

The hybrid global gold regime: a perspective from the Peruvian ASGM sector

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1. Introduction: the global gold chain as a hybrid regime

Gold mining in Peru has a long tradition and grew significantly during the latest global commodity boom in the 2000s. About one third of the gold mined in Peru is artisanal and produced on a small scale by individual miners or small companies washing the mineral out of superficial sediments (referred to in the literature as Artisanal Small-Scale Gold Mining, henceforth ASGM). The bulk of ASGM production takes place in the Amazon basin, in the department of Madre de Dios, located in the Peruvian south.

The Peruvian state currently classifies small-scale gold mining in Madre de Dios into three types (Wieland 2020): formal or legal gold mining², which refers to mining activities that comply with the legal provisions established by the state; illegal gold mining, which refers to mining activities in places where mining is officially forbidden (in so-called “no-go zones”); and informal gold mining carried out by miners who operate without the required legal permits in places where mining is not forbidden. Many miners who have been working for decades in areas closed off for mining are only recently invoking what they consider their consuetudinary right to mine and see themselves as informal and not illegal miners. In some cases, the Peruvian government has accepted this claim.

This complex scenario, which includes the coexistence of different categories of gold mining in one and the same region, is the result of different policy responses to the sector that have varied over time: small-scale gold mining in Peru was not regulated by the state for most of the time since extraction started in the 19th century, hence it was neither legal nor illegal. Only recently, in 2012, Peruvian governments started to require miners to formalise their activities and to prohibit gold production in several

1 We greatly appreciate the support of Adriana Foronda Barrionuevo and Frauke Berg in the preparation of this chapter.

2 In this chapter we use the terms “formal” and “legal” interchangeably.

environmentally sensitive areas. At the same time, a transition period was established during which those miners operating in zones where mining is legally allowed are supposed to become legal miners. They are asked to “formalise” their businesses by registering their mining activities with public agencies and obtaining the public concession to operate. This transition period has been extended several times amid miners’ protests and is currently in place until the end of 2021. So far, only few miners have complied with this formal process; they thus remain informal, neither legal nor illegal.

While this categorisation into formally, illegally and informally mined gold seems straightforward, we argue in this chapter that in practice the formal, illegal and informal activities related to the production and commercialisation of artisanally mined gold in Madre de Dios intermingle. Moreover, the intersection of formal, illegal and informal activities is not limited to the local level of the production site but applies to the entire global chain that connects the gold produced in Madre de Dios with consumers around the globe. Thus, we characterise the global gold chain as a hybrid regime that features formal, illegal and informal actors and actions that aim at converting informally or illegally mined gold into a legal commodity suitable for sale on the formal markets.

Conceptually and theoretically, the chapter draws on the literature on institutional hybridisation which has studied different governance schemes, e.g. in the environmental and natural resource sectors (Lemos and Agrawal 2006; Sindzingre 2006; Olivier de Sardan 2015). Hybridisation is defined as a process where state and non-state actors as well as formal, illegal and informal institutions converge, generating mixed forms of resource governance that are neither completely legal nor informal or illegal but combine all of these attributes (Sindzingre 2006; Damonte 2018, 2021). Institutional hybridity results from actor constellations where no actor commands enough power or political will to completely impose their own institutional vision.

Processes of institutional hybridisation tend to take place in weak states where territories exist that are not completely subject to state control or where the state is only marginally represented (Damonte 2018, 2021). Hybridisation may also occur when non-state groups are strong enough to contest the imposition of state regulation (Dargent et al. 2017). Often, the lack of citizens’ trust in state actors promotes and reinforces hybrid modes of governance.

Historically, cycles of territorial expansion related to the exploitation of natural resources have provided the context for the emergence of hybrid modes of governance. During these periods, states tend to make inroads in-

to new territories where natural resources are located, often at the margin of their control, and often against the resistance of established populations or powerful groups that settled there previously. With the state lacking the power to dominate these local groups, institutional hybridisation follows: the establishment of a sector that includes (at least partly) the new formal rules promoted by the state, the institutionalisation of informal or illegalised local practices as well as the local appropriation and reinterpretation of new formal rules promoted by the state or also by corporations.

Due to the complex entanglements among formal, illegal and informal activities, hybrid regimes are difficult to control. In addition, once these regimes are established, states tend to face even more difficulties in expanding the rule of formal law. In fact, with no actor strong enough to impose its will, hybrid sectors tend to be resistant to change. This does not mean that hybrid constellations are static. They rather have a fluid nature depending on the evolution of the balance of power and actors' capacities for adaptation to technological, political and social change. As a consequence, hybrid regimes are characterised by constant negotiations between state and corporate actors, with local powers aiming to legitimate their presence and often previously established economic activities, such as the extraction of natural resources.

The concept of hybridisation also provides a useful lens through which to understand the entire global gold chain and the problems regarding its regulation. Adopting this perspective, we conceptualise the global gold chain as a hybrid regime in which rules intended to govern and regulate a given area coexist with informal or illegal practices that cause the opposite outcomes to the ones envisioned by the formal rules.³ Thus, the informal or illegal practices bend or circumvent the formal rules. The hybrid character not only implies that illegal actors participate in the chain. It is also hybrid in the sense that legal actors engage in informal or illegal activities or informal and illegal actors use legal means to reach their aims. In addition, the hybrid global regime is dynamic in nature: different actors can not only enter or exit but also move between the formal, illegal and informal subsectors: informal transactions can be legalised or be outlawed in the context of state formalisation plans (as in the case of small-scale gold mining in Madre de Dios) or new international regulations, while

3 We borrow the term “regime” from international relations theory, where it is defined as a set of “implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area of international relations” (Krasner 1983).

new informal or illegal practices for producing or trading gold may be developed, depending on the domestic and international regulatory powers and market opportunities.

The hybrid character of the global gold chain is consequential for the opportunities of national and international control and enforcement bodies to monitor and police it. The close coexistence of formal, illegal and informal activities which combine to form a complex and sometimes confusing fabric requires actors in charge of policing to observe not only outright illegal groups but also the actions of legal actors able to occasionally or permanently expand their legal businesses by illegal means. These latter are much more difficult to detect, trace and verify, and formal actors may shift much more dynamically and flexibly between legal and illegal techniques than illegal actors. Thus, the concept of hybrid regimes helps to understand the difficulties regulators face in controlling and governing the global gold chain from the local producing areas through the different national and international intermediaries to the global consumer markets.

The consequences of these difficulties for regulation and control are significant, particularly in the producing areas in Peru and elsewhere. As a result of the growing global demand and the underregulated production and trade, people in the Peruvian Amazon, especially indigenous groups, have experienced ever-growing levels of environmental damage, health risks, violence and crime. The situation in the gold-producing areas can thus be characterised as a case of global interdependent inequalities in the sense that extra-local actors from different parts of the globe cause or reinforce social inequalities in specific localities (Jelin et al. 2018).

How to understand the global gold chain as a hybrid regime? In this chapter, we trace the hybrid character of the global gold chain starting in the Peruvian ASGM region in Madre de Dios and following the different stages and levels of the chain through which Peruvian artisanally mined gold travels until reaching the end consumers around the globe. We aim at identifying the causes that account for hybridity in the producing region in Madre de Dios and the ways formal, illegal and informal actions and actors intersect all along the chain to build a hybrid regime.

The chapter draws on a literature review which considered different sources: academic papers and books, grey literature as well as newspapers and journal reports. It also includes personal notes from the authors' fieldwork, collected using qualitative ethnographic methods such as non-participant observation of mining camps and activities. Fieldwork visits were conducted from 2012 to 2018. Informal interviews and structured interviews as well as field observation were undertaken during these visits.

This chapter is divided into four sections. The second section describes the evolution of gold mining in Peru in general and the ASGM sector in Madre de Dios in particular. It discusses the factors that have led to the hybrid constitution of that sector and describes a set of important recent developments. The third section analyses the global gold chain in which the gold from Madre de Dios participates. It emphasises the hybrid character of the chain by identifying how formal, illegal and informal activities intersect all along the chain. The fourth section summarises the main argument of the chapter about the global gold chain as a hybrid regime and explores the social and environmental consequences of the growing ASGM sector in Peru. It closes with a brief discussion of the international responses that aim at a more effective regulation of the global gold trade, which would be as important as the efforts in the production areas to reduce the negative consequences ASGM entails particularly for the local population.

2. Small-scale gold mining in Peru

The history of gold mining in the Central Andes dates back to as early as 1200 BCE, and minerals have dominated the economies of both the former Spanish colonies and the later independent republics of Bolivia, Ecuador and Peru. Since becoming a republic, Peru has experienced several gold rushes. The first one occurred between 1930 and 1960 and caused the first wave of migration into the Amazon rainforest, where enormous reserves of alluvial gold have accumulated in the riverbeds. The most recent one started in the mid-1990s under completely different conditions, in particular under the imperative of the global markets and with new technology available (Bebbington and Bury 2013). Driven mostly by Asian (Chinese) demand, prices for minerals increased significantly in the 2000s, with the gold price rising by 308 per cent to reach US\$1,669 an ounce from 2004 to 2012 (Poveda 2015). Even after the price peaked and dropped, it remained high by historical standards. In Peru, the rising global gold price led to a period of massive growth in gold mining. While previously insignificant, currently the country ranges among the ten largest global producers (number six as of 2019 after China, Russia, Australia, the US and Canada) (World Gold Council n.d.). The volume of

exports increased from 4294.4 thousand tr. oz. in 2001 to 6563 thousand tr. oz. in 2017.⁴

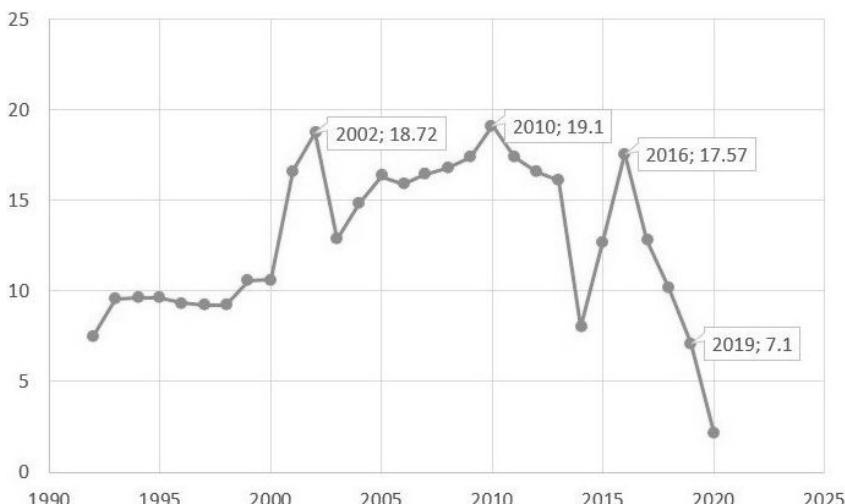
The gold sector in Peru is divided into large-scale and small-scale production. Large-scale mining is characterised by the presence of large companies operating with a considerable workforce, using heavy machinery and often sophisticated technology. It occurs in specific, officially circumscribed areas licensed by the state and involves the payment of taxes and royalties by companies. The latter makes large-scale mining attractive for governments, and indeed, since the 1990s, large-scale mining has been actively promoted in Peru (Bebbington et al. 2008; Humphreys Bebbington and Bebbington 2010; Salas 2008). Nowadays, the Peruvian Andes host some of the biggest gold mines in the world, in particular in the department of Cajamarca, where the Yanacocha mine operates. Before the formal large-scale gold sector was established, most gold production in Peru was small-scale and took place mainly in three departments: Madre de Dios, La Libertad and Puno (Echave 2016). Small-scale mining is carried out by individuals or small mining cooperatives instead of large companies. This sector is characterised by the use of rather rudimentary technology, if any. Since small-scale mining tends to be informal, the contribution to the public sector in terms of taxes is generally low.

The Peruvian ASGM sector also witnessed an enormous growth in terms of production and territory between 2003 and 2010. Given its partly informal and partly illegal character, the sector is difficult to quantify. However, official export statistics back the upward trend in a rather simple measure: until 2002, the volume of production and the volume of export of gold matched. Since 2003, Peru has been exporting more gold than it officially produces. This gap is explained by part of the production stemming from informal and illegal small-scale gold mining that takes place outside of public control. According to estimates, between 2003 and 2014, 19 out of 100 tons of gold were produced by the illegal and informal subsectors, and between 2010 and 2013, at the peak of the boom, they accounted for one quarter of the production (Torres Cuzcano 2015: 32). In terms of value, the illegal and informal subsectors are assumed to have produced gold worth US\$15.777 billion between 2003 and 2014 (Torres Cuzcano 2015: 34), in some years exceeding the value of cocaine exports, the most important illegal commodity in the region (Global Initiative against Transnational Organized Crime 2016).

4 Data from: Banco Central de Reserva del Perú: <https://estadisticas.bcrp.gob.pe/estadisticas/series/>.

In territorial terms, 21 of 25 Peruvian departments currently register small-scale gold mining. A small part of the production takes place in the surroundings of large-scale projects in the Andean highlands. The bulk of small-scale gold production is located in the Amazon region. Within it, the Madre de Dios river basin is the centre for small-scale gold mining, providing ca. 70 % of Peruvian artisanal mining (Valdés, Basombrío and Vera 2019).

Figure 1: Annual gold production in Madre de Dios (in tons)



Source: own elaboration with data from the Peruvian Ministry of Energy and Mines (MINEM)

Attracted by the rising gold price, thousands of people have migrated from the country's poor highlands to the Amazon lowlands since the early 2000s to build livelihoods based on the production of gold. The number of miners in Madre de Dios increased from 9,500 to 15,000 between 2001 and 2009 (Pachas 2011a). According to MINEM, the Peruvian Ministry for Energy and Mining, gold production in Madre de Dios steadily grew from 7.5 tons in 1992 until reaching 10.3 tons in late 2019 (see Figure 1). Currently, in Madre de Dios small-scale mining is the most important economic activity, and miners are the most important economic and political group in the region (Mosquera 2009; Pachas 2011b).

Small-scale mining in Peru has historically been informal, which means that the state had not adopted any regulation concerning the activity,

neither in an affirmative nor in a prohibitive way. A myriad of small producers operates the sector, and to different degrees also native communities, farmers and loggers are involved in the production of gold.⁵ In fact, small-scale mining in Madre de Dios is no longer a mere subsistence activity. Many miners have achieved significant profits and enhanced their business by employing workers and mechanising their operations (Cortés-McPherson 2019).

The different Peruvian governments treated the sector in an ambivalent way subject to changes over time. After first fluctuating between promoting and ignoring the sector, which both ultimately caused it to grow, more recently the state has aimed at formalising it (i.e. putting it under the rule of law) and reducing it.

State presence has always been scarce in the Amazon region. While it was almost non-existent to the Peruvian state before, starting in the 19th century Madre de Dios was perceived as a frontier region – a quasi-mythical resource-rich territory to be conquered.⁶ Against this background, the Amazonian rubber boom took place from 1879 to 1912, driving rubber companies, loggers and immigrants into the rainforest. The Peruvian government actively promoted the sector and tacitly backed numerous atrocities committed by the rubber companies that captured and enslaved local indigenous communities for labour and to gain access to their territories (Taussig 1986). When the rubber boom ended because Asian countries (such as former Ceylon and India) provided cheaper rubber to the world market, the Amazon region effectively ‘disappeared’ from the state’s radar for decades. It was during the 1960s and 1970s that the Peruvian government again decided to promote small-scale mineral extraction in the entire country. This time, state sponsorship ended in the 1990s when structural reforms reduced state intervention in economic affairs to a minimum (Pachas 2011b; Valencia 2014).

In the following years, global demand put small-scale mining on a further growth path that caused severe social and ecological damage. Responding to both domestic business pressures to open up the Amazon region for large-scale operations and international pressures to preserve the important and sensitive Amazonian ecosystem, in the early 2000s the state

5 In total, there are 29 native communities in the region, with the Harakbut being the main ethnic group living in the mining zones of Madre de Dios. While most communities practice agriculture, hunting and gathering, for many native people artisanal mining is a typical part of their livelihood (Gray 1986; CONAP 2007).

6 Regarding the concept of “frontier”, see Peluso and Lund 2011 and De Jong et al. 2017.

turned its attention to small-scale gold production again, this time with a strategy to regulate (formalise) and, ultimately, reduce it. Starting in 2001, a series of laws were enacted that officially recognised small-scale gold mining (Law No. 27651), adopted a plan for Economic and Ecological Zoning (EEZ) in Madre de Dios (Huamán 2005) that allocated only 10.14 per cent of the territory to small-scale mining activities (Fernández 2010) and, in 2010, further reduced the territory available for small-scale mining to the so-called “mining corridor”.

These new regulations proved largely ineffective. Spurred by the construction of the Interoceanic Highway connecting Peru and Brazil, illegal mining continued to expand into the buffer zones of natural reserves such as La Pampa in Madre de Dios. In response, the Peruvian state switched to a strategy of “mano dura” (firm hand), a concept well known from the anti-drug campaigns in the region. Under pressure from the international community (Cortés-McPherson 2019), a new formalisation plan was launched in 2012 (Legislative Decree No. 1102) which declared all mining activities not authorised by the state as illegal. The strategy to legalise small-scale gold mining was two-pronged, aiming on the one hand at formalising informal mining in the legal mining corridor and on the other hand at eradicating illegal mining outside this area. In addition to defining a process for formalisation (Wieland 2020), a system was put into place to trace gold production from extraction through processing to trade. It required all actors involved in the production (i.e. contractors, informal miners, suppliers of machinery and feedstock) and trade (i.e. buyers, traders, exporters) of gold to register and periodically report their operations to the Ministry of Energy and Mines. Buyers and traders were also required by law to verify the legal origin of the gold they buy lest they face criminal charges (León Pacheco 2020).

It was thus only in 2012 that small-scale gold mining in Madre de Dios became differentiated into formal, illegal and informal gold mining. Four years later, illegal mining was criminalised and classified as a type of organised crime subject to up to 15 years of prison (Legislative Decree No. 1244). As a consequence, the second component of the current strategy involves the military and includes the systematic use of force. As in the past in the context of anti-drug campaigns, the government declared a “war against illegal mining” (Pachas 2011a; Valencia 2014; Cortés-McPherson 2019). The General Directorate of Captaincies and Coastguards (DICAPI) was established as a branch of the Peruvian Navy and put in charge of decommissioning and dismantling unauthorised machinery in zones where mining is prohibited. In 2019, a series of spectacular military raids (*Operación Mercurio*) destroyed illegal mining camps and evicted miners, de-

stroying millions of dollars in wildcat mining equipment (Saffon 2020a). By the end of 2020, almost two years after the beginning of *Operación Mercurio*, more than 25,000 miners and people linked to illegal mining were expelled from the Amazon region (Fiestas 2021).

Strengthening law enforcement included not only military operations in the production areas but also enhanced interdiction efforts regarding smuggling or illegal financial transactions, which broke up several illegal companies and networks of smugglers (Cortés-McPherson 2019). Notwithstanding these accomplishments, the illegal business reacted in a manner well known from other illegal commodities, particularly from the coca/cocaine sector, the number one illegal sector of the region (Colombia, Bolivia and Peru are the main producers of the coca leaf, the raw material for cocaine, see Zevallos 2017): a “balloon effect” occurred (Schorr 2013). Many illegal economies can be thought of as a big latex balloon. If control efforts “squeeze” it at one point, the air inside does not disappear but moves into another area of less resistance. With the Peruvian state ramping up law enforcement, small-scale gold mining has migrated further into the Amazon rainforest to areas not easily accessible to law enforcers. Gold mining operations have spread almost unchecked into previously unaffected areas, such as along the Napo and Nanay rivers in the department of Loreto (Saffon 2020b; see also Fiestas 2021). Moreover, a part of the illegal gold production has shifted to other countries in the region. In neighbouring Bolivia and Colombia, illegal gold mining has been on the rise in recent years, at least in the case of the former with far weaker political restrictions for the sector (Amengual and Dargent 2020). In fact, after the US company NTR was convicted of illegally buying Peruvian gold, its imports from Ecuador and Bolivia rose by US\$485 million (Goi 2017).⁷

While the militarisation of Madre de Dios managed to reduce small-scale gold mining in the region, the COVID-19 pandemic caused it to increase again through a combination of global and domestic factors. First, with the COVID-19 pandemic the gold price soared on the international

7 Regionalisation can also be observed with regard to mercury smuggling. Several studies claim that since Peru no longer mines mercury as a result of the country's adherence to the Minamata Convention, the Peruvian ASGM sector has been supplied with mercury imported illegally from Bolivia (Campanini 2020; Montoya 2018). Bolivia is the second largest importer of mercury globally and buys mercury from Mexico and Russia, among others, to smuggle it to Peru. There is also evidence that some of the mercury crosses Peru to be sold in Ecuador (Montoya 2018).

markets. In May 2020, the price was US\$1,764.55 per ounce – reaching the price level of 2012 during the peak of the last boom (Dupraz-Dobias 2020). Second, the pandemic interrupted the global gold chain, and formal large-scale gold mining had to adhere – temporarily – to the lockdown measures declared by the Peruvian government. As a consequence, the large-scale production of gold dropped, and legal mining exports from Peru decreased by 65 per cent in April 2020. Small-scale gold miners filled the gap (Saffon 2020a).

Another factor that contributed to the renewed growth of small-scale gold mining in the region was the interruption of the military campaign. While a minor military presence was maintained, the bulk of the troops were recalled in order to be employed in measures to contain the COVID-19 pandemic (Sierra Praeli 2020). Finally, as a result of miners' mobilisations and lobbyism, the state was forced to adapt the formalisation campaign in 2019 (Law No. 31007) by extending the period to register for formalisation until December 2021. All of these factors combined to offset the results obtained by the military campaign of the past years and put the sector back on a growth path. As a consequence, in 2020, Peruvian gold exports registered a surplus of 1500 tons in excess of the reported official production (Montaño Pastrana 2020).

3. Madre de Dios in the hybrid global gold chain

The gold mined in Peru travels through a global chain until reaching the customers across the globe. This global chain comprises different stages, sectors, countries and actors (Verbrugge and Geenen 2020). Five stages can be distinguished: mining, processing, refining, trade and consumption. Mining, processing and in some cases also small-scale refining take place in the localities and the countries where gold is being extracted. More often, large-scale refineries located in Switzerland, the US or China refine crude gold from all over the globe. According to the World Gold Council, 90 % of global trading takes place in three trading hubs: the London Bullion market, the US COMEX market and the Shanghai Gold Exchange (SGE) (World Gold Council n.d.). These are complemented by smaller market centres around the world, which include Dubai, India, Japan, Singapore and Hong Kong. The world's biggest gold importers (as of 2019), with over 10 % of market share, are the United Kingdom (US\$70.8 billion, 23.1 % of total gold imports), Switzerland (\$60.7 billion, 19.8 %), China (\$43.9 billion, 14.3 %) and India (\$32.2 billion, 10.5 %). Also, the share of the UEA is rapidly growing (Workman n.d.).

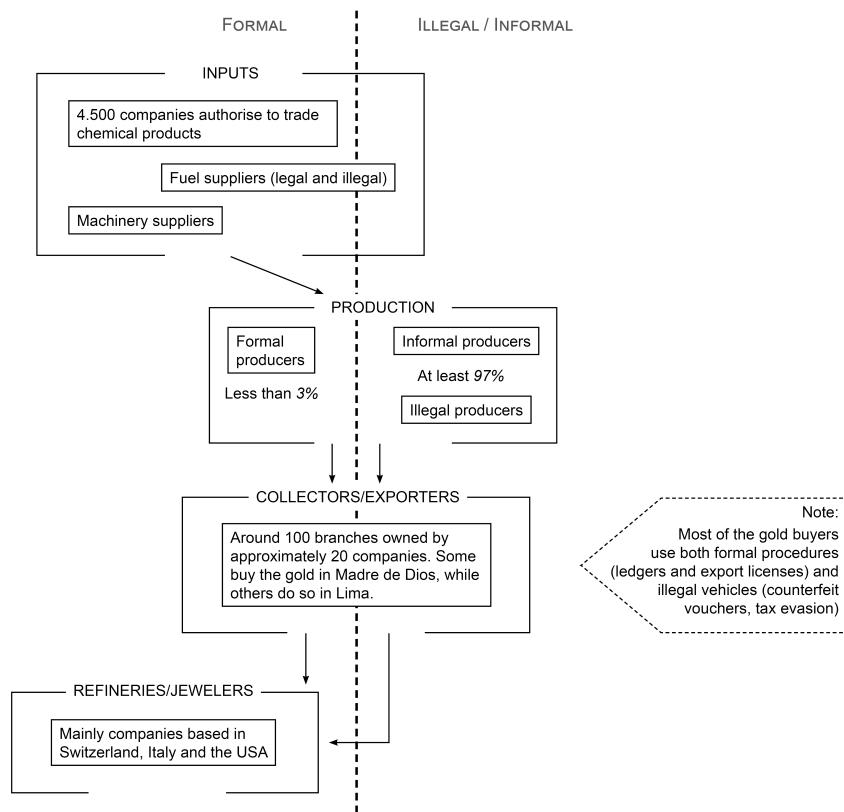
The miners in Madre de Dios sell their gold to different buyers. Generally, one part of the production is sold to specialised collectors or providers of input (such as machinery, fuel or chemicals) who run their businesses in the production area. Another part goes to bigger collectors who operate offices in the cities of Cuzco or Juliaca, or in the Peruvian capital Lima (Valdés, Basombrío and Vera 2019). These trading companies arrange the export to the global markets. Peruvian gold is mainly taken to refineries in the US, Switzerland and Italy. India is the largest purchaser of Peruvian gold with a 30 % share (SIICEX 2019).

The global gold chain from production to consumption can be conceptualised as a “hybrid regime” in which formal, illegal and informal activities intersect, turning it into what has been called in the literature a “grey market” (Hartnett and Dawdy 2013). Formally, illegally and informally mined gold is treated by formal, illegal and informal actors in order to reach the formal markets in Europe, the US and Asia.

The hybridisation can be observed at the very beginning of the gold chain. The inputs needed to extract gold in Madre de Dios, mostly machinery and chemicals, are supplied by legal companies, whereas fuel, required to operate machinery, is sometimes acquired through illegal channels (i.e. contraband; Damonte 2018). Illegally produced gold is laundered and smuggled into the global market through a myriad of intermediaries (Cortés-McPherson 2020). It is commercialised through formal and illegal channels (by contraband) by formal companies and illegal actors and ends up in formal refineries abroad. From there, Peruvian gold produced informally or illegally is sold as a completely legal commodity to the end customer around the world.

The laundering of informal or illegal gold takes place in different ways and involves different levels. During these processes, generally a lower price than the official market price is paid. At the production site, legal companies and processing plants buy informal or illegal gold and certify that it is of legal origin. At times, ghost companies operate to buy and formalise illegally produced gold. Sometimes the legal processing plants and the trading houses issue fictitious sales receipts to bring informal or illegal gold into the formal market (Wiener 2019; Valdés, Basombrío and Vera 2019). Also, other concession holders buy informal or illegal gold to raise their purported production level to the limit legally allowed. A third option for converting informal or illegal gold into legal gold involves regional networks. Increasingly, informally or illegally mined Peruvian gold is transported to neighbouring countries, particularly to Bolivia, where it is laundered and exported (Valdés, Basombrío and Vera 2019; Cawley 2014).

*Figure 2: Hybrid (formal-illegal-informal) global gold chain**



Source: own elaboration; adapted from Damonte (2018)

* In this figure we have integrated the informal and illegal subsectors. This was done in order to visualise the fact that there is no clear cut between illegal and informal production and to highlight the hybrid as well as fluid character of the global gold chain.

On the next level in the chain, informally and illegally mined gold can be exported in different ways. One way is through formal companies. There are legal companies based in Lima that purchase gold from different collectors and export it to the global markets. As mentioned, a lot of gold laundering also takes place in Bolivia. According to official Bolivian reports, gold exports have tripled since 2005, reaching US\$331 million in 2013, without a corresponding increase in local production (Valdés, Basombrío and Vera 2019). Illegal gold is also smuggled by individuals on

commercial flights departing from the airport in Lima (Cortés-McPherson 2020). Often, gold is stored by shell companies at the airport, waiting to be taken abroad by “mules”. In fact, the trade in artisanal gold is facilitated by the material properties of gold as a small product that can be smuggled across borders with relative ease (Cortés-McPherson 2020). The tax authority of Peru estimates that 35 tons of illegal contraband gold worth over US\$1 billion were shipped via Lima to the US and Switzerland between February and October of 2014 (Global Initiative against Transnational Organized Crime 2016).

Another way of converting informal or illegal gold into a formal commodity, which connects the second and third stages in the commercialisation chain, involves the large-scale international refineries in the US and Europe. In recent years, various investigations carried out by the Peruvian public prosecutor’s office on money laundering have implicated international refineries in the London Bullion Market Association. For instance, an illegal Peruvian gold trader has been found guilty of exporting more than 13 tons of illegally mined gold worth more than \$637 million to several companies in the US between April 2012 and May 2014. In particular, the cases of the North Texas Refinery (NTR) and of Kaloti Metals & Logistics are extensively documented (Society for Threatened Peoples 2016; Bargent 2015). According to a US Homeland Security investigation, between 2012 and 2015, NTR bought US\$3.6 billion worth of gold in Latin America. The US-based refinery started to buy Peruvian gold in 2012 and had imported US\$980 million worth of Peruvian ASGM gold a year later. In December 2013, Peruvian authorities seized 508 kg of gold destined for six foreign refineries, one of which was NTR. In 2017, the NTR refinery pleaded guilty to having purchased illegal gold from Peruvian sources; three of its executives were sentenced to prison.

Also, European refineries have been found to acquire illegal or informal gold from Peru. The most important cases involved the Swiss company Metalor (a subsidiary of a Japanese group), one of the most important refineries in the world (Cruz 2019), and the Geneva-based group MKS – Produits Artistiques Métaux Précieux (PAMP). In both cases, the public prosecutor’s office in Peru initiated investigations after the confiscation of a gold shipment of unknown origin addressed to the Swiss companies (Castilla 2018). Another European case implicated the Italian company Italpreziosi in a case of money laundering with illegal gold (Society for Threatened Peoples 2016).

To sum up, this overview of the global gold chain in which the gold produced in Madre de Dios participates shows that informality and illegality are not only present at the extraction site but also in the commercialisa-

tion activities from local collectors to transnational companies in the US and Europe. In addition, this overview demonstrates how the intersections of formal, illegal and informal activities imprint a hybrid character on the entire global gold chain.

4. Concluding remarks: the hybrid global gold regime and its consequences

In parallel to the growth of global demand, the extraction and export of gold has increased significantly in Peru since the early 2000s. Within a couple of years, Peru has become a major player in the global gold chain which connects the states extracting gold from their subsoils with the end consumers on the world markets. One third of the gold mined in Peru is artisanally produced, and most of its production takes place in the Amazon region of Madre de Dios. Gold mined in this region corresponds to three different categories: a small part is formal, which means that miners have fulfilled the legal conditions as stipulated by the Peruvian government. Some gold is illegal because it is extracted from regions where mining is prohibited, and most is still informal because the majority of miners have not formalised their businesses and operate without restrictions due to the transition period established by the Peruvian government. The coexistence of these different types in one and the same region results from different policy approaches towards the sector that have varied over time.

This chapter argues that the global gold chain constitutes a hybrid regime since it encompasses formal, illegal and informal actors and activities. These not only coexist separately but intersect in the different stages and levels of the global chain, from production to commercialisation. As presented in Section 3, until gold reaches the consumers around the globe, a series of formal, illegal and informal actors perform formal, illegal and informal actions: for instance, informal or illegal gold is sold to formal companies or illegal collectors in Madre de Dios or legal international companies buy gold from illegal traders or informal or illegal producers.

The global gold chain is only one example of a hybrid regime among others. In the Andean region, the coca/cocaine chain constitutes another case of a hybrid regime. The coca plant is a traditional plant used for different medicinal and recreational purposes, which can be legally produced in parts of Peru and Bolivia. However, as raw material for the production of the illegal drug cocaine, a part of the legal production is diverted into the illegal business, and legal activities are mixed with illegal and informal

ones all along the production and commercialisation stages of the global cocaine chain.

As stated in the introduction, an important characteristic of hybrid regimes is that they are difficult to govern and control. In Peru, the lack of regulation and control of the sector has motivated a steady growth that came at a high price, particularly for the people living in the gold-producing areas. Indeed, small-scale miners in Madre de Dios and customer around the globe are not only connected by the gold ingots travelling from the Amazon riverbeds to the world markets, changing form and value in the process. There is a flip side to the global gold chain: while gold leaves the region, a series of important problems for the local people and the environment are “imported”. These include growing deforestation of the Amazon rainforest (Amazon Conservation Association 2014; Caballero et al. 2018; Valdés, Basombrío and Vera 2019; Asner and Tupayachi 2016), contamination of the soil and water resources by mining activities, particularly by the widespread use of mercury in the production process (UN Environment 2019), and a critical loss of biodiversity in a region with one of the highest levels of biodiversity on earth (Markham and Sangermano 2018).

In addition to the environmental problems, the extraordinary growth of small-scale gold mining in Madre de Dios has also produced important social problems, including an increase in criminal violence, human trafficking (Novak and Namihas 2009) and forced prostitution (Arriarán and Chávez 2017; Cortés-McPherson 2019; Salazar and Castro 2018; Valdés, Basombrío and Vera 2019; Steele 2013; Cortés-McPherson 2019). Human rights violations occur frequently in the gold camps, for instance the permanent exposure of workers to toxic substances known to cause serious illness (such as mercury), extended and exhausting working days and physical violence as well as child labour. Also, the region saw a dramatic increase of violence against environmental leaders, and there is a constant tension between miners and environmental groups that advocate for the eradication of illegal mining in prohibited areas and the constitution of new zones closed to mining (Actualidad Ambiental 2020). In 2020 alone, during the pandemic, five murders of environmental and indigenous leaders were registered, and several leaders reported death threats.

Regulating the sector and effectively curbing the problems arising from extended ASGM would be very important not only for the local people but also for the planet, given the important role of the Amazon rainforest for the regulation of the global ecosystem. However, as discussed above, it is the hybrid character of the chain that hinders the attempts at regulation and limitation on the local, national and global levels. The presence of

formal channels provides a confusing abundance of opportunities to evade regulation by means of whitewashing and money laundering. In this process, illegal or informal gold associated with environmental destruction and human suffering is transformed into a formal commodity difficult to trace back to its origin.

The focus on the hybrid character of the global gold chain has some implications in terms of policy recommendations. First, this perspective allows for a better understanding of the complex situation in the gold-producing areas. In particular, it provides an explanation for the coexistence of the different types of gold by stressing the role of politics and of power relations and puts the states' opportunities for regulating the sector into perspective. The formalisation of ASGM would be a very important step in order to curb the uncontrolled growth of the sector. Small-scale gold mining is an important economic activity for many people in Peru and elsewhere, particularly due to the lack of other economic opportunities in these countries. In order to ensure a long-term effect, formalisation should be carried out considering local practices and needs and in cooperation with the (powerful) local miners. Besides enabling a more sustainable gold production, governments and international donors should provide stable economic alternatives to gold extraction instead of relying exclusively on military strategies and criminalisation. Also, the establishment of more market-based incentives, like the certification of eco-gold, could be of help. So far, these market incentives are rare in Peru and of limited effect.

On the other hand, the perspective on the hybridity of the global gold regime stresses the need to focus much more on the actions of legal actors and their illegal activities at all levels and stages of the global chain. In Peru, this applies to both formal miners and trading companies. Further up the chain, international trading companies and large-scale smelters should be subjected to closer scrutiny. While formalisation and law enforcement within Peru will take time to develop their teeth because of the structural restrictions on state capacity and the diversity and dynamism of local actors and transaction lines, more efforts in regulating the international intermediaries and markets would be an efficient step to reduce the negative impact of gold production on the ground.

How to govern a hybrid regime? The problems related to illegal and informal mining have motivated bilateral and multilateral activism. Several international conventions and national laws have been enacted in order to render global supply chains more transparent and less damaging (amongst them the US Dodd-Frank Act, the Palermo Convention, the Minamata Convention etc.). With regard to mining, a series of transnational networks have formed that promote transparency in supply chains,

with some focusing on private corporations and others concentrating on political actors (Bebbington et al. 2016). They are led by international organisations (as in the case of the Global Reporting Initiative (founded in 1997), the Mining and Metals Sector Supplement (2003) and the UN's Global Compact (founded in 2000)), non-governmental organisations (for instance in case of the Publish What You Pay campaign and the Global Alliance for Tax Justice) and industry groups (in the case of the International Council on Mining and Metals (ICMM, founded in 2001)). The Extractive Industries Transparency Initiative (EITI) was launched in 2007 to bring together corporate, civil and governmental actors. Since these initiatives only involve voluntary mechanisms and lack effective tools for monitoring and sanctioning, their impact has been limited so far.

The European Union has also taken on the subject of "conflict minerals" in general and, more recently, human rights violations in the context of mining. It promotes a "raw materials diplomacy" which entails dialogues with several countries, among them Peru, Ecuador and Colombia. In addition, the EU Conflict Minerals Regulation was issued in 2017 and entered into force in 2021. This regulation targets risks such as child labour, forced labour, forced prostitution and the financing of armed groups in the context of extraction and trade of four minerals (tantalum, tungsten, tin and gold).

While without doubt an important step, the EU Regulation has been criticised for several flaws: first, the EU Regulation defines risk on the basis of a reduced canon of phenomena viewed as converting minerals into actual "conflict minerals". Many of the risks and negative impacts occurring widely at mineral extraction sites are not addressed. These include several of the mining-induced consequences observed in the Peruvian Amazon, such as environmental consequences, violent displacements, social conflicts, corruption and the presence of illegal groups. Given their highly adverse effects, these phenomena should be factored into the definition of "conflict minerals".

Related is, secondly, the fact that several countries suffering from the negative side effects of gold production do not fall under the EU Conflict Minerals Regulation. The Regulation is backed by a list of conflict-affected and high-risk areas (the CAHRA list) produced by an external contractor, which is supposed to guide companies with regard to high risks of illegal trade and/or possible conflicts over the exploitation of minerals.⁸ Neither

⁸ See <https://www.cahraslist.net/cahras>; the contractor in charge is the UK-based RAND Corporation Europe.

Peru nor other countries in South America increasingly affected by illegal ASGM such as Bolivia, Ecuador or Brazil figure on the list. Exceptions are Colombia, where mineral extraction is in some places connected to armed conflict, and Venezuela, mostly for the same phenomena that also occur in Peru and neighbouring countries. The country selection appears inconsistent and should be extended accordingly.

Lastly, many critics claim that the establishment of due diligence for the process is still lacking, which hinders the proper implementation of the Regulation (Betancur 2019). Regarding the governance of the sector in general, experts still complain that the mineral-importing countries are not doing enough to oblige stakeholders and their subcontractors to comply with both international and domestic standards regarding human and labour rights and environmental protection. Also, law enforcement against companies that import and sell illegally mined gold is still weak.

As we have argued in this chapter, the gold chain is a hybrid global regime. All countries involved in the different stages of production, commercialisation and consumption must enforce rules to reduce in particular the destructive local side effects of the sector. Law enforcement should address not only illegal actions or actors but also legal ones and take into consideration the complexities of informality in the production areas, in Peru and other ASGM sectors elsewhere on the globe.

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