org/subscribe/archive/tcaw/10/i03/html/03willis.html


373 BluRadio.com: El 80% de la minería de Colombia es ilegal, según la Contraloría. 20 August 2015 [http://www.bluradio.com/108039/el-80-de-la-mineria-de-colombia-es-ilegal-segun-la-contraloria

Global Initiative against Transnational Organized Crime Organized Crime and Illegally Mined Gold in Latin America