Challenging formalization in the Peruvian artisanal and small-scale gold mining sectors: the interconnection between legal and illegal economies in gold production

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Abstract

A finite, non-renewable mineral, the existing gold on earth is estimated to be 244,000 metric tons. Approximately 57,000 of which are in underground reserves in a resource-hungry world. Increasing global demand and skyrocketing prizes of this metal partly explain the expansion of unregulated gold extraction sourced by artisanal and small-scale mining (ASM) operations. Nowadays ASM accounts for one-fifth of the mineral production and employs 45 million people in 80 countries. This development has gone hand in hand with the growth of illicit markets on a global scale, and with the interest in natural resources being shown by organized criminal groups (OCGs). OCGs have been diversifying their business portfolios to include the extraction and trade of minerals and other raw materials. In particular, they are focusing on gold, a commodity that is functional to them and whose attributes "conspire to make its chain of custody astonishingly complex and incredibly difficult to regulate" (Bloomfield & Maconachie, 2021, p. 57).

For over forty years governments worldwide have conducted policies to formalize ASM, yet today up to 90% of the sector operates without a title or the legal authority to mine. Academia has explained the persistence of informality as per the normalization of a top-down approach defined by historical and structural limitations of resource-rich developing states more interested in promoting large-scale mining. This dissertation contributes to existing literature by examining the reasons why it seems to be so difficult for governments to regulate ASM. In answering this query, I question the extent to which OCGs infiltration in gold extraction, and the illegal practices that come with it, have impacted the regulatory experience. I take an illegal market approach to explore the Peruvian unregulated gold production; in particular, the embeddedness of illegal activities in the Madre de Dios mining camps. I argue that this presence and agency is already affecting the regulatory efforts of this country. As recent literature has pointed out, over time the Peruvian government policies have been influenced by a diversity of actors; ranging from small-scale miners; large-scale mining elites; and foreign institutions, which has led to a process of institutional hybridization of ASM governance. In this dissertation, I provide the reasons why I contend that groups that engage in illegal behavior, including OCGs, should be added to this list.

To arrive at the conclusions of this thesis, I entered in dialogue with the disciplines of political ecology, criminology, and economic geography. I borrow analytical tools from the Global Production Networks (GPN) framework, and I base my findings in three peer reviewed papers that expose three nodes of the Peruvian gold supply chain. These three articles are cornerstones in the architecture of the dissertation. I examine how key stakeholders react to market, socio-economic and institutional constraints inherent in a high-risk industry. In observing their behavior and relationalities, I find that a broad range of actors take advantage of the blur between the legal and illegal that characterizes irregular mining enclaves such as Madre de Dios. I trace different stages of the supply chain to identify specific nodes to providing an explanation for the expansion of the Madre de Dios phenomenon and the ways in which its mining culture has unfolded over time. I conclude that, to a great extent, this gold enclave's extraordinary growth relates to the interfaces between the legal and the illegal economies. For many individuals, illegal engagement has emerged as a risk-management strategy to overcome what otherwise would be unsurmountable hurdles. This mechanism has allowed miners to gain economic and political power to leverage state policies, in the context of a precarious exploited workforce culture in a gold-hungry world. This agency has unfolded in local and global settings whereby OCGs converge and benefit from weak institutions. It is a situation that relates to failed formalization strategies, cultural settings, and the global expansion of illegal markets.

Resumen

Se estima que hay 244,000 toneladas métricas de oro en la tierra, un mineral finito y no renovable. Aproximadamente 57,000 de esta cantidad se encuentra en reservas bajo tierra en un mundo *hambriento* de recursos naturales. La creciente demanda de este metal y lo disparado de su precio, explica en parte la expansión de la extracción no-regulada del oro a través de operaciones de minería artesanal y de pequeña escala (MAPE). Actualmente, la MAPE genera una quinta parte de la producción de este metal y emplea a 45 millones de personas en 80 países. Este desarrollo ha ido de la mano del incremento global de los mercados ilegales y del creciente interés que grupos criminales organizados (OCGs, por sus siglas en inglés) están mostrando en los recursos naturales. Los OCGs han ido diversificando sus portafolios de negocio para incluir la extracción y comercialización de minerales y materias primas. Éstos están especialmente interesados en el oro, una mercancía que les es altamente funcional y "cuyos atributos conspiran para hacer que su cadena de custodia sea increíblemente difícil de regular" (Bloomfield & Maconachie, 2021, p. 57).

Durante más de cuarenta años gobiernos de todo el mundo han implementado políticas para formalizar la MAPE; sin embargo, a la fecha, el 90% del sector opera sin permiso o licencia que le autorice a ejercer la actividad. La academia ha explicado la "persistencia de la informalidad" por la normalización de un enfoque de arriba-abajo resultado de limitaciones históricas y estructurales en países en desarrollo más interesados en promocionar la minería a gran escala. Esta tesis doctoral contribuye a la literatura destinada a examinar las razones por las que regular la MAPE parece ser tan difícil para los gobiernos. Para abordar este interrogante cuestiono hasta qué punto la penetración de OCGs en la extracción del oro, así como las prácticas ilegales que ello implica han impactado la experiencia regulatoria. Adopto un enfoque de mercado ilegal para explorar la cadena de distribución irregular del oro en Perú, en particular, la asimilación de las actividades ilegales en los campos mineros de Madre de Dios. Defiendo que esta presencia y agencia ha afectado de hecho los esfuerzos normativos del Estado peruano. Tal y como la literatura reciente ha señalado, con el tiempo, las políticas del de este gobierno han sido influenciadas por una diversidad de actores que va desde mineros a pequeña-escala, élites mineras de larga escala, a instituciones internacionales, entre otros. Esto ha llevado a un proceso de hibridación de la gobernanza MAPE. En esta tesis, doy las razones por las que defiendo que los grupos involucrados en comportamientos ilegales, incluyendo OCGs, deberían ser añadidos a esta lista.

Para llegar la conclusión he dialogado con la ecología política, la criminología y la geografía económica. En esta línea, hago uso de herramientas analíticas tomadas del enfoque de Redes de Producción Global (GPN por sus siglas en inglés) para proponer un mapa incipiente de la cadena artesanal del oro peruana. Baso mis hallazgos en tres artículos de revisión de pares que exponen tres nodos de la cadena de suministro del oro. Estos tres artículos establecen un anclaje de la arquitectura de la tesis. Examino como grupos de interés clave reaccionan a restricciones de mercado, socioeconómicas, e institucionales intrínsecas a una industria de alto riesgo. Al observar su comportamiento y las relaciones que establecen, deduzco que un amplio espectro de actores se aprovecha

de la confusión entre lo legal e ilegal que caracteriza algunos enclaves irregulares como el de Madre de Dios. De esta manera, rastreo las diferentes etapas de la cadena de suministro para identificar nodos específicos que puedan proveer una explicación de la expansión del fenómeno de Madre de Dios y la forma en la que esta cultura minera ha evolucionado en el tiempo. Concluyo que, en buena medida, el extraordinario crecimiento de este enclave aurífero se debe a las interfaces que tienen lugar entre lo legal e ilegal. Para muchas personas el involucramiento con lo ilegal emerge como una estrategia de gestión de riesgo a fin de superar lo que de otra manera serían trabas infranqueables para sus negocios. Este mecanismo ha permitido que los mineros ganen poder económico y político para influenciar políticas de Estado, en el contexto de una cultura laboral precaria en un mundo hambriento por oro. Esta agencia se ha desarrollado en espacios locales y globales en los que grupos organizados transnacionales convergen y se benefician de instituciones débiles. Es una situación que tiene que ver con estrategias de formalización fallidas, determinantes culturales, y la expansión global de los mercados ilegales.

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them Peruvians by birth, some of them, like myself (as I like to think), by adoption. To me, they have become dear friends: Ruth Goldstein, Livia Wagner, Johanna Espín, Alejandra Villanueva Ubillús, Guisselle Vila and Maria Eugenia Robles.

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Reconocimientos

Escribir una tesis doctoral es un emprendimiento desafiante. Una experiencia única y demandante para todo aquel que se embarca en esta aventura intelectual. Hay altibajos, y es la gente que te acompaña en este camino la que hace la diferencia. En ocasiones, eso es tan así que puede suponer la diferencia entre continuar o tirar la toalla. Gracias Dr. Javier Arellano-Yanguas por tu santa paciencia y apoyo durante estos años. No hubiera completado esta labor sin tu ayuda.

Las personas se adentran en un proceso de doctorado por razones diferentes. Yo me apunté a este programa por muchos motivos, pero nunca pensé que el proceso iba a revelarse tan diferente a como yo lo había imaginado. En este tiempo, he perdido personas que amaba (físicamente y metafóricamente) y renuncié a oportunidades de trabajo, pero, por otro lado, gané capacidades invaluables y madurez. Quiero agradecer a la Dra. Alyson Brysk por ayudarme en la etapa inicial de la investigación, y al Dr. James Cavalaro quien hizo posible mi estadía en la Universidad de Stanford en California. Mi aprecio a los académicos que me dieron la oportunidad de publicar: al Dr. John Winterdyk de la Universidad Mount Royal en Canadá, Dr. Boris Verbrugge de la Universidad Lovaina La Vieja y Dra. Sara Geenen de la Universidad de Amberes, ambos en Bélgica, y finalmente, Dra. Yuliya Zabyelina del Colegio John Jay de Justicia Criminal en Nueva York. Gracias también a Paúl Cisneros por sus perspicaces comentarios y la invitación a presentar mi trabajo en Quito. En Irlanda, mi agradecimiento a uno de esos ángeles que aparecen cuando se los necesita, como en un cuento de hadas. Annette Feeney, no puedo todavía creer mi suerte de que aparecieras en los últimos y estresantes días de este proceso. ¡Te pasaste! Te debo una.

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Acronyms and abbreviations

ACAFMIRA	High Commission for Mining Formalization, Interdiction for Illegal Mining and Environmental Remediation
AECID	Agencia Española de Cooperación al Desarrollo
AGC	Artisanal Gold Council
ALACIP	Asociación Latinoamericana de Ciencia Política
AMASUC	Mining Association for Arequipa and Mid-South
APAYLON	Asociación de Productores Agrarios y Lavadores Artesanales de Oro de Madre de Dios
ASGM	Artisanal and Small Scale Gold Mining
ASM	Artisanal and Small Scale Mining
BBC	Bristish Broadcasting Corporation
CEDLA	Center for Latin American Research and Documentation
CEMS	Center for Mining and Sustainability
CEO	Chief Executive Officer
CHS	Capital Humano y Social
CINCIA	Center for Amazonian Scientific Innovation
COINBAMAD	Indigenous Council of the Lower Part of Madre de Dios
DAR	Derecho, Ambiente y Recursos Naturales
DESCO	Centro de Estudios y Promoción del Desarrollo
DNI	Documento Nacional de Identidad
DRC	Democratic Republic of Congo
DREM	the Regional Direction of Energy and Mines
EITI	Extractive Industries Transparency Initiative
FARC	Fuerzas Armadas Revolucionarias de Colombia
FATF	Financial Action Task Force
FEDEMIN	Mining Federation of Madre de Dios
FEMAR	Federation of Artisanal Miners of Arequipa
FENAMAD	Native Federation of the Madre de Dios and its Tributaries
FENAMARPE	National Federation of Artisanal and Small Scale Miners of Peru
FREMARLIB	Regional Association of Artisanal Miners of La Libertad
GCC	Global Commodity Chain
GDP	Gross Domestic Product
GFI	Global Financial Integrity
GGPS	Globa Gold Producion System
GPN	Global Production Networks
GI-ATOC	Global Initiative Against Transnational Organized Crime
GOMIAM	Small-scale gold mining and social conflict in the Amazon

GRADE	Group for the Analysis and Development
GVC	Global Value Chains
IDEI	Instituto de Estudios Internacionales
IEP	Instituto de Estudios Peruanos
IFF	Intermediate Financing Facility Account
IIAP	Research Institute of the Peruvian Amazon
IIED	International Institute for Environment and Development
IIRSA	Initiative for the Integration of the Regional Infrastructure of South America
ILO	International Labor Organization
INEI	Instituto Nacional de Estadística e Informática
INGEMMET	Instituto Geológico Minero y Metalúrgico
INTERPOL	International Criminal Police Organization
IOM	International Organization for Migration
IRCD	Institute for Research Communication and Development
LBMA	London Bullion Market Association
LSM	Large Scale Mining
MAPE	Minería artesanal y en pequeña escala
MAAP	Monitoring of the Andean Amazon Project
MDD	Madre de Dios
MINAM	Ministerio del Ambiente
MINEM	Ministerio de Energía y Minas
NATO	North Atlantic Treaty Organization
NGO	Non-Governmental Organization
OAAS	Office of Socio-environmental Matters
OAS	Organizaton of American States
OEFA	Organismo de Evaluación y Fiscalización Ambiental
OECD	Organisation for Economic Co-operation and Development
OSCE	Organization for Security and Co-operation in Europe
OSINERGMIN	Organismo Supervisor de la Inversión en Energía y Minería
PCM	Presidencia del Consejo de Ministros
PEN	Peruvian Sol
PUCP	Pontificia Universidad Catolica del Peru
SERNANP	National Service for Protected Areas
SOMAPINE	National Society for Small Scale Mining
SPDA	Peruvian Society of Environmental Law
SSGM	Small-scale gold mining
SUNAFIL	National Superintendency for Labor Audits
SUNAT	Superintendencia Nacional de Aduanas y de Administración Tributaria
UAE	United Arab Emirates

UIF	Unidad de Ingeniería Financiera
UN	United Nations
UNAMAD	Amazonic University of Madre de Dios
UNTOC	UN Convention against Transnational Organized Crime
UP	Universidad del Pacifico
US	United States
USA	United States of America
USAID	United States Agency for International Development
USD	United States Dollar
VRAE	Valle de los Ríos Apurímac y Ene
WWF	World Wildlife Fund

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Chapter one: Introduction

The nurse kept talking to me at the bare reception of the *centro de salud* of Huepetue, a remote mining town along the gold-rich tributaries of the Madre de Dios River in the Amazon Basin. Her back was to the gurney where a male adolescent was lying, facing the wall. From where I was, I could only see the back of his body, lying still and lifeless on the trolley. He had thick black hair and was wearing an old, dirty shirt. I could not concentrate on the nurse's words, wondering how nobody else seemed to notice the young man in the hospital bed.

This was my first visit to Huepetue. Following the advice of my local colleagues, I travelled undercover to avoid suspicions. I was part of a crew from the local Health Department of Madre de Dios conducting a random check on the medical facilities of the mining settlement. It was back in 2010. At that time, I worked for the United Nations Migration Agency (IOM) and had travelled to this Peruvian province days before to provide technical assistance to the regional government. The medical team and I left Puerto Maldonado, the capital of Madre de Dios, at five am to make it to Huepetue and back the same day through the rough terrain. Along the journey, we encountered a landscape where dunes of polluted sand were left in abandoned mining operations amid the green rainforest. "This is what is left after the miners leave", the old man in the jolting vehicle told me noticing my surprise. I had seen the environmental damage that mining causes before, yet the magnitude of this devastation shocked me. It was eerie to be surrounded by kilometers of man-made, desert-like land in the heart of the lush Amazonia. On top of this scene is where the gold mining town of Huepetue sits.

Back in the hospital, the young men lay vulnerable. I looked around the room but did not see much medical equipment or any doctors. Worried, I inquired about him. Who is he? Is he getting any help? I asked the nurse. "He is a miner who was brought up to the *centro de salud* (health center). He must have got a heat stroke while working, it gets very hot there. Unfortunately, there is not much we can do for him." That part was apparent to me.

I never learned the fate of this young miner, but this disturbing memory and the notion of such precarity is what led me to study the political economy of artisanal and small-scale gold mining (ASGM). Almost a decade later, I understand that the extractive industry is frequently determined by a similar precarity. Unregulated mineral extraction, mostly sourced by artisanal and small-scale mining (ASM) operators, accounts for one-fifth of global mineral production and employs 45 million people in 80 countries (World Bank, 2020). Thus, the potential for development of this "labour-intensive, low-tech mineral exploration and processing" activity (Hilson, 2011) is considerable. The obvious question here is: what prevents mineral-rich developing nations from regulating this industry and, in doing so, yielding their natural wealth in a resource-hungry world? Moreover, how does one come to terms with the depiction of the local young man above, and with the very precarious expansion of the mining town of Huepetue? In a nutshell, why does it seem to be so difficult for governments to regulate ASGM?

This thesis unfolds around this question. I start by noting that extractive governance is not exclusively a prerogative of nation states and by acknowledging that governments are not the only actor shaping this industry. In Peru, as well as in many other gold-rich countries of the Global South, the presence and agency of a variety of stakeholders has eventually affected the ways in which laws and regulations are implemented. In this research work, although I align myself with the idea that the Andean country is experiencing a progressive hybridization of its ASM governance, I specifically enquire about the role of the state as a regulator and the challenges that this institution encounters in designing and enforcing policies. Thus, in contributing to the wealth of scholarship that has already been published during the last forty years to explain regulatory bottlenecks, I concentrate on the penetration and agency of organized criminal groups (OCGs) and the expansion of illegal practices in gold mining enclaves with a view to understanding how this has affected public policy.

Moreover, I examine how key stakeholders react to market, socio-economic, and institutional constraints inherent in a high-risk industry. In observing their behavior and relationalities, I find that an entire range of actors take advantage of the blurred

boundaries between legal and illegal that characterize irregular mining enclaves such as the one in Madre de Dios. Furthermore, in tracing the different stages of the supply chain and identifying specific nodes, I observe that the expansion of Madre de Dios and the ways that its mining culture has evolved over time relates to the interfaces between the legal and illegal to a great extent. For many individuals, illegal engagement emerges as a risk-management strategy to overcome what otherwise would be unsalvable hurdles in an industry where they are at a disadvantage. This agency unfolds in local and global settings whereby OCGs converge and benefit from weak institutions. It is a situation that relates to failed formalization strategies, cultural structures, and global market trends, including the global expansion of illegal markets.

In developing this argument, I begin with an introductory chapter where I present the subject matter and its relevance. I review academic responses that make sense of the challenges that mineral-rich developing nations face in regulating ASM, mostly concerned about failed formalization strategies. Following this evaluation, I consider the growing interest that organized criminal groups have shown in the natural resource sector, particularly in gold, a mineral that is highly functional to them. It is in this introductory chapter that I further present the research question, related sub-questions, and advance the analytical approach that I adopt. Following that thread, I indicate how I believe this work contributes to the subject matter before moving onto my reasons for choosing the Peruvian ASGM as the center of my study. The introduction concludes with an outline of the research methods I employ and a brief introduction of the empirical chapters. This is followed by a section whereby I elaborate on the theoretical approach taken and the analytical tools used. This theoretical episode (chapter two) gives space to three empirical chapters (three, four, and five) represented by three published peer-reviewed articles. Each section focuses on a specific node of the Peruvian ASGM supply chain presenting key moments of gold production characterized by the expansion of illegal practices and the presence of OCGs. The dissertation concludes with a synopsis of the argument, the main findings of the research, and the lessons learned that might enlighten decision-making processes in Peru and elsewhere.

1.1. Challenges to ASGM regulation: the persistence of informality

National governments worldwide have conducted policies to formalize ASM operations under the rationale that formalization would lead to employment and economic development in impoverished resource-rich countries (Hilson, 2010). Although formalization schemes differ from country to country, most strategies have followed a top-down approach assuming that licensing miners would help consolidate property laws. Formalization would also facilitate miners' access to credit and technical assistance (Siwale & Siwale, 2017), contribute to managing better social and environmental impacts (Salo et al. 2016, 1058–1059), and address taxation (Siegel and Veiga 2009, 52). Unfortunately, after decades of policy implementation, there is a broad consensus that formalization has not translated into effective regulation (Espin & Perz, 2021). Today, up to 90% of the sector operates without title or legal authority to mine worldwide.

Arguably, the persistence of informality has been associated with the normalization of a top-down approach characterized by costly, highly bureaucratic processes that miners could simply not follow (Banchirigah, 2008). Scholars have also highlighted the prioritization of LSM before ASM in land regimes and emphasized that nation-states' structural limitations and lack of commitment are at the core of failed formalization exercises (Damonte, 2016, 2018; Hilson et al., 2017; Maconachie, 2011; Maconachie & Conteh, 2020; Vila Benites & Villanueva Ubillús, 2022). Moreover, some of these obstacles pertain to historical limitations related to state-building processes, particularly in the Amazonia (Damonte, 2018). In parallel to formalization strategies, governments have also focused on interdicting banned operations, primarily those in prohibited locations and those using machinery or supplies not permitted by law. To a great extent, military interventions have been criticized for being short-sighted measures that have failed to yield sustainable outcomes (Geenen, 2012). What is worse, in many instances interdictions have had pervasive effects on ASGM mining regimes by spreading and deepening illegal practices on the one hand, and by curtailing long standing efforts of well-intentioned miners to formalize themselves, on the other (van der Valk et al., 2020; Vila Benites & Villanueva Ubillús, 2022). However, as previously noted, less structuralist

accounts provide room for a bottom-up agency to explain the scant progress of regulatory processes. For instance, and in the case of Peru, there is exciting work pointing to the political capital and economic leverage that ASGM miners have managed to gather to contest policies successfully (Cortés-McPherson, 2019; Damonte, 2021; Dargent & Urteaga, 2016; Toledo Orozco, 2022).

Here, consensus is emerging that formalization must be clearly defined and integrated in comprehensive plans to develop the industry (McQuilken & Hilson, 2018; Siegel & Veiga, 2009). Interdictions, on the other hand, should be specific, carefully designed, and strategically executed. That said, while most efforts to tackle irregular ASGM operations have been focused on formalization and interdicting, many countries have also adopted inclusive approaches with measures aimed at regulating not only the downstream part of the chain, but also the mainstream and upstream stages. In this thesis, I use the term regulation to include formalization, interdiction, and other strategies to regulate ASGM production. This approach allows for a broader understanding of overall processes and challenges. More so when it comes to gold, a mineral "uniquely difficult to regulate" (Bloomfield & Maconachie, 2021), which also happens to be highly functional to illicit global networks.

1.2. Gold and its appeal to Organized Criminal Groups (OCGs)

Indeed, no natural resource is more appealing to organized criminal groups (OCG) than gold. There is no other element on earth with more allure. Throughout history, gold has fascinated humans. It has been the drive of unimaginable explorations and fevers. Its shining brilliance has blinded kings, pirates, priests, respected members of the community, those with nothing to lose, and, of course, criminals. Gold is a commodity, a symbol of power, a currency, and a safe-haven asset for investment. Gold breaks ground in the periodic table of minerals by its "enduring luster, malleability, resistance to wear and corrosion" (Bernstein, 2012). Untraceable, gold can be smuggled, laundered in the supply chain, used as a form of payment in illicit markets, or employed to finance criminal activities. Gold, as Bloomfield and Maconachie (2021) note, is a commodity whose

attributes “conspire to make its chain of custody astonishing complex and incredibly difficult to regulate.” Again, gold is functional to criminal organizations.

A finite, non-renewable mineral, the existing gold on earth is estimated to be 244,000 metric tons, which will fit in a 28 cubic meters cube. Most of it is already above ground. Half of the available sourced gold has been used in the jewelry sector; a quarter is carefully guarded in the vaults of governments and security safes of wealthy individuals. Most of the remaining gold is used in technological devices. Among other future uses, gold will be critical to building spaceships for space exploration. As I write, a current event, the Russian invasion of Ukraine, has exposed the contemporary geopolitical power of gold. Member states of NATO have used the mineral as a weapon seeking to limit the ability to circumvent Western sanctions by freezing Russia's gold reserves. Moreover, the conflict pushed the price of gold to US$ 2,050 per troy ounce, the second highest in history (in August 2020, the price reached US$ 2,074). This has led to speculation about the escalation of the war and a potential scenario of stagnation which could be 'very *bullish* for gold' because investors would seek protection in this commodity (Spence, 2022).

To put the price of gold into perspective, for most of the twentieth century, the troy ounce of gold was below US$ 100. It was only after the global recession of 2008 that the monetary value of this metal surged exponentially and, so did the prospects for profit in gold extraction. International corporations made fortunes via industrial large scale-mining (LSM), while remote explorations of local artisanal and small-scale miners became profitable. As one of my interviewees put it, “as long as the price of gold is worthwhile, there will be illegal mining”. Thus, the dilemma unfolds for regulators: how to deal with the estimated 57,000 metric tons of gold reserves that remain underground while protecting nature and people? There is no doubt that sourcing those reserves will be a disputed undertaking. So too will be the ways by which gold production will be regulated, and the role that OCGs will play in the process.

The global scarcity of natural resources is increasingly attracting OCGs into unregulated mining enclaves. OCGs are improving at diversifying their business portfolios to include the extraction and trade of minerals and other raw materials (Rettberg & Ortíz-Riomalo, 2016; van Uhm & Nijman, 2020). In 2021, the Global Financial Institution (GFI) (2021) indicated that, if traditionally natural resources have been linked to conflict and violence, it is only in the last ten years that the international community has begun to recognize the scale of its association with global illicit financial flows (IFF). In 2017, the illegal market in natural resources was estimated to be worth US$275 billion, just below counterfeiting and drug trafficking (GFI, 2021). The GFI is not the only institution to have voiced its concern about this trend. In less than a year, the following have published on the subject: Interpol (2022), the Financial Action Task Force (FATF) (2021), the Global Initiative against Transnational Organized Crime (GI-TOC) (2021), and the Organization for the American States (OAS)(2021).

To illustrate the extent of the problem, in just four years (2014-2018), the volume of environmental crime increased by 44% (INTERPOL et al., 2018). INTERPOL and UNEP now estimate that illicit mining was estimated to be worth USD 48 million by 2018 . Just two years earlier, the OECD released a report stating that the weight of illicit economies amounted to 1.5% of the global GDP (OECD, 2016), a trend that has been accelerated by globalization. According to GI-TOC, a think-tank that studies transnational crime (2021), criminals are the main beneficiaries of globalization. In a globalized world, OCGs' profile and modus operandi has changed from sizeable mafias into ever-growing networks whose adaptability allows for diversification and expansion. They thrive in spaces characterized by weak institutions and have managed to infiltrate themselves in business and politics by “blurring distinctions between illegal and legal” (GI-TOC, 2021).

Moreover, GI-TOC notes that this process is part of the Fourth Industrial Revolution and the power shifts that come with it. Hence, the illicit extraction and trade of natural resources would unfold amid what Muradian et al., (2012) describe as a new phase of modern capitalism. This is a historical time that introduces an expanded geography of extraction as part of a systemic global transformation. Led by China, this geography

underlines a shift in the global metabolic profile on the flow of energy and materials. Therefore, as Geenen and Verbrugge (2020) explain, if the mining industry has traditionally reacted to the challenges of fixity (territorial location) and scarcity (shortage of minerals) by introducing technological innovation and by expanding into new mining destinations, in the new geography of extraction, they argue, the industry increasingly relies on informalization to keep up with the demand for the mineral. As a result, the new commodity frontier (Moore, 2000) has expanded to include countries of the Global South with a wealth of mineral deposits and the broad availability of cheap labor. Globally, this move helps to offset the growing costs of extraction and the pressure for sustainability that the natural resources industry faces (Mudd, 2007). It draws a new gold commodity frontier characterized by its diversity and connectivity, away from the historic duality that separated LSM and ASM (Verbrugge & Geenen, 2018). It also speaks to the growing pressure to develop policies and strategies to regulate the former and integrate mining scales in a shifting global gold market. A new world order for gold with emerging players where interfaces between the legal and illegal might become commonplace.

Conceptual clarification of illegalities

Yet making the distinction between formal, informal, or illegal it is not an easy endeavor in ASGM. Neither it is to clearly state what the term illegal means. In his work regarding Peruvian illicit gold, Naomi Van der Valk, 2020 problematized the complexity in defining the existing universe of illegalities. She notes that the scientific literature includes multiple definitions of organized crime (von Lampe, 2016), mostly to describe "complex criminal organizations that aim to control illegal markets—sometimes branching out to legal markets—and attain control by means of violence and corruption". However, as this author recognizes, OCGs are diversifying in response to the new criminal opportunities arising, so its definition must remain flexible (von Lampe, 2008). Van der Valk clarifies that over the years these definitions have shifted between "who and what notions of organized crime are, now often settling on a combination of the two". This is the approach I take in this dissertation. While on the one hand I look into the infiltration of OCGs and convergences developed in the mining enclaves, I am also concerned about the expansion

of illegal practices as part of interfaces between the legal and illegal whereby a wide range of individuals engage in illegal behavior or converge with criminals.

Thus, on the one hand, I use the notion of organized criminal groups (OCGs) to conceptually frame the subject matter since it provides terminological consistency when referring to criminal behaviors and the nature of the perpetrators as part of structures designed to thrive by portraying criminal activities. According to the United Nations Convention against Transnational Organized Crime (UNTOC Article 2a) OCGs encompass four key characteristics: (1) they are structured groups of three or more persons that (2) exist for some time to (3) act in concert to commit at least one serious crime in order to (4) obtain, either directly or indirectly, financial or another material benefit. Per the same legal instrument, a serious crime would mean an "offence punishable by a maximum penalty of incarceration of at least four years" (Article 2b). However, as Albanese (2020) clarifies, the UN convention still leaves room for interpretation regarding the offences and the methods used over time.

With that said, if OCGs can be defined as professional criminals structured to commit serious legal offences, my research relies on the idea of illegal practices to determine illegal behaviors pertaining to extractive regulation as stated by Peruvian law. I am aware that in adopting this concept I risk it being too broad, more so when in the ASGM complex landscapes, illegal does not necessarily equal illicit and vice versa. As Lahiru-Dutt (2004) infers in relation to the case of India, “illegal mining may well be seen as legitimate by local communities”. Notwithstanding the impossibility of drawing a clear-cut line when it comes to illegalities, for this research, I understand illegal practices as part of the Peruvian penal code in conjunction with additional regulations stated to deem a behavior illegal. Those practices might include corruption, illicit trade, smuggling, violence, exploitation, etc. or be specific to the industry. In her work, Eva Bernet Kempers (2020) picks up four types of illegalities that take place in mining camps which will deem mining illegal: 1) those activities that take place without a permit; 2) operations that extract and process gold in quantities greater than those allowed for in the permits; 3) the use

chemicals and equipment in ways that are not allowed; 4) mining in protected areas; and 5) activities part of gold smuggling processes, including money laundering.

Under this conceptual umbrella, it is still important to highlight that the perception of illegalities also varies geographically. For instance, in Latin America, and specifically in Peru, mining legislation would define what is legal or criminal within the industry in different ways. Although it will be explained in more detail later, it was the regulatory process of ASM that took place in 2011 that introduced the idea of mining been and illegal activity under specific situations as explained above with the Executive Decree 1105. The legislative Decree 1102 incorporated this crime in the penal code. Furthermore, in 2017, illegal mining was added to the Law Against Organized Crime, Law 30077 (*Ley contra el Crimen Organizado*) to tackle money laundering and other practices associated with the activity.

1.3. Research question, analytical approach, and findings

Aware of the conceptual complexity when approaching the matter of illegalities, in light of the difficulty to successfully manage ASM for the state exposed at the beginning of this section, and the wealth of scholarship that has already provided insightful explanations pertaining ASM regulatory challenges worldwide, I am most concerned about the penetration of OCG in unregulated gold production. Specifically, I inquire about how this infiltration has affected ASGM governance by challenging efforts of governments to implement policies. To delve into this puzzle, I look into the emblematic gold enclave of Madre de Dios and investigate the dynamics that shape the ASGM production with the objective of shedding light on the relative failure of an extensive body of law -over 70 rules- enacted by the Peruvian government to regulate the activity during the last decade (2012 to 2022). This is an ambitious legal framework "on-the-books" that did not translate itself into "law-in-practice" (Espin & Perz, 2021). By 2021, only 2% of the 90,000 miners that signed up to formalize their operations managed to do so (OAS/DTOC, 2021). Military interdictions, on the other hand, proved to be ill-designed and poorly implemented strategies. That stated, it is only fair to acknowledge a fair degree

of advancement in the overall regulatory landscape of the Peruvian ASGM. Although unevenly distributed along the national gold geography and mostly concentrated on open pit operations, this country's government has taken significant steps to formalize miners. It has been a process that Vila Benites and Villanueva Ubillús (2022) define as a pendulum-like motion, characterized by back-and-forth cycles of political settlements in resource regimes. Over time, this dynamic has resulted in the increasing hybridization of ASGM governance which has been influenced and shaped by a diversity of actors; ranging from small-scale miners (Cortés-McPherson, 2019; Damonte, 2021; Toledo Orozco, 2022); to large-scale mining elites (Cano, 2020; Vila Benites, 2022; Vila Benites & Villanueva Ubillús, 2022); and foreign institutions (Dargent & Urteaga, 2016; Villanueva Ubillus, 2021).

Yet, in mapping the scenario of individuals called to play a part in the Peruvian ASGM governance, this thesis addresses the undeniable appearance and agency of organized criminal groups (OCGs) that have arrived in the mining enclave to participate in the gold business. In tackling the subject, I want to stress that it is not my intention to criminalize the sector further. On the contrary, I risk approaching such a sensitive matter by carefully addressing a reality that needs to be better understood in order to develop informed policy and to deliver effective and efficient implementation. To proceed with my investigation, I engage with several disciplines and adopt a combination of analytical tools necessary to explain an intricate reality. I look at the ASGM as an economic activity observing that this industry is highly vulnerable to the penetration of OCGs exposing the urgency to design and implement effective regulation.

To study this reality, I enter in dialogue with premises from political ecology, and criminology, and those of the global organization of production. Analytically, I borrow tools developed by the Global Production Network (GPN) framework nurtured by economic geographers. These tools allow me to anchor the ASGM production process and to look to the ways in which different stakeholders behave at different stages of the supply chain. From this point of view, this thesis is innovative in using such a theoretical mix. Analytically, it offers an illustration that even amidst the structural forces of the

GPN, there is room for agency. The dissertation correlates the three peer reviewed chapters with specific nodes where I spot the presence and agency of OCG and illegal practices. It will not go unnoticed to some readers that these three nodes do overlap somehow, a situation that reflects the interrelated nature of the different stages of the supply chain and the way different stakeholders and processes are interconnected. This research work is ambitious in presenting different stages of the production cycle that include episodes taking place at the downstream and upstream stages.

I bring about these depictions to empirically scrutinize three nodes where illegal practices are embedded into the network to argue that illegal engagement emerges as a strategy to manage risk within the irregular gold production system. In my research, I find that the expansion of illegal practices and the penetration of OCGs in gold mining enclaves, such as the one in Madre de Dios, relate to market, institutional and social constraints. I contend that miners and other actors alike are impeded in their development under which the ASGM unregulated market operates. Due to these perils, illicit engagement emerges as a risk-management strategy to overcome what would otherwise be unsurmountable hurdles. This strategy unfolds in local and global settings whereby the divide between legal and illegal is increasingly blurred along all stages of the supply chain, thus becoming a thriving space for OCGs. It is a situation that to a great extent relates to failed formalization strategies, cultural structures, and global market trends, including the expansion of illegal markets. Moreover, I continue, as will be shown in chapters three, four, and five, that it is through this dynamic of interfaces and synergies that the expansion of Madre de Dios takes place. An illicit engagement is not exclusively a strategy utilized by a single specific stakeholder. A range of actors, from miners to workers to transnational corporations, take advantage of the blurred line between legal and illegal to defend their interests.

To support my argument, I acknowledge stakeholders agency (engaging in illegal practices) as a mechanism to deal with the economic uncertainty (Geenen, 2018), social precarity (Ulmer, 2020), and institutional ambiguity (Verbrugge, 2015a) that characterizes this industry. I isolate and target nodes whereby change takes place due to

the penetration of OGC within the network and/or by the use of illicit practices by random individuals. Moreover, in understanding this process, in each chapter I expose how these mechanisms have allowed relevant players to create, enhance and capture value throughout the supply chain.

Thus, in chapter three, I show that operators working in prohibited natural protected landscapes of the Amazon were able to capture value after their productivity increased as a result of the introduction of forbidden heavy machinery for the area. Unable to access any formal means of credit, miners forged alliances with suppliers of this equipment who provided technology to them despite being aware of its future illegal use. In the episode I present how this interface has led to the emergence of an elite of mining entrepreneurs that was instrumental to the magnitude of the expansion of the Madre de Dios phenomenon. Chapter four provides an in-depth examination of the precarity of the job market and the ways that workers used family and community ties to recruit individuals to work in slave-like conditions. This agency, the generalized consumption of sexual services of trafficked women, and alcohol abuse has contributed to shape the mining culture in this enclave. As I later explain, this is a series of choices that relates to the universe of precarities in which this impoverished workforce operates. Chapter five illustrates the complexity of a global gold market and the reaction of the gold production system to the Peruvian government regulations to control gold smuggling. Specifically, it exposes how on the other end of the supply change, large transnationals would engage with criminals to secure the necessary supply of the precious metal.

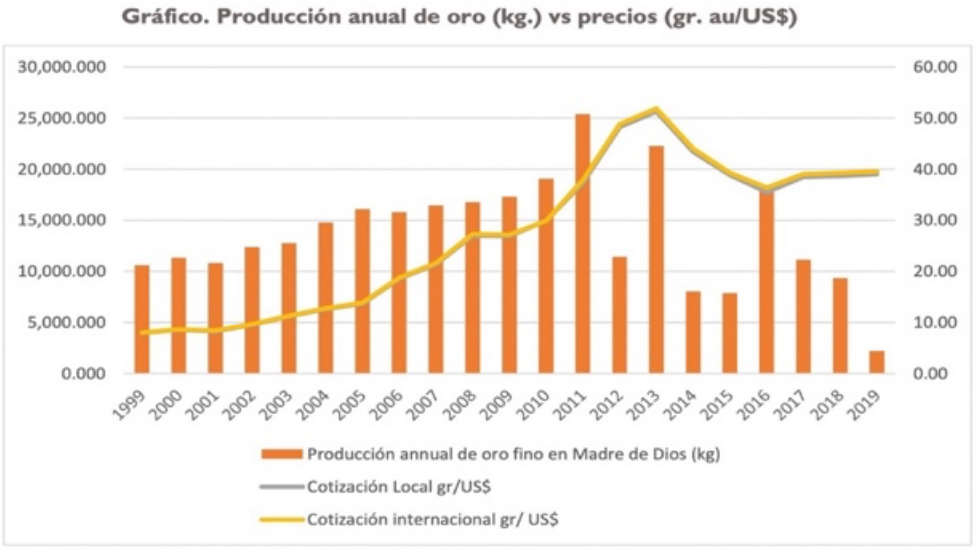
1.4. OCGs and illicit practices in the Peruvian ASGM

ASGM was key for the expansion of Madre de Dios. This Peruvian area experiences the highest income per capita in the country thanks to the irregular gold industry and enjoys a human development index above the national average. In 2011, mining exports represented 68.4% of Madre de Dios' gross aggregated value. The contribution to Peru's overall unregulated gold production was estimated to be 80% for many years, which is a

significant inflow of capital into a country whose gold exports reached 66.8% of the global output in 2018 (CEMS, 2020).

The Center for Mining and Sustainability Studies (CEMS) of the Pacific University of Peru produced a useful chart presenting the gold production in Madre de Dios versus the price of gold from 1999 to 2019 (see below).

Chart 1. Gold production versus market prices in Madre de Dios



Fuente: DREMH Madre de Dios (2019). Elaboración propia.

Approximately 50,000 miners have moved to the area to participate in gold mining. With such mineral wealth, it is obvious that the potential for economic development would be significant if suitable measures were to be put in place. Unfortunately, despite this opportunity and the positive macroeconomic statistics, the activity has had a significant negative impact in one of the most biodiverse spots of the Amazonia. To date, an estimated 100,000 hectares have been deforested in the Peruvian Amazon, and tons of mercury have been leached into the rivers, affecting the traditional food chain of local communities. The infographic below shows the main mining zones of Madre de Dios, six

hours away from Puerto Maldonado, the capital of the region. In brown, the illustration highlights the major illegal mining areas in the towns of Huepetue and Delta 1. The image does not include what was considered the most dangerous encampment called La Pampa, which is located on the gold-rich land of the Interoceanic Road, a buffer zone between the Natural Reserve of Tambopata. The Peruvian government considers those operations that violate regulations per Executive Order N. 1105 as illegal. This law established a specific corridor to practice the activity, and prohibited mining in water courses, natural reserves, or culturally protected areas.

Chart 2. Infographic of illegal mining sites in Madre de Dios

Environmental costs correlate with social costs, yet, as noted in this thesis, I focus on how the penetration and presence of OCG and the expansion of illicit practices that come with it affect the mining enclave. In 2021 the Department against Transnational Organized Crime (DTOC) of the Organization of the American States (OAS) (2021) published a

report dedicated to the problem of OCGs in the Peruvian gold industry. They cautioned that “sophisticated criminal networks and organizations have developed around Peru's illegal gold trade, promoting production, contraband flows, and the sale and export of illegally extracted minerals … bringing armed violence and human trafficking”. Local analysts shared similar accounts. Valdez et al, (2019) assured that OCGs infiltration has evolved into a form of coexistence between the legal and illegal, a culture of illegalities that speak of a form of territorial control (CEMS, 2020). This situation was exacerbated by the construction in 2010 of the Interoceanic Road. As Goldstein (2022) contends in her work on illegal trafficking and roads, this infrastructure has brought about a connectivity that “enables travel and migration, but also facilitates a variety of illegal economies”. The last chain of the South American highway was built to connect the Atlantic and Pacific Oceans, this road is in Madre de Dios, a triple frontier bordering Brazil and Bolivia.

Madre de Dios is the least populated region of Peru, with only 185,000 inhabitants compared to the 10 million in Lima. Yet this province has the highest homicide rate in the country and ranks in second place for the number of *sicariato* (hired assassins). Violence and crime have made their way through this mining area. In 2015, Madre de Dios had 20.1 homicides per 100,000 inhabitants (three times the national average). Two years later, in 2017, that figure rose to 46.6, and reached 58.6 in Tambopata, where the most dangerous mining sites are located (Valdés et al., 2019). To give some perspective, the national average of homicides per 100,000 inhabitants that year was 7.8.

Regarding the expansion of violence, the numbers above are only the tip of the iceberg in what has been described as a giant necropolis (Ulmer, 2020). Mass graves have been found in the mining camp of La Pampa where victims were incinerated (Vera, 2017). During my fieldwork, I heard multiple testimonies validating this fact. Two such examples are: a nurse assigned to a medical post in the Interoceanic highway, outside an exit of La Pampa, told me: 'It is an everyday affair. People come here with injuries of all kinds. Many have been stabbed, others have been shot”. A respected analyst from Lima confirmed that “thousands have been killed in Madre de Dios. The magnitude of the

massacre is such," he lamented, "that it might require a Commission of Truth". A Commission of Truth was formed in Peru to investigate mass killings during the years of the terrorist insurgency back in the 1980s. A feature published by Mongabay (2020) sheds light into events in some parts of the mining enclave. The journalist interviewed a local law enforcement official, who maintained that "illegal logging, illegal mining and land grabbing are managed by mafias installed in Madre de Dios, therefore, those that defend nature conservation or oppose illicit business are threatened and killed". Furthermore, the 2021 Amazon Assessment Report (2021) regards the situation as a central problem of invisibilities in the Amazonian basin embedded in traditional socio-economic systems of illicit economies that include timber, gold, coca, and land grabbing, among others, associated with "corruption, resource theft, and speculation".

Peru shares over a thousand kilometers with the Colombian Amazon (historically the world epicenter for cocaine production), while Madre de Dios borders with Bolivia and Brazil. The collaboration of this Andean-Amazon region over illicit trafficking is historical. However, the increasing participation of Peru in the global cocaine market, the infiltration of OCGs and illegal practices in gold mining enclaves, and the construction of the Interoceanic Road are a recipe for disaster. As the local journalist Manuel Calloquisque (2020) indicated following the assassination of the leader of a syndicate over the control of the coca trade in Puerto Maldonado: "by 2019, it was obvious that the *narcos* have established themselves in Madre de Dios".

1.5. Methodology and structure of the thesis

In analyzing the complexity of the ASGM, and by addressing the dilemma posed by my research question as to why it is so difficult for governments to regulate ASGM, I concentrate on the Peruvian experience between 2012 to 2022. Firstly, I narrow down the complexity of the subject matter by identifying a problem to work with as a "well-defined aspect of a historical episode" (George L. & Bennet, 2005). That is, I take the broad inquiry into the more specific concern that relates to the mapping of actors and their role in the sector in a specific place and time. Then, by focusing on the penetration and agency

of criminal groups (OCG) within the Peruvian ASGM production networks in the given decade, I define key actors and their role; the domain, location and a reasonable timeframe (a decade) in order to be able to come up with reasonable inferences relevant to the policy process (Sabatier, 1986).

Analytically, I propose a compendium of multidisciplinary frameworks that provide enough diversity and tools to make sense of such a complex reality. As Booth et al., (2008) contend in their cornerstone work on political science methods, political analysis contains a mix of facts and values that relate not only to the subject under scrutiny but to the theoretical framework used to make sense of the iterations studied. In this dissertation, I explore theoretical propositions emanating from political science scholarship, political-ecology, criminology, and economic geography. More often than not, the multi-causality of social research requires more than one disciplinary focus to make precise inferences characteristic of qualitative research.

Moreover, as King et al. (1994) point out "every researcher labors under limitations of knowledge and insight", and, as these scholars also note, "mistakes are unavoidable, yet others would likely point out such errors." I am convinced that is the case here. In my research journey, I have encountered multiple limitations and obstacles deriving from the theoretical challenges of the theme, the difficulty, or even danger of accessing data, and the ethical dilemmas intrinsic to some intellectual and factual positioning in reading facts. The risk of further criminalizing artisanal and small-scale gold miners and their communities in my choice to tackle the issue of illegalities and criminality has been a heavy weight to bear. There was no easy way to talk about the elephant in the room without talking about that. Consequently, there is no way to try to shed light on the sector by persisting in avoiding the subject matter. As per the King et al. quote above, I am sure that I have failed many in my equanimity in dealing with the topic. For that, I can only say that I have never taken the easy route to arrive at a conclusion.

This brings me to a critical issue when describing methodologies and evidence gathering in the social sciences. In producing this work, I have made multiple field trips to Peru and

spent long periods on back-and-forth trips to Madre de Dios between 2013-2018. During that time, I conducted semi-structured interviews with over a hundred individuals from all types of backgrounds, including experts, small-scale miners, community leaders, central and local authorities, NGOs, and business leaders. In organizing this extensive database, I established three broad categories of interviewees: 1) experts, 2) authorities, and 3) human subjects directly involved in the business. In the first group I included: scholars, independent analysts, activists from non-profit organizations, journalists, and personnel from international cooperation agencies. To mention some of the most relevant institutions with which I had the opportunity to interact, in order to keep the confidentiality of the informant or sources, I will abstain from providing names of specific individuals.

In coming up with an argument, I carried out semi-structured interviews where I always went the extra mile to make interviewees feel comfortable and safe to talk. During these interviews I inquired about the role of each informant to understand his/her implication and perception of the development of the industry and policies in place. Questions unfolded around how specific regulations would affect them personally and how things could be done differently. In mapping these actors and their perceptions I was able to construct a building block for each group of interviewees and their specific concerns. In doing so, I have always followed ethical procedures that included informing them of my role as a PhD candidate, my intention to collect data, and its specific intended use. Furthermore, I have always asked for explicit verbal permission to use the information provided, although I did not request signed consent. Despite being recommended in research manuals, this measure is impossible to fulfil in practice in particular cultural contexts where human subjects tend to be suspicious of leaving any proof that might eventually incriminate them for something. Therefore, in my conclusions, I have been very conscious of not jeopardizing anybody's well-being or exposing identities at any times.

In order to identify some of the institutions with which I interacted in the first category, I can mention the Pontificia Catholic University of Peru (PUCP) and its Group for the

Analysis of Development (GRADE); the Pacific University (UP) and the associated Center for Mining and Sustainability Studies (CEMS); local colleges of Madre de Dios such as the UNAMAD and the Research Institute for Peruvian Amazon (IIAP). Within this category I had the opportunity to discuss the subject with relevant NGOs devoted to promoting social and environmental rights. To mention some, in no particular order: the Center for Scientific Innovation in the Amazonia (CINCIA) associated to the Wake Forest University in USA, the Peruvian Society of Environmental Law (SPDA), *Cooperacion*, *Pro-Naturaleza*, DAR, *Responsabilidad Social*, the Initiative for the Conservation in the Andean Amazon (ICCA), Wanamei Project, WWF, CHS, *Tierra de Hombres*, the Association for the Research and Integral Development (*Aider*), and *Caritas.* Most of these organizations have offices in Puerto Maldonado that I visited, more than once in some instances. In my fieldwork, I also had the opportunity to travel with colleagues that were in Madre de Dios to conduct their own research on behalf of global research centers or specialized international agencies, such as: GIA-TOC, *Verité*, Carnegie Amazon (associated to the University of Sandford), Artisanal Gold World Council (AGC), *Solidaridad* Network, and relevant UN agencies. In this category I also include multiple interactions with journalists from *Ojo Publico*, *El Utero de Marita*, *El Comercio*, *El Pais*, *Andina*, *SER* and the local media of Madre de Dios. Finally, I include my conversations with personnel of diverse agencies for international cooperation based in Lima, starting with the USAID, AECID, *Cosude*, Canadian Cooperation and specific interviews with the leaders of key projects on the subject such as the PERCAM project and Gama Project.

Regarding my second category of inquiry as the collection of relevant data directly from the Peruvian authorities, I was able to reach and speak to subjects in key governmental positions in Lima and their technical advisors. In Madre de Dios I was lucky enough to have relatively easy access to the authorities due to my previous work with this regional government. On a national level, the following are the most significant institutions that I approached: The High Commission for Mining Formalization, Interdiction for Illegal Mining and Environmental Remediation (*ACAFMIRA*, in Spanish) of the Peruvian Council of Ministers (*PCM*, in Spanish), two different Directors of the Department for

formalization of the Ministry of Energy and Mines (MINEM), Ministry of Environment (MINAM), Ministry of Interior, SUNAT, *Activos Mineros* (which were assigned to purchase gold from ASGM-operators), the Superior Organism for the Energy and Mining Investment (OSINERGMIN), National Superintendency for Labor Audits (SUNAFIL), Ministry of Justice, Ministry of Women, Observatory of Criminality of the Ministry of the Public Ministry, and the National Ombudsman (*Defensoria del Pueblo*). In Madre de Dios, I spoke to different personnel of the Regional Government, including several *Governadores* within the time period that included my research, I also interviewed the director of the Regional Direction of Energy and Mines (DREM), the local director of INGEMMET, a representative from the Ministry of the Environment (MINAM), a representative from the National Service for Protected Areas (SERNANP), Office of Socio-environmental Matters (OAAS), the local Ombudsman, as well as two Congressmen and their technical advisors, in addition to the mayors of Tambopata, Inambari, and Mazuko.

Finally, in seeking direct contact with operators within the supply chain, I was able to talk to representatives of the following associations, interviews that in many cases were followed by visits to their mining operations. To mention some, I spoke with representatives of the miners' associations of Madre de Dios such as: FEDEMIN, APAYLON, FENAMARPE, SOMAPINE, and the Association of the *Chichiqueros*, an association of miners without a concession. I also spoke with members of groups that alternated forestry and mining exploitations such as the Association of Artisanal Miners and Farmers of Manuani, and other organizations focused on defending their indigenous and forestry rights: the Indigenous Council of the Lower Part of Madre de Dios (COINBAMAD), the Committee for the Management of the Natural Reserve of Tambopata, Native Federation of the Madre de Dios River and its Tributaries (FENAMAD), the Chestnut Association. I also interviewed representatives from mining associations of other regions of Peru such as AMASUC (Arequipa and Mid-South), Federation of Artisanal Miners of Arequipa (FEMAR) and the Regional Association of Artisanal Miners of La Libertad (FREMARLIB). In addition to these miners, I also spoke to informants linked to other stages of the supply chain, where gold was melted and sold

in local posts in Mazuko and Madre de Dios. In these back-and-forth trips, I took every opportunity to interview laborers, whom I came across in different settings and who narrated their difficult circumstances to me. With the support of the Public Ministry, I also interviewed young women and men that have been subject to labor and sexual exploitation.

In addition to my fieldwork and relevant literature, my data collection has been enriched with anecdotal literature and social media posts of key subjects. I believe the grounded cultural and political understanding I have acquired by living and working in Peru for ten years has helped my not only to access data but to interpret the cultural and political nuances in which this information in embedded. In my work with the UN, I provided technical assistance to national government, as well as to specific regional authorities, including those of Madre de Dios, where I worked extensively. In close coordination with the Ministry of Interior, which held the chair of the Human Trafficking Multidisciplinary Group on Human Trafficking in Peru, I led the drafting of the very first national policy on the matter. In Madre de Dios I worked with *gobernadores* and other key leaders, including those of the mining sector, to conduct several focus groups on human trafficking in order to develop the regional plan on the subject. In doing so, I was exposed to countless hours of participant observation, where I learnt political processes and their limitations in design and practice. This experience gave me privileged access to real politics and its application on the ground, as well as the mindset to understand and care for the country and its people.

As previously stated, this introduction is followed by a theoretical chapter where I expose my analytical tools and choices. In addition to that, this thesis encompasses three peer-reviewed papers[1] published between 2019 and 2020 that tackle three momentums within the Peruvian irregularly sourced gold supply chain. Each chapter describes a node of the production network relevant to the overall functioning of the ASGM system of this country. Chapters three, four, and five illustrate specific interfaces and convergences that

[1] The articles are under my married name in the USA, Dolores Cortés-McPherson

take place in these nodes that allow miners and other key mining actors alike, to overcome market, social, and institutional constraints, leading to value capture and empowerment to contest regulations. Although each episode was written and published independently, they are consistent in portraying a sequence of interactions that allows the creation of an initial map of the Madre de Dios gold production.

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Chapter Two: Theoretical approach: A mix of analytical tools to understand the Peruvian ASGM

The links between illegal gold mining and drug trafficking in the Andean-Amazonia have been extensively documented by anecdotal literature to the point that the term *narco-minería* (narco-mining) has been coined pertaining to the convergence between the two illicit businesses. The tensions between ASGM and criminality in Peru has also attracted the attention of academics. A considerable number of scholars have highlighted the danger of criminalizing miners, noting that such a victimization has had detrimental effects on regulation (Baraybar Hidalgo, 2015; Bernet Kempers, 2020; Dargent & Urteaga, 2016; Vila Benites, 2022). Arguably, a deliberate political strategy may have been orchestrated by LSM-elites who see ASM as a competitor for resource-rich land and who would benefit from the association between ASGM and criminality. From a political-ecology standpoint, Vila Benitez (2022) maintains that ASM criminalization is instrumental to the well-established mining elites of the country. These power groups may have been able to enhance their role in resource governance by mainstreaming an image of 'desirable extraction practices' to society at large. They do so, she argues, at the expense of the criminalization of miners as an obvious manifestation of LSM governmentality in the Peruvian resource regime.

Following this line of thought, albeit from a green criminology perspective, Eva Bernet Kempers (2020) provides an insight into the feelings of the people of Madre de Dios. In 2017, she conducted a series of focus groups to detect local perceptions over a measure that included this industry under the Law Against Organized Crime (Law No. 330077). In her data analysis, she concluded that this population believe that the new law labelled miners as criminals. Strictly speaking, this regulation was aimed at providing law enforcement officials with increased powers to prosecute money laundering cases linked to illegal mining. Yet, the ramifications and significance of the directive furthered the negative image of small-scale mining operators, impeding opportunities for formalization. Critically, she concludes, the demonization of miners via ASGM policy was ultimately aimed at eradicating them.

From a green criminology perspective as well, Johanna Espin (2018) carried out a thorough review of the extensive legal framework in place to regulate ASGM in Peru. She found that the persistence of illegal practices responds to an absence of collaboration at the different scales of government, which translated into inadequate resource allocation to the subnational Government of Madre de Dios in charge of formalizing miners. As part of Peru's relatively new decentralization process, regional authorities were assigned to implement formalization strategies on the ground. Nonetheless, the transference of competencies was not backed up with technical and financial resources.

Moving on into classic criminology, Tim Boekhout van Solinge (2014) claims that natural resources are an unexplored field of study for criminologists. In his opinion, the extraction and trade of minerals can be considered an organized criminal activity and a productive economic activity (Paoli, 2002; von Lampe, 2016). This is the approach that Naomi van der Valk et al., (2020) adopt for the case of the Peruvian ASGM. These authors argue that an illegal market approach to organized crime applies to illegal gold mining "because it is primarily an economic activity rather than an activity dominated by OCGs". They argue that illegal gold production in Madre de Dios is sustained by interfaces between the legal and illegal (Bisschop, 2012; Passas, 2002) in a market that responds to "the same incentives and restrains that legal enterprises" (Kleemans, 2015; Paoli, 2002) but that is embedded by elements of extortion and protection. In this setting, "miners are more vulnerable, and thus more likely to capitulate to the pressure from OCGs by seeking nonlegal forms of protection" (van der Valk et al., 2020). In trying to explain the nature of the cross-border crime, Nikos Passas (2002) introduces the idea of interfaces as a critical strategy that explains global criminal structures. He argues that OCGs are not always as organized as it is assumed. Instead, they rely on opportunistic and ad-hoc alliances, including those with respected actors. In his work, Passas proposes a typology of interfaces to decode OCGs behavior, but it is the very idea of alliances between the legal and illegal that has been most engrained in criminology studies (Bisschop, 2012).

Complementarily to the notion of interface, Van Uhm & Nijman (2020) highlight "the myriad forms of crime convergences" that unfold in ASM. They detect five ways in which the illegal gold market is functional to OCGs, leading to convergences: 1) when they need to adjust to changing socioeconomic environments, 2) to dominate new markets, 3) to maximize existing illegal infrastructures, for example; access to smuggling routes, smuggling methods or local corruption; 4) to capitalize on existing infrastructure to camouflage contraband with legitimate goods, and 5) to contraband gold as barter trade (for example for drugs or weapons). In that like stands Louise Shelly's (2018) work who underlines the global expansion of convergences in many industries. She stresses the danger of the expansion of OCGs, which she explains is due to their capacity to adapt, diversify and converge. I find that Passas' interface idea complements Shelly's emphasis on convergences. Hence, interfaces between the legal and illegal and convergences with OCGs seem to be an intrinsic part of the ASGM culture. I suggest that both phenomena interplay in nodes of the Peruvian gold supply chain.

2.1. The use of interfaces and convergences to manage ASGM risk

In approaching ASGM from an illegal market standpoint, I highlight the relevance of the socio-economic structures that have been developed in some mining enclaves such as Madre de Dios. In that space, I maintain that OCGs converge with and relate to all range of actors shaping an irregular gold production system characterized by its capacity to adapt, diversify, and generate alliances to further the agenda of a variety of stakeholders. These individuals rely on interfaces between the legal and illegal as a mechanism to overcome or circumvent market, socio-economic, or institutional constraints along the cycle of gold production. It is a strategy that the whole range of actors seem to instrumentalize to manage the high risk intrinsic in this industry. Thus, illegal engagement cannot be understood as the sole prerogative of a single group, on the contrary, different set of individuals seem to find relief and retribution by navigating between the legal and illegal to advance their interests. To a great extent, it is a situation that relates to failed formalization attempts, social and cultural structures in impoverished

rural landscapes, current patterns in global markets and the increasing global expansion of criminal networks.

In this dissertation, chapter three presents the interfaces developed between miners running illegal operations, and suppliers of heavy machinery from Lima representing transnational corporations. An apparent odd alliance that was highly effective in increasing the productivity exponentially in the illegal gold mining fields of Huepetue in the early 70s. In fact, the chapter attributes considerable weight to that alliance as a precursor of ASGM expansion in Madre de Dios. Chapter four exposes the precarity of an industry whereby an exploited workforce uses kinship ties to recruit boys and young men for forced labor, and girls and women for sexual trafficking. The episode describes a convergence where ordinary workers enter into alliances with human traffickers. A choice that can only be explained in precarious spaces where the blur between the legal and illegal can be traced down to cultural practices such as the *padrinazgo*. The *padrinazgo* is an arrangement common in some Peruvian rural settings historically used as a form of supplementary income for impoverished families. Examples of such arrangements are where girls are handed over to wealthier families as domestic servants or are used to encourage alcohol consumption in bars in exchange for sexual services. While chapter three and four expose local dynamics in two nodes of the supply chain located in the downstream part of the production cycle, chapter five brings about global market dynamics that exhibit a similar disregard for the rule of law on the other end. It illustrates the complexity of a global gold system in which large corporations are willing to go the extra mile to ensure supplies. The episode documents how a transnational engaged with middlemen who orchestrated a criminal network with the objective of smuggling gold from Peru into the USA.

I bring about these depictions to reiterate that illegal engagement frequently emerges as a strategy that relates to market, socio-economic and institutional obstacles. Stakeholders juggle those constraints and the intrinsic risk associated with them within an industry that has not been able to introduce regular formalized structures. ASGM is an economic activity (Boekhout Van Solinge, 2014; van der Valk et al., 2020) that involves high risk.

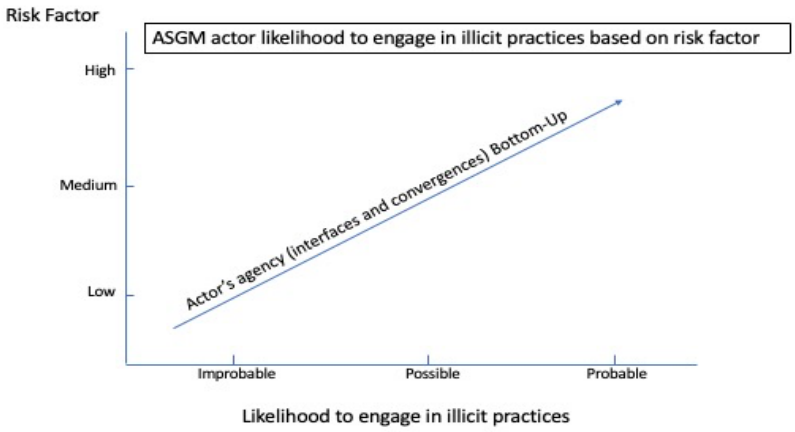
Yet, the idea of risk has been mostly analyzed by classical economists and economic geographers from the perspective of the firm and within the increasing fragmentation of production. From that viewpoint, it has been theorized as the distribution of profits and risks within the supply chain characterized by the growing offshoring and outsourcing of tasks (Gereffi & Lee, 2016). To some authors, firms tend to point at risk to legitimate "skewed distributional financial arrangements" in corporate capital mineral investment (Emel & Huber, 2008). Drawing from that perception, and, for the case of the gold production in the Eastern Democratic Republic of Congo, Geenen (2018) stresses the relevance of the idea of risk to adequately problematize the nature of the relationships and dynamics within ASM production networks. To this author, risk operates at the intersection of capital and rule obscuring the uneven distribution of the negative impact of capitalism.

In her work, Geenen asks the reader to pay attention to the ways in which actors within the gold production networks deal with uncertainty, risk, and anticipation, to conclude that individuals functioning within high-risk environments tend to develop trust-based structures as a saving mechanism to cope with institutional and market constrains. Trust is also a key idea put forward by McQuilken (2018) in his PhD thesis on ASM in the sub-Saharan Africa. To this scholar, ASM activities "are deeply embedded within social production networks characterized by trust-based, reciprocal relationships of mutual cooperation and benefit". Thus, risk and trust seem to be somehow part of the same equation. It urges us to better understand how those two concepts, risk and trust, relate to each other, and the role they play in informal and illegal ASGM settings.

Taking that line, each chapter of this thesis exposes a node in which specific actors engage in illegal practices along the gold supply chain to overcome market, socio-economic or institutional limitations, including measures set up to regulate the industry. On that note, I strengthen my argument by suggesting that illegal engagement relates to the level of risk faced by specific stakeholders at different stages of the gold production chain within an inherently precarious industry. In developing this, I take Geenen's (2018) perception of economic uncertainty as related to the fixity and embeddedness of gold in particular

institutions and markets, for example, the inability of ASGM-miners to access credit or technical expertise. In stressing the relevance of social precarity in mining settings, I build on Ulmer's (2020) conception of precarity in labor relations associated to specific diminished cultural spaces. Finally, I add Verbrugge's (2015a) depiction of institutional uncertainty/ambiguity as it portrays the institutional shortcoming exposed thus far, but that also stresses the contentious relationship between the national and local government in the midst of a challenging decentralization process in Peru (Arellano-Yanguas, 2011). I have sketched a simple illustration to suggest the correlation between the level or risk and the likelihood of illegal engagement. The chart does not intend to be an exhaustive tool of analysis based on concrete measurable evidence but to show a trend that reflects patterns or cause and effect, and above all speaks of stakeholder agency.

Chart 3 – Illegal engagement as a risk management strategy



2.2. ASGM from the perspective of the fragmentation of production

Thus, in continuing with this idea, and from an illegal market perspective, I take the postulates presented above emanating from the political-ecology, economic geography, and criminology disciplines into dialogue with the global production organization. Specifically, I borrow insights from the Global Production Network (GPN) which I use as my analytical tool (Bridge, 2008; Henderson et al., 2002) to empirically explore three scenarios where interfaces and convergences occur along the Peruvian ASGM supply

chain. I do so to lead the reader to the importance of value creation within the supply chain process as a definitory part of the irregular gold production process and its risk assessment. I have found that dissecting the supply chain allows to better identify and isolate nodes whereby OCGs infiltrate and operators exhibit illegal behavior. The next paragraphs follow core insights of the fragmentation of production scholarship to justify my assessment. In its use I do not pretend to make any sound contribution to the existing GPN literature but instead point out its value as an analytical tool and, therefore, its potential for further theoretical development.

With its background in economic scholarship, the fragmentation of production school of thought has been embraced by several disciplines. Wallerstein's (1974) seminal World Systems Theory was key to the initial development of this model. It explained the early industrialization of production, which he framed as an unequal exchange between the core and the periphery that characterizes the capitalist system. Accordingly, the manufacture of commodities would have its foundation in the core's appropriation of surplus value acquired through labor exploitation. The idea of value creation and appropriation throughout the supply chain is central to the globalization of the production process defined by the dynamics of outsourcing and offshoring in an ever-increasing complex global system. This preliminary work evolved into the global commodity chain (GCC) framework. The GCC focuses on the interactions within the firm that result in the production of a commodity. Specifically, this theory is interested in analyzing the governance of the chains within the firm that relate to the generation of rent. A move forward from the GCC, the Global value chain (GVC) substitutes the term, commodity, for value to stress the inter-firm coordination (governance of the chain) and how value is created, captured, sustained and leveraged within that structure (Gereffi & Lee, 2016).

The GCC and GVC have been criticized for their limitations in explaining a globalized world. To overcome this shortcoming, a cluster of the Manchester School of Economic Geography introduced the Global Production Network (GPN) (Bair, 2008; N. M. Coe & Yeung, 2015; Henderson et al., 2002). They depart from the rigidity of the chain to propose a non-linear concept of networks that emphasizes an inter-scalar system where

vertical chains mix with diagonal and *horizontal relationships*, social processes, and agency outside the firm. The GPN is defined as a "globally organized nexus of related functions and operations by firms and non-firm institutions through which goods and services are produced and distributed" (N. Coe et al., 2004). It is supported by the three key concepts of value, power and embeddedness. In addressing value and power, this framework is informed by notions of value as a surplus value and the classical concept of value as rent. In introducing embeddedness, it foregrounds how networks are leveraged and shaped by national and regional socio-institutional and economic contexts. Embeddedness, a key ingredient of the GNP, would, thus manifest itself in territorial embeddedness, societal embeddedness, and network embeddedness (Bair 2008; Henderson et al. 2002: 452; Hughes et al. 2008).

Although the dynamism of this approach and its attention to territorial, social, and institutional processes to unveil network configurations speaks of its potential to study how networks proliferate in informal spaces (Maconachie & Hilson, 2016; Phillips, 2011; Verbrugge & Geenen, 2018), GPN's fixation on the lead firm role has prevented its broader use (Geenen & Verbrugge, 2020; McQuilken & Hilson, 2018; Phillips, 2011). As per its conceptualization of GPN 2.0 as "an organizational arrangement comprising interconnected economic and noneconomic actors coordinated by a global lead firm and producing goods or services across multiple geographic locations for world- wide markets" (Yeung & Coe, 2015, p. 32), this paradigm seems to neglect, as Phillips (2011) notes, "questions of informality in the study of global production networks (GPNs)", which he adds, "is curious given the scale and reach of informality in the contemporary global economy." In line with previous arguments of this document regarding interfaces and convergences within the Peruvian ASGM, Phillips (2011) argues that informality and formality are structurally blended in capitalist economies to the extent that their dichotomization is empirically and theoretically misconceived. Moreover:

> Informality is created and exploited within GPNs in a 'top–down' manner – that is, by capital, firms, employers and states – and the 'bottom–up' dynamics of informality, which frequently are constitutive of 'adverse incorporation' in

> GPNs for large numbers of workers, generating and perpetuating forms of poverty, marginalization and vulnerability.

A similar claim is made by Geenen and Verbrugge (2020) in their attempt to theorize the global gold production system (GGPS). The GGPS proposes a modified GPN framework to "make sense of the diversity and connectivity in global gold mining." First, they try to overcome the enrooted limitation of the GPN occasioned by the "narrow focus on the (lead) firm" and secondly, to address GPN's "concomitant neglect of the beginnings of global supply chains." In their analytical exercise, these authors highlight the need to include the transformation of raw commodities into (semi)finished products in the organization of production scholarship. Critically, the GGPS brings about another limitation of the GPN approach: the scant attention that this literature has placed on exploring natural resources industries configurations (Baglioni & Campling, 2017; Bridge, 2008; McQuilken & Hilson, 2018; Radhuber, 2015). Here, Bridge's (2008) seminal work on the global production network of oil opened the ground for GPN's potential on the matter:

> For understanding the network configurations and regional development impacts associated with extractive industries as a way to make progress in a stalled policy debate regarding the linkages between resource extraction and socio-economic development (popularly known as the 'resource curse thesis').

Bridge's (2008) work introduces two key concepts leveraging resource extraction systems: materiality and territoriality. Materiality relates to the fixed characteristics (location, quality, yield, etc.) of mineral resources and deposits, while territoriality pertains to how the network is embedded in the nation-state's proprietorial, institutional, and cultural-political structures. Building on Bridge's postulates, some scholars have further explored these variables. By bringing about notions of materiality and embeddedness, they point out at the ecology of the network and to the social agency of actors within. In line with Santos and Milanez's (2015) work on the case of iron ore in Brazil, they foreground the role of labor embeddedness within extractive production

networks. They argue that labor structures are not just a factor of production but an intrinsic part of the process in the capture and appropriation of nature (Radhuber, 2015), which is embedded in "socio-political constructs" (Baglioni and Campling 2017: 8). As Rammohan and Sundaresan (2003: 905) state, labor is not "born cheap" in the periphery, but rather, it is "socially priced." This notion of social price is associated with gender-based discrimination and exploitation of certain races that are allegedly biologically better adapted to perform certain low paid jobs.

2.3. GPN as analytical tool to unveil gold production

Similarly, McQuilken and Hilson (2018) point out that the GPN's potential to facilitate the collection of information across and at all levels of a nexus contrasts with the rather conservative application of the framework thus far. Critically, these authors stress that the GPN's value could be enormous "as a tool for understanding and analyzing the dynamics of complex and largely informal industries such as ASM". Several scholars have already looked at ASM through the organization of the supply chain (Banchirigah, 2008; Fisher, 2007; Verbrugge, 2015b). However, as McQuiken and Hilson contend, the opportunities that the GPN brings to analyze the industry might be exponential if there were ways to integrate the broad relational framework. This framework includes in this analysis operators' relationships with significant actors who are not directly involved in the production or commercialization phases of the system. Yet, these actors; landowners, traditional leaders, sponsors, etc. are already "shaping the commodity chains they are a part of" since "such relationships determine, to a significant degree, how much value is created, enhanced, and captured at each node" (Murphy, 2012: 210).

That said, the use of this framework to study ASM remains limited in scope. McQuilcken and Hilson (2018) have empirically applied this analytical tool to the case of the alluvial diamond production system in Ghana to dissect what they referred to as the network's artisanal production strand. A comprehensive map of actors and process structures within the supply chain that sheds light on this structure's behavior and governance. In his research work, McQuilken expands this exercise to sub-Saharan Africa. He does so to

determine the potential of 'pro-poor' ethical mineral certification schemes within the system. Again, relating to Africa, Geenen (2018) uses the GNP in her work on gold mining in the Eastern Democratic Republic of Congo, whereby she places special attention to the generation of risk within the system, which she argues affects how actors "deal with the extreme uncertainty that characterizes the market and the institutional environment in which they operate". By the same token, and for the same African country, Geenen and Cuvelier (2019) utilize this approach to study the role of local elites in mineral production, preoccupied about how those elites operate across scales and how they navigate structural constraints over time.

For Latin America, specifically Peru, as mentioned, Van der Valk (2020), looks into the production organization of Peruvian ASGM to describe the complexity of actors associated with illegal mining. Worth mentioning here is the report produced by CEMS (2020), where the GPN approach helps to illustrate the multiple impediments that formalized ASGM Peruvian miners' encounter in capturing value, given the persistent market and institutional obstacles they face. Finally, Villanueva (2021) questions the emergence of voluntary sustainable standards for ASGM in Peru through the lens of the GPN.

All these early applications of the GPN to study unregulated artisanal and small-scale production greatly contribute to further understanding the subject matter. As suggested, this analytical tool allows yielding key "insights into its organization, the roles played by the different individuals who populate it (the network), and the nature of the relationships between these individuals […] such information is key to designing more robust formalization and support strategies" for governments. (McQuilken & Hilson, 2018).

2.4. Nodes to anchor key moments of the supply chain

Aware of these challenges when adopting the GPN framework as an analytical tool, I enter in dialogue with notions of political ecology and criminology. This mixed set of academic disciplines expands the scope of my approach to better examine dynamics of

gold production in Madre de Dios. Furthermore, as noted, I choose three scenarios to apply these tools. The scenarios relate to the published articles (chapters three, four, and five), which I have already mentioned. Each episode illustrates a particular node of the Peruvian ASGM chain as part of its overall production cycle whereby illegal engagement emerges as a choice for particular stakeholders. Here, I understand the gold supply chain as expressed in an intricate map of relationalities and processes where legal and illegal actors and practices are embedded in the evolving territoriality of Madre de Dios. I stress the relevance of the nodes as precise instruments to anchor key moments within the production cycle. Yet I encounter another analytical challenge. That is, the lack of a clear definition of this figure. Proponents of the GCC/GGC/GPN have referred to the idea of nodes in slightly different ways. In her work, Mezzadri (2010, p. 492) used nodes to signal the transition by which "developing countries, once mostly providers of raw materials and new markets for Western manufactures, instead became manufacturing production nodes." Thus, she frames them as geographical locations politically determined (a country). Correspondingly, Henderson et al. (2002, p. 452) speak of nodes as "new islands of an archipelago economy" that integrate global networks.

This geographic bias in the conceptualization makes perfect sense in a paradigm led by economic geographers. Certainly, the very framework was developed to explain firms' processes of outsourcing and offshoring elsewhere. That said, GPN scholars also introduce nuances in the use of the term that are not strictly georeferenced. They present the node as a value-capturing moment. Gereffi (1995, p. 283) speaks of it as adding-value processes that take place at each stage of the international production and distribution system. The excerpt below captures this sentiment:

> Given that this is a production system in which value accrues according to the particular nodes of the commodity chain one controls, then it is a system that potentially has very important implications for development prospects (Gereffi, 1995, p. 269).

Following this line of thought, other members of the Manchester school, Coe et al. (2008, p. 6) add a layer of complexity to this conundrum. In their use of the term, they seem to pay more attention to the interconnectedness and dynamics between global production networks and their inherent purpose to create value through the transformation of material and non-material inputs into demanded goods and services. Thus: "A *global* production network is one whose interconnected nodes and links extend spatially across national boundaries and, in so doing, integrates parts of disparate national and sub-national territories". (N. M. Coe et al.,

This is the approach that Murphy seems to favor to foreground the relevance of "interdependencies and structural power differences" between different points or actors in a GPN industrial organization (Murphy, 2012). To this scholar, it is inside the node where the relationality brought about by the interactions of relevant actors determine how much value is created, enhanced, and captured. After reviewing appreciations put forward by the builders of the GPN architecture, it seems apparent that, although there is not a specific given definition of the term, there is an underlying implicit understanding of what it entitles. That is, a place/space whereby the interactions within contribute somehow to define relationalities and to the creation, enhancement or capture of value. Therefore, the above quotes and literature references complement each other.

Furthermore, those rare cases of scholarly work that have made use of the GPN to study ASM seem to be in line with this overall definition. Geenen (2018, p. 36) mentions it in her depiction of uncertainty and risk in the Eastern Democratic Republic of Congo which, she argues, relate to other nodes in the global gold production network. Something similar occurs with McQuilken and Hilson's (2018, p. 8) research on the Ghanian ASM diamonds. In their article, they make multiple references to nodes in relation to the ASM networks which 'are a part of multidimensional and multilayered lattices of economic and social activity'. I find the idea of nodes most helpful to dissect the already fractured ASM supply chain. For the purpose of this dissertation, I refer to nodes within to signal the moment-space, as a space of relationality within the supply chain that allows us to explore the configuration and behavior of the system and to infer how value is captured. I view

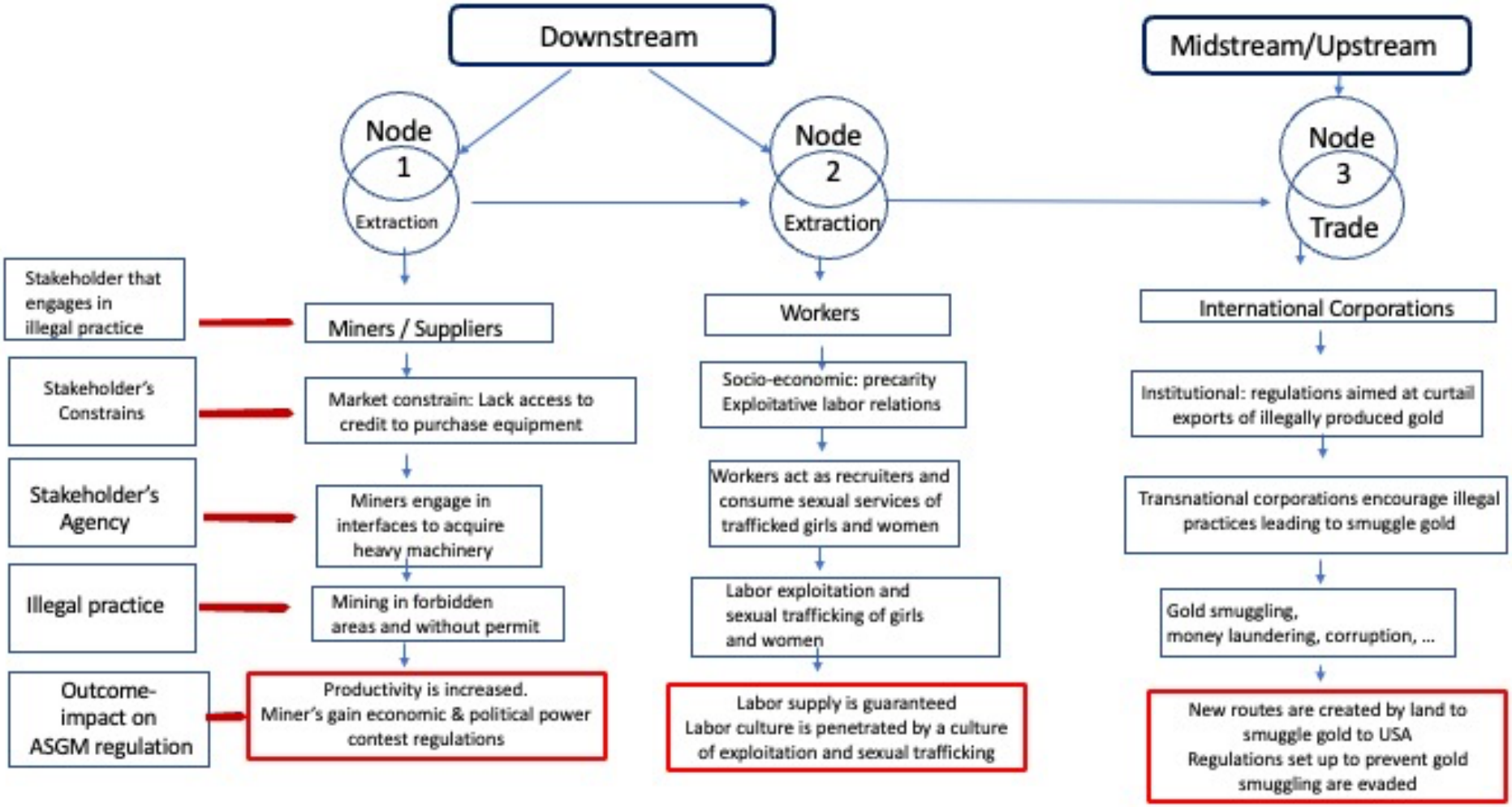
them as a tool that permits processes to be isolated within the organizational fragmentation of production. Notably, isolating and foregrounding the nodes that populate the network helps to map the processes and dynamics of the Peruvian ASGM. These figures are an instrument to learn about the configuration of the system (McQuilken & Hilson, 2018) and to infer the ways in which the iterations occurring are shaping the network in preventing effective regulation and, therefore, affecting resource governance.

2.5. The Peruvian artisanal and small-scale gold production

In actual fact and to a great extent, risk determines the relationality of the multiple actors within the Peruvian ASGM and their likelihood to engage in illicit practices along the supply chain. The chart below outlines the essence of the three empirical chapters in this dissertation and it also presents the general architecture of this research work. It is important to inform the reader that each chapter was written to represent an isolated reality as expressed in a particular node that includes particular stakeholders and their agency, how they react to a specific constraint and the corresponding result. That said, although this isolation makes sense in order to analyze concrete developments within the production process, it is artificial one in a system that is characterized by its connectivity and capacity to adjust and adapt. Thus, although each individual chapter was conceived in isolation and focuses on a specific moment of the supply chain, there is significant overlap along the downstream, midstream, and upstream stages of the system.

Chart 4. **Three nodes of the Peruvian gold supply chain defined by interfaces between the legal and illegal, and convergences with OCGs**

Three nodes of the Peruvian gold supply chain defined by interfaces between the legal and illegal, and convergences with OCGs



I close this analytical section with the chart above. It is a graphic exercise illustrating the correlation between the three chapters that follow, and the nodes they represent within the Peruvian supply chain and its stages. Thus, the downstream part of the production cycle includes two nodes for this exercise as expressed in chapter three and four. In this extraction phase, I look the specific stakeholders, miners and suppliers of machinery in node one (chapter three) and workers in node two (chapter four). While miners' limitations are related to their inability to access financial means of credit to run their operations, specifically to acquire necessary technology to increase productivity, node 2 exposes the socio-economic hurdles of workers who agree to use their kindship ties to recruit other workers. Thus, while miners and suppliers' alliances allow for an increase in productivity and miner's capture of value, the workers' agency perpetuates a culture of precarities and exploitation. The first outcome led to empowered miners who gather the economic and political power to halt regulatory attempts. This dynamic unfolds in a culture of precarities where workers also participate by opposing regulations. Finally, node three helps to follow the supply chain process to find out that, miners and workers are not the only ones to take advantage of the blur between the legal and illegal (as per chapter five). Transnational corporations seem to do the same by engaging with middlemen, and also finance the development of syndicates created to smuggle gold from Peru into the USA.

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Chapter three: Expansion of small-scale gold mining in Madre de Dios: 'capital interests' and the emergence of a new elite of entrepreneurs in the Peruvian Amazon

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This research draws on the literature on livelihood diversification that claims that artisanal and small-scale mining (ASM) is not exclusively a poverty-driven activity. Taking the case of the Madre de Dios (MDD) gold rush in the Peruvian Amazon, this article builds up on the notion of 'capital interests' as a driver for the expansion of the ASM (Verbrugge, 2014). For many migrants who moved to the Huepetue basin in MDD from the Andean highlands, mining was initially a subsistence livelihood but, overtime, they were able to separate themselves from the workforce, mechanize their operations, and accumulate capital. They also entered the political arena to defend their interests and contest the central government's efforts to regulate the industry. The research analyses the factors that explain this transition and the emergence of small-scale gold mining entrepreneurs. This research concludes that among other factors, endogenous financial arrangements between the formal, informal and illegal economies were developed which engaged unexpected financers. In the process, the new elite of small-scale mining entrepreneurs gave shape to a 'resource-nationalistic' discourse that resonates with that of other com- munities opposing large scale mining projects.

3.1. Introduction

In 2014 General Daniel Urresti was interviewed for a segment feature of Cuarto Poder, a popular TV program that Peruvians watch Sunday nights as a barometer of the country's political and social agenda. The segment featured the Baca's, a family of small-scale gold miners (SSGM) from the Peruvian region of Madre de Dios (MDD). According to the journalistic report, the Baca's had built an 'empire' on extracting gold in the Amazon. In the interview, the general, the then head of a special task force to regulate ASM, defended himself against accusations of leading a strategy aimed at eradicating small miners. In his

defense, Urresti argued that the Baca's operated as a "business group" pretending to be small-mining operators to avoid taxation and the costs implicit in the regulatory process. The highlight of the TV broadcast was not the presence of this high-ranking official, but the appearance, in "exclusivity", of Gregoria Casas Huamanhuillca. In an unprecedented way, the matriarch of the most powerful family of in- formal gold miners in Peru had agreed to talk to the media.

An illiterate indigenous Quechua-speaker from the Peruvian high-land's city of Cusco in the Peruvian Highlands, Gregoria, also known as la Reina del Oro (the Queen of Gold), had moved to MDD as a young servant. She married Cecilio Baca who arrived to the same town in search for work in the early '70 s. They mined day and night, initially in an artisanal manner, to progressively expand their operations. By 2014, the couple and their five children owned over 42,000 ha of mining land, a float of machinery and state capital worth millions (Castilla, 2013a,b,c).

Many legends surround this family, most of which center on the controversial figure of Gregoria. She is a woman who moves with security guards and that, allegedly, controls the gold business in Huepetue (León, 2012), the mining town that she and her husband helped found. Some rumors depict her walking with a soda bottle filled with gold nuggets that she shakes in the town parades. She has also been connected with rituals in which young women have disappeared in sacrifices to Mother Earth. She has even attracted the attention of Ivy League anthropologists for whom la Reina del Oro "represents a most enticing female target" in a male dominated world, a woman who has been instrumental in attacking small miners and diverting attention from other fortunes in MDD (Goldstein, 2015).

Despite its many dilemmas, the case of the Bacas nonetheless allows us to construct a portrait of the evolution of gold miners who migrated from the impoverished Andean highlands into the remote and isolated rainforests of MDD in the '70 s. Many of them settled into what are now the mining towns of Huepetue, Mazuko o Laberinto, bustling spaces from which an average of 20 tones of ore have been sourced annually (GOMIAM,

2015). Using artisanal means to begin with, over time the miners diversified their labor force, mechanized their operations and began to accumulate capital. More so, they also penetrated the political arena. At a regional level, they run the government of Madre de Dios and the main mining towns. Cecilio Baca was elected mayor of Huepetue twice. At a national level, candidates with nicknames such as el "*comeoro*" (the gold-eater) or *"cigarrito"* (the little-cigar) have been re- presenting MDD in the Peruvian Congress. Miners have also influenced presidential elections.

Thus, Artisanal and Small-Scale Gold Mining (ASGM) in Peru has expanded beyond the expectations of a low-tech, subsistence enterprise, as the activity has traditionally been defined in the literature (Bryceson and Jønsson, 2010; Hilson, 2011), to gain economic and political power. But, how has this transition taken place? What are the drivers that have allowed for the emergence of this mining elite in the heart of the Amazon? The past five years have seen a proliferation of insightful literature on the Peruvian ASM and on MDD, mostly concerned with the challenges Peruvian authorities face in regulating the sector. Inter- nationally the study of the ASM expansion and evolution has been approached from the perspective of artisanal mining as a livelihood for poverty alleviation (Bryceson and Jønsson, 2010) in the field of development studies. Nevertheless, the one-dimensional paradigm perpetuating ASM as a poverty-driven activity has been increasingly challenged. Concepts such as the 'entrepreneurial small-scale miner' were used by Fisher (Fisher, 2007) in discussing Tanzania and later by Verbbruge in analyzing the case of the Compostela Valley in the southern Philippines (Verbrugge, 2014). These works bring about new perspectives to the analysis of the push and pull factors to explain not just the expansion of ASM but also its evolution overtime.

The objective of this article is twofold. First, it seeks to describe the MDD gold mining enclave and the emergence of a new elite in the Amazon. As has been documented in other countries, (Clifford, 2011; Fisher, 2007; Graulau, 2001; Hilson, 2010) the Peruvian SSGM transition cannot be explained exclusively by a poverty-driven narrative. While the livelihood perspective can be applied to the first stages of the enclave's formation, it does not adequately explain its development. This section describes this new class of

entrepreneurs. In order to address the second goal of the article, I embrace Verbrugges' (2014) contribution to the livelihood diversification studies and the concept of 'capital interests' explored for the southern Philippines. In the Peruvian case, I argue that the transition of the SSGM in MDD can be explained by the development of endogenous financial arrangements and the appearance of a heterogenous set of financers -formal/informal/illegal- motivated by 'capital interest' in a context that benefited from national and inter- national developments. Nationally, the installation of the Mining Bank of Peru in MDD in 1972 established the enclave's economic foundation while the Regional Government, formed 30 years later, served as a platform from which to launch their political agenda and contest national politics. Internationally, the Initiative for the Integration of the Regional Infrastructure of South America (IIRSA) and the construction of the Interoceanic road in Madre de Dios, further expanded the potential 'capital interests' in the MMD's gold by facilitating its trade together with the necessary supplies for its extraction in and out the re- mote rainforest. In the context of a commodity boom with soaring gold prices, a final key factor was the Peruvian government's failure to regulate gold trade.

In writing this article, I used four types of sources. I revised the existing scholarly literature on ASM in Peru and elsewhere, which I enriched with information from reports published by governmental institutions, NGOs and consultancy firms. For the empirical part of this study, I found the data that I acquired through close examination of the Peruvian media and some of their investigative journalists to be particularly useful. I also found social media to be a valuable source of data. A final key set of information was gained by conducting non-participant observation, informal conversations and over 100 interviews with workers, mining entrepreneurs, leaders of mining associations, and a range of authorities, including high-ranking government officials, academics and investigative journalists. During the last five years (2013–2018) I have also travelled to Lima and Madre de Dios for spans of three/four weeks each time, to conduct interviews for my PhD.

The structure of this article is as follows. The above presentation will be continued with a description of the political economy of gold in Madre de Dios and the steps the taken by the Peruvian government to regulate the sector. That will be followed by a theoretical framework of the concepts used and the angle from which we have chosen to elaborate and interpret the topics raised: the emergence of a mining elite in Madre de Dios and the factors that have enabled this phenomenon. The third and fourth sections will develop those points further, and a brief summary will conclude the article.

3.2. The political economy of the SSGM and the attempts to regularize the sector

Peru became a middle-income country as a result of a macro- economic model that successfully focused on the export of its natural resources. Mining was the fundamental source of fiscal revenue and the engine of an economic growth that reduced poverty from 54.3% to 25.8% (INEI, 2015). With just over 30 million inhabitants, the Andean country has been one of the top five producers of gold worldwide and the largest in Latin America. A significant portion of the gold, -an average of 19% between 2003 and 2012 (Torres Cuzcano, 2015)-, has been extracted in ASM operations, amounting to 1315 USD million per year (Torres Cuzcano, 2015). The sector employs 150,000 miners and provides indirect work to between 300,000 to 500,000 people (Salo et al., 2016).

ASGM takes place in the all (25) regions of Peru; but, for a number of years, MDD produced 80% the gold sourced in the country by the SSGM, an estimated yield of 20 tons per year (Pachas, 2011a). Huepetue alone boasted amounts of 9,3 tons for 2004, although the actual figure is probably much larger. Thanks to ASGM, MDD's GDP grew to 816% and poverty fell from 308% to 3% (Macroconsult, 2013), the lowest figure recorded in Peru by 2011. Despite this, less than half of the population has running water and less than a third enjoys proper drainage or sewage. In successive waves of migration, mostly from poor neighboring areas, between 30,000 and 50,000 people (IIAP, 2011) have moved to MDD in the contemporary gold rush.

Despite ASM's contribution to job creation and its significant financial flows, natural protected areas were compromised by un- regulated mining operations and 3000 tones of

mercury were poured into the Amazon River (Defensoría del Pueblo, 2014). In MDD alone, one of the most biodiverse places on earth, river courses were reversed impacting 25% of the wetlands (WWF, 2013) and 62,500 ha were de- forested by 2016 (MAAP, 2016). In some mining camps, violence and human trafficking for sexual and labor exploitation became common practices (Barrantes, 2016; CHS, 2012; Mujica, 2014; Novak and Namias, 2009; Verité, 2013). Furthermore, the industry has been linked to transnational crime networks (Ambrus, 2016; Gestión, 2012; GIATOC, 2016; Verité, 2016) and linked to drug trafficking and other illegal economies (EIA-GLOBAL, 2012; Gestión, 2012; Semana Económica, 2012; Society for Threatened People, 2014). To some, il- legal mining is a more lucrative business than drug trafficking (Gestión, 2012), no small thing considering that Peru is one of the world's largest producers of coca leaves (Zevallos Trigoso, 2017).

3.3. The regularization of ASM in Peru

It was not until 2010, under pressure from the international com- munity concerned with the environmental damage caused in the Amazon (Dargent and Urteaga, 2016), that President Garcia passed an executive order (No 012-2010) declaring the regularization of MDD' mining operations of national interest. Two years later, a national legal framework was enacted to regulate ASM through the country. Although it was conceived as a comprehensive strategy to address the overall commodity supply chain (Herrera, 2014), the public policy concentrated its efforts on formalizing the sector and on eradicating illegal sites. Over 74,000 miners initiated their formalization process in 2012; 5500 of whom were from MDD. As of 2018, few miners had managed to fulfill the requirements necessary for obtaining a mining permit, none were from MDD. Most miners got stuck on the second of six steps, unable to prove ownership of the concession or provide a contract with the concessionary. In Huepetue, and in the case of the Baca's family and others, the problem was different. Reluctant to acknowledge the dimension of their business as medium-scale operations, they instead used the regularization process as an opportunity to formalize them- selves as small-scale owners, which led to their application being rejected.

Together with the formalization, the government's strategy was the interdiction of illegal mining sites, located in protected areas or watercourses. Between 2011 and 2014, dredges were destroyed along the Amazon River. Just as in 2013, 78 military interventions were under- taken involving up to 1500 policemen (Gamboa, 2015). Similar to other mining bans in Africa (Geenen, 2012), the strategy did not alleviate the situation: mining expanded in natural reserves (SPDA, 2016a; SPDA, 2016b) and led to protests and deadlocks (Damonte, 2018). Moreover, interventions also targeted miners who had already invested in the formalization of their operations. In contrast, not enough efforts were made to eradicate La Pampa mining camps, a buffer zone of the Tambopata natural reserve where crime is rampant and extends into the reserve (Arriarán, 2014).

3.4. The debate about the expansion of the SSGM

Despite the well-documented challenges presented by ASM regulation and its economic relevance and socio-environmental implications, in Peru and in other parts of the world, research into the subject is lacking. In Latin American countries, the scant interest that the subject receives from the academia contrasts with the considerable attention that large-scale mining (LSM) has enjoyed. The literature on the ex- tractive governance in the region has tended to focus on large and medium-scale operations and, to some extent, their relationship with ASM (Toledo Orozco and Veiga, 2018). The neo-extractivist paradigm, implying a greater involvement of the state in the mineral governance, has used the Andean countries as an analytical playground (Bebbington, 2009; Gudynas, 2009) while Peru has been a case study for the 'resource curse' literature (Arellano-Yanguas, 2011; Bebbington and Bury, 2009; Orihuela, 2013). Indeed, the behavior of the state and the social conflict it generates has traditionally captured the interest of academia in Latin American circles when it comes to the ASM. In that regard, the work of Salman and de Theije (2017); Rettberg and Ortíz- Riomalo, (2016), and Cisneros (2014); amongst others, describe the contexts for Bolivia, Surinam, Colombia and Ecuador, respectively. As Salman and de Theije (2017) put it: 'conflict is small-scale's middle name'.

Although it is impossible to provide accurate data due to the in- formal nature of the industry, there are an estimated 16 million artisanal and small miners worldwide

(Seccatore et al., 2014) and over 100 million people depend on this activity for their livelihoods (ILO, 1999; The World Bank, 2008). There is no official definition of ASM (ILO, 1999) but there is consensus within the academic community on the key elements that compose the concept as an activity that portrays 'individual or collective labor-intensive mineral extraction with limited capital investment using basic tools, manual devices or simple portable machinery" (Bryceson and Jønsson, 2010). The difference between artisanal miners and small-scale miners may be described as 'the former employing manual low technology methods, and the latter having some degree of mechanization" (Fisher, 2007). The gold miners of MDD who are the subject of this study, started out as artisanal workers and progressively transformed themselves into SSGM entrepreneurs.

In Peru the academic output on ASM is still limited, but in the last five years an incipient body of work from different disciplines has emerged. From the political science standpoint, state theorists and anthropologists seem intent on scrutinizing the ASM in Madre de Dios. In particular, there is a strong interest in understanding the reasons why regulating ASM has proved so difficult for the Peruvian state (Damonte, 2016, 2018; Dargent and Urteaga, 2016; Durand, 2007, 2013, 2015, 2016; Pachas, 2011a; Salo et al., 2016; Valencia, 2014). Another set of literature has as its focus the environmental harm caused by the sector (Arriarán and Gómez, 2007; Espin Moscoso, 2018); the issue of human trafficking in mining camps (Barrantes, 2016; Goldstein, 2015; Mujica, 2014; Novak and Namias, 2009; Tuesta Reátegui, 2018); or its socio- economy (Dammert B., 2018; De Echave Cáceres, 2018; Glave and Kuramoto, 2002; Mosquera et al., 2009; Perz et al., 2016; Torres Cuzcano, 2007, 2015). This literature has contributed valuable insight into ASGM activity in MDD and in the broader context of the country.

In global terms, most of the academic literature on ASM has focused on the African and Asian contexts. This geographical focus has unintentionally biased understanding of the phenomenon elsewhere, be- cause the analysis and findings in Africa where often assumed to ex- plain the industry in other parts of the world. The literature of development studies describes ASM as a poverty-driven activity caused by detrimental structural

adjustments programs applied to the African countries (Hilson, 2006, 2010, 2010; Hilson and McQuilken, 2014) or the privatization of the mining sector (Banchirigah, 2008). The rural livelihood body of work exposes what was assumed to be a subsistence sector due to the lack of other viable means of livelihood.

International study into the expansion of ASM has approached the topic from the perspective of artisanal mining as a livelihood for poverty alleviation (Bryceson and Jønsson, 2010) within development studies departments. This one-dimensional paradigm perpetuating ASM as a poverty-driven activity has, nevertheless, been increasingly challenged. Concepts, such as the 'entrepreneurial small-scale miner' which was first used by Fisher (Fisher, 2007) for Tanzania, and later by Verbrugge in discussing the Compostela Valley in the southern Philippines (Verbrugge, 2014), offer new perspectives to analyze push and pull factors of ASM expansion that were not necessarily poverty-driven in essence.

More recently and applied to the southern Philippines, Verbrugge used the rural livelihood diversification approach to determine what drives ASM's change (Barrett et al., 2001; Verbrugge, 2014). He questions the one-dimensional focus that has characterized these studies as 'obscuring the socially segmented nature of diversification into the sector' (Verbrugge, 2014). To this author, while the majority of those who engage in ASM do so for subsistence purposes, for certain groups, the sector also harbors opportunities for capital accumulation as an activity with few entry barriers (Cartier and Bürge, 2011; Siegel and Veiga, 2009; Verbrugge, 2014) that, at the same time, can serve as route to social emancipation (Boeck, 2001; Bryceson and Jønsson, 2010; Verbrugge and Besmanos, 2016). In the Compostela Valley of the Philippines, change was driven by heterogeneous financers with capital to invest in the SSGM (Verbrugge, 2014).

3.5. The small-scale gold mining elite of Madre de Dios

The debate about the expansion of the SSGM in MDD raises challenging questions, but what are the main elements that define this elite? Who are these new entrepreneurs? How do they organize themselves and connect with the outside world? The mining landscape

of MDD presents a vast number of rich characters who move easily between the formal, informal an illegal world. In the middle of what was once a fertile jungle, the streets of the city of Huepetue bustle with people oblivious to environmental or social concerns. With its unpaved roads and lack of basic services, the possibility of wealth seem remote, yet the local industry produces over 9 tons of gold annually (Torres Cuzcano, 2007). Some mining groups though, like the Baca's, were able to leverage the rich deposits of the Amazon. Beginning in poverty, by 2014 they owned 42,000 ha of gold-rich land (El Comercio, 2014).

An insight into these questions is the nature of the settlers that moved to the MDD jungle from the Andean highlands in the '70 s. A wave of migrants often described as frugal, hardworking and business-savvy. These core values have been crucial to taking advantage of the rich gold deposits of the Amazonian rivers and forests. They introduced machinery an increased the production to accumulate capital. Some began to diversify their business portfolio. The newspaper El Comercio traced their assets of the Baca's down. According to the report, they own heavy machinery, they have purchased real state with cash, and have invested in hotels, gasoline dispensers and transportation, among others in- vestments (Castilla, 2012a). For the Peruvian government, they work "as a consortium, using heavy machinery and distributing utilities" (El Comercio, 2014).

3.5.1. Glocalization

The economic leverage of the Peruvian ASM entrepreneurs transcends local settings to reach international markets and foreign institutions and actors. In March 2017, Bloomberg broke the news about the Peruvian gold. The Southern District of Florida of the U.S. Department of Justice had indicted four Peruvian citizens and three conspirators. Amongst them was US citizen Juan Pablo Granda, whose WhatsApp messages from MDD were intercepted by the Federal Bureau of Investigation. In the texts messages sent to colleagues back in Florida, he described himself as the "new (Pablo) Escobar of gold" (Castilla, 2013b, 2018a,b). Granda was the intermediary between the Peruvian miners and the Miami based company, NTR metals, which bought $3.5 billion worth of gold from South America between 2012 and 2017. The company purchased the gold directly

from Peru and Madre de Dios at first, and later from Brazil, Colombia or Bolivia where the metal was smuggled into, in response to the increasing control by the Peruvian authorities. Since 2013 the Peruvian media had reported on companies being under investigation for illegally gold trading (Castilla, 2013b, 2018a). The media revealed that one such company was located in Huepetue and owned by the then the Director of the Ministry of Mines, Luis Zavaleta Vargas, and his brother (Castilla, 2012b).

3.5.2. Intertwined economies

Hence, a defining characteristic of this enclave is the symbiosis of the formal, informal and illegal economies (Damonte, 2018; Durand, 2007). In Peru 60% of the economy is informal and 40% of the work- force is "self-employed" (Loayza, 2008). Durand (2007) describes in- formality in Peru as part of a culture of transgression that installed itself in the capital, Lima, in the 1980s due to the unemployment, the weakness of the state and the incentives for informality (De Soto, 1989; Durand, 2007; Matos Mar, 1986). Perceived as an urban phenomenon at first, this modus operandi penetrated rural spaces of the Andeans and the Amazonia connected now with global markets (Durand, 2015). Il- legal gold trading has been described as being more profitable than drug trafficking (Gestión, 2012). Once laundered, these financial flows contribute to an industry that represents 12% of the GDP, 60% of the exports and 20% of the foreign investment (De Echave Cáceres, 2016; EIA-GLOBAL, 2012; Torres Cuzcano, 2015). Miners and their inter- mediaries interact with numerous interest groups, including Swedish refineries of the London Bullion Market Association (Castilla, 2018b; La Republica, 2018).

3.5.3. A cluster of mining associations and the right to exploit their natural wealth

The formal and illicit economies interrelate systemically in micro- nets or clusters (GOMIAM, 2015; López and Vizcarra Castillo, 2014; Mujica, 2014; Pachas, 2011a; Vizcarra Castillo, 2014). This behavior has also been demonstrated by the myriad of associations and federations in which ASM miners organize themselves (SPDA 2014a; Castilla 2012; De Echave 2016a; Fernández 2014). To exert their in- fluence they join forces in complex settings. They stand as separate actors but "relate to each other when

it is economically convenient in spite of the problem that their coexistence and bond represents" (Durand, 2013). They show some level of coordination, they mutate, transform and adapt to specific situations and goals to disintegrate or lose strength afterwards (Damonte et al., 2013; Ipenza and Valencia, 2014; Mosquera et al., 2009; Pachas, 2011b).

It is within this constellation of ASM associations that a new narrative seems to have been taken shape. Irrespective of their differences, they agree in a sort of 'resource-nationalistic' discourse (Bebbington, 2009; Gudynas, 2009). They reclaim their legitimate right to access and exploit the natural resources, in opposition to large, foreign-owned operations that leave their communities in poverty. This narrative was well exposed by the Governor of Madre de Dios, Luis Otsuka, in his speech to the Peruvian Congress while he was a candidate for the Regional Government of MDD in 2014.

> *"We are in favor of investment but with equity for all Peruvians. This is not a political discourse, is a technical one so people can learn how they are looting our wealth[2]. How the government gives it away. It is very sad, but it is like that ... The ministry of mining is only the minister for the large miners, they have assigned a so-called minister for us but the only thing he does is interdicting us ... We are persecuted. I demand respect. I am proud of being a miner but they typify us as criminals. They accuse us of abusing children, of being connected to the drug-trafficking and of financing armed groups. A foreign NGO sues me! Why? For defending my right to use my wealth? For defending the right to feed poor miners' children? ... There is a persecution for those who love Peru. We want viable solutions for our children with respect for the environment. Our children deserve to live with their wealth. As yourselves, we are also entitled to vacations in Aruba, Cancun, Hawaii, just as you do. That is also our right".*

Otsuka was able to put into words the feeling of the emerging elite of SSGM entrepreneurs by demanding, not just their right to work, but also their right to privileges enjoyed by other elites enjoy. Otsuka was the first miner to seize power of the Regional Government of MDD. The resource-nationalistic narrative seems to be developing in

parallel to the one observed in other rural communities of the Andean country that oppose LSM projects. Peruvian scholar, Maritza Paredes (2006) views this as an ethnic discourse that gravitates around the perspective of collective rights of the indigenous people, including as such: campesinos (farmers), quechuas, aimaras, coca growers or miners. This was examined by Toledo Orozco and Veiga (2018) for the case of Tambogrande in northern Peru. They found out that local communities welcomed ASM while opposing LSM investments because the ASM connects with the existing 'socio-economic' order based upon ethnic and cultural bonds. As leader of the powerful Mining Federation of Madre de Dios (FEDEMIN), Otsuka led many of the organized social mobilizations and protests that took place there in fierce opposition to the government's regularization policy. Miners associations have proved to have an extraordinary power to use social unrest to pressure the central government in what Damonte (2018) calls a sequence or protest-negotiation.

3.5.4. Political leverage of the SSGM miner

Indeed, the mining entrepreneurs have a large social base that supports the sector. This has helped them to take over the regional government and the main mining towns. Miners have also appointed their candidates to represent them before the Congress and have influenced national politics (De Echave Cáceres, 2016, 2018; Fernández, 2014). Given their social support, their voting power is significant for any presidential candidate (De Echave Cáceres, 2016). They made financial contributions to President Humana's political campaign in 2011 (Perú 21 2014). They had negotiated agreements with Humala beforehand, which he broke once in power. In 2016, the candidate Fujimori promised the miners that she would change existing policies to regularize the sector and, while she did not win the Presidency, she uses her power in the Congress to lobby for the miners.

3.6. Drivers of the SSGM in MDD

The Peruvian miners went from being poor miners to entrepreneurs. How did they get there? How did this transition take place? And what factors explain the upraising of the mining elite in the heart of the Amazon? To tackle these questions, I embrace the concept

of ‘capital interests’ (Verbrugge, 2014). I argue that this transformation can be explained by the development of endogenous financial arrangements and the appearance of (formal/informal/illegal) financers attracted by the financial gains of the sector in a setting that benefited from national and international developments. Nationally, the installation of a Mining Bank in MDD and the creation of the Regional Government. Inter- nationally, the construction of the Interoceanic Road in Madre de Dios and the commodity boom and soaring prices of gold. A final key factor worth a separate article, was the failure of the Peruvian government to regulate gold trade.

The establishment of the Peruvian Mining Bank in 1972 was an opportunity for the artisanal miners who had just arrived in Madre de Dios (Damonte, 2018; Torres Cuzcano, 2007; Valencia, 2014; Villanueva Ubillus, 2015) mainly from the city of Cusco in the ‘70 s. The installation of the bank was the most emblematic part of a policy aimed at promoting small-scale mining in the Amazon as a means to populate the remote and isolated jungle. The financial institution extended credits to miners, purchased their gold and provided help. In the early ‘90 s, with the new government of President Fujimori in place, the bank was dismantled (1992) as part of a structural adjustment strategy. The attention of the new Government shifted to promoting large-scale projects instead. The miners were left in a limbo. This situation has been described by the Damonte (2018) as part of the state-building process of the Amazon that, “historically governed as an extraction zone instead of a place with social and economic development potential”.

3.6.1. Revenue sharing arrangements and the unexpected financers

The dismantling of the Mining Bank left miners without a source of credit but led to the foundation of an economy that developed alter- native sources of capital. Unexpected financers emerged, attracted by the financial opportunities. The appearance of heavy machinery dealers was a turning point. Volvo and Ferreyros (the local brand of caterpillar) arrived in MDD in the early ‘90 s and offered loans to miners for the purchase of their machines. Volvo sold at least US$ 2,5 million worth between 1994–1996 and Ferreyros made US$ 185,000 between 2003–2005 (Castilla, 2013c). In an interview, Gregoria Casas recounted the moment these companies arrived:

> *Managers of Volvo flew to Huepetue's airport in a small plain o in their vans from Cusco, they stayed in the Victoria hotel. At the time, each machine cost between US$170,000 and US $180,000. We handed an initial payment of US30,000 to them. I paid cash"... (Castilla, 2013a*)

The use of heavy machinery tripled the yield and allowed for a re- duction in workforce numbers. The Baca family went from extracting 250 g to 800 g per month with the mechanization. By 2013, they collected 80 kg per month (El Comercio, 2015). Casas recollected that it took her 6 years to pay for some of the machinery; thus, in order to expedite the payments, a new arrangement was established. A new financer was born: the gold dealer. As Gregoria recollects, the dealer made payments directly to the supplier and gave her the receipts.

> *I gave (the gold) to the merchants ... and they gave me the facility to pay the company (machinery or other supply vendor), later they gave me my receipt. We did it like this for security reasons. I have always been a good customer, everybody knows me. I have never worked in the dark or hidden" (Castilla, 2013c).*

Thus, the gold buyers in MDD, many of whom are investigated for money laundering, became a key group in the advancement of the area. In this line, a third financial agreement can be mentioned, the one in- spired by a system used by the local Amazonian chestnut farmers. Affected by the structural adjustment and unable to obtain loans from banks, farmers resorted to borrowing money from their clients. As de- scribed by Perz et al. (2016), under the "*habilito*" system farmers advanced cash to families with forest concessions; and in return, they agreed to sell their harvest at a set price. When the machinery dealers came to MDD, the miners used a similar arrangement to the "*habilito*". They advanced cash for the purchase and the gold-buyer covered the remaining cost of the machinery, in exchange for a set price for the metal.

Traditional banks refused to lend money to the farmers, but they actively sought other stakeholders. The testimony of the current congressman for Madre de Dios (2016–2020), Modesto Figueroa, illustrates this point. He was a motorcycle taxi-driver in the 80 s who started out selling gasoline to his colleagues. One day, as he relates, he was approached by a bank: In the 90 s they offered me loans, it is because of that I decided to form a *business and invest on my first gas station with the Proveedora del Sur E.I.R.L ... I did it with bank loans...' (El Comercio, 2017).*

A final set of financers were those that came from foreign countries who adventured in the industry. Brazilians were key, transferring their knowledge of alluvial mining and dredges, but the 2010 Execute Order prohibited mining in water courses and all dredges were bombarded by the Peruvian army. At a later stage, gold was smuggled into the country due to the control on the commodity of the Peruvian authorities. Gold was also smuggled through Bolivia. There are cases of Russians, Chinese and Koreans adventuring into MDD mining camps eager for a 'piece of the cake', but Peruvian laws were tough on those investors, some of whom were heavy fined (El Comercio, 2015). That said, when it comes to the development of the ASM, their role does not seem to have been prominent for ASM expansion, although more research is needed in this area.

3.6.2. The role of the Regional Government

In the early 2000s, President Toledo changed the constitution in order to decentralize the administration of the country, transferring important competences to the 25 regions (MDD among them). The new political structure implied the creation of regional governments to ad- minister the new set of competencies transferred to them, among which was the role of formalizing ASM. Within that structure a new figure was created, that of the Gobernador, initially referred to as the President of the Regional Government. It did not take long for the gold miners of Madre de Dios to win to take over the Regional Government in Madre de Dios due to their popular support. In 2015, the leader of the association FEDEMIN became the Gobernador of Madre de Dios without a real political party behind him. Two main immediate consequences emerged from this development. On the one hand, as an elected authority, Otsuka acquired the legitimacy that the

representation the people gave him and was now able to talk as an equal to high-ranking authorities in Lima.

A controversial figure who rose to power as an outspoken defendant of the miner's legitimate right to exploit the land, Otsuka directly confronted the Ministry of Environment at the time, Manuel Pulgar Vidal. Vidal was a respected figure of the political scene in Lima. He was a vehement environmentalist, connected to international environ- mental circles. As head of the Ministry of Environment, he took on the role of defending the Amazon against the miners of Madre de Dios. Otsuka and Vidal became enemies and openly attacked each other. The battle between the miners and the Ministry of Environment misled the governance of the ASM, which was managed as an environmental hazard instead of part of the extractive industry. The LSM in Peru had a history of polluting vital ecosystems throughout the country and was strongly rejected by local communities that had seen no benefits after decades of big projects exploiting their lands. In 2016, however, the new government adopted a more inclusive approach. It assigned more resources and competencies to the Ministry of Mines to take over ASM management, relieving the Ministry of Environment of pressures and responsibilities.

Another important consequence that the creation of the decentralization process and the Regional Governments brought about was the shift in the decision-making process. If demands formulated by the miners to previous administrations were not considered, that was to change. The development of infrastructure is a good example. For years, small-scale gold miners had demanded new roads leading to certain mining camps without success. Otsuka changed this and decided to build new roads, some of which confronted the Central Government's views as well as environmentalist groups due to the potential damage to natural protected areas. The Gobernador was consequently sued, but he defended himself by claiming that there were interests behind the attacks (Inforegion, 2016).

3.6.3. The Southern Interoceanic Road

Internationally, the Initiative for the Integration of the Regional Infrastructure of South America (IIRSA) and the construction of the Interoceanic Road in Madre de Dios further expanded the potential 'capital interests' in the MMD gold mining industry by facilitating its trade and the transportation of the necessary supplies for its extraction to and from of the remote rainforest. The construction of 2600 km of road from Peru's Pacific coastline, across the Andes and through the Amazon rainforest, part of the Corridor Vial Interoceanic Sur Perú- Brazil, opened new possibilities not just for transporting the metal but also to obtaining the required supplies (machinery, gasoil, mercury etc.) in an easier and cheaper way (Dammert B., 2018; Goldstein, 2015). In 2011, President Garcia inaugurated the last of the 22 bridges of IIRSA, el Puente Continental, in the capital of MDD, Puerto Maldonado. Resembling the Golden Gate bridge of San Francisco, this 723m-long structure transformed, as the Golden Gate bridge did in 1949, the landscape of the area, reducing the commute from Cusco to Puerto Maldonado from days or, even weeks, to a journey of 8 h.

3.6.4. The commodity boom and the soaring price of gold

To conclude, the aforementioned factors would not have played out the way they did if the price of gold had not increased as it did. Between 1972 and 2011, the price of an ounce of gold went from $US 70 to $US 1895. This would not have happened either if the Peruvian government, as those of the Philippines and Bolivia did, had a greater control over the commodity transactions. And while there are cases where the price of commodities has not explained a resource boom, as documented by Heemkerk for the ASM for the case of ASM in Suriname (Heemskerk, 2001), in Peru, this factor was crucial to the financial scalation of the small-scale entrepreneurs.

3.7. Conclusion

The article, which analyses the factors behind the emergence of a new elite of small-scale entrepreneurs in the Madre de Dios region of the Peruvian Amazon, shows how the ASM sector presents opportunities for 'capital interests' (Verbrugge, 2014). The article has

identified a number of financial arrangements that have taken place between the miners and a heterogenous class of financers that gradually gave shape to the economic enclave in this part of Peru. It also notes that this enclave was created by specific developments that took place, such as the establishment of a Mining Bank in Madre de Dios in 1972 to pro- mote ASM and the creation of the regional governments as part of the Peruvian decentralization process. The wave of miners that arrived in Madre de Dios in the '70 s benefited from government policies to pro- mote ASM activity and were able to develop alternative financial mechanisms when this policy was abruptly interrupted, and the Mining Bank dismantled.

The research draws on the literature on livelihood diversification and aims to contribute to those studies that reveal that ASM is not exclusively a poverty-driven activity. For the migrants who moved to the Huepetue basin from the Andean highlands in the '70 s, ASM was initially a subsistence livelihood, but they were able to separate themselves from the working force, mechanize their operations and accumulate capital. In a favorable environment of soaring gold prices and high demand for the commodity, they developed strategies for growing their business and to progressively penetrate the political arena to defend their interests. This new elite of small-scale mining entrepreneurs gave shape to a 'resource-nationalistic' discourse that resonates with that of other communities that oppose large scale mining projects. The findings of this study contribute to a better understanding of the complexity of the ASM setting and to describe the political economy of the Madre de Dios gold rush in the heart of the Amazon.

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Chapter four: Digging into the Mining Subculture: The Dynamics of Trafficking in Persons in the Artisanal and Small-Scale Gold Mining of Peru's Madre de Dios

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4.1. Introduction

There has been a considerable international concern over the expansion of trafficking in persons in the supply chain of commodities, including gold. A fifth of gold extraction worldwide is provided by artisanal and small-scale gold mining (ASGM), which is often outside govern- ment oversight and international compliance schemes. Although ASGM contributes to economic development and provides jobs to the poor, the lack of government control and regulation of this sector makes it socially destabilizing and welcomes crimes such as trafficking in persons.

Over the last decade, the nexus between trafficking in persons and the supply chain has captured the attention of the United Nations (UN), the Organization for Security and Co-operation in Europe (OSCE), and other international organizations. The topic has been included in the UN's Sustainable Development Goals (SDGs) set in 2015 as blueprint to achieve a better and more sustainable future. The central importance of decent work for all in achieving sustainable development is empha- sized by the Sustainable Development Goal 8 (SDG 8), which aims to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" (SDGs, n.d.).

Trafficking in persons has also gathered significant scholarly attention, though the literature has overwhelmingly concentrated on international trafficking of women for sexual exploitation (Andrees & Linden, 2005; Cockbain, Bowers, & Dimitrova, 2018; Laczko & Godziak, 2005), with only a small body of scholarship on trafficked men and boys. The abuse and extreme occupational hazards suffered by trafficked male victims, however, cannot be disregarded. Occupational health and safety interventions are

urgently needed to protect male workers, particularly undocumented migrant laborers among them, working in high-risk, under-regulated, and labor-intensive sectors, such as ASGM. Having been ratified by 175 States Parties, the United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children (henceforth, the Trafficking Protocol), supplementing the United Nations Convention Against Transnational Organized Crime (UNTOC), standardized the concept of human trafficking worldwide, creating a common legal understanding of the crime, incorporating both sex and labor exploitation of both men and women, boys and girls, and children, set forth in Article 3:

> Trafficking in persons shall mean the recruitment, transportation, transfer, harboring 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 exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude or the removal of organs.

The Trafficking Protocol also broke down the key elements of the trafficking process, namely (a) the *activity* by which the victim is recruited and transported (recruitment, transportation, transfer, harboring, receipt, etc.); (b) *means* by which he or she is controlled, forced into the specific form of exploitation (violence, threat of violence, coercion, abduction, fraud, deception, abuse of power or position of vulnerability, etc.); and (c) *purpose* which involves exploitation (sexual exploitation, force labor, slavery, involuntary servitude, organ removal, etc.). Since its inception, this definition has been used as a cornerstone of legislative amendments and policy reform designed to prevent, respond, and punish trafficking in persons.

This chapter focuses on the analysis of labor exploitation of unskilled and semi-skilled mine workers, including adolescents and children, laboring at informal and illegal gold mining sites to no avail in remote areas of Madre de Dios in the Peruvian Amazon. This chapter makes use of the term “worker” and “workforce” to refer to unskilled and semi-

skilled miners, which comprise the majority of the labor, force in informal gold mining in Madre de Dios. These terms have been chosen to distinguish victimized mine workers from those who own the means of production and/or those who have started the formalization process with the Peruvian authorities.

The analysis presented in the chapter is informed by two analytical frameworks: one on the role of *ethnic diasporas*, which is used for shed- ding light on the recruitment of victims in exploitative labor; and the other on a *mining subculture*, which is used to explain one of the key aspects of how the exploitation of mine workers is prolonged.

The qualitative analysis offered in the chapter is informed by Antonela Arhin's approach to exploited workers' recruitment, which, she argues, is based on ethnic diasporas (Arhin, 2016). In her analysis of over 70 court cases focusing on the trafficking of adults and children for labor exploitation filed between 2004 and 2014, she confirmed that traffickers often rely on diaspora networks in the recruitment, transportation, and exploitation of the victims. She emphasizes the strong ties between the nationalities of traffickers and victims, as well as traffickers, intermedi- aries, and collaborators. Arhin (ibid.) found that most traffickers prefer to recruit co-ethnics and that the first stage of the trafficking process, the *activity,* as defined by the Trafficking Protocol, is determined by what she calls the "affective economy of co-ethnic identification" (p. 82), which refers to particular cultural and socioeconomic settings of shared ethnicities of groups that have common ethnic and national traits, iden- tities, and affinities. These findings echo the results of previous studies on the topic, such as Jackie Turner and Liz Kelly, who argued that traffickers tend to recruit co-ethnics to "minimize costs and maximize profits," in the same way that other victims fall into deceptive situations after trusting community members and friends (Turner & Kelly, 2009). This trend is demonstrated in informal gold mining in Madre de Dios (Cortés-McPherson, 2019), where the workforce is recruited using local diasporas. Hence, the beginning of the trafficking process is ethnically and culturally determined.

Since the 1990s, anthropologists working in sub-Saharan Africa discovered that artisanal miners expressed a particular form of masculinity, which had a strong influence on the way they behaved both in their workplace and during their spare time (Cuvelier, 2014). Some scholars have written about miners going through a male *initiation ritual* into a particular *habitus*—a term borrowed from renowned sociol- ogist, anthropologist, and philosopher Pierre Bourdieu (1984). The latter should be understood as a "system of dispositions" and "the physical embodiment of cultural capital," such as ingrained habits, moral posi- tions, as well as consumption patterns and leisure activities. Habitus is formed through socialization and is informed by the individual's cultural milieu and personal history (e.g., ethnicity or profession) (Grätz, 2004; Walsh, 2003; Werthmann, 2008). For example, Andrew Walsh described a sapphire-mining town in Madagascar, where young mine workers earn little and consume "daringly" to sate immediate desires (Walsh, 2003). In a similar vein, Jeroen Cuvelier's (2017) research on the mining subcul- ture in Katanga, the Democratic Republic of the Congo (DRC), sheds light on the functions of a "moral economy where money, migration, and masculinity shape work relations" and social interaction (Cuvelier, 2017, p. 204). The "conspicuous consumption of money," writes Cuvelier, is one of the central pillars of the mining subculture that makes "credit and debt dominate life on the mines" (ibid.)

While Arhin's perspective is of helpful in framing the *activity*, the first element of human trafficking, expressed in the recruitment and trans- portation of victims, and Walsh's and Cuvelier's studies elucidate the *means*, the second element, which facilitates the understanding of how miners are captured and retained in exploitative conditions. Once in the mining camp, informal miners are controlled and retained by *soft coercion* brought about by a parallel illegal entertainment industry that encom- passes the sexual exploitation of women and girls, and heavy alcohol consumption. Whereas the victims of human trafficking are commonly exploited through direct coercive means, such as physical violence or deception, there are numerous forms of coercion that prevent victims from leaving their exploitative situation. This chapter argues that the particular subculture in gold mining camps of Madre de Dios embraced the noncoercive, "soft" means to control male workers, whereby they find themselves dragged into "daring consumption"

(Walsh, 2003) and a "life of excess" (Cuvelier, 2017). In doing so, they spend recklessly on alcohol and sex, digging themselves into a debt and thus perpetuating their own exploitation by creditors. Importantly, this particular mining subcul- ture encourages the sexual exploitation of girls and young women. This chapter demonstrates that fake job offers lure women from all over Peru and neighboring countries into working in *prostibares*—bars that also offer sexual services—in the mining camps of Madre de Dios, making the entire gold mining region a hub for organized crime and trafficking in persons. It is in this geographical space that two parallel irregular economies—one based on labor exploitation and the other based on the sex trade—feed on each other.

In line with this argument, the chapter first analyzes the complexity of informal gold mining in general and the extent to which the exploitation of labor and the sex trafficking industry has penetrated informal mining in the Madre de Dios region in particular. After that, it describes specific aspects of the Peruvian context, focusing on the role that ethno diasporas, the consumption of alcohol by miners, and the illicit sex trade play in perpetuating the exploitation of unskilled miners and the trafficking of girls and young women. The chapter concludes with a short review of the anti-trafficking legislation and policy in Peru, in light of the interplay between labor exploitation and the illicit sex trade.

The chapter builds upon previous research conducted by the author (e.g., Cortés-McPherson, 2019), including fieldwork carried out in the Madre de Dios region in 2013 and 2018 as part of her doctoral studies at the University of Deusto, Spain. The findings also derive from the data collected from interviews with miners, representatives of nongovernmental organizations (NGOs) and local authorities, among other relevant stakeholders, which were conducted in Madre de Dios and Lima during the author's employment at the International Organization for Migration (IOM) in a capacity of trafficking in persons focal point for the Andean Region.

4.2. Major Patterns of the Exploitation of Workers in Informal Mining

On January 7, 2014, *The Wall Street Journal* published an article entitled "How Companies Face Up to Human Trafficking Risk," commencing with a reference to the

use of forced labor within Apple's iPhone 5 supply chain and followed with a statement warning that "few things are worse for a company or an industry than to be associated with human trafficking or slave labor" (DiPietro, 2014, n.p.). There are about 40 million victims of modern slavery today (ILO, 2017), and the volume of trafficking for forced labor has grown across all industries (UNODC, 2016, 2018). It comes as no surprise that trafficking in persons for both labor and sex is of concern to businesses. As Siobhan McGrath and Samantha Watson (2018) put it, trafficking in persons plays an impor- tant role in contemporary global economic dynamics and consumer relations (McGrath & Watson, 2018).

With almost three quarters of the Earth's gold deposits already exhausted, global gold production has doubled over the last 50 years, soaring from approximately 1500 tons per year to almost 3000 tons annually (Rossi, 2016). In less than a decade (2003–2011), the price of the precious metal increased by 417%, stimulating the expansion of ASGM to a fifth of the global output—equal to an estimate of 400 tons (USAID, 2017). Defined as "low-tech, labor-intensive mineral exploration and processing" (Hilson & McQuilken, 2014, p. 104), the ASGM sector employs between 14 million and 30 million people, and contributes to the alleviation of poverty in gold-rich developing countries (Buxton, 2013; Labonne, 2014). However, the lack of government over- sight and the persistently high prices for gold globally, has occasioned the unrestrained expansion of mining camps, creating severe environmental and social problems, including the trafficking of persons for labor and sex.

However, the most recent data from the United Nations Office on Drugs and Crime (UNODC, 2018), indicates that the share of victims of trafficking for forced labor has remained stable at about 34% (compared to 59% for trafficking related to sexual exploitation, and 7% for traf- ficking related to other illicit activities). In its 2016 Global Report on Trafficking in Persons, the UNODC (2016) noted that over the last 10 years, the profile of victims has considerably changed: the ratio of forced labor (four out of every 10) and the number of trafficked male victims have increased from 13% in 2004 to a total of 21% in 2014. The most recent Global Report on Trafficking in Persons (2018)

notes that more than half of the victims of trafficking for forced labor are men. The crime is also increasingly perceived as a domestic phenomenon, 42% of victims are trafficked inside their own countries (UNODC, 2016). Importantly, the 2016 report suggests that "traffickers and their victims often come from the same place, speak the same language or have the same ethnic background. Such commonalities help traffickers generate trust to carry out the trafficking crime" (ibid., p. 6). Another important aspect of the bond between traffickers and victims is that family ties play an important role in the perpetration of victimization. The 2016 report extrapolates that family ties are sometimes abused in situations when "rel- atives entrusted with the care of a family member ... break their promise and profit from the family member's exploitation" (ibid., p. 10). Today, criminal justice practitioners globally become more aware of the diversity among victims and a large pool of the trafficking means, yet the policies of some countries, as this chapter will demonstrate, are often behind the changes.

McGrath (2013) examined trafficking in persons patterns within the global production networks (GPNs), focusing on the exploitation dynamics of sugarcane workers in Brazil. Her study serves as a testa- ment to the fact that labor trafficking is part of the current global economic system that reproduces oppressive and degrading employment. To the GPN school of thought represented by McGrath, among other scholars (Barrientos, Kothari, & Phillips, 2013; LeBaron & Howard, 2015; Phillips, 2016), the fact that labor may be "voluntary" at the point of entry does not mean that the work relation would be consen- sual at a later stage. In this case, the person's prior consent to work for an employer is considered irrelevant—the employer becomes a trafficker and the employee is turned into a victim of trafficking. The notions of "consent" and "voluntariness" are questioned within this paradigm, which postulates that workers' vulnerabilities and lack of options explain why they agree to exploitative arrangements. These views are shared by advocates of a *global value chain framework* that focuses on the nega- tive impact that global economics is having on labor standards (Crane, LeBaron, Allain, & Behbahani, 2019).

Unskilled miners are easy prey for traffickers. With a focus on the South African industrial gold mines, Sarah Steele highlighted the fine line that separates poor working conditions from trafficking in persons (Steele, 2013). She pointed out that there is a general assumption that abusive working conditions might constitute a violation of labor rights but not necessarily trafficking. Workers' vulnerability and lack of viable alternative options are disregarded as an explanation to accept abusive labor practices, but, as Steele (2013) clarifies, "if an employer exploits the worker's lack of alternatives, this could constitute abuse of power or a position of vulnerability, thereby fulfilling all three conditions (activity/means/exploitation) of the crime" (p. 668).

Adolescents and children are also an integral part of the mining workforce. In her key work on modern slavery, Alison Brysk expresses her concern over the expansion of child labor in the informal mining industry:

> Some 20% and 30% of the world's gold comes from artisanal mines through Africa, South America, and Asia [and] of the two million children who work in goldmines worldwide, many are forced, often through debt bondage, to do back-breaking work in hazardous conditions ... Child laborers in gold mines face a number of dangers in: West Africa, children rub mercury into their hands before sifting soil through their fingers. In South America, children reportedly wash gold while standing in waist-deep water contaminated by mercury. Prolonged mercury expo- sure causes retardation, blindness, kidney damage, and tremors. (Brysk, 2012, p. 80)

Within the ASGM literature, the use of children in mining has been approached in the context of the subsistence livelihoods of families whose members, including children, resort to informal mining to escape poverty (Hilson, 2008; Maconachie, 2011). Children undertake dangerous work, often in hazardous conditions, which exposes them to extreme health and safety risks (ILO, 2015). Deprived of formal education and their habitual living environment, child victims of labor exploitation face serious diffi- culties to integrate successfully into society outside of the mining camps (Hilson, 2008).

Children are known to have been involved in services related to mining, including work in shops, restaurants, and motorcycle and tire repair. Exploitative practices in activities

indirectly related to ASGM also include exploitation of women in sexual services. Very little attention has thus far been directed to the trafficking of men into extractive industries (particularly ASGM, most of which is either informal or illegal), and the role of mining camps as sex trafficking hubs. The urgent need for artisanal miners, however, creates distinct migratory patterns that also create a demand for sex workers, which in turn propels the trafficking of girls and young women to satisfy the demand in mining settlements (Hidrón & Koepke, 2014). "Criminal gangs, realizing the profits to be made from the sex industry around mines," are known to have turned to forcing, coercing, or deceiving women and girls into the sex trade (Steele, 2013, p. 666). As a result, there emerges "a toxic combination of vulnerable men and women," whose appalling exploitation tarnishes the reputation of artisanal mining and undermines its potential to create viable livelihoods for local communities (ibid.).

4.3. Exploitation of Male Workers in Peru's Artisanal and Small-Scale Gold Mining

Peru is the largest gold producer in Latin America, and sixth in the world with a registered volume of 166 tons in 2016, approximately 20% of which comes from ASGM operations (Torres Cuzcano, 2015). ASGM takes place in all 25 regions of the country, but in Madre de Dios ASGM comprises almost 80% of this volume, with an estimate of 20 tons per year. In 2018, based on a study of satellite images taken between 1985 and 2017, the Center for Amazonian Scientific Innovation (Centro de Innovación Científica Amazónica, CINCIA) reported that in the last 34 years, ASGM has caused deforestation of over 95,000 hectares of rain forest in Madre de Dios (CINCIA, 2018). In addition to human traf- ficking, this sector has also been associated with organized crime, such as drug trafficking (Ambrus, 2016; GI-TOC, 2016, 2017; Verité, 2016).

It was not until 2010 that the Peruvian government reacted to the problem of ASGM. It enacted the Executive Order (No. 012–2010) designed to formalize informal gold mining and eradicate illegal mining sites located in protected areas and waterways. The government tried to toughen illegal mining laws, by means such as declaring ASGM an orga- nized crime activity, and has offered incentives to illegal miners so they will register their activity. These legislative and policy initiatives involved 30 governmental agencies

and included over 70 laws, primarily meant to promote mainstream formalization and eradicate illegal sites located in natural reserves or bodies of water.

The United States Department of State has repeatedly reported on the existence of male labor trafficking in the Peruvian ASGM in its *Traf- ficking in Persons Report* s. In February 2017, Peru signed a memorandum of understanding (MoU) with the United States, to reduce illegal gold mining and associated crimes, including trafficking in persons. The same year, the United States committed USD 5 million to fight child traf- ficking in Peru (US Embassy in Peru, 2017). In its 2018 report, the US Department of Labor listed Peru as one of the three countries[1][2] where gold is produced using forced labor by children and adults (US Department of Labor, 2018), while Verité (2016), an NGO dedicated to fighting against trafficking in persons, found evidence of widespread exploitation of miners for forced labor. In 2011, Gulnara Shahinian, the United Nations Special Rapporteur on Contemporary Forms of Slavery, visited Madre de Dios and recommended that the Peruvian government provide better safeguards to the mining workforce, many of which, she claimed, were living and working in slavery-like conditions (Shahinian, 2011). For years, international humanitarian organizations have docu- mented human trafficking cases associated with ASGM (Barrantes, 2014; CHS Alternativo, 2012; Global Witness, 2012; Mujica, 2014; Novak & Namias, 2009; Ojo Público, 2019; Salazar & Castro, 2018).

It is impossible to measure the extent of trafficking in persons in Madre de Dios. The area has attracted between 30,000 and 50,000 unskilled mine workers, most of whom are subjected to some degree of exploitation. The unskilled workforce of miners includes different cate- gories of workers, such as *macheteros* (cutters) who clear trees before gold mining operations can be started, *carreteros* (carters) who trans- port rocks and clean soil, *buzos* (divers) who dive with hoses hooked to water pumps used to collect gold-bearing particles of sand (Verité, 2013). These workers spend hours submerged in pools of water contaminated with fuel, mercury, and other toxics (Picture 13.1).

[2] The other two countries are Burkina Faso and the Democratic Republic of Congo (DRC).

Other types of semi-skilled workers are truck operators, as well as *maraqueros* who operate the pumps, 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 (ibid.).

In 2009, the IOM published the first report on the subject, providing testimonies that illustrated how miners were deceived and coerced (Novak & Namias, 2009). According to the IOM, they were recruited with the promise of being paid every three months, but their salaries were never paid. The following testimony reveals a dynamic that applies to the current state of affairs:

> *We arrived, the patron Don Quispe (the boss) told us that they will pay us after every 90 days of work, and that for each 30 days, they will pay PEN 500 (approx. USD 148) so, after 90 days, we would had received PEN 1,500 (approx. USD 444). We were excited. We had never thought of earning so much money and for that reason we were very happy. We started working. After the 90 days, when we asked for our payment, the chacal*[2][3] *told us that the patron was coming over during the weekend. With that hope, we continued working. When the patron came, we asked him to pay us, he said that he was going to pay the following week. Two weeks after the agreed 90 days had passed, we started to complain and demand our payment. Every time that we went to ask for our money, the chacal threw us away, and if we insisted, he threatened with beating us up. (ibid., p. 51) [Excerpt translated from Spanish by the author.]*

In 2014, the International Labour Organization (ILO) conducted a survey in the neighboring region of Cusco, from where most mineworkers are recruited (Sanz, 2015).

[3] [2]The term *chacal* (jackal or wolf) is used to refer to middlemen in charge of operations, who are known for rendering brutal violence against their victims.

The survey used the ILO's forced labor indicators[43] to measure the extent of the problem. It found that 25% of the workers were deceived about the tasks they would perform once employed. Many were threatened with having their payment seized (13%), had their IDs confiscated (13%), or were locked down (2%). A quarter of the surveyed men had to pay back living expenses or cover the damage caused to equipment. Many miners were paid late (29%), or were not paid at all.

83% of miners working every single day in the mines (31%), some working 24-hour shifts (12%), were directly exposed to hazardous work conditions (e.g., explosions, landslides, exposure to mercury, and other toxic substances), had to work without basic safety equipment (e.g., boots, helmets, gloves, or masks), and had no health coverage. The survey also revealed that mining camps often had no access to drinking water, or the drinking water provided was too expensive. Under such circum- stances, mine workers used to resort to consuming untreated water from the river or the pools created while digging for gold. Freedom of move- ment was also restricted. For 33% of mine workers, leaving the mining camp was also impossible due to the remoteness of the site, high costs of the scarce and dangerous forms of travel, or the absolute lack of trans- portation infrastructure. Almost half of them (43%) said that they were under surveillance by mine owners and their middlemen all the time while they worked and that they had restricted communication with their families.

The testimony by the United Nations Special Rapporteur on Contem- porary Forms of Slavery (Shahinian, 2011) describes the trafficking process in detail:

> *Men and adolescents are often recruited through deception, being offered working conditions and workers' rights that are subsequently not complied with in practice. Often, the workers receive advance payments in cash or goods*

[4] The ILO's indicators have been categorized in the following way: (1) deception about the nature and condition of the work; (2) confiscation of identity papers or travel documents; (3) physical violence; (4) forced overtime; (5) limited freedom of movement or communication; and (6) withholding or delay of wages, or no freedom to resign in accordance with legal requirements (Sanz, 2015).

> *during their first three months of work, which are then deducted from the salary, using a mechanism of overestimating the goods provided and underestimating the quantity and quality of the gold handed over, so that the worker is indebted to his "patron," a situation similar to the enganche system seen in the logging sector. They work long hours in very dangerous conditions, are exposed to toxic substances (such as mercury) and to serious diseases (such as malaria). Workers are poorly fed and have no form of labour protection or health and social security coverage. (p. 10)*

Although the involvement of children in ASGM has been decreasing, the Special Rapporteur noted that around 20% of the miners in Madre de Dios ASGM were between 11 and 18 years old (ibid.). No different from adults, children were at risk of serious physical injury and harm to one's health. They breathed contaminated air and were exposed to polluted soil and water.

4.4. Internal Migration and Recruiting from Ethnic Diasporas

Although some sources originally reported on the involvement of profes- sional human trafficking networks in the recruitment of mine workers in Madre de Dios, research based on field trips suggests the recruit- ment of mine workers is largely, though not exclusively, carried out by networks within familial circles and small local communities (Goldstein, 2014; Mujica & Cavagnoud, 2011; Verité, 2013). It echos Arhin's (2016) thesis on the *affective economy* of co-ethnic identification grounded on shared family, ethnic, and national identities, and affinities between the traffickers and their victims. Indeed, mine workers are not recruited by criminal syndicates but are enrolled by friends and family members in what workers perceive to be seasonal work. At the recruitment stage, they initially see their informal employment in gold mines as tempo- rary and are willing to take the risk that the job may entail. In his research, Teodoro Sanz confirmed that 10% of the victimized miners were recruited by a family member, and 5% were forced to accept jobs in ASGM (Sanz, 2015).

The following testimonies support this point, exposing the inter- actions between victims, traffickers (*patrons*), recruiters (*uncles*), and intermediaries (*chacals/cooks*):

> *My uncle*[4][5] *brought us in a truck to the town of Mazuko. We (me and two older brothers) were left with a woman. I was taken with him along the river, to the town of Laberinto. I was very scared of the river because I did not know how to swim. In Laberinto he left me with another man. He told him: "Here he is, give me the money." He told me that I should stay with that man to work. He, el patron (the boss) was from the city of Cusco. The man gave my uncle the money. I don't know how much. My uncle told me that if I do not listen, they would throw me to the river... I stayed there for five years. My uncle came from time to time, I believe every three months, to see if I was working and was given money. He came but said nothing to me. He just looked at me from afar. Martha (the cook) told me that I had been sold to the patron. I did not under- stand anything. (Novak & Namias, 2009, p. 51) [Excerpt translated from Spanish by the author.]*

> *When I finished helping in the kitchen, the chacal sent me to wash gold in the shaft. I didn't want to go, but Martha (the cook) helped me. She told the chacal that I was too young to be in the mine and that he should help. In that place they beat workers up with sticks when they do not work, and they throw stones at them to make them work harder. They also hit the cook's son. I did not play because I was scared to be beaten up... During that time, I was very scared. They hit hard those that did not want to work or did not follow orders. One day they almost killed a worker. His name was Leo. They said that he had stolen two grams of gold, but he said it was not true. They threw him in the well and almost drowned him. They kept beating him up with a stick, they kicked him hard. They left him badly wounded. (ibid., p. 55) [Excerpt translated from Spanish by the author.]*

[5] [4]The term *uncle* in Peru does not always relate to a blood relationship.

According to the 2014 census, 80% of the miners that run an opera- tion in Madre de Dios were internal migrants, and 50% of those came from the neighboring region of Cusco, Southeastern Peru, which is the place of origin of the largest majority of the workforce in ASGM in Madre de Dios. They are Quechua[5] speakers, brought into arti- sanal mining through family and community members. In the remote Quechua-speaking mountain regions, traffickers are able to trick parents into sending children with them. In doing so, they abuse the *padrino system*, "whereby wealthy land owners or distant wealthy relatives would offer to shelter, feed, and educate a child of a poverty-stricken family in exchange for that child's domestic labor" (Laser-Maira, Huey, Castro, Ehrlich, & Nicotera, 2018, p. 34). Poverty and cultural isolation make these communities particularly vulnerable to deception, and many of them are recruited to work in the mines by family members or acquaintances following the co-ethnic identification pattern.

With regards to poverty, the ILO reported (Sanz, 2015) that the monthly income of the Peruvian highlands, mainly in Cusco, was PEN 243 (approx. USD 70) per family in 2014. During the five years prior to the survey, 77% of those households had been affected by severe problems (drought, freezing, floods, illnesses, accidents, etc.), and many of them were burdened with loans they could not pay back (31%). About 2% of these individuals studied did not have any means of identification. With low levels of education and socioeconomic status, *indocumentados* do not have a National Identity Document (Documento Nacional de Identidad, DNI), which means that they cannot have any formal employment in Peru or elsewhere (Wells, 2014). "In other cases, the *indocumentados* are criminals, or people suspected of having committed a crime, who are running from the law and seeking refuge in the lawless environment of the mining camps. *Indocumentados* may thus be vulnerable to labor exploitation and/or individuals who prey on others as human traffickers, robbers, armed guards, or bouncers at brothels" (Verité, 2013, p. 38). Some of these individuals were threat- ened by mine owners that they would surrender them to the police if they revolted against the conditions of their employment, which were clearly exploitative (ibid.).

As in the case of miners recruited from ethno-diasporas, such as the Quechua peoples, a very similar pattern of recruitment is used for bringing young women and girls into the sex trade to satisfy the demand for sex in the mining camps. In their research, Jaris Mujica and Régine Cavagnoud (2011) research found that the girls exploited in *prostibares* for sex were related to the owners of the restaurants who acted as their godmothers or aunts (Mujica & Cavagnoud, 2011). Through their cultural perspective, they protected their relatives, with exploita- tion being part of the custodial relationship and tutelage. Mujica and Cavagnoud (2011) concluded that, in the Pucallpa Port, sexual exploita- tion was a complementary economy to the beverage industry. Moreover, traffickers were not part of transnational networks, but local business owners that run their small restaurants and bars through family ties. In order to increase their profits, they included sexual services in their business portfolios. In her work on the sexual exploitation of women in Madre de Dios, Ruth Goldstein discovered that many of the sex workers had arrived at the mining enclave through sisters, cousins, aunts, and friends (Goldstein, 2014). She also noted that the *madams*, female masterminds of human trafficking networks, and their 250 sex workers shared co-ethnic bonds that brought about solidarity ties between them (ibid.). A Verité report concluded that human trafficking in the Peruvian ASGM is mostly carried out by family networks (Verité, 2013, p. 21).

4.5. *Prostibares*: Alcohol and Sex as a Means of Indirect Coercion

In the heart of the Peruvian Amazon, precious commodities, such as timber or gold, are smuggled through the Pucallpa Port located on the banks of the Ucayali River, on a daily basis. It is plagued with *prostibares*—hybrids between bars and brothels that operate without licenses in the mining camps and the settlements adjacent to them[6].[6] *El Papillón*, *Miss Sagitario*, *El California*, *El Embassy* are some of the evoca- tive names given to *prostibares*. There used to be about 400 *prostibares* in Madre de Dios in 2015, in each, between 5 and 25 women, many of whom were adolescents (Yori, 2015).

[6] [6]It should be noted here that prostitution between adults (18 years of age and older) is legal for women and men. Commercial sex services can only be rendered if the providers are registered with municipal authorities and carry a health certificate. Brothels require a license to operate.

Women at *prostibares* are tasked to encourage the customers to order more drinks and are forced to drink with the miners to increase the profit of this parallel irregular beverage industry. They also have to provide sexual services if requested. *Prostibares* have become pivotal spaces where masculinity is exacerbated through alcohol consumption and sexual predation of adolescents and young women. As the night falls, the enticing lights and pictures of sexually provocative women make *prostibares* an attractive destination in the mining camps.

Instead of violence, which is a common means of coercion in cases of forced labor, debt bondage seems to be most commonly used against mine workers in Madre de Dios. Miners are unable to break the traf- ficking cycle because their prolific consumption of alcohol and sex makes them addicted, indebted and forced to borrow from middlemen, and thus trapped in the mining camp. Not only do miners typically have to work without pay for 90-days, supposedly because of recruitment and travel expenses, but they also accrue debts for alcohol and sex services in addition to food and lodging. Some miners work unpaid for periods that far exceed the 90-days just to complete the contract and leave because of the artificially created monetary bondage.

If traditionally, trafficked victims are exploited through coercive means, the ASGM subculture has integrated noncoercive, "soft" methods for coercing and retaining a workforce. They are susceptible to falling into the trap of alcohol addiction as a way to evade the hardship of a slave-like life. Adjacent to this, women, who are recruited from the Peru- vian highlands following the same pattern, find themselves in a system that exploits them. Journalist Rosario Yori spent time undercover in Madre de Dios mining camps and visited some of the *prostibares*. In her writing, she shared Mariela's story:

> *Mariela says that she just turned 18 in January. ("I'm a Capricorn," she also says with certain pride.) She has chubby cheeks, straight dark her, and an easy, childish smile. While she is talking to us, the waiter comes and hands her a piece of paper, a ficha (token), which Mariela keeps on her bra. For every*

> *drink she has with the customers, she gets a ficha from the owner, which she later cashes. The customers drink light beer, but the girls are only allowed to drink water, small glasses of wine, or dark beer. The drinks for the girls cost 20 soles. Only ten (USD 3) go to the girls. (Yori, 2015)*

The sex trade is a parallel economy to ASGM. In 2019, the inves- tigative platform *Ojo Publico* (Salazar & Castro, 2018) analyzed over 50 notebooks seized in military operations carried out between 2016 and 2017 in the Delta 1 and La Pampa mining sites in the Madre de Dios region. Based on the notebooks, they discovered a link between the clan- destine sale of beer and the trafficking in girls and young women in La Pampa. In their careful analysis of *prostibares* ' revenues, they revealed that women had to drink an incredible amount of alcohol—between 15 and 24 bottles of beer every day—and sell a minimum of PEN 240 (approx. USD 70) worth of alcohol from which they received PEN 48 (approx. USD 4.15). In another investigation, the Peruvian journalist, Gabriel Arriarán, studied a notebook of one of such bar, *The Embassy*. He learned that in just a little over two weeks, the bar made a gross income of almost PEN 50,000 (approx. USD 15,000), 75% of which came to the sale of beer. Up to 15% of the revenue was made by providing commercial sexual services (Frontera Pirata, 2018).

The illicit sex trade is at the core of what Cuvelier (2017) calls a "lifestyle of excess" characterized by a mining subculture where money, migration, and masculinity are celebrated through the exploitation of women. Mineworkers fall into debt bondage, where they are encouraged to spend what they earn wastefully just to prolong their exploitation. In this subculture, mine workers' exploitative labor is deeply intertwined with the sexual exploitation of women. These two forms of human trafficking feed on each other, blurring the boundary between mine workers, as victims of labor exploitation on the one hand, and mine workers as consumers of illicit commercial sex, thus promoting the sexual exploitation of women, on the other.

4.6. Peru's Steps Toward Bringing an End to Human Trafficking

Peru has made decisive legislative and policy-level steps toward the elimination of trafficking. It has signed and ratified the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children (Trafficking Protocol), along with other relevant international treaties, including the following ILO Conventions: The Forced Labor Convention (No. 29), the Abolition of the Forced Labor Convention (No. 105), and the Worst Forms of Child Labor Convention (No. 182). The Peruvian government also increased the penalties for crimes related to human trafficking. Article 153 of the Peruvian Penal Code prohibits all forms of trafficking in persons, with penalties up to 15 years of imprisonment. In January 2017, the Peruvian government, in its Legislative Decree No. 1232, amended the penal code with the introduction of the slavery offense (art. 153–C) and forced labor (art. 168–B) as other criminalized forms of human exploitation, prescribing sentences of more than 25 years in cases with aggravating circumstances, such victim's death while in an exploitative situation.

In addition to the legislative amendments, Peru has a comprehensive plan to bring an end to human trafficking: the National Plan to Fight Human Trafficking 2017–2021 (Plan Nacional contra la Trata de Personas, Plan Nacional 2017–2021). However, the limited budget for its implementation, mostly oriented to law enforcement measures (Montoya Vivanco, 2017), made the fulfillment of many anti-trafficking goals impossible. The cut in the anti-trafficking budget was particularly felt in the realms of victim protection and assistance to the rescued victims. For instance, between 2016 and 2017, the Peruvian police rescued 481 female victims of labor and sexual exploitation in *prostibares* from the Madre de Dios region. They were sent back to their places of origin without adequate legal, social, or psychological assistance. In her research, Barrantes (2016) exposed how the rescued women were often revictimized by the authorities, who placed them into appalling condi- tions at rescue centers where women were confined against their will. Many of the rescued women decided that trafficking, although exploitative, gave them a place to sleep and some money. Thus, many of them considered going back to the mining camps because of the lack of a viable alternative (Salazar & Castro, 2018).

As in many other countries, the Peruvian anti-human trafficking policy followed a security approach centered on fighting sexual trafficking of women being trafficked by international networks. With the time, and through key research such as the one carried out by Mujica and Cavagnoud (2011), it was generally accepted in the country that human trafficking was a predominantly domestic issue that complemented local economies, such as ASGM prominent in Madre de Dios. Yet the government policies, as for the allocation of resources mainly to law enforcement measures, failed to reflect this change.

In 2010, the Madre de Dios government supplemented the national policy for bringing an end to human trafficking with its own regional strategy to fight human trafficking that was updated in 2018. Following the principles and objectives set forth in the Plan Nacional 2017–2021, the Regional Plan Against Human Trafficking in Madre de Dios 2018– 2021 (Plan Regional contra la Trata de Personas de Madre de Dios 2018–2021) included broad measures to harmonize the anti-human trafficking policy with the national attempts to formalize ASGM. However, this did not translate in tangible results due to the failure to direct financial and technical resources to the implementation of this strategy. It is anticipated that the enforcement of laws against crimes facilitating sex trafficking, such as illegal mining, could also help decrease the demand for illicit commercial sex services.

In May 2018, police and prosecutors conducted a raid in the mining town of La Pampa—allegedly the biggest illegal gold mining camp in the Amazon—that led to the arrest of seven suspected traffickers. In February 2019, the government launched a large-scale operation, called "Opera- tion Mercury," to expel illegal miners from La Pampa, particularly the Tambopata National Reserve, where mining is strictly prohibited. In this long-term operation scheduled to last until mid-2021 at the very least, a mixed force of the police officers and soldiers was deployed: among the more than 1500 criminal justice sector officials involved in the opera- tion, there were 20 police and 10 prosecutors from anti-trafficking units (ibid.).

In the raids carried out to destroy illegal operations and the makeshift settlements in La Pampa, law enforcement officials expected to rescue hundreds of women, but they only found 120, 63 of which were minors. After being rescued, these women did not receive appropriate support and protection, and many chose to move to other mining camps. This is the unfortunate outcome of the underfunded and incomplete policy, whereby the government of Peru carried out rescue operations without providing sufficient victim assistance programs. Among other policy gaps is that rescuing exploited male workers seems to have never become a priority. In the ASGM camps of the Amazon rainforest, male mine workers are often seen as the cause of social unrest, sexual exploitation, and environmental damage, rather than victims of labor exploitation. The Plan Nacional 2017–2021 contemplates all forms of exploitation, but it is mostly focused on problems related to the trafficking of women for sexual exploitation. The interpretation of human trafficking as a secu- rity problem primarily related to the sexual exploitation of women by human trafficking networks—as featured in several emblematic cases of Peruvian women trafficked to Japan, the United States, and several European countries—does not reflect the present reality.

4.7. Conclusion

The chapter examines the dynamics of exploitation within the ASGM workforce as part of the new geography of gold mining in the current global production system. Through the analysis of ASGM in the Peruvian Amazon, it exposes the emergence of a mining subculture where the workforce is exploited, not only through common coercive means, but also through noncoercive ones. This subculture is characterized by male workers trapped in a world of alcohol consumption and sexual predation, bringing harm to girls and young women, while putting themselves in debt to the point of no return. These exploited workers find comfort in *prostibares* (unlicensed bars/brothels), which become a pivotal part of the mining subculture, where money, migration, and masculinity shape working relations and encourage miners to spend what they earn, thus perpetuating the exploitation cycle.

In the ASGM sector, a new moral economy has emerged, characterized by the complexity of the interactions of different actors and the development of parallel irregular industries. Women are trafficked with the dual purpose of sustaining a booming illicit alcohol industry and to offer sex to miners. That said, and as it has been demonstrated for other parts of the Peruvian Amazon, the sexual services provided in *prostibares* are part of local economies based on selling alcohol, instead of lucrative busi- nesses run by transnational crime networks, which we usually think of in relation to human trafficking. These subeconomies have become part of the ASGM landscape and are pivotal venues where the subculture takes shape. As such, artisanal mining in Madre de Dios is not just a male-dominated profession, it is a male-dominated, masculine or "machismo" subculture that promotes the exploitation of girls and young women.

Despite the fact that Peru's government officials refer to the human trafficking in Madre de Dios mining sites as a major issue, trafficking is still mainly perceived to be a form of sexual exploitation of women which were ought to be "rescued" while carrying out military operations aimed at eradicating illegal gold mines. The exploitation of male workers in ASGM has not been seen as a serious problem that requires both prevention, intervention (rescue), and victim assistance programs. The exploitation of men working in ASGM is deeply intertwined with the sexual exploitation of women. These are the two illegal economies that feed on each other, perpetuating the exploitation cycle. Any successful strategy to bring an end to human trafficking in Peru must take this complexity into account.

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Chapter five: Peru: Curtailing Smuggling, Regionalizing Trade

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5.1. Introduction

"I am like Pablo (Escobar), coming to Ecuador to get coke" boasted Juan Pablo Granda in an intercepted WhatsApp message (InSight Crime 2018). The skillful smuggler of gold likened his criminal acumen to that of the infamous Colombian drug lord, and while his charisma may have fallen short, the volume of the illicit business at stake did not. Granda was the operations manager and middleman for NTR Metals, a US-based refinery to which he helped smuggle over USD 3.5 billion worth of South American gold over a four-year period (2013–2017) (Castilla 2014; Gibbons 2017). Sourced from unregulated artisanal and small-scale gold mining (ASGM) in Peru, the mineral was laundered into the supply chain using shell companies. At first, it was shipped by air from Lima, but to avoid newly enforced controls deployed at Peruvian airports, in 2014 the merchandise began to be smuggled regionally by land into neighboring Andean countries before reaching its final destination.

Granda is not the only unscrupulous character to have been associated with the gold industry in recent years. In 2017, Bloomberg dedicated an extensive feature article to the related case of the Chilean gold smuggler Harold Vilches. Headlined "How to Become an International Gold Smuggler," the piece unraveled the epic journey of the 23 years old Chilean who, at 19, had set up the largest gold smuggling ring in South America with a reach that extended to Dubai, and attempts to smuggle African gold. The allure of the story is such that Vilches, under police surveillance in Chile, signed a film contract with an award-winning Hollywood producer.

Granda and Vilches are part of a network of middlemen linked to one of the largest gold syndicates in South America. This case reveals how the gold production system mutates

in response to regulations, highlighting the complexity of effective policy development. In 2012, the Peruvian government developed an aggressive strategy to regulate ASGM which, besides the formalization of mining operations, considered trade management measures including improved surveillance of the ways in which gold was exported to other countries. In 2013, the Peruvian authorities seized 508 kg of gold at the Jorge Chávez International Airport in Lima (Castilla 2014), which was waiting to be cleared and sent to six Refineries abroad. The seizure was a turning point. From that point on, smuggling networks began to move their gold "by motorcycle, by mule, by armored car, and never the same way" to its final destination in neighboring Andean coun- tries (Reuters 2014).

Despite the media coverage, the way in which ASGM-gold finds its way into global markets has not attracted much academic interest. Taking the case of Peruvian ASGM, this chapter lays bare some of the dynamics in this critical section of the global gold production system. More precisely, it demonstrates how the gold trade has responded to policy measures destined to curtail smuggling. Rather than advancing the formalization of the gold trade, these policy measures have paradoxically contributed to the increased infiltration of illicit buyers, traders and exporters (FATF 2015; GIATOC 2017). This chapter uses secondary literature and data collected in the field as part of the author's Ph.D. research. It is divided in two sections. The first illustrates trends pertaining to the contraband of gold within the global production system. The second zooms in on the case of Peruvian ASGM to demonstrate the flexibility of the global production system in reacting to pressures. It ends with a discussion and conclusion.

5.2. Smuggling of Gold in the Global Production System

Much of the existing literature on illicit markets has overlooked the issue of gold. For example, it is notably absent from the list[1] of universally smuggled goods Hartnett and Dawdy's (2013: 43) compiled while examining the "archeology of the illegal and illicit economies" and Levi's (2018) inquisitive analysis of the anti-money laundering regime. Yet the gold economy exemplifies like no other Hartnett and Dawdy's claim that "most

markets are grey, not black or white" (2013: 37), as part of a system in which formal, informal and illicit economies are interdependent (Halperin 1994). Illegally sourced gold is laundered and smuggled into the global market through a myriad of intermediaries. Before reaching its final destination, the mineral navigates multiple layers of actors across different countries. In this process, airports have become bottlenecks where gold can be seized, and illicit actors apprehended.

The Global Initiative Against Transnational Organized Crime (2016) identifies smuggling as occupying a unique position in the gold supply chain because it serves a dual purpose: generating profits and moving funds. Based on data compiled by the United Nations Office on Drugs and Crime and INTERPOL (2011), an estimated USD 2.3 billion worth of gold was laundered globally in 2010, but according to the 2016 report of the United Nations Environment Program Annual Report (2016: 7), ASGM global extraction and trade generates between USD 12 and USD 48 billion annually. In Latin America alone, this sector is worth an estimated USD 7 billion per year.

Gold is particularly appealing to criminal networks not only because it is highly lucrative, but also because it offers additional benefits: It transits between the legal and illegal sectors, can easily be blended into the legal economy and carries lighter sentences if detected (GIATOC 2017). Gold is, therefore, an extremely attractive vehicle for money laundering because it provides "a mechanism for organized crime groups to convert illicit cash into a stable anonymous, transformable and easily exchangeable asset to realize or reinvest the profits of their criminal activities" (FATF 2015: 3). Some drug trafficking organizations are already in the gold business in Peru and Colombia (GFI 2017; Rettberg and Ortíz-Riomalo 2016). In 2015, the Financial Action Task Force (FATF) published a special report on money laundering and terrorist financing associated with gold which confirmed that organizations, such as Al-Qaeda, the Revolutionary Armed Forces of Colombia (FARC), the Liberation Tigers of Tamil Eelam (LTTE) and Hezbollah, were active in the gold economy (FATF 2015).

With that in mind, the intricacies of the gold trade undoubtedly present a challenge to policy makers. As it will be shown through the analysis of the ASGM regulatory process in Peru, measures taken to pre- vent the illegal export of gold ultimately stimulated unregulated cross- border trading with the participation of neighboring Andean states. A similar pattern of regionalization has been described within the Great Lakes Region (GLR) of Africa, where illegally sourced gold from Tanzania and the DRC is smuggled regionally to reach Refineries in the United Arab Emirates (UAE) (Geenen 2015). At the very end of the supply chain, India, the largest consumer of this metal worldwide has also witnessed how illicit actors have adjusted to regulations imposed to prevent the mineral being illegally introduced through its borders. These scenarios illustrate the changing nature of the global gold production system and how it adapts to new dynamics and players. The case of India, in particular, sheds light in that regard.

5.2.1. India: At the Other Side of the Production System

In 2013 the Indian government rose the import duty of gold by 15% to balance a record account deficit. This measure prompted a 300% increase in its contraband and the emergence of syndicates which, in 2014, smug- gled 700 kg of this metal daily. Gold made its way into the country by air hidden in hand luggage and body cavities and by other methods used to circumvent customs controls at airports (BBC 2014). The syndicates use trade misinvoicing, a practice that the Global Financial Integrity (2019) estimates accounts for more of 87% of measurable illicit financial flows worldwide, to smuggle large quantities of gold. They also make use of diasporas to transport the mineral within the vast air traffic landscape in such a large and densely populated country. The *modus operandi* of these syndicates is illustrated in more details in the following example (FATF 2015).

In 2014, the French Police carried out an investigation into a syndicate being run by an Indian national and involving five countries: Morocco, Belgium, the United Arab Emirates UAE, London and India. The profitability of this illicit business rested on the conversion and resale of untaxed smuggled gold. The metal was purchased at EUR 31 per gram in Belgium and resold for EUR 36.32 per gram in Dubai or India (FATF 2015).

The syndicate bought the gold in Belgium with cash obtained in France from the sale of Moroccan cannabis (EUR 10 million in a six- month period). The investigation established two main routes. In the first, gold was sent to Dubai where it was laundered and officially exported. In Dubai, the metal was declared to customs using false invoices. In the second, gold was transported from Belgium via the hub airports of Bangkok and Singapore. In both routes, tickets and fake documentation provided by an Indian-based travel agency were distributed to family members who carried the mineral with them on the airline. The investigation traced up to 200 tickets used by the same person traveling between Dubai and India over a four-year period.

On receipt of the money, the Indian national arranged the transportation of the cash by car to Belgium where it was used to purchase gold and jewelry. The bulk of the cash was deposited in cash into the different accounts of companies associated with an identified gold trader and used to purchase gold from a wholesaler. False invoices generated by the Indian national (in the name of companies set up by him) were used to support the transactions on the gold coins and ingots as well as gold certificates. (FATF 2015: 7)

India has clearly become a major player in the global gold production system. It is now the largest purchaser of Peruvian gold with a 30% of the registered production, that is a 53% increase from the previous year. India's share of Peruvian gold exports is above traditional buyers like Switzerland and the United States whose imports declined by 12 and 5%, respectively (SIICEX 2019). Another key actor in this system is the UEA, whose gold imports increased from 67 tons (worth USD 1.6 billion) in 2006 to 446 tons (worth USD 15.1 billions) within ten years (Reuters 2019). Dubai has managed to capture 25% of the global gold trade in spite of Resistance from the London Bullion Market Association (LBMA) which has repeatedly raised concerns over Dubai's weak customs procedures and reputation for hand-carried gold smuggling; however, this reaction can also be interpreted as an attempt to maintain the status quo in a global gold market dominated by the LBMA-listed Refineries.

The core of the gold production system lies in gold-rich countries, a fifth of the mineral being sourced in the unregulated mines of developing countries. In Africa, the Tanzania Mineral Audit Agency (TMAA) was created in 2009 to monitor smuggling. To do so, the agency established auditing desks and special agents in main airports. Located at departure gates with additional X-ray machines, TMAA agents are vigilant to suspicious passengers. The units target special flights, mainly those heading to the United Arab Emirates (UAE) and India (Blore 2015). To avoid these controls, smugglers began to send the gold through Kenya and within the Great Lakes Region.

5.3. The Regionalization of the Peruvian ASGM Commodity Frontier

In 2013, Peru ranked among the top 20 best performing countries on the anti-money laundering index issued by the Basel Institute on Governance. According to Mújica and Galdós (2016), however, the ranking did not accurately indicate the extent of the problem or the effectiveness of the National Plan to Combat Money laundering because it measured policy design without considering whether laws had been enforced. The Basel Institute has since readjusted its figures, and the Andean country has been repositioned to better reflect the extent of its illicit financial flows. In the organization's last report, Peru ranked 58th out of 125 countries (Basel Institute on Governance 2019).

The new score is undoubtedly related to improved and more accurate data gathering and processing. That said, it was only in 2012 that the Peruvian Financial Intelligence Unit (UIF) added illegal gold mining to the list of items associated with money laundering. In the space of only three years (2012–2015), the UIF registered USD 4299 million linked to this sector. This amount was almost half of the money illegally injected into the economy from 2007 to 2015, a total of USD 11,187 million. To some analysts, illegal mining seems "to generate more dirty money than drug trafficking" (Poder 2015) in a country that is one of the world's leading producers of coca (Zevallos Trigoso 2017). Over seven years, USD 5125 million was accounted for by the drug economy compared to the USD 4299 of the gold economy in the space of only three years.

Article 3 of the National Mining Law (4 June 1992) states that the commercialization of gold is free in Peru. That is, anybody can buy the metal provided they obtain a traceable receipt for its purchase. Peru is the largest gold producer of South America and ranks sixth in the world with an average extraction rate between 160 and 200 tons per year, 20% of which is sourced by ASGM. The country is considered a new gold giant, a testament to the commodity frontier's rapid expansion through ASGM. This informal sector employs 150,000 miners and provides indi- rect work to 300,000–500,000 people (Salo et al. 2016). To the Peruvian economist Victor Torres Cuzcano (2015) the industry is worth an aver- age of USD 1315 million per year, a figure that amounts to between USD 3 billion and USD 5.6 billion according to The Global Initiative Against Transnational Organized Crime (2016: 18).

5.3.1. The Peruvian ASGM Regularization Attempt

In 2012, the Peruvian government launched a comprehensive strategy to regulate ASGM. Despite the industry's contribution to the economy and its potential to create employment opportunities for the poor, it has detrimental environmental and social impacts due to its unregulated nature. The ecological harm has been particularly widespread in the area of Madre de Dios where 110 points of illegal extraction were identified in a newly compiled map of illegal sites within the Amazon basin (RAISG 2019). ASGM leads to the deforestation and pollution of forests and rivers, and it is especially detrimental to the ecosystem due to the extended use of mercury. Mining in protected areas and water bodies is illegal in Peru, two restrictions that affect Madre de Dios greatly due to the wealth of its biodiversity and the fact that its richest deposits are along the Ama- zon river and its tributaries. ASGM in this Andean state has also been linked to sexual and labor exploitation, and human trafficking of children, women and men (Cortés-McPherson 2019b). In some areas, the activity becomes increasingly violent with the infiltration of criminal organizations that control access to mining camps (El Comercio 2017).

Peruvian ASGM policies are in line with the international mainstream, assuming that formalized miners will comply with fiscal, environmental and social requirements (Geenen 2012; Siegel and Veiga 2009; Verbrugge 2015). Yet, as has been the case in

other countries, the Peruvian formal- ization process has not been successful (Salo et al. 2016). In 2012, over 74,000 miners signed up to formalize their operations, but 7 years later no real settlement was reached between them and the state. Although the number of licensed miners has since increased, the process of formal- ization, mainly understood as the acquisition of "full legal and transfer- able mining titles to their claims'' (Barry 1995), remains hampered by bureaucratic obstacles and structural limitations within the land regime (Damonte 2016, 2018; Dargent and Urteaga 2016; Pachas 2012; Perz et al. 2016).

For over a decade, Madre de Dios was responsible for 80% of the informal gold extraction in Peru. This extraordinary productivity can be partly explained by the emergence of small-scale mining entrepreneurs (Fisher 2007; Verbrugge 2014) who managed to accumulate capital, and introduced division of labor and the use of heavy machinery (Cortés- McPherson 2019a). These first miners, who had migrated from the Peruvian highlands to Madre de Dios in the early 1970s, were followed by successive waves of gold rushers with whom they competed for land. Madre de Dios has been the main focus of the eradication policy implemented by the Peruvian authorities since 2012, but military operations often targeted old miners, many of whom were already engaged in previous formalization processes. Thousands of police officers were deployed to the area in repeated military interventions which led to protests and dead- locks (GOMIAM 2015). In 2019, three military bases were established in La Pampa, an area where violence had escalated out of control.

Together with policies designed to formalize extraction and eradicate illegal mining sites, regulations to prevent the smuggling of gold were also enforced. Activos Mineros SAC was appointed as the official entity to buy gold sourced from ASGM (decree 012-2012-EM). A cadastre portal for gold traders (249-2013-EM) was enforced, and new rules were issued to control land routes and airports. Control checks were strengthened in the cargo areas of the Jorge Chávez International Airport in Lima, and detectors were installed in X-ray machines to find high-density metals carried by passengers. A task force was created[2] to improve surveillance at the airport, which is a South American hub. In addition to cargo surveil- lance, X-ray detectors for high-density metals were also

installed in the key domestic airports of Cusco, Juliaca, Arequipa and Madre de Dios, disrupting the complacency with which passengers carried gold on domestic flights.

5.3.2. Airports as Bottlenecks for Smugglers

Approximately 80% of the ASGM-gold has historically been shipped through the Jorge Chávez International Airport via commercial cargo carriers or in hand luggage (El Comercio 2014) and, thus, particular emphasis was placed on monitoring this route. As a result, from the end of 2013 to June 2015, the Peruvian National Custom and Tax Administration Superintendence (SUNAT) seized USD 37 million in 35 interventions at the facility (Congreso Peru 2015). Investigations conducted by the country's Financial Intelligence Unit also led to the identification of shell companies stored their merchandise at the airport. In December 2013, law enforcement officials seized 508 kg of gold awaiting shipment to six Refineries abroad.

During these operations, another web of local intermediaries was exposed. The Peruvian District Attorney's Office for Anti-Laundering Crimes of the Public Ministry identified a money laundering organization that smuggled 13,289,107 kg of gold worth USD 626 million between April 2012 and April 2016 (Caretas 2017). The head of the network was Pedro David Pérez Miranda, a character well-known to Peruvian law enforcement officials and the media. An intermediary between the miners and the Refineries, Miranda was nicknamed *Peter Ferrari* due to his incli- nation for expensive cars and luxury goods. On the day he was sentenced to 18 months in jail, Miranda stated: "I have always been very proud that all the gold I have exported is legal. It might be informal, but it is legal" (Caretas 2017).

5.3.3. The Regionalization of the Gold Commodity Frontier

The new restrictions on trade provoked a 70% decrease in Peruvian gold exports (Gibbons 2017). Accordingly, other neighboring countries of the Andean region increased their trade. Bolivia acquired a special role in this context. A small producer, between January and August 2014, the country exported 24 tons of the metal, six times more than it had

produced in the first seven months of 2014, and more than tripling its 2013 gold exports (Reuters 2014). Bolivia's southern border extends 1000 km along the most productive ASGM regions in Peru, Madre de Dios and Puno, from which the mineral was smuggled by land into Bolivia taking advantage of the porous borders between the two countries.

According to one local dealer, in a testimony published by Reuters, the gold was transported into Bolivia by motorcycle, mule, armored car and by plane using light aircraft. The latter method was the safest "to avoid losing a consignment to bandits stalking lawless borderlands" (Reuters 2014). The volume of the cross-border trade was such that shipments were restricted to 200 kg so as not to risk unbalancing the plane. In a new twist of events, the Peruvian gold smuggled into Bolivia was once again transported to the global market using Lima's Jorge Chávez International Airport. In 2014, suspicious commercial flights from Bolivia carrying 35 tons of gold stopped over at the Peruvian airport en route to their final destination (Castilla 2014).

Thus, these trade management policies when coupled with investigations into money laundering have had a significant impact. In particular, measures directed at improving Peruvian airport surveillance prompted an adjustment of ASGM-gold trade patterns, which generated increased interaction between the formal, informal and illicit sectors. This point is neatly illustrated by the case of the US refinery that closes the chapter.

5.3.4. Global Refineries and Their Intermediaries

NTR metals made international media headlines, such as: "Peru Crack- down on Illegal Gold Leads to New Smuggling Routes" (Reuters 2014) and "Peru-Us Gold Case Show How Importer Shifted Gears" (InSight Crime 2017). The case was extensively documented. According to a US Homeland Security Investigation, between 2012 and 2015, NTR bought USD 3.6 billion worth of gold in Latin America. The US-based refinery started to buy Peruvian gold in 2012 and had imported USD 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 Metals. That marked a turning point.

Controls and checks intensified as a result, leading to a massive decline of NTR's imports from Peru - from an estimated $980 million in 2013 to only $79 million in 2014. Nonetheless, illegal gold routes only took another path. Peruvian smugglers began moving illegally mined gold into neighboring countries, from which the minerals were sent to the United States. As figures from the affidavit show, after Peru's illegal gold crack- down, NTR imports from Ecuador and Bolivia grew by $485 million. At the same time, the US company imported gold from other countries in the region, most notably Colombia, as well as Chile, Guyana and the Caribbean. (InSight Crime 2017)

In order to continue purchasing Peruvian ASGM-gold, the refinery resorted to involving informal and illegal actors capable of navigating the obstacles they encountered. A web of middlemen negotiated on their behalf in the Andean region.

Authorities believe that Granda and his associates cut off competitors by offering quicker payments to costumers, and personally traveled to Peru and neighboring countries to meet with their sources of illegal gold. (InSight Crime 2017)

Intercepted WhatsApp messages indicate that members of the firm back in the United States were aware of the illegal nature of the gold business. As mentioned earlier in this chapter, in one of the messages, NTR operations manager, Juan Pablo Granda, compared himself to the Colombia drug lord Pablo Escobar. In other exchanges, NTR employees made references to the use of "mules" to carry the gold out of Peru. As Homeland Security Investigations (HSI) Special Agent Colbert Almeida wrote in an affidavit filed in March 10, 2017, the refinery sent the money "with the intent to promote the carrying on of organized criminal activity, including illegal gold mining, gold smuggling and the entry of goods into the U.S. by false means and statements, and narcotics trafficking" (InSight Crime 2017) an indication of how licit and illicit buyers, shell companies and Refineries reacted to the restrictions on transporting gold.

7.4 Discussion and Conclusion

This chapter has outlined how ASGM-gold ends up in international mar- kets as part of the global gold production system, a topic that has not yet received sufficient scholarly attention. It has demonstrated the flexibility of the ASGM trade and its network of intermediaries in the face of external pressures. Paradoxically, efforts on the part of the Peruvian state to root out illegal cross-border smuggling using commercial flights have enabled the emergence of a clandestine regional gold trading system that offers ample opportunities for unscrupulous entrepreneurs.

These findings have important policy implications and serve as a stark reminder that policies aimed at formalizing ASGM need to look beyond mining and approach the gold production system as a whole. Comprehensive policy development will need to acknowledge this complexity in order to reach political settlements among the various industry actors. The Peruvian case demonstrates the fact that measures aimed at improving trade management have proven to be effective in terms of seizing merchandise and disrupting the modus operandi of networks. In particular, as the chapter highlighted, airports are critical avenues to preventing the illegal transportation of gold overseas. But effective trade management will only be successful in conjunction with money laundering investigations and surveillance of illicit financial flows associated with the industry. In addition, more attention needs to be paid to strengthening customs procedures and border management.

Finally, this chapter also reveals the changing narrative of the gold economy in parallel to the expansion of ASGM worldwide. The informalization of gold production and the dynamics involved in smuggling the mineral has resulted in a growing infiltration of illicit intermediaries contributing to a narrative in which the gold economy is increasingly perceived as illicit or illegal. This factor further complicates the already difficult process for effective gold management and successful regulatory attempts within the global gold production system.

Notes

1. The list include: tobacco, alcohol, tea, drugs, cotton, wool, pepper and butter.
2. The task force was composed by the public and private institutions in charge of managing the Jorge Chavez International Airport. The public ones being: Customs, the Money laundering Unit of the Ministry of Jus- tice, the Financial Intelligence Unit and the National Reserve Bank, and the private involving airlines and the conglomerate Lima Airport Partners.

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Chapter six: Conclusions

While investigating the main research question as to why it seems to be so difficult for governments to regulate ASGM, in this dissertation I have taken an increasingly relevant angle of analysis. I adopt an illegal market approach to delve into the dynamics of gold production to elucidate the factors that have challenged nation states' efforts to successfully regulate global ASM for decades. In taking this line, I aim to contribute to scholarly explanations around the "persistence of informality" (Banchirigah, 2008), which are mostly centered on existing institutional limitations to formalize ASM operations and the miners' ability to contest policies. I emphasize the relevance of the presence of illegal practices within this sector, the ways in which a diversity of ASGM-operators have engaged with them and the convergences that have been created with organized criminal groups (OCGs) throughout different stages of the gold supply chain. I focus on the Peruvian Andean-Amazonian gold enclave of Madre de Dios where an estimated 50,000 operators that include miners, workers, and other individuals have arrived to participate in the activity.

I examine the Peruvian ASGM from 2012 to 2022 with the intention of adding value to the wealth of literature that has already addressed the relative failure of an extensive body of law enacted by the Peruvian government. A legal framework "on-the-books" that did not translate itself into "law-in-practice" (Espin & Perz, 2021), but that gave room for the establishment of significant political and administrative foundations leading to a fair degree of advancement in the Peruvian ASM regulatory landscape. This is a decade characterized by a progressive institutional hybridization of the industry (Damonte, 2021). Over time, ASGM governance has been influenced and shaped by a diversity of actors; ranging from small-scale miners (Cortés-McPherson, 2019; Damonte, 2021; Toledo Orozco, 2022); large-scale mining elites (Cano, 2020; Vila Benites, 2022; Vila Benites & Villanueva Ubillús, 2022); and foreign institutions (Dargent & Urteaga, 2016; Villanueva Ubillus, 2021). In this thesis, I provide the reasons why I maintain that illegal engagement in ASGM dynamics needs to be included into this analysis. Moreover, I

emphasize the importance of understanding this presence and agency for successful policy development and implementation.

In Peru, as well as in many other gold-rich countries of the Global South, non-state actors affect laws and regulations, nevertheless, in this research, I specifically enquire about the role of the state as a regulator and the challenges that this institution encounters to design and enforce ASM policies. For over forty years, national governments have conducted strategies to formalize ASM operations worldwide under the assumption that formalization would lead to employment and development (Hilson, 2010). Most of them have followed a top-down approach aimed at licensing miners with a view to consolidating property laws (Siegel and Veiga 2009, 52), addressing taxation, and facilitating financial and technical assistance (Siwale & Siwale, 2017). Regulations would also be key to control the social and environmental pervasive impacts or unregulated extraction (Salo et al. 2016). Unfortunately, four decades of policy implementation did not translate into effective formalization (Espin & Perz, 2021). Today up to 90% of the sector operates without title or legal authority to mine.

The persistence of informality has been associated with the normalization of a top-down approach characterized by costly and bureaucratic processes that miners could not follow (Banchirigah, 2008); the prioritization of large-scale mining, institutional limitations and lack of commitment at all levels of government (Damonte, 2016, 2018; Hilson et al., 2017; Maconachie, 2011; Maconachie & Conteh, 2020; Vila Benites & Villanueva Ubillús, 2022). In addition, interdictions destined to ban illegal operations, the other key ingredient of the ASM regulatory frameworks, have been criticized for being short-sighted, failing to yield sustainable outcomes (Geenen, 2012). Even worse, in many instances, they have impeded well-intentioned miners to formalize themselves and have deepened illegal practices (van der Valk et al., 2020; Vila Benites & Villanueva Ubillús, 2022). These outcomes are particularly stark in the case of gold, a commodity which attributes "conspire to make its chain of custody astonishing complex and incredibly difficult to regulate". (Bloomfield & Maconachie, 2021). Gold is highly functional for criminal organizations in a world where the global scarcity of natural resources is

attracting OCGs. These groups are diversifying their businesses to include the extraction and trade of minerals, particularly gold (Rettberg & Ortíz-Riomalo, 2016; van Uhm & Nijman, 2020).

In this thesis, I take a comprehensive approach in looking at regulation to include formalization and interdictions as well as other measures to manage gold production in Peru. I examine how key stakeholders react to the market, socio-economic and institutional constraints inherent in a high-risk industry. In observing their behavior and relationalities, I find that a broad range of actors take advantage of the blur between the legal and illegal that characterizes irregular mining enclaves such as the one of Madre de Dios. I trace different stages of the supply chain to identify specific nodes which have allowed me to observe and explain the expansion of the Madre de Dios phenomenon and the ways in which its mining culture has unfolded over time. I conclude that, to a great extent, this gold enclave's extraordinary growth relates to the interfaces between the legal and the illegal economies. For many individuals, illegal engagement has emerged as a risk-management strategy to overcome what otherwise would be unsurmountable hurdles. This mechanism has allowed miners to gain economic and political power to leverage state policies, in the context of a precarious exploited workforce culture in a gold-hungry world. This agency has unfolded in local and global settings whereby OCGs converge and benefit from weak institutions. It is a situation that relates to failed formalization strategies, cultural settings, and the global expansion of illegal markets.

In developing this argument, I enter in dialogue with premises from political ecology, and from criminology, in addition to those of the global organization of production. I borrow from the Global Production Network (GPN) theory as an analytical tool to look to the ways that diverse stakeholders behave at different stages of the supply chain. This thesis is innovative in using such a theoretical mix. It exposes how amidst the structural forces of the GPN, there is room for agency. Empirically, the dissertation correlates the three peer reviewed chapters (three, four, and five) with specific nodes along the supply chain where I identify illegal practices and the presence of OCGs. This research work is also

ambitious in presenting different stages of the production network that include episodes taking place at the downstream and upstream stages.

Thus, I empirically scrutinize three nodes where illegal practices are embedded to argue that illegal engagement emerges as a strategy to manage risk within the irregular gold production system. This illicit engagement is not a strategy utilized by a single specific stakeholder. All of the actors within the system take advantage of the blurred lines between legal and illegal to defend their interests. This agency (engaging in illegal practices) is a mechanism to deal with the economic uncertainty (Geenen, 2018), the social precarity (Ulmer, 2020), and the institutional ambiguity (Verbrugge, 2015) that characterizes this industry. I isolate and target nodes whereby change occurs due to the penetration of OGC within the network and/or by the use of illicit practices. Moreover, in scrutinizing this process, I suggest that each node relate to an event whereby these mechanisms have allowed relevant players to create, enhance and capture value shaping the gold production system.

In the first node, chapter three, I show that operators working in prohibited natural protected landscapes of the Amazon were able to increase their productivity as a result of the introduction of forbidden machinery. Miners have forged alliances with suppliers of this equipment who provided them with the technology, despite being aware of its illegal use. This interface led to the emergence of an elite of mining entrepreneurs that was instrumental in the magnitude of the expansion of the Madre de Dios phenomena(Cortés-McPherson, 2019). The second node, chapter four, exposes the precarity of labor and the ways that workers have taken advantage of family and community ties to recruit other workers who would also be exploited. Worker's consumption of sexual services of trafficked girls and women, and their alcohol abuse have also added to shaping the mining culture of this enclave. Choices that, I contend, relate to the universe of precarities in which this impoverished workforce operates (Cortés-McPherson, 2020). Chapter five illustrates the complexity of a global gold market and the reaction of the gold production system to the Peruvian government regulations to control gold smuggling by tightening supervision of exports at airports. Specifically, it shows how on the other end of the chain,

large transnationals have also engaged with criminals to secure the necessary supply of the precious metal (Cortes-McPherson, 2020). In the following paragraphs, I provide a recapitulation of the nodes and their significance.

6.1. Node one (Chapter three): From access credit to policy contestation

Through the colorful character of Gregoria Casa Huamanhuillca, the third chapter introduced the first node in the Madre de Dios gold production that I tackle. Illiterate, *la tia Goya* (Aunt Goya) arrived at the Huepetuean rainforest from the Andean highlands as a servant. She made a fortune mining gold in the pristine Amazonia. She also became a legend and earned her place in the folklore-rich mythology of the mining camps of Madre de Dios, a mixture of traditions of the Andean highlands brought about by migrant miners. Known as *la Reina del Oro* (the queen of gold), she was feared as having superpowers but died in a car accident in 2021. At that time, she was under investigation for money laundering.

La tia Goya is not the only one that struck it rich in Madre de Dios by navigating between the legal and illegal. Yet, for some individuals, economic gain led to political power. In that line, chapter three also introduces the case of Luis Otzuka. He was the leader of the mining association of Madre de Dios FEDEMIN who became the Governor of the region (2015-2018). His political victory went hand in hand with a vindication of the miners' legitimate right to profit from their natural resources. A sub-national resource nationalism rhetoric (Eaton, 2010) that was instrumental in legitimizing illicit engagement and contesting regulations. The narrative confronted the *status quo* of an elite from Lima associated with large foreign firms and backed up by the political authorities of the capital city. Otzuka's administration was a contentious one with the national government. He was openly in conflict with the Minister of the Environment at that time, Manuel Pulgar Vidal, whom he accused of being opportunistic in his defense of nature. The political power of the miners also reached Lima. Eulogio Amado Romero and Modesto Figueroa made it to the Peruvian Congress with the objective of lobbying against ASGM regulation. Both were also accused of having made their money by illicit means. Amado

Romero, known as *comeoro* (the one that eats gold), secretly owned multiple gold mines illegally operating in prohibited locations, while Modesto Figueroa, A.K.A *cigarrito* (little cigar), ran a successful gas station business and made millions by illegally selling gasoline to miners.

The above characters represent dynasties that led the early expansion of the Madre de Dios. In the downstream of the supply chain, this node speaks to the market constraints that ASGM miners face in running their business and how they engage in illegal practices to leverage the capital interest of the industry (Verbrugge, 2014), beyond preconceptions that ASM is exclusively a poverty driven activity (Hilson & Hu, 2022). Over time, miners have learned to manage economic and institutional uncertainty (Geenen, 2018) by developing alliances with legal enterprises but also by converging with OCGs.

6.2. Node two (Chapter four): Social precarity and slavery-like work relations

Continuing with the gold production and culture in Madre de Dios, chapter four introduces a key element: labor. Located in the downstream phase of extraction, this node complements the previous one. The incipient capitalization of the activity has allowed for a division of the labor force. Yet, while the first node relates to a specific group of miners that arrived at the area as the first gold diggers in the 70s, chapter four broadens its scope of analysis to capture the essence of the Madre de Dios mining subculture characterized by exploitative labor arrangements. In some instances, workers experienced slavery-like situations, as illustrated in the cases portrayed in this section. In line with a wave of critical literature that rejects the over-simplification of narratives regarding exploitation practices, including human trafficking (Marcus & Snajdr, 2013; Ulmer, 2020), chapter four foregrounds these individuals' agency by their choice to work under oppressive conditions. Yet this is a choice that only makes sense in a universe of precarities whereby people pick the least insecure option they have (Ulmer, 2020).

Furthermore, in Madre de Dios, workers take advantage of kinship ties (Arhin, 2016) to recruit other workers who will be equally exploited. As portrayed in the cases of the

Democratic Republic of Congo (Geenen, 2018; Geenen & Cuvelier, 2019), Ghana (McQuilken & Hilson, 2018), and sub-Saharan Africa in general (McQuilken, 2018), trust relations are an intrinsic part of ASM settings as a mechanism to manage risk. Recruitment dynamics are trust-based in the industry and in the Madre de Dios enclave, the workforce seems to have taken on the burden of providing the necessary labor to run and maintain mining operations. Individuals tend to trust family members, friends, and people from the community to accept a job offer. As Ulmer (2020) describes in his eye-opening article about the cultural complexities in the Madre de Dios mining fields, "miners are exploited as laborers and simultaneously exploit others". Now, the fact that labor may be voluntary at the point of entry does not mean that work relations will be consensual at a later stage (Barrientos et al., 2013; LeBaron & Howard, 2015; McGrath, 2016, 2018; Phillips, 2016). Again, moving away from the traditional rhetoric of human trafficking experiences (Marcus & Snajdr, 2013), in Madre de Dios, miners are not forced to work in the fields by violent means, instead they are seduced by what in chapter four is described as soft-means (Cortés-McPherson, 2020), an idea that, somehow relates to Cuvelier's (2017) "life of excess" whereby workers fall into a cycle that is difficult to break. That is, a culture that induces them to spend what they earn on sex and alcohol.

6.3. Node three (Chapter five): regionalizing trade to smuggle gold

The last node of this thesis concentrates on the commercialization of gold and the ways that the mineral reaches its destination into foreign refineries by illicit means. Pedro Perez Miranda, A.K.A. *Peter Ferrari* due to the number of those cars that he owned, was a popular Peruvian criminal associated with drug trafficking until he diversified his business to include gold in an obvious convergence. He took advantage of his already developed expertise and connections to illegally transport the mineral abroad. He was particularly skillful at articulating criminal networks, including law enforcement officials, politicians, businesspeople as well as criminals. With his help, tons of gold left the country through the main airport of Peru for years. In 2014 the Peruvian government imposed a set of measures to curtail illegal gold exports and a stricter surveillance at airports. Millions of dollars' worth of gold were confiscated, ending an era of massive

gold smuggling by air. Yet, as the chapter exposes, the production system rapidly readjusted and the mineral was sent over land through neighboring Andean countries. In the process, Miranda ended up in jail, where he died of Covid in 2020.

In the chapter, I focus on a set of actors and processes that have led to the end of the production cycle to highlight the role of a transnational firm to secure the arrival of gold shipments to the USA. This is a good example of the difficulty in isolating nodes, and yet it remains a necessary exercise to analyze the involvement of all actors, including legitimate powerful enterprises outside ASM countries at the end of the supply chain. In mapping the wealth of individuals that participate in this last part of the Peruvian gold production and export, the chapter focuses on another colorful character: Juan Pablo Granda. JP Granda is a US citizen born in Ecuador employed by NTR metals who help to smuggle USD 3 billion worth of Peruvian gold in four years for that transnational company. Granda, who liked to compare himself with the infamous Colombian drug lord, Pablo Escobar, was instrumental in creating alternative routes to smuggle the mineral through neighboring Andean countries. Granda also ended up in jail.

This episode exposes not only that ASGM regulatory development is halted, lobbied, and contested on the ground by miners who need to overcome market obstacles in the first node. Or how, for the second node, work relations are devaluated as part of a mining subculture. The third node is illustrative of the length transnational corporations are willing to go to in order to keep their profits. It also shows how global dynamics are intertwined, from the Amazonian rainforest to an office in a luxurious skyscraper in Miami or London.

6.4. Final Remarks

I started the dissertation recounting a personal experience. It depicted a young worker, who was sick and vulnerable in a remote hospital in the mining town in Huepetue. Drawing from the vulnerability of the miner, I exposed the precarity that characterizes artisanal and small-scale gold mining (ASGM), an industry faced with economic

uncertainty, social precarity, and institutional instability and ambiguity. These limitations speak of an activity that is high risk. Although the potential for employment and economic development of ASGM is enormous, the apparent inability of governments to regulate the industry prevents miners and the community from better yielding their own natural resources opening the door to criminal infiltration and expansion.

For over forty years developing mineral-rich countries of the Global South have not been able to effectively formalize ASM. Regulatory bottlenecks have already been the focus of a considerable number of academic studies. Those findings have also been presented to policy makers, to civil society and NGOs, and to relevant global institutions. Nevertheless, informality has persisted. This research has endeavored to shed light on what challenges successful regulatory exercises to this day. Taking the case study of the Peruvian ASGM, it poses an apparently simple question: why it is so difficult for governments to regulate ASGM? That with a view to understanding the extent to which illegal practices and convergences with OCGs contribute to existing challenges of regulatory efforts of national governments. As per my conclusion, the answer is that they do.

In my choice of theoretical approach and analytical tools, I have opted for a diversity of disciplines given the multifaceted, multi-disciplinary, highly complex settings of ASGM, particularly in the Peruvian Andean-Amazonia. I am convinced that I must have incurred several analytical flaws in this attempt to get these disciplines to dialogue with each other. However, I believe that this exercise has yielded invaluable findings. From an analytical standpoint, and in borrowing from the GPN framework, I want to underscore the potential of this school of thought to study informal and extractive economies. I want to reiterate here that my intention has never been to develop this theory but to make use of some of the tools at my disposal. I hope that in this effort, I have somehow contributed to empirically support the potential of the GPN in studying such complex settings, such as those pertaining to the study of illicit markets, which as noted, expand in parallel to globalization.

Empirically, I faced a good number of challenges too. This thesis encompasses three peer reviewed articles that were conceived independently in the context of specific requirements to study the ASGM phenomena in Madre de Dios. Although part of my PhD doctoral process, the publications responded to opportunities presented to me to participate in relevant global research projects aligned with my expertise and fieldwork data. The introduction and conclusions frame these complementary set of publications. Not only that, while my back-and-forth visits to Peru to conduct fieldwork ended in 2018, I present an up-to-date investigation that includes current and the most recent literature relevant to the subject. In fact, this time span has been a blessing. During the last five years, academic work on the subject has been significant in diversity and quality. I was able to benefit from this scholarly work that, no doubt, has allowed for a better informed and more rigorous delivery. It has also opened analytical possibilities that I had not contemplated before. Certainly, the long journey was necessary to allow ideas to come to fruition and to take advantage of new data, perspectives and theoretical approaches as it emerged.

The purpose and ambition of this dissertation has always been to come up with new perspectives that might help illuminate decision making processes on the ground. I gave space to some of characters that populate the Madre de Dios mining camps, and in so doing, made them visible. Indeed, they are fascinating in their uniqueness. In bringing them to life, I sincerely hope that I am paying them respect. I deliberately did not make any judgments over given behaviors, whether legal or illegal. I hope that the depictions, reflections, conclusions and findings of this work are of help to the people of Madre de Dios, Peru, and hopefully in any location where ASM takes place. It is my desire that this effort to talk about the elephant in the room, by addressing the complex matter of illegalities in ASM, will inspire others to do so. To finish, I will refrain from providing specific policy recommendations as I believe that it goes beyond of the scope of this research. That said, I would suggest continuing the effort to uncover the truth and to be mindful. We are living at ever-increasing speed in transformational times. Whatever is decided now will have lifelong repercussions.

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Peru
Madre de dios
Elite
Entrepreneurs
Formalization
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ABSTRACT

This research draws on the literature on livelihood diversification that claims that artisanal and small-scale mining (ASM) is not exclusively a poverty-driven activity. Taking the case of the Madre de Dios (MDD) gold rush in the Peruvian Amazon, this article builds up on the notion of 'capital interests' as a driver for the expansion of the ASM (Verbrugge, 2014). For many migrants who moved to the Huepetue basin in MDD from the Andean highlands, mining was initially a subsistence livelihood but, overtime, they were able to separate themselves from the workforce, mechanize their operations, and accumulate capital. They also entered the political arena to defend their interests and contest the central government's efforts to regulate the industry. The research analyses the factors that explain this transition and the emergence of small-scale gold mining entrepreneurs. This research concludes that among other factors, endogenous financial arrangements between the formal, informal and illegal economies were developed which engaged unexpected financers. In the process, the new elite of small-scale mining entrepreneurs gave shape to a 'resource-nationalistic' discourse that resonates with that of other communities opposing large scale mining projects.

1. Introduction

In 2014 General Daniel Urresti was interviewed for a segment feature of *Cuarto Poder*, a popular TV program that Peruvians watch Sunday nights as a barometer of the country's political and social agenda. The segment featured the Baca's, a family of small-scale gold miners (SSGM) from the Peruvian region of Madre de Dios (MDD). According to the journalistic report, the Baca's had built an 'empire' on extracting gold in the Amazon. In the interview, the general, the then head of a special task force to regulate ASM, defended himself against accusations of leading a strategy aimed at eradicating small miners. In his defense, Urresti argued that the Baca's operated as a "business group" pretending to be small-mining operators to avoid taxation and the costs implicit in the regulatory process. The highlight of the TV broadcast was not the presence of this high-ranking official, but the appearance, in "exclusivity", of Gregoria Casas Huamanhuillca. In an unprecedented way, the matriarch of the most powerful family of informal gold miners in Peru had agreed to talk to the media.

An illiterate indigenous Quechua-speaker from the Peruvian highland's city of Cusco in the Peruvian Highlands, Gregoria, also known as *la Reina del Oro* (the Queen of Gold), had moved to MDD as a young servant. She married Cecilio Baca who arrived to the same town in search for work in the early '70 s. They mined day and night, initially in an artisanal manner, to progressively expand their operations. By 2014, the couple and their five children owned over 42,000 ha of mining land, a float of machinery and state capital worth millions (Castilla, 2013a,b,c).

Many legends surround this family, most of which center on the controversial figure of Gregoria. She is a woman who moves with security guards and that, allegedly, controls the gold business in Huepetue (León, 2012), the mining town that she and her husband helped found. Some rumors depict her walking with a soda bottle filled with gold nuggets that she shakes in the town parades. She has also been connected with rituals in which young women have disappeared in sacrifices to mother Earth. She has even attracted the attention of Ivy League anthropologists for whom *la Reina del Oro* "represents a most enticing female target" in a male dominated world, a woman who has been instrumental in attacking small miners and diverting attention from other fortunes in MDD (Goldstein, 2015).

Despite its many dilemmas, the case of the Bacas nonetheless allows us to construct a portrait of the evolution of gold miners who migrated from the impoverished Andean highlands into the remote and isolated rainforests of MDD in the '70 s. Many of them settled into what are now the mining towns of Huepetue, Mazuko o Laberinto, bustling spaces from which an average of 20 tones[1] of ore have been sourced annually (GOMIAM, 2015). Using artisanal means to begin with, over time the

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[1] Figure for 2011

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miners diversified their labor force, mechanized their operations and began to accumulate capital. More so, they also penetrated the political arena. At a regional level, they run the government of Madre de Dios and the main mining towns. Cecilio Baca was elected mayor of Huepetue twice. At a national level, candidates with nicknames such as el '*comeoro*" (the gold-eater) or *cigarrito* (the little-cigar) have been representing MDD in the Peruvian Congress. Miners have also influenced presidential elections.

Thus, Artisanal and Small Scale Gold Mining (ASGM) in Peru has expanded beyond the expectations of a low-tech, subsistence enterprise, as the activity has traditionally been defined in the literature (Bryceson and Jønsson, 2010; Hilson, 2011), to gain economic and political power. But, how has this transition taken place? What are the drivers that have allowed for the emergence of this mining elite in the heart of the Amazon? The past five years have seen a proliferation of insightful literature on the Peruvian ASM and on MDD, mostly concerned with the challenges Peruvian authorities face in regulating the sector. Internationally the study of the ASM expansion and evolution has been approached from the perspective of artisanal mining as a livelihood for poverty alleviation (Bryceson and Jønsson, 2010) in the field of development studies. Nevertheless, the one-dimensional paradigm perpetuating ASM as a poverty-driven activity has been increasingly challenged. Concepts such as the 'entrepreneurial small-scale miner' were used by Fisher (Fisher, 2007) in discussing Tanzania and later by Verbbruge in analyzing the case of the Compostela Valley in the southern Philippines (Verbrugge, 2014). These works bring about new perspectives to the analysis of the push and pull factors to explain not just the expansion of ASM but also its evolution overtime.

The objective of this article is twofold. First, it seeks to describe the MDD gold mining enclave and the emergence of a new elite in the Amazon. As has been documented in other countries, (Clifford, 2011; Fisher, 2007; Graulau, 2001; Hilson, 2010) the Peruvian SSGM transition cannot be explained exclusively by a poverty-driven narrative. While the livelihood perspective can be applied to the first stages of the enclave's formation, it does not adequatel explain its development. This section describes this new class of entrepreneurs. In order to address the second goal of the article, I embrace Verbrugges' (2014) contribution to the livelihood diversification studies and the concept of 'capital interests' explored for the southern Philippines. In the Peruvian case, I argue that the transition of the SSGM in MDD can be explained by the development of endogenous financial arrangements and the appearance of a heterogenous set of financers -formal/informal/illegal- motivated by 'capital interest' in a context that benefited from national and international developments. Nationally, the installation of the Mining Bank of Peru in MDD in 1972 established the enclave's economic foundation while the Regional Government, formed 30 years later, served as a platform from which to launch their political agenda and contest national politics. Internationally, the Initiative for the Integration of the Regional Infrastructure of South America (IIRSA) and the construction of the Interoceanic road in Madre de Dios, further expanded the potential 'capital interests' in the MMD's gold by facilitating its trade together with the necessary supplies for its extraction in and out the remote rainforest. In the context of a commodity boom with soaring gold prices, a final key factor was the Peruvian government's failure to regulate gold trade.

In writing this article, I used four types of sources. I revised the existing scholarly literature on ASM in Peru and elsewhere, which I enriched with information from reports published by governmental institutions, NGOs and consultancy firms. For the empirical part of this study, I found the data that I acquired through close examination of the Peruvian media and some of their investigative journalists to be particularly useful. I also found social media to be a valuable source of data. A final key set of information was gained by conducting non-participant observation, informal conversations and over 100 interviews with workers, mining entrepreneurs, leaders of mining associations, and a range of authorities, including high-ranking government officials, academics and investigative journalists. During the last five years (2013–2018) I have also travelled to Lima and Madre de Dios for spans of three/four weeks each time, to conduct interviews for my PhD.

The structure of this article is as follows. The above presentation will be continued with a description of the political economy of gold in Madre de Dios and the steps the taken by the Peruvian government to regulate the sector. That will be followed by a theoretical framework of the concepts used and the angle from which we have chosen to elaborate and interpret the topics raised: the emergence of a mining elite in Madre de Dios and the factors that have enabled this phenomenon. The third and fourth sections will develop those points further, and a brief summary will conclude the article.

2. The political economy of the SSGM and the attempts to regularize the sector

Peru became a middle-income country as a result of a macroeconomic model that successfully focused on the export of its natural resources. Mining was the fundamental source of fiscal revenue and the engine of an economic growth that reduced poverty from 54.3% to 25.8% (INEI, 2015). With just over 30 million inhabitants, the Andean country has been one of the top five producers of gold worldwide and the largest in Latin America. A significant portion of the gold, -an average of 19% between 2003 and 2012 (Torres Cuzcano, 2015)-, has been extracted in ASM operations, amounting to 1315 USD million per year (Torres Cuzcano, 2015). The sector employs 150,000 miners and provides indirect work to between 300,000 to 500,000 people (Salo et al., 2016).

ASGM takes place in the all (25) regions of Peru; but, for a number of years, MDD produced 80% the gold sourced in the country by the SSGM, an estimated yield of 20 tons per year (Pachas, 2011a). Huepetue alone boasted amounts of 9,3 tons for 2004, although the actual figure is probably much larger. Thanks to ASGM, MDD's GDP grew to 816% and poverty fell from 308% to 3% (Macroconsult, 2013), the lowest figure recorded in Peru by 2011. Despite this, less than half of the population has running water and less than a third enjoys proper drainage or sewage. In successive waves of migration, mostly from poor neighboring areas, between 30,000 and 50,000 people (IIAP, 2011) have moved to MDD in the contemporary gold rush.

Despite ASM's contribution to job creation and its significant financial flows, natural protected areas were compromised by unregulated mining operations and 3000 tones of mercury were poured into the Amazon river (Defensoría del Pueblo, 2014). In MDD alone, one of the most biodiverse places on earth, river courses were reversed impacting 25% of the wetlands (WWF, 2013) and 62,500 ha were deforested by 2016 (MAAP, 2016). In some mining camps, violence and human trafficking for sexual and labor exploitation became common practices (Barrantes, 2016; CHS, 2012; Mujica, 2014; Novak and Namias, 2009; Verité, 2013). Furthermore, the industry has been linked to transnational crime networks (Ambrus, 2016; Gestión, 2012; GIATOC, 2016; Verité, 2016) and linked to drug trafficking and other illegal economies (EIA-GLOBAL, 2012; Gestión, 2012; Semana Económica, 2012; Society for Threatened People, 2014). To some, illegal mining is a more lucrative business than drug trafficking (Gestión, 2012), no small thing considering that Peru is one of the world's largest producers of coca leaves (Zevallos Trigoso, 2017).

2.1. The regularization of ASM in Peru

It was not until 2010, under pressure from the international community concerned with the environmental damage caused in the Amazon (Dargent and Urteaga, 2016), that President Garcia passed an executive order (No 012-2010) declaring the regularization of MDD' mining operations of national interest. Two years later, a national legal framework was enacted to regulate ASM through the country. Although it was conceived as a comprehensive strategy to address the overall

commodity supply chain (Herrera, 2014), the public policy concentrated its efforts on formalizing the sector and on eradicating illegal sites. Over 74,000 miners initiated their formalization process in 2012; 5500 of whom were from MDD. As of 2018, few miners had managed to fulfill the requirements necessary for obtaining a mining permit, none were from MDD. Most miners got stuck on the second of six steps, unable to prove ownership of the concession or provide a contract with the concessionary. In Huepetue, and in the case of the Baca's family and others, the problem was different. Reluctant to acknowledge the dimension of their business as medium-scale operations, they instead used the regularization process as an opportunity to formalize themselves as small-scale owners, which led to their application being rejected.

Together with the formalization, the government's strategy was the interdiction of illegal mining sites, located in protected areas or watercourses. Between 2011 and 2014, dredges were destroyed along the Amazon river. Just as in 2013, 78 military interventions were undertaken involving up to 1500 policemen (Gamboa, 2015). Similar to other mining bans in Africa (Geenen, 2012), the strategy did not alleviate the situation: mining expanded in natural reserves (SPDA, 2016a; SPDA, 2016b) and led to protests and deadlocks (Damonte, 2018). Moreover, interventions also targeted miners who had already invested in the formalization of their operations. In contrast, not enough efforts were made to eradicate La Pampa mining camps, a buffer zone of the Tambopata natural reserve where crime is rampant and extends into the reserve (Arriarán, 2014).

3. The debate about the expansion of the SSGM

Despite the well-documented challenges presented by ASM regulation and its economic relevance and socio-environmental implications, in Peru and in other parts of the world, research into the subject is lacking. In Latin American countries, the scant interest that the subject receives from the academia contrasts with the considerable attention that large-scale mining (LSM) has enjoyed. The literature on the extractive governance in the region has tended to focus on large and medium-scale operations and, to some extent, their relationship with ASM (Toledo Orozco and Veiga, 2018). The neo-extractivist paradigm, implying a greater involvement of the state in the mineral governance, has used the Andean countries as an analytical playground (Bebbington, 2009; Gudynas, 2009) while Peru has been a case study for the 'resource curse' literature (Arellano-Yanguas, 2011; Bebbington and Bury, 2009; Orihuela, 2013). Indeed, the behavior of the state and the social conflict it generates has traditionally captured the interest of academia in Latin American circles when it comes to the ASM. In that regard, the work of Salman and de Theije (2017); Rettberg and Ortíz-Riomalo, (2016), and Cisneros (2014); amongst others, describe the contexts for Bolivia, Surinam, Colombia and Ecuador, respectively. As Salman and de Theije (2017) put it: 'conflict is small-scale's middle name'.

Although it is impossible to provide accurate data due to the informal nature of the industry, there are an estimated 16 million artisanal and small miners worldwide (Seccatore et al., 2014) and over 100 million people depend on this activity for their livelihoods (ILO, 1999; The World Bank, 2008). There is no official definition of ASM (ILO, 1999) but there is consensus within the academic community on the key elements that compose the concept as an activity that portrays 'individual or collective labor-intensive mineral extraction with limited capital investment using basic tools, manual devices or simple portable machinery" (Bryceson and Jønsson, 2010). The difference between artisanal miners and small-scale miners may be described as 'the former employing manual low technology methods, and the latter having some degree of mechanization" (Fisher, 2007). The gold miners of MDD who are the subject of this study, started out as artisanal workers and progressively transformed themselves into SSGM entrepreneurs.

In Peru the academic output on ASM is still limited, but in the last five years an incipient body of work from different disciplines has emerged. From the political science standpoint, state theorists and anthropologists seem intent on scrutinizing the ASM in Madre de Dios. In particular, there is a strong interest in understanding the reasons why regulating ASM has proved so difficult for the Peruvian state (Damonte, 2016, 2018; Dargent and Urteaga, 2016; Durand, 2007, 2013, 2015, 2016; Pachas, 2011a; Salo et al., 2016; Valencia, 2014). Another set of literature has as its focus the environmental harm caused by the sector (Arriarán and Gómez, 2007; Espin Moscoso, 2018); the issue of human trafficking in mining camps (Barrantes, 2016; Goldstein, 2015; Mujica, 2014; Novak and Namias, 2009; Tuesta Reátegui, 2018); or its socio-economy (Dammert B., 2018; De Echave Cáceres, 2018; Glave and Kuramoto, 2002; Mosquera et al., 2009; Perz et al., 2016; Torres Cuzcano, 2007, 2015). This literature has contributed valuable insight into ASGM activity in MDD and in the broader context of the country.

In global terms, most of the academic literature on ASM has focused on the African and Asian contexts. This geographical focus has unintentionally biased understanding of the phenomenon elsewhere, because the analysis and findings in Africa where often assumed to explain the industry in other parts of the world. The literature of development studies describes ASM as a poverty-driven activity caused by detrimental structural adjustments programs applied to the African countries (Hilson, 2006, 2010, 2010; Hilson and McQuilken, 2014) or the privatization of the mining sector (Banchirigah, 2008). The rural livelihood body of work exposes what was assumed to be a subsistence sector due to the lack of other viable means of livelihood.

International study into the expansion of ASM has approached the topic from the perspective of artisanal mining as a livelihood for poverty alleviation (Bryceson and Jønsson, 2010) within development studies departments. This one-dimensional paradigm perpetuating ASM as a poverty-driven activity has, nevertheless, been increasingly challenged. Concepts, such as the 'entrepreneurial small-scale miner' which was first used by Fisher (Fisher, 2007) for Tanzania, and later by Verbrugge in discussing the Compostela Valley in the southern Philippines (Verbrugge, 2014), offer new perspectives to analyze push and pull factors of ASM expansion that were not necessarily poverty-driven in essence.

More recently and applied to the southern Philippines, Verbrugge used the rural livelihood diversification approach to determine what drives ASM's change (Barrett et al., 2001; Verbrugge, 2014). He questions the one-dimensional focus that has characterized these studies as 'obscuring the socially segmented nature of diversification into the sector' (Verbrugge, 2014). To this author, while the majority of those who engage in ASM do so for subsistence purposes, for certain groups, the sector also harbors opportunities for capital accumulation as an activity with few entry barriers (Cartier and Bürge, 2011; Siegel and Veiga, 2009; Verbrugge, 2014) that, at the same time, can serve as route to social emancipation (Boeck, 2001; Bryceson and Jønsson, 2010; Verbrugge and Besmanos, 2016). In the Compostela Valley of the Philippines, change was driven by heterogeneous financers with capital to invest in the SSGM (Verbrugge, 2014).

4. The small-scale gold mining elite of Madre de Dios

The debate about the expansion of the SSGM in MDD raises challenging questions, but what are the main elements that define this elite? Who are these new entrepreneurs? How do they organize themselves and connect with the outside world? The mining landscape of MDD presents a vast number of rich characters who move easily between the formal, informal an illegal world. In the middle of what was once a fertile jungle, the streets of the city of Huepetue bustle with people oblivious to environmental or social concerns. With its unpaved roads and lack of basic services, the possibility of wealth seem remote, yet the local industry produces over 9 tons of gold annually (Torres Cuzcano, 2007). Some mining groups though, like the Baca's, were able to leverage the rich deposits of the Amazon. Beginning in poverty, by

2014 they owned 42,000 ha of gold-rich land (El Comercio, 2014).

A insight into these questions is the nature of the settlers that moved to the MDD jungle from the Andean highlands in the '70 s. A wave of migrants often described as frugal, hardworking and business-savvy. These core values have been crucial to taking advantage of the rich gold deposits of the Amazonian rivers and forests. They introduced machinery an increased the production to accumulate capital. Some began to diversify their business portfolio. The newspaper *El Comercio* traced their assets of the Baca's down. According to the report, they own heavy machinery, they have purchased real state with cash, and have invested in hotels, gasoline dispensers and transportation, among others investments (Castilla, 2012a). For the Peruvian government, they work "as a consortium, using heavy machinery and distributing utilities" (El Comercio, 2014).

4.1. Glocalization

The economic leverage of the Peruvian ASM entrepreneurs transcends local settings to reach international markets and foreign institutions and actors. In March 2017, Bloomberg broke the news about the Peruvian gold. The Southern District of Florida of the U.S. Department of Justice had indicted four Peruvian citizens and three conspirators. Amongst them was US citizen Juan Pablo Granda, whose WhatsApp messages from MDD were intercepted by the Federal Bureau of Investigation. In the texts messages sent to colleagues back in Florida, he described himself as the "new (Pablo) Escobar of gold" (Castilla, 2013b, 2018a,b). Granda was the intermediary between the Peruvian miners and the Miami based company, NTR metals, which bought $3.5 billion worth of gold from South America between 2012 and 2017. The company purchased the gold directly from Peru and Madre de Dios at first, and later from Brazil, Colombia or Bolivia where the metal was smuggled into, in response to the increasing control by the Peruvian authorities. Since 2013 the Peruvian media had reported on companies being under investigation for illegally gold trading (Castilla, 2013b, 2018a). The media revealed that one such company was located in Huepetue and owned by the then the Director of the Ministry of Mines, Luis Zavaleta Vargas, and his brother (Castilla, 2012b).

4.2. Intertwined economies

Hence, a defining characteristic of this enclave is the symbiosis of the formal, informal and illegal economies (Damonte, 2018; Durand, 2007). In Peru 60% of the economy is informal and 40% of the workforce is "self-employed" (Loayza, 2008). Durand (2007) describes informality in Peru as part of a culture of transgression that installed itself in the capital, Lima, in the 1980s due to the unemployment, the weakness of the state and the incentives for informality (De Soto, 1989; Durand, 2007; Matos Mar, 1986). Perceived as an urban phenomenon at first, this *modus operandi* penetrated rural spaces of the Andeans and the Amazonia connected now with global markets (Durand, 2015). Illegal gold trading has been described as being more profitable than drug trafficking (Gestión, 2012). Once laundered, these financial flows contribute to an industry that represents 12% of the GDP, 60% of the exports and 20% of the foreign investment (De Echave Cáceres, 2016; EIA-GLOBAL, 2012; Torres Cuzcano, 2015). Miners and their intermediaries interact with numerous interest groups, including Swedish refineries of the London Bullion Market Association (Castilla, 2018b; La Republica, 2018).

4.3. A cluster of mining associations and the right to exploit their natural wealth

The formal and illicit economies interrelate systemically in micronets or clusters (GOMIAM, 2015; López and Vizcarra Castillo, 2014; Mujica, 2014; Pachas, 2011a; Vizcarra Castillo, 2014). This behavior has also been demonstrated by the myriad of associations and federations in which ASM miners organize themselves (SPDA 2014a; Castilla 2012; De Echave 2016a; Fernández 2014). To exert their influence they join forces in complex settings. They stand as separate actors but "relate to each other when it is economically convenient in spite of the problem that their coexistence and bond represents" (Durand, 2013). They show some level of coordination, they mutate, transform and adapt to specific situations and goals to disintegrate or lose strength afterwards (Damonte et al., 2013; Ipenza and Valencia, 2014; Mosquera et al., 2009; Pachas, 2011b).

It is within this constellation of ASM associations that a new narrative seems to have been taken shape. Irrespective of their differences, they agree in a sort of 'resource-nationalistic' discourse (Bebbington, 2009; Gudynas, 2009). They reclaim their legitimate right to access and exploit the natural resources, in opposition to large, foreign-owned operations that leave their communities in poverty. This narrative was well exposed by the Governor of Madre de Dios, Luis Otsuka, in his speech to the Peruvian Congress while he was a candidate for the Regional Government of MDD in 2014.

> "We are in favor of investment but with equity for all Peruvians. This is not a political discourse, is a technical one so people can learn how they are looting our wealth[2]. How the government gives it away. It is very sad, but it is like that … The ministry of mining is only the minister for the large miners, they have assigned a so-called minister for us but the only thing he does is interdicting us … We are persecuted. I demand respect. I am proud of being a miner but they typify us as criminals. They accuse us of abusing children, of being connected to the drug-trafficking and of financing armed groups. A foreign NGO sues me! Why? For defending my right to use my wealth? For defending the right to feed poor miners' children? … There is a persecution for those who love Peru. We want viable solutions for our children with respect for the environment. Our children deserve to live with their wealth. As yourselves, we are also entitled to vacations in Aruba, Cancun, Hawaii, just as you do. That is also our right".

Otsuka was able to put into words the feeling of the emerging elite of SSGM entrepreneurs by demanding, not just their right to work, but also their right to privileges enjoyed by other elites enjoy. Otsuka was the first miner to seize power of the Regional Government of MDD. The resource-nationalistic narrative seems to be developing in parallel to the one observed in other rural communities of the Andean country that oppose LSM projects. Peruvian scholar, Maritza Paredes (2006) views this as an ethnic discourse that gravitates around the perspective of collective rights of the indigenous people, including as such: *campesinos* (farmers), quechuas, aimaras, coca growers or miners. This was examined by Toledo Orozco and Veiga (2018) for the case of Tambogrande in northern Peru. They found out that local communities welcomed ASM while opposing LSM investments because the ASM connects with the existing 'socio-economic' order based upon ethnic and cultural bonds. As leader of the powerful Mining Federation of Madre de Dios (FEDEMIN), Otsuka led many of the organized social mobilizations and protests that took place there in fiercelypposition to the government's regularization policy. Miners associations have proved to have an extraordinary power to use social unrest to pressure the central government in what Damonte (2018) calls a sequence or protest-negotiation.

4.4. Political leverage of the SSGM miner

Indeed, the mining entrepreneurs have a large social base that supports the sector. This has helped them to take over the regional government and the main mining towns. Miners have also appointed their candidates to represent them before the Congress and have

[2] Wealth as natural resources.

influenced national politics (De Echave Cáceres, 2016, 2018; Fernández, 2014). Given their social support, their voting power is significant for any presidential candidate (De Echave Cáceres, 2016). They made financial contributions to President Humana's political campaign in 2011 (Perú 21 2014). They had negotiated agreements with Humala beforehand, which he broke once in power. In 2016, the candidate Fujimori promised the miners that she would change existing policies to regularize the sector and, while she did not win the Presidency, she uses her power in the Congress to lobby for the miners.

5. Drivers of the SSGM in MDD

The Peruvian miners went from being poor miners to entrepreneurs. How did they get there? How did this transition take place? And what factors explain the upraising of the mining elite in the heart of the Amazon? To tackle these questions, I embrace the concept of 'capital interests' (Verbrugge, 2014). I argue that this transformation can be explained by the development of endogenous financial arrangements and the appearance of (formal/informal/illegal) financers attracted by the financial gains of the sector in a setting that benefited from national and international developments. Nationally, the installation of a Mining Bank in MDD and the creation of the Regional Government. Internationally, the construction of the Interoceanic road in Madre de Dios and the commodity boom and soaring prices of gold. A final key factor worth a separate article, was the failure of the Peruvian government to regulate gold trade.

The establishment of the Peruvian Mining Bank in 1972 was an opportunity for the artisanal miners who had just arrived in Madre de Dios (Damonte, 2018; Torres Cuzcano, 2007; Valencia, 2014; Villanueva Ubillus, 2015) mainly from the city of Cusco in the '70 s. The installation of the bank was the most emblematic part of a policy aimed at promoting small-scale mining in the Amazon as a means to populate the remote and isolated jungle. The financial institution extended credits to miners, purchased their gold and provided help. In the early '90 s, with the new government of President Fujimori in place, the bank was dismantled (1992) as part of a structural adjustment strategy. The attention of the new Government shifted to promoting large-scale projects instead. The miners were left in a limbo. This situation has been described by the Damonte (2018) as part of the state-building process of the Amazon that, *"historically governed as an extraction zone instead of a place with social and economic development potential"*.

5.1. Revenue sharing arrangements and the unexpected financers

The dismantling of the Mining Bank left miners without a source of credit but led to the foundation of an economy that developed alternative sources of capital. Unexpected financers emerged, attracted by the financial opportunities. The appearance of heavy machinery dealers was a turning point. Volvo and Ferreyros (the local brand of caterpillar) arrived in MDD in the early '90 s and offered loans to miners for the purchase of their machines. Volvo sold at least US$ 2,5 million worth between 1994–1996 and Ferreyros made US$ 185,000 between 2003–2005 (Castilla, 2013c). In an interview, Gregoria Casas recounted the moment these companies arrived:

> Managers of Volvo flew to Huepetue's airport in a small plain o in their vans from Cusco, they stayed in the Victoria hotel. At the time, each machine cost between US$170,000 and US $180,000. We handed an initial payment of US30,000 to them. I paid cash"… (Castilla, 2013a)

The use of heavy machinery tripled the yield and allowed for a reduction in workforce numbers. The Baca family went from extracting 250 g to 800 g per month with the mechanization. By 2013, they collected 80 kg per month (El Comercio, 2015). Casas recollected that it took her 6 years to pay for some of the machinery; thus, in order to expedite the payments, a new arrangement was established. A new financer was born: the gold dealer. As Gregoria recollects, the dealer made payments directly to the supplier and gave her the receipts.

> I gave (the gold) to the merchants … and they gave me the facility to pay the company (machinery or other supply vendor), later they gave me my receipt. We did it like this for security reasons. I have always been a good customer, everybody knows me. I have nerver worked in the dark or hidden" (Castilla, 2013c).

Thus, the gold buyers in MDD, many of whom are investigated for money laundering, became a key group in the advancement of the area. In this line, a third financial agreement can be mentioned, the one inspired by a system used by the local Amazonian chestnut farmers. Affected by the structural adjustment and unable to obtain loans from banks, farmers resorted to borrowing money from their clients. As described by Perz et al. (2016), under the *habilito* system farmers advanced cash to families with forest concessions; and in return, they agreed to sell their harvest at a set price. When the machinery dealers came to MDD, the miners used a similar arrangement to the *habilito*. They advanced cash for the purchase and the gold-buyer covered the remaining cost of the machinery, in exchange for a set price for the metal.

Traditional banks refused to lend money to the farmers, but they actively sought other stakeholders. The testimony of the current congressman for Madre de Dios (2016–2020), Modesto Figueroa, illustrates this point. He was a motorcycle taxi-driver in the 80 s who started out selling gasoline to his colleagues. One day, as he relates, he was approached by a bank:

> In the 90 s they offered me loans, it is because of that I decided to form a business and invest on my first gas station with the Proveedora del Sur E.I.R.L … I did it with bank loans…' (El Comercio, 2017).

A final set of financers were those that came from foreign countries who adventured in the industry. Brazilians were key, transferring their knowledge of alluvial mining and dredges, but the 2010 Execute Order prohibited mining in water courses and all dredges were bombarded by the Peruvian army. At a later stage, gold was smuggled into the country due to the control on the commodity of the Peruvian authorities. Gold was also smuggled through Bolivia. There are cases of Russians, Chinese and Koreans adventuring into MDD mining camps eager for a 'piece of the cake', but Peruvian laws were tough on those investors, some of whom were heavy fined (El Comercio, 2015). That said, when it comes to the development of the ASM, their role does not seem to have been prominent for ASM expansion, although more research is needed in this area.

5.2. The role of the Regional Government

In the early 2000s, President Toledo changed the constitution in order to decentralize the administration of the country, transferring important competences to the 25 regions (MDD among them). The new political structure implied the creation of regional governments to administer the new set of competencies transferred to them, among which was the role of formalizing ASM. Within that structure a new figure was created, that of the *Gobernador*, initially referred to as the President of the Regional Government. It did not take long for the gold miners of Madre de Dios to win to take over the Regional Government in Madre de Dios due to their popular support. In 2015, the leader of the association FEDEMIN became the *Gobernador* of Madre de Dios without a real political party behind him. Two main immediate consequences emerged from this development. On the one hand, as an elected authority, Otsuka acquired the legitimacy that the representation the people gave him and was now able to talk as an equal to high-ranking authorities in Lima.

A controversial figure who rose to power as an outspoken defendant of the miner's legitimate right to exploit the land, Otsuka directly

confronted the Ministry of Environment at the time, Manuel Pulgar Vidal. Vidal was a respected figure of the political scene in Lima. He was a vehement environmentalist, connected to international environmental circles. As head of the Ministry of Environment, he took on the role of defending the Amazon against the miners of Madre de Dios. Otsuka and Vidal became enemies and openly attacked each other. The battle between the miners and the Ministry of Environment misled the governance of the ASM, which was managed as an environmental hazard instead of part of the extractive industry. The LSM in Peru had a history of polluting vital ecosystems throughout the country and was strongly rejected by local communities that had seen no benefits after decades of big projects exploiting their lands. In 2016, however, the new government adopted a more inclusive approach. It assigned more resources and competencies to the Ministry of Mines to take over ASM management, relieving the Ministry of Environment of pressures and responsibilities.

Another important consequence that the creation of the decentralization process and the Regional Governments brought about was the shift in the decision-making process. If demands formulated by the miners to previous administrations were not considered, that was to change. The development of infrastructure is a good example. For years, small-scale gold miners had demanded new roads leading to certain mining camps without success. Otsuka changed this and decided to build new roads, some of which confronted the Central Government's views as well as environmentalist groups due to the potential damage to natural protected areas. The Gobernador was consequently sued, but he defended himself by claiming that there were interests behind the attacks (Inforegion, 2016).

5.3. The Southern Interoceanic road

Internationally, the Initiative for the Integration of the Regional Infrastructure of South America (IIRSA) and the construction of the Interoceanic road in Madre de Dios further expanded the potential 'capital interests' in the MMD gold mining industry by facilitating its trade and the transportation of the necessary supplies for its extraction to and from of the remote rainforest. The construction of 2600 km of road from Peru's Pacific coastline, across the Andes and through the Amazon rainforest, part of the Corridor Vial Interoceanic Sur Perú-Brazil, opened new possibilities not just for transporting the metal but also to obtaining the required supplies (machinery, gasoil, mercury ect) in a easier and cheaper way (Dammert B., 2018; Goldstein, 2015). In 2011, President Garcia inaugurated the last of the 22 bridges of IIRSA, el Puente Continental, in the capital of MDD, Puerto Maldonado. Resembling the Golden Gate bridge of San Francisco, this 723 m-long structure transformed, as the Golden Gate dridge did in 1949, the landscape of the area, reducing the commute from Cusco to Puerto Maldonado from days or, even weeks, to a journey of 8 h.

5.4. The commodity boom and the soaring price of gold

To conclude, the aforementioned factors would not have played out the way they did if the price of gold had not increased as it did. Between 1972 and 2011, the price of an ounce of gold went from $US 70 to $US 1895. This would not have happened either if the Peruvian government, as those of the Philippines and Bolivia did, had a greater control over the commodity transactions. And while there are cases where the price of commodities has not explained a resource boom, as documented by Heemkerk for the ASM for the case of ASM in Suriname (Heemskerk, 2001), in Peru, this factor was crucial to the financial scalation of the small-scale entrepreneurs.

6. Conclusion

The article, which analyses the factors behind the emergence of a new elite of small-scale entrepreneurs in the Madre de Dios region of the Peruvian Amazon, shows how the ASM sector presents opportunities for 'capital interests' (Verbrugge, 2014). The article has identified a number of financial arrangements that have taken place between the miners and a heterogenous class of financers that gradually gave shape to the economic enclave in this part of Peru. It also notes that this enclave was created by specific developments that took place, such as the establishment of a Mining Bank in Madre de Dios in 1972 to promote ASM and the creation of the regional governments as part of the Peruvian decentralization process. The wave of miners that arrived in Madre de Dios in the '70 s benefited from government policies to promote ASM activity and were able to develop alternative financial mechanisms when this policy was abruptly interrupted and the Mining Bank dismantled.

The research draws on the literature on livelihood diversification and aims to contribute to those studies that reveal that ASM is not exclusively a poverty-driven activity. For the migrants who moved to the Huepetue basin from the Andean highlands in the '70 s, ASM was initially a subsistence livelihood, but they were able to separate themselves from the working force, mechanize their operations and accumulate capital. In a favorable environment of soaring gold prices and high demand for the commodity, they developed strategies for growing their business and to progressively penetrate the political arena to defend their interests. This new elite of small-scale mining entrepreneurs gave shape to a 'resource-nationalistic' discourse that resonates with that of other communities that oppose large scale mining projects. The findings of this study contribute to a better understanding of the complexity of the ASM setting and to describe the political economy of the Madre de Dios gold rush in the heart of the Amazon.

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13

Digging into the Mining Subculture: The Dynamics of Trafficking in Persons in the Artisanal and Small-Scale Gold Mining of Peru's Madre de Dios

Dolores Cortés-McPherson

Introduction

There has been a considerable international concern over the expansion of trafficking in persons in the supply chain of commodities, including gold. A fifth of gold extraction worldwide is provided by artisanal and small-scale gold mining (ASGM), which is often outside government oversight and international compliance schemes. Although ASGM contributes to economic development and provides jobs to the poor, the lack of government control and regulation of this sector makes it socially destabilizing and welcomes crimes such as trafficking in persons.

Over the last decade, the nexus between trafficking in persons and the supply chain has captured the attention of the United Nations (UN), the Organization for Security and Co-operation in Europe (OSCE), and other international organizations. The topic has been included in the UN's Sustainable Development Goals (SDGs) set in 2015 as blueprint to achieve a better and more sustainable future. The central importance

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of decent work for all in achieving sustainable development is emphasized by the Sustainable Development Goal 8 (SDG 8), which aims to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" (SDGs, n.d.).

Trafficking in persons has also gathered significant scholarly attention, though the literature has overwhelmingly concentrated on international trafficking of women for sexual exploitation (Andrees & Linden, 2005; Cockbain, Bowers, & Dimitrova, 2018; Laczko & Godziak, 2005), with only a small body of scholarship on trafficked men and boys. The abuse and extreme occupational hazards suffered by trafficked male victims, however, cannot be disregarded. Occupational health and safety interventions are urgently needed to protect male workers, particularly undocumented migrant laborers among them, working in high-risk, under-regulated, and labor-intensive sectors, such as ASGM. Having been ratified by 175 States Parties, the United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children (henceforth, the Trafficking Protocol), supplementing the United Nations Convention Against Transnational Organized Crime (UNTOC), standardized the concept of human trafficking worldwide, creating a common legal understanding of the crime, incorporating both sex and labor exploitation of both men and women, boys and girls, and children, set forth in Article 3:

> Trafficking in persons shall mean the recruitment, transportation, transfer, harboring 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 exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude or the removal of organs.

The Trafficking Protocol also broke down the key elements of the trafficking process, namely (a) the *activity* by which the victim is recruited and transported (recruitment, transportation, transfer, harboring, receipt, etc.); (b) *means* by which he or she is controlled,

forced into the specific form of exploitation (violence, threat of violence, coercion, abduction, fraud, deception, abuse of power or position of vulnerability, etc.); and (c) *purpose* which involves exploitation (sexual exploitation, force labor, slavery, involuntary servitude, organ removal, etc.). Since its inception, this definition has been used as a cornerstone of legislative amendments and policy reform designed to prevent, respond, and punish trafficking in persons.

This chapter focuses on the analysis of labor exploitation of unskilled and semi-skilled mine workers, including adolescents and children, laboring at informal and illegal gold mining sites to no avail in remote areas of Madre de Dios in the Peruvian Amazon. This chapter makes use of the term "worker" and "workforce" to refer to unskilled and semi-skilled miners, which comprise the majority of the labor, force in informal gold mining in Madre de Dios. These terms have been chosen to distinguish victimized mine workers from those who own the means of production and/or those who have started the formalization process with the Peruvian authorities.

The analysis presented in the chapter is informed by two analytical frameworks: one on the role of *ethnic diasporas*, which is used for shedding light on the recruitment of victims in exploitative labor; and the other on a *mining subculture*, which is used to explain one of the key aspects of how the exploitation of mine workers is prolonged.

The qualitative analysis offered in the chapter is informed by Antonela Arhin's approach to exploited workers' recruitment, which, she argues, is based on ethnic diasporas (Arhin, 2016). In her analysis of over 70 court cases focusing on the trafficking of adults and children for labor exploitation filed between 2004 and 2014, she confirmed that traffickers often rely on diaspora networks in the recruitment, transportation, and exploitation of the victims. She emphasizes the strong ties between the nationalities of traffickers and victims, as well as traffickers, intermediaries, and collaborators. Arhin (ibid.) found that most traffickers prefer to recruit co-ethnics and that the first stage of the trafficking process, the *activity,* as defined by the Trafficking Protocol, is determined by what she calls the "affective economy of co-ethnic identification" (p. 82), which refers to particular cultural and socioeconomic settings of shared

ethnicities of groups that have common ethnic and national traits, identities, and affinities. These findings echo the results of previous studies on the topic, such as Jackie Turner and Liz Kelly, who argued that traffickers tend to recruit co-ethnics to "minimize costs and maximize profits," in the same way that other victims fall into deceptive situations after trusting community members and friends (Turner & Kelly, 2009). This trend is demonstrated in informal gold mining in Madre de Dios (Cortés-McPherson, 2019), where the workforce is recruited using local diasporas. Hence, the beginning of the trafficking process is ethnically and culturally determined.

Since the 1990s, anthropologists working in sub-Saharan Africa discovered that artisanal miners expressed a particular form of masculinity, which had a strong influence on the way they behaved both in their workplace and during their spare time (Cuvelier, 2014). Some scholars have written about miners going through a male *initiation ritual* into a particular *habitus*—a term borrowed from renowned sociologist, anthropologist, and philosopher Pierre Bourdieu (1984). The latter should be understood as a "system of dispositions" and "the physical embodiment of cultural capital," such as ingrained habits, moral positions, as well as consumption patterns and leisure activities. Habitus is formed through socialization and is informed by the individual's cultural milieu and personal history (e.g., ethnicity or profession) (Grätz, 2004; Walsh, 2003; Werthmann, 2008). For example, Andrew Walsh described a sapphire-mining town in Madagascar, where young mine workers earn little and consume "daringly" to sate immediate desires (Walsh, 2003). In a similar vein, Jeroen Cuvelier's (2017) research on the mining subculture in Katanga, the Democratic Republic of the Congo (DRC), sheds light on the functions of a "moral economy where money, migration, and masculinity shape work relations" and social interaction (Cuvelier, 2017, p. 204). The "conspicuous consumption of money," writes Cuvelier, is one of the central pillars of the mining subculture that makes "credit and debt dominate life on the mines" (ibid.)

While Arhin's perspective is of helpful in framing the *activity*, the first element of human trafficking, expressed in the recruitment and transportation of victims, and Walsh's and Cuvelier's studies elucidate the *means*, the second element, which facilitates the understanding of how

miners are captured and retained in exploitative conditions. Once in the mining camp, informal miners are controlled and retained by *soft coercion* brought about by a parallel illegal entertainment industry that encompasses the sexual exploitation of women and girls, and heavy alcohol consumption. Whereas the victims of human trafficking are commonly exploited through direct coercive means, such as physical violence or deception, there are numerous forms of coercion that prevent victims from leaving their exploitative situation. This chapter argues that the particular subculture in gold mining camps of Madre de Dios embraced the noncoercive, "soft" means to control male workers, whereby they find themselves dragged into "daring consumption" (Walsh, 2003) and a "life of excess" (Cuvelier, 2017). In doing so, they spend recklessly on alcohol and sex, digging themselves into a debt and thus perpetuating their own exploitation by creditors. Importantly, this particular mining subculture encourages the sexual exploitation of girls and young women. This chapter demonstrates that fake job offers lure women from all over Peru and neighboring countries into working in *prostibares*—bars that also offer sexual services—in the mining camps of Madre de Dios, making the entire gold mining region a hub for organized crime and trafficking in persons. It is in this geographical space that two parallel irregular economies—one based on labor exploitation and the other based on the sex trade—feed on each other.

In line with this argument, the chapter first analyzes the complexity of informal gold mining in general and the extent to which the exploitation of labor and the sex trafficking industry has penetrated informal mining in the Madre de Dios region in particular. After that, it describes specific aspects of the Peruvian context, focusing on the role that ethno diasporas, the consumption of alcohol by miners, and the illicit sex trade play in perpetuating the exploitation of unskilled miners and the trafficking of girls and young women. The chapter concludes with a short review of the anti-trafficking legislation and policy in Peru, in light of the interplay between labor exploitation and the illicit sex trade.

The chapter builds upon previous research conducted by the author (e.g., Cortés-McPherson, 2019), including fieldwork carried out in the Madre de Dios region in 2013 and 2018 as part of her doctoral studies at the University of Deusto, Spain. The findings also derive

from the data collected from interviews with miners, representatives of nongovernmental organizations (NGOs) and local authorities, among other relevant stakeholders, which were conducted in Madre de Dios and Lima during the author's employment at the International Organization for Migration (IOM) in a capacity of trafficking in persons focal point for the Andean Region.

Major Patterns of the Exploitation of Workers in Informal Mining

On January 7, 2014, *The Wall Street Journal* published an article entitled "How Companies Face Up to Human Trafficking Risk," commencing with a reference to the use of forced labor within Apple's iPhone 5 supply chain and followed with a statement warning that "few things are worse for a company or an industry than to be associated with human trafficking or slave labor" (DiPietro, 2014, n.p.). There are about 40 million victims of modern slavery today (ILO, 2017), and the volume of trafficking for forced labor has grown across all industries (UNODC, 2016, 2018). It comes as no surprise that trafficking in persons for both labor and sex is of concern to businesses. As Siobhan McGrath and Samantha Watson (2018) put it, trafficking in persons plays an important role in contemporary global economic dynamics and consumer relations (McGrath & Watson, 2018).

With almost three quarters of the Earth's gold deposits already exhausted, global gold production has doubled over the last 50 years, soaring from approximately 1500 tons per year to almost 3000 tons annually (Rossi, 2016). In less than a decade (2003–2011), the price of the precious metal increased by 417%, stimulating the expansion of ASGM to a fifth of the global output—equal to an estimate of 400 tons (USAID, 2017). Defined as "low-tech, labor-intensive mineral exploration and processing" (Hilson & McQuilken, 2014, p. 104), the ASGM sector employs between 14 million and 30 million people, and contributes to the alleviation of poverty in gold-rich developing countries (Buxton, 2013; Labonne, 2014). However, the lack of government oversight and the persistently high prices for gold globally, has occasioned the

unrestrained expansion of mining camps, creating severe environmental and social problems, including the trafficking of persons for labor and sex.

However, the most recent data from the United Nations Office on Drugs and Crime (UNODC, 2018), indicates that the share of victims of trafficking for forced labor has remained stable at about 34% (compared to 59% for trafficking related to sexual exploitation, and 7% for trafficking related to other illicit activities). In its 2016 Global Report on Trafficking in Persons, the UNODC (2016) noted that over the last 10 years, the profile of victims has considerably changed: the ratio of forced labor (four out of every 10) and the number of trafficked male victims have increased from 13% in 2004 to a total of 21% in 2014. The most recent Global Report on Trafficking in Persons (2018) notes that more than half of the victims of trafficking for forced labor are men. The crime is also increasingly perceived as a domestic phenomenon, 42% of victims are trafficked inside their own countries (UNODC, 2016). Importantly, the 2016 report suggests that "traffickers and their victims often come from the same place, speak the same language or have the same ethnic background. Such commonalities help traffickers generate trust to carry out the trafficking crime" (ibid., p. 6). Another important aspect of the bond between traffickers and victims is that family ties play an important role in the perpetration of victimization. The 2016 report extrapolates that family ties are sometimes abused in situations when "relatives entrusted with the care of a family member … break their promise and profit from the family member's exploitation" (ibid., p. 10). Today, criminal justice practitioners globally become more aware of the diversity among victims and a large pool of the trafficking means, yet the policies of some countries, as this chapter will demonstrate, are often behind the changes.

McGrath (2013) examined trafficking in persons patterns within the global production networks (GPNs), focusing on the exploitation dynamics of sugarcane workers in Brazil. Her study serves as a testament to the fact that labor trafficking is part of the current global economic system that reproduces oppressive and degrading employment. To the GPN school of thought represented by McGrath, among other scholars (Barrientos, Kothari, & Phillips, 2013; LeBaron & Howard,

2015; Phillips, 2016), the fact that labor may be "voluntary" at the point of entry does not mean that the work relation would be consensual at a later stage. In this case, the person's prior consent to work for an employer is considered irrelevant—the employer becomes a trafficker and the employee is turned into a victim of trafficking. The notions of "consent" and "voluntariness" are questioned within this paradigm, which postulates that workers' vulnerabilities and lack of options explain why they agree to exploitative arrangements. These views are shared by advocates of a *global value chain framework* that focuses on the negative impact that global economics is having on labor standards (Crane, LeBaron, Allain, & Behbahani, 2019).

Unskilled miners are easy prey for traffickers. With a focus on the South African industrial gold mines, Sarah Steele highlighted the fine line that separates poor working conditions from trafficking in persons (Steele, 2013). She pointed out that there is a general assumption that abusive working conditions might constitute a violation of labor rights but not necessarily trafficking. Workers' vulnerability and lack of viable alternative options are disregarded as an explanation to accept abusive labor practices, but, as Steele (2013) clarifies, "if an employer exploits the worker's lack of alternatives, this could constitute abuse of power or a position of vulnerability, thereby fulfilling all three conditions (activity/means/exploitation) of the crime" (p. 668).

Adolescents and children are also an integral part of the mining workforce. In her key work on modern slavery, Alison Brysk expresses her concern over the expansion of child labor in the informal mining industry:

> Some 20% and 30% of the world's gold comes from artisanal mines through Africa, South America, and Asia [and] of the two million children who work in goldmines worldwide, many are forced, often through debt bondage, to do back-breaking work in hazardous conditions … Child laborers in gold mines face a number of dangers in: West Africa, children rub mercury into their hands before sifting soil through their fingers. In South America, children reportedly wash gold while standing in waist-deep water contaminated by mercury. Prolonged mercury exposure causes retardation, blindness, kidney damage, and tremors. (Brysk, 2012, p. 80)

Within the ASGM literature, the use of children in mining has been approached in the context of the subsistence livelihoods of families whose members, including children, resort to informal mining to escape poverty (Hilson, 2008; Maconachie, 2011). Children undertake dangerous work, often in hazardous conditions, which exposes them to extreme health and safety risks (ILO, 2015). Deprived of formal education and their habitual living environment, child victims of labor exploitation face serious difficulties to integrate successfully into society outside of the mining camps (Hilson, 2008).

Children are known to have been involved in services related to mining, including work in shops, restaurants, and motorcycle and tire repair. Exploitative practices in activities indirectly related to ASGM also include exploitation of women in sexual services. Very little attention has thus far been directed to the trafficking of men into extractive industries (particularly ASGM, most of which is either informal or illegal), and the role of mining camps as sex trafficking hubs. The urgent need for artisanal miners, however, creates distinct migratory patterns that also create a demand for sex workers, which in turn propels the trafficking of girls and young women to satisfy the demand in mining settlements (Hidrón & Koepke, 2014). "Criminal gangs, realizing the profits to be made from the sex industry around mines," are known to have turned to forcing, coercing, or deceiving women and girls into the sex trade (Steele, 2013, p. 666). As a result, there emerges "a toxic combination of vulnerable men and women," whose appalling exploitation tarnishes the reputation of artisanal mining and undermines its potential to create viable livelihoods for local communities (ibid.).

Exploitation of Male Workers in Peru's Artisanal and Small-Scale Gold Mining

Peru is the largest gold producer in Latin America, and sixth in the world with a registered volume of 166 tons in 2016, approximately 20% of which comes from ASGM operations (Torres Cuzcano, 2015). ASGM takes place in all 25 regions of the country, but in Madre de Dios ASGM comprises almost 80% of this volume, with an estimate of 20 tons per

year. In 2018, based on a study of satellite images taken between 1985 and 2017, the Center for Amazonian Scientific Innovation (Centro de Innovación Científica Amazónica, CINCIA) reported that in the last 34 years, ASGM has caused deforestation of over 95,000 hectares of rain forest in Madre de Dios (CINCIA, 2018). In addition to human trafficking, this sector has also been associated with organized crime, such as drug trafficking (Ambrus, 2016; GI-TOC, 2016, 2017; Verité, 2016).

It was not until 2010 that the Peruvian government reacted to the problem of ASGM. It enacted the Executive Order (No. 012–2010) designed to formalize informal gold mining and eradicate illegal mining sites located in protected areas and waterways. The government tried to toughen illegal mining laws, by means such as declaring ASGM an organized crime activity, and has offered incentives to illegal miners so they will register their activity. These legislative and policy initiatives involved 30 governmental agencies and included over 70 laws, primarily meant to promote mainstream formalization and eradicate illegal sites located in natural reserves or bodies of water.

The United States Department of State has repeatedly reported on the existence of male labor trafficking in the Peruvian ASGM in its *Trafficking in Persons Report*s. In February 2017, Peru signed a memorandum of understanding (MoU) with the United States, to reduce illegal gold mining and associated crimes, including trafficking in persons. The same year, the United States committed USD 5 million to fight child trafficking in Peru (US Embassy in Peru, 2017). In its 2018 report, the US Department of Labor listed Peru as one of the three countries[1] where gold is produced using forced labor by children and adults (US Department of Labor, 2018), while Verité (2016), an NGO dedicated to fighting against trafficking in persons, found evidence of widespread exploitation of miners for forced labor. In 2011, Gulnara Shahinian, the United Nations Special Rapporteur on Contemporary Forms of Slavery, visited Madre de Dios and recommended that the Peruvian government provide better safeguards to the mining workforce, many of which, she claimed, were living and working in slavery-like conditions (Shahinian,

[1]The other two countries are Burkina Faso and the Democratic Republic of Congo (DRC).

2011). For years, international humanitarian organizations have documented human trafficking cases associated with ASGM (Barrantes, 2014; CHS Alternativo, 2012; Global Witness, 2012; Mujica, 2014; Novak & Namias, 2009; Ojo Público, 2019; Salazar & Castro, 2018).

It is impossible to measure the extent of trafficking in persons in Madre de Dios. The area has attracted between 30,000 and 50,000 unskilled mine workers, most of whom are subjected to some degree of exploitation. The unskilled workforce of miners includes different categories of workers, such as *macheteros* (cutters) who clear trees before gold mining operations can be started, *carreteros* (carters) who transport rocks and clean soil, *buzos* (divers) who dive with hoses hooked to water pumps used to collect gold-bearing particles of sand (Verité, 2013). These workers spend hours submerged in pools of water contaminated with fuel, mercury, and other toxics (Picture 13.1).

Other types of semi-skilled workers are truck operators, as well as *maraqueros* who operate the pumps, 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 (ibid.).

In 2009, the IOM published the first report on the subject, providing testimonies that illustrated how miners were deceived and coerced (Novak & Namias, 2009). According to the IOM, they were recruited with the promise of being paid every three months, but their salaries were never paid. The following testimony reveals a dynamic that applies to the current state of affairs:

> We arrived, the patron Don Quispe (the boss) told us that they will pay us after every 90 days of work, and that for each 30 days, they will pay PEN 500 (approx. USD 148) so, after 90 days, we would had received PEN 1,500 (approx. USD 444). We were excited. We had never thought of earning so much money and for that reason we were very happy. We started working. After the 90 days, when we asked for our payment, the *chacal*[2] told us that the patron was coming over during the weekend. With that hope, we continued working. When the patron came, we asked

[2]The term *chacal* (jackal or wolf) is used to refer to middlemen in charge of operations, who are known for rendering brutal violence against their victims.

Picture 13.1 A *Buzo* diving in a search of gold (*Photo credit* Carmen Barrantes)

> him to pay us, he said that he was going to pay the following week. Two weeks after the agreed 90 days had passed, we started to complain and demand our payment. Every time that we went to ask for our money, the *chacal* threw us away, and if we insisted, he threatened with beating us up. (ibid., p. 51) [Excerpt translated from Spanish by the author.]

In 2014, the International Labour Organization (ILO) conducted a survey in the neighboring region of Cusco, from where most mineworkers are recruited (Sanz, 2015). The survey used the ILO's

forced labor indicators[3] to measure the extent of the problem. It found that 25% of the workers were deceived about the tasks they would perform once employed. Many were threatened with having their payment seized (13%), had their IDs confiscated (13%), or were locked down (2%). A quarter of the surveyed men had to pay back living expenses or cover the damage caused to equipment. Many miners were paid late (29%), or were not paid at all.

83% of miners working every single day in the mines (31%), some working 24-hour shifts (12%), were directly exposed to hazardous work conditions (e.g., explosions, landslides, exposure to mercury, and other toxic substances), had to work without basic safety equipment (e.g., boots, helmets, gloves, or masks), and had no health coverage. The survey also revealed that mining camps often had no access to drinking water, or the drinking water provided was too expensive. Under such circumstances, mine workers used to resort to consuming untreated water from the river or the pools created while digging for gold. Freedom of movement was also restricted. For 33% of mine workers, leaving the mining camp was also impossible due to the remoteness of the site, high costs of the scarce and dangerous forms of travel, or the absolute lack of transportation infrastructure. Almost half of them (43%) said that they were under surveillance by mine owners and their middlemen all the time while they worked and that they had restricted communication with their families.

The testimony by the United Nations Special Rapporteur on Contemporary Forms of Slavery (Shahinian, 2011) describes the trafficking process in detail:

> Men and adolescents are often recruited through deception, being offered working conditions and workers' rights that are subsequently not complied with in practice. Often, the workers receive advance payments in cash or goods during their first three months of work, which are

[3]The ILO's indicators have been categorized in the following way: (1) deception about the nature and condition of the work; (2) confiscation of identity papers or travel documents; (3) physical violence; (4) forced overtime; (5) limited freedom of movement or communication; and (6) withholding or delay of wages, or no freedom to resign in accordance with legal requirements (Sanz, 2015).

> then deducted from the salary, using a mechanism of overestimating the goods provided and underestimating the quantity and quality of the gold handed over, so that the worker is indebted to his "patron," a situation similar to the *enganche* system seen in the logging sector. They work long hours in very dangerous conditions, are exposed to toxic substances (such as mercury) and to serious diseases (such as malaria). Workers are poorly fed and have no form of labour protection or health and social security coverage. (p. 10)

Although the involvement of children in ASGM has been decreasing, the Special Rapporteur noted that around 20% of the miners in Madre de Dios ASGM were between 11 and 18 years old (ibid.). No different from adults, children were at risk of serious physical injury and harm to one's health. They breathed contaminated air and were exposed to polluted soil and water.

Internal Migration and Recruiting from Ethnic Diasporas

Although some sources originally reported on the involvement of professional human trafficking networks in the recruitment of mine workers in Madre de Dios, research based on field trips suggests the recruitment of mine workers is largely, though not exclusively, carried out by networks within familial circles and small local communities (Goldstein, 2014; Mujica & Cavagnoud, 2011; Verité, 2013). It echos Arhin's (2016) thesis on the *affective economy* of co-ethnic identification grounded on shared family, ethnic, and national identities, and affinities between the traffickers and their victims. Indeed, mine workers are not recruited by criminal syndicates but are enrolled by friends and family members in what workers perceive to be seasonal work. At the recruitment stage, they initially see their informal employment in gold mines as temporary and are willing to take the risk that the job may entail. In his research, Teodoro Sanz confirmed that 10% of the victimized miners were recruited by a family member, and 5% were forced to accept jobs in ASGM (Sanz, 2015).

The following testimonies support this point, exposing the interactions between victims, traffickers (*patrons*), recruiters (*uncles*), and intermediaries (*chacals/cooks*):

> My uncle[4] brought us in a truck to the town of Mazuko. We (me and two older brothers) were left with a woman. I was taken with him along the river, to the town of Laberinto. I was very scared of the river because I did not know how to swim. In Laberinto he left me with another man. He told him: "Here he is, give me the money." He told me that I should stay with that man to work. He, *el patron* (the boss) was from the city of Cusco. The man gave my uncle the money. I don't know how much. My uncle told me that if I do not listen, they would throw me to the river… I stayed there for five years. My uncle came from time to time, I believe every three months, to see if I was working and was given money. He came but said nothing to me. He just looked at me from afar. Martha (the cook) told me that I had been sold to the patron. I did not understand anything. (Novak & Namias, 2009, p. 51) [Excerpt translated from Spanish by the author.]

> When I finished helping in the kitchen, the *chacal* sent me to wash gold in the shaft. I didn't want to go, but Martha (the cook) helped me. She told the *chacal* that I was too young to be in the mine and that he should help. In that place they beat workers up with sticks when they do not work, and they throw stones at them to make them work harder. They also hit the cook's son. I did not play because I was scared to be beaten up… During that time, I was very scared. They hit hard those that did not want to work or did not follow orders. One day they almost killed a worker. His name was Leo. They said that he had stolen two grams of gold, but he said it was not true. They threw him in the well and almost drowned him. They kept beating him up with a stick, they kicked him hard. They left him badly wounded. (ibid., p. 55) [Excerpt translated from Spanish by the author.]

According to the 2014 census, 80% of the miners that run an operation in Madre de Dios were internal migrants, and 50% of those came from the neighboring region of Cusco, Southeastern Peru, which is

[4]The term *uncle* in Peru does not always relate to a blood relationship.

the place of origin of the largest majority of the workforce in ASGM in Madre de Dios. They are Quechua[5] speakers, brought into artisanal mining through family and community members. In the remote Quechua-speaking mountain regions, traffickers are able to trick parents into sending children with them. In doing so, they abuse the *padrino system*, "whereby wealthy land owners or distant wealthy relatives would offer to shelter, feed, and educate a child of a poverty-stricken family in exchange for that child's domestic labor" (Laser-Maira, Huey, Castro, Ehrlich, & Nicotera, 2018, p. 34). Poverty and cultural isolation make these communities particularly vulnerable to deception, and many of them are recruited to work in the mines by family members or acquaintances following the co-ethnic identification pattern.

With regards to poverty, the ILO reported (Sanz, 2015) that the monthly income of the Peruvian highlands, mainly in Cusco, was PEN 243 (approx. USD 70) per family in 2014. During the five years prior to the survey, 77% of those households had been affected by severe problems (drought, freezing, floods, illnesses, accidents, etc.), and many of them were burdened with loans they could not pay back (31%). About 2% of these individuals studied did not have any means of identification. With low levels of education and socioeconomic status, *indocumentados* do not have a National Identity Document (Documento Nacional de Identidad, DNI), which means that they cannot have any formal employment in Peru or elsewhere (Wells, 2014). "In other cases, the *indocumentados* are criminals, or people suspected of having committed a crime, who are running from the law and seeking refuge in the lawless environment of the mining camps. *Indocumentados* may thus be vulnerable to labor exploitation and/or individuals who prey on others as human traffickers, robbers, armed guards, or bouncers at brothels" (Verité, 2013, p. 38). Some of these individuals were threatened by mine owners that they would surrender them to the police if they revolted against the conditions of their employment, which were clearly exploitative (ibid.).

[5]The Quechuan languages are an indigenous language family spoken by the Quechua peoples inhabiting the Peruvian Andes.

As in the case of miners recruited from ethno-diasporas, such as the Quechua peoples, a very similar pattern of recruitment is used for bringing young women and girls into the sex trade to satisfy the demand for sex in the mining camps. In their research, Jaris Mujica and Régine Cavagnoud (2011) research found that the girls exploited in *prostibares* for sex were related to the owners of the restaurants who acted as their godmothers or aunts (Mujica & Cavagnoud, 2011). Through their cultural perspective, they protected their relatives, with exploitation being part of the custodial relationship and tutelage. Mujica and Cavagnoud (2011) concluded that, in the Pucallpa Port, sexual exploitation was a complementary economy to the beverage industry. Moreover, traffickers were not part of transnational networks, but local business owners that run their small restaurants and bars through family ties. In order to increase their profits, they included sexual services in their business portfolios. In her work on the sexual exploitation of women in Madre de Dios, Ruth Goldstein discovered that many of the sex workers had arrived at the mining enclave through sisters, cousins, aunts, and friends (Goldstein, 2014). She also noted that the *madams*, female masterminds of human trafficking networks, and their 250 sex workers shared co-ethnic bonds that brought about solidarity ties between them (ibid.). A Verité report concluded that human trafficking in the Peruvian ASGM is mostly carried out by family networks (Verité, 2013, p. 21).

Prostibares: Alcohol and Sex as a Means of Indirect Coercion

In the heart of the Peruvian Amazon, precious commodities, such as timber or gold, are smuggled through the Pucallpa Port located on the banks of the Ucayali River, on a daily basis. It is plagued with *prostibares*—hybrids between bars and brothels that operate without licenses in the mining camps and the settlements adjacent to them.[6] *El*

[6]It should be noted here that prostitution between adults (18 years of age and older) is legal for women and men. Commercial sex services can only be rendered if the providers are registered with municipal authorities and carry a health certificate. Brothels require a license to operate.

Papillón, *Miss Sagitario*, *El California*, *El Embassy* are some of the evocative names given to *prostibares*. There used to be about 400 *prostibares* in Madre de Dios in 2015, in each, between 5 and 25 women, many of whom were adolescents (Yori, 2015).

Women at *prostibares* are tasked to encourage the customers to order more drinks and are forced to drink with the miners to increase the profit of this parallel irregular beverage industry. They also have to provide sexual services if requested. *Prostibares* have become pivotal spaces where masculinity is exacerbated through alcohol consumption and sexual predation of adolescents and young women. As the night falls, the enticing lights and pictures of sexually provocative women make *prostibares* an attractive destination in the mining camps.

Instead of violence, which is a common means of coercion in cases of forced labor, debt bondage seems to be most commonly used against mine workers in Madre de Dios. Miners are unable to break the trafficking cycle because their prolific consumption of alcohol and sex makes them addicted, indebted and forced to borrow from middlemen, and thus trapped in the mining camp. Not only do miners typically have to work without pay for 90-days, supposedly because of recruitment and travel expenses, but they also accrue debts for alcohol and sex services in addition to food and lodging. Some miners work unpaid for periods that far exceed the 90-days just to complete the contract and leave because of the artificially created monetary bondage.

If traditionally, trafficked victims are exploited through coercive means, the ASGM subculture has integrated noncoercive, "soft" methods for coercing and retaining a workforce. They are susceptible to falling into the trap of alcohol addiction as a way to evade the hardship of a slave-like life. Adjacent to this, women, who are recruited from the Peruvian highlands following the same pattern, find themselves in a system that exploits them. Journalist Rosario Yori spent time undercover in Madre de Dios mining camps and visited some of the *prostibares*. In her writing, she shared Mariela's story:

> Mariela says that she just turned 18 in January. ("I'm a Capricorn," she also says with certain pride.) She has chubby cheeks, straight dark her, and an easy, childish smile. While she is talking to us, the waiter comes

> and hands her a piece of paper, a *ficha* (token), which Mariela keeps on her bra. For every drink she has with the customers, she gets a *ficha* from the owner, which she later cashes. The customers drink light beer, but the girls are only allowed to drink water, small glasses of wine, or dark beer. The drinks for the girls cost 20 soles. Only ten (USD 3) go to the girls. (Yori, 2015)

The sex trade is a parallel economy to ASGM. In 2019, the investigative platform *Ojo Publico* (Salazar & Castro, 2018) analyzed over 50 notebooks seized in military operations carried out between 2016 and 2017 in the Delta 1 and La Pampa mining sites in the Madre de Dios region. Based on the notebooks, they discovered a link between the clandestine sale of beer and the trafficking in girls and young women in La Pampa. In their careful analysis of *prostibares*' revenues, they revealed that women had to drink an incredible amount of alcohol—between 15 and 24 bottles of beer every day—and sell a minimum of PEN 240 (approx. USD 70) worth of alcohol from which they received PEN 48 (approx. USD 4.15). In another investigation, the Peruvian journalist, Gabriel Arriarán, studied a notebook of one of such bar, *The Embassy*. He learned that in just a little over two weeks, the bar made a gross income of almost PEN 50,000 (approx. USD 15,000), 75% of which came to the sale of beer. Up to 15% of the revenue was made by providing commercial sexual services (Frontera Pirata, 2018).

The illicit sex trade is at the core of what Cuvelier (2017) calls a "lifestyle of excess" characterized by a mining subculture where money, migration, and masculinity are celebrated through the exploitation of women. Mineworkers fall into debt bondage, where they are encouraged to spend what they earn wastefully just to prolong their exploitation. In this subculture, mine workers' exploitative labor is deeply intertwined with the sexual exploitation of women. These two forms of human trafficking feed on each other, blurring the boundary between mine workers, as victims of labor exploitation on the one hand, and mine workers as consumers of illicit commercial sex, thus promoting the sexual exploitation of women, on the other.

Peru's Steps Toward Bringing an End to Human Trafficking

Peru has made decisive legislative and policy-level steps toward the elimination of trafficking. It has signed and ratified the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children (Trafficking Protocol), along with other relevant international treaties, including the following ILO Conventions: The Forced Labor Convention (No. 29), the Abolition of the Forced Labor Convention (No. 105), and the Worst Forms of Child Labor Convention (No. 182). The Peruvian government also increased the penalties for crimes related to human trafficking. Article 153 of the Peruvian Penal Code prohibits all forms of trafficking in persons, with penalties up to 15 years of imprisonment. In January 2017, the Peruvian government, in its Legislative Decree No. 1232, amended the penal code with the introduction of the slavery offense (art. 153–C) and forced labor (art. 168–B) as other criminalized forms of human exploitation, prescribing sentences of more than 25 years in cases with aggravating circumstances, such victim's death while in an exploitative situation.

In addition to the legislative amendments, Peru has a comprehensive plan to bring an end to human trafficking: the National Plan to Fight Human Trafficking 2017–2021 (Plan Nacional contra la Trata de Personas, Plan Nacional 2017–2021). However, the limited budget for its implementation, mostly oriented to law enforcement measures (Montoya Vivanco, 2017), made the fulfillment of many anti-trafficking goals impossible. The cut in the anti-trafficking budget was particularly felt in the realms of victim protection and assistance to the rescued victims. For instance, between 2016 and 2017, the Peruvian police rescued 481 female victims of labor and sexual exploitation in *prostibares* from the Madre de Dios region. They were sent back to their places of origin without adequate legal, social, or psychological assistance. In her research, Barrantes (2016) exposed how the rescued women were often revictimized by the authorities, who placed them into appalling conditions at rescue centers where women were confined against their will. Many of the rescued women decided that trafficking, although exploitative, gave them a place to sleep and some money. Thus many of them

considered going back to the mining camps because of the lack of a viable alternative (Salazar & Castro, 2018).

As in many other countries, the Peruvian anti-human trafficking policy followed a security approach centered on fighting sexual trafficking of women being trafficked by international networks. With the time, and through key research such as the one carried out by Mujica and Cavagnoud (2011), it was generally accepted in the country that human trafficking was a predominantly domestic issue that complemented local economies, such as ASGM prominent in Madre de Dios. Yet the government policies, as for the allocation of resources mainly to law enforcement measures, failed to reflect this change.

In 2010, the Madre de Dios government supplemented the national policy for bringing an end to human trafficking with its own regional strategy to fight human trafficking that was updated in 2018. Following the principles and objectives set forth in the Plan Nacional 2017–2021, the Regional Plan Against Human Trafficking in Madre de Dios 2018–2021 (Plan Regional contra la Trata de Personas de Madre de Dios 2018–2021) included broad measures to harmonize the anti-human trafficking policy with the national attempts to formalize ASGM. However, this did not translate in tangible results due to the failure to direct financial and technical resources to the implementation of this strategy. It is anticipated that the enforcement of laws against crimes facilitating sex trafficking, such as illegal mining, could also help decrease the demand for illicit commercial sex services.

In May 2018, police and prosecutors conducted a raid in the mining town of La Pampa—allegedly the biggest illegal gold mining camp in the Amazon—that led to the arrest of seven suspected traffickers. In February 2019, the government launched a large-scale operation, called "Operation Mercury," to expel illegal miners from La Pampa, particularly the Tambopata National Reserve, where mining is strictly prohibited. In this long-term operation scheduled to last until mid-2021 at the very least, a mixed force of the police officers and soldiers was deployed: among the more than 1500 criminal justice sector officials involved in the operation, there were 20 police and 10 prosecutors from anti-trafficking units (ibid.).

In the raids carried out to destroy illegal operations and the makeshift settlements in La Pampa, law enforcement officials expected to rescue hundreds of women, but they only found 120, 63 of which were minors. After being rescued, these women did not receive appropriate support and protection, and many chose to move to other mining camps. This is the unfortunate outcome of the underfunded and incomplete policy, whereby the government of Peru carried out rescue operations without providing sufficient victim assistance programs. Among other policy gaps is that rescuing exploited male workers seems to have never become a priority. In the ASGM camps of the Amazon rainforest, male mine workers are often seen as the cause of social unrest, sexual exploitation, and environmental damage, rather than victims of labor exploitation. The Plan Nacional 2017–2021 contemplates all forms of exploitation, but it is mostly focused on problems related to the trafficking of women for sexual exploitation. The interpretation of human trafficking as a security problem primarily related to the sexual exploitation of women by human trafficking networks—as featured in several emblematic cases of Peruvian women trafficked to Japan, the United States, and several European countries—does not reflect the present reality.

Conclusion

The chapter examines the dynamics of exploitation within the ASGM workforce as part of the new geography of gold mining in the current global production system. Through the analysis of ASGM in the Peruvian Amazon, it exposes the emergence of a mining subculture where the workforce is exploited, not only through common coercive means, but also through noncoercive ones. This subculture is characterized by male workers trapped in a world of alcohol consumption and sexual predation, bringing harm to girls and young women, while putting themselves in debt to the point of no return. These exploited workers find comfort in *prostibares* (unlicensed bars/brothels), which become a pivotal part of the mining subculture, where money, migration, and masculinity shape working relations and encourage miners to spend what they earn, thus perpetuating the exploitation cycle.

In the ASGM sector, a new moral economy has emerged, characterized by the complexity of the interactions of different actors and the development of parallel irregular industries. Women are trafficked with the dual purpose of sustaining a booming illicit alcohol industry and to offer sex to miners. That said, and as it has been demonstrated for other parts of the Peruvian Amazon, the sexual services provided in *prostibares* are part of local economies based on selling alcohol, instead of lucrative businesses run by transnational crime networks, which we usually think of in relation to human trafficking. These subeconomies have become part of the ASGM landscape and are pivotal venues where the subculture takes shape. As such, artisanal mining in Madre de Dios is not just a male-dominated profession, it is a male-dominated, masculine or "machismo" subculture that promotes the exploitation of girls and young women.

Despite the fact that Peru's government officials refer to the human trafficking in Madre de Dios mining sites as a major issue, trafficking is still mainly perceived to be a form of sexual exploitation of women which were ought to be "rescued" while carrying out military operations aimed at eradicating illegal gold mines. The exploitation of male workers in ASGM has not been seen as a serious problem that requires both prevention, intervention (rescue), and victim assistance programs. The exploitation of men working in ASGM is deeply intertwined with the sexual exploitation of women. These are the two illegal economies that feed on each other, perpetuating the exploitation cycle. Any successful strategy to bring an end to human trafficking in Peru must take this complexity into account.

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CHAPTER 7

Peru: Curtailing Smuggling, Regionalizing Trade

Dolores Cortes-McPherson

7.1 Introduction

"I am like Pablo (Escobar), coming to Ecuador to get coke" boasted Juan Pablo Granda in an intercepted WhatsApp message (InSight Crime 2018). The skillful smuggler of gold likened his criminal acumen to that of the infamous Colombian drug lord, and while his charisma may have fallen short, the volume of the illicit business at stake did not. Granda was the operations manager and middleman for NTR Metals, a US-based refinery to which he helped smuggle over USD 3.5 billion worth of South American gold over a four-year period (2013–2017) (Castilla 2014; Gibbons 2017). Sourced from unregulated artisanal and small-scale gold mining (ASGM) in Peru, the mineral was laundered into the supply chain using shell companies. At first, it was shipped by air from Lima, but to avoid newly enforced controls deployed at Peruvian airports, in 2014 the merchandise began to be smuggled regionally by land into neighboring Andean countries before reaching its final destination.

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Granda is not the only unscrupulous character to have been associated with the gold industry in recent years. In 2017, Bloomberg dedicated an extensive feature article to the related case of the Chilean gold smuggler Harold Vilches. Headlined "How to Become an International Gold Smuggler," the piece unraveled the epic journey of the 23 years old Chilean who, at 19, had set up the largest gold smuggling ring in South America with a reach that extended to Dubai, and attempts to smuggle African gold. The allure of the story is such that Vilches, under police surveillance in Chile, signed a film contract with an award-winning Hollywood producer.

Granda and Vilches are part of a network of middlemen linked to one of the largest gold syndicates in South America. This case reveals how the gold production system mutates in response to regulations, highlighting the complexity of effective policy development. In 2012, the Peruvian government developed an aggressive strategy to regulate ASGM which, besides the formalization of mining operations, considered trade management measures including improved surveillance of the ways in which gold was exported to other countries. In 2013, the Peruvian authorities seized 508 kg of gold at the Jorge Chávez International Airport in Lima (Castilla 2014), which was waiting to be cleared and sent to six Refineries abroad. The seizure was a turning point. From that point on, smuggling networks began to move their gold "by motorcycle, by mule, by armored car, and never the same way" to its final destination in neighboring Andean countries (Reuters 2014).

Despite the media coverage, the way in which ASGM-gold finds its way into global markets has not attracted much academic interest. Taking the case of Peruvian ASGM, this chapter lays bare some of the dynamics in this critical section of the global gold production system. More precisely, it demonstrates how the gold trade has responded to policy measures destined to curtail smuggling. Rather than advancing the formalization of the gold trade, these policy measures have paradoxically contributed to the increased infiltration of illicit buyers, traders and exporters (FATF 2015; GIATOC 2017). This chapter uses secondary literature and data collected in the field as part of the author's Ph.D. research. It is divided in two sections. The first illustrates trends pertaining to the contraband of gold within the global production system. The second zooms in on the case of Peruvian ASGM to demonstrate the flexibility of the global production system in reacting to pressures. It ends with a discussion and conclusion.

7.2 Smuggling of Gold in the Global Production System

Much of the existing literature on illicit markets has overlooked the issue of gold. For example, it is notably absent from the list[1] of universally smuggled goods Hartnett and Dawdy's (2013: 43) compiled while examining the "archeology of the illegal and illicit economies" and Levi's (2018) inquisitive analysis of the anti-money laundering regime. Yet the gold economy exemplifies like no other Hartnett and Dawdy's claim that "most markets are grey, not black or white" (2013: 37), as part of a system in which formal, informal and illicit economies are interdependent (Halperin 1994). Illegally sourced gold is laundered and smuggled into the global market through a myriad of intermediaries. Before reaching its final destination, the mineral navigates multiple layers of actors across different countries. In this process, airports have become bottlenecks where gold can be seized, and illicit actors apprehended.

The Global Initiative Against Transnational Organized Crime (2016) identifies smuggling as occupying a unique position in the gold supply chain because it serves a dual purpose: generating profits and moving funds. Based on data compiled by the United Nations Office on Drugs and Crime and INTERPOL (2011), an estimated USD 2.3 billion worth of gold was laundered globally in 2010, but according to the 2016 report of the United Nations Environment Program Annual Report (2016: 7), ASGM global extraction and trade generates between USD 12 and USD 48 billion annually. In Latin America alone, this sector is worth an estimated USD 7 billion per year.

Gold is particularly appealing to criminal networks not only because it is highly lucrative, but also because it offers additional benefits: It transits between the legal and illegal sectors, can easily be blended into the legal economy and carries lighter sentences if detected (GIATOC 2017). Gold is, therefore, an extremely attractive vehicle for money laundering because it provides "a mechanism for organized crime groups to convert illicit cash into a stable anonymous, transformable and easily exchangeable asset to realize or reinvest the profits of their criminal activities" (FATF 2015: 3). Some drug trafficking organizations are already in the gold business in Peru and Colombia (GFI 2017; Rettberg and Ortíz-Riomalo 2016). In 2015, the Financial Action Task Force (FATF) published a special report on money laundering and terrorist financing associated with

gold which confirmed that organizations, such as Al-Qaeda, the Revolutionary Armed Forces of Colombia (FARC), the Liberation Tigers of Tamil Eelam (LTTE) and Hezbollah, were active in the gold economy (FATF 2015).

With that in mind, the intricacies of the gold trade undoubtedly present a challenge to policy makers. As it will be shown through the analysis of the ASGM regulatory process in Peru, measures taken to prevent the illegal export of gold ultimately stimulated unregulated cross-border trading with the participation of neighboring Andean states. A similar pattern of regionalization has been described within the Great Lakes Region (GLR) of Africa, where illegally sourced gold from Tanzania and the DRC is smuggled regionally to reach Refineries in the United Arab Emirates (UAE) (Geenen 2015). At the very end of the supply chain, India, the largest consumer of this metal worldwide has also witnessed how illicit actors have adjusted to regulations imposed to prevent the mineral being illegally introduced through its borders. These scenarios illustrate the changing nature of the global gold production system and how it adapts to new dynamics and players. The case of India, in particular, sheds light in that regard.

7.2.1 India: At the Other Side of the Production System

In 2013 the Indian government rose the import duty of gold by 15% to balance a record account deficit. This measure prompted a 300% increase in its contraband and the emergence of syndicates which, in 2014, smuggled 700 kg of this metal daily. Gold made its way into the country by air hidden in hand luggage and body cavities and by other methods used to circumvent customs controls at airports (BBC 2014). The syndicates use trade misinvoicing, a practice that the Global Financial Integrity (2019) estimates accounts for more of 87% of measurable illicit financial flows worldwide, to smuggle large quantities of gold. They also make use of diasporas to transport the mineral within the vast air traffic landscape in such a large and densely populated country. The *modus operandi* of these syndicates is illustrated in more details in the following example (FATF 2015).

In 2014, the French Police carried out an investigation into a syndicate being run by an Indian national and involving five countries: Morocco, Belgium, the United Arab Emirates UAE, London and India. The profitability of this illicit business rested on the conversion and resale of

untaxed smuggled gold. The metal was purchased at EUR 31 per gram in Belgium and resold for EUR 36.32 per gram in Dubai or India (FATF 2015). The syndicate bought the gold in Belgium with cash obtained in France from the sale of Moroccan cannabis (EUR 10 million in a six-month period). The investigation established two main routes. In the first, gold was sent to Dubai where it was laundered and officially exported. In Dubai, the metal was declared to customs using false invoices. In the second, gold was transported from Belgium via the hub airports of Bangkok and Singapore. In both routes, tickets and fake documentation provided by an Indian-based travel agency were distributed to family members who carried the mineral with them on the airline. The investigation traced up to 200 tickets used by the same person traveling between Dubai and India over a four-year period.

> On receipt of the money, the Indian national arranged the transportation of the cash by car to Belgium where it was used to purchase gold and jewelry. The bulk of the cash was deposited in cash into the different accounts of companies associated with an identified gold trader and used to purchase gold from a wholesaler. False invoices generated by the Indian national (in the name of companies set up by him) were used to support the transactions on the gold coins and ingots as well as gold certificates. (FATF 2015: 7)

India has clearly become a major player in the global gold production system. It is now the largest purchaser of Peruvian gold with a 30% of the registered production, that is a 53% increase from the previous year. India's share of Peruvian gold exports is above traditional buyers like Switzerland and the United States whose imports declined by 12 and 5%, respectively (SIICEX 2019). Another key actor in this system is the UEA, whose gold imports increased from 67 tons (worth USD 1.6 billion) in 2006 to 446 tons (worth USD 15.1 billions) within ten years (Reuters 2019). Dubai has managed to capture 25% of the global gold trade in spite of Resistance from the London Bullion Market Association (LBMA) which has repeatedly raised concerns over Dubai's weak customs procedures and reputation for hand-carried gold smuggling; however, this reaction can also be interpreted as an attempt to maintain the status quo in a global gold market dominated by the LBMA-listed Refineries.

The core of the gold production system lies in gold-rich countries, a fifth of the mineral being sourced in the unregulated mines of developing countries. In Africa, the Tanzania Mineral Audit Agency (TMAA) was created in 2009 to monitor smuggling. To do so, the agency established auditing desks and special agents in main airports. Located at departure gates with additional X-ray machines, TMAA agents are vigilant to suspicious passengers. The units target special flights, mainly those heading to the United Arab Emirates (UAE) and India (Blore 2015). To avoid these controls, smugglers began to send the gold through Kenya and within the Great Lakes Region.

7.3 The Regionalization of the Peruvian ASGM Commodity Frontier

In 2013, Peru ranked among the top 20 best performing countries on the anti-money laundering index issued by the Basel Institute on Governance. According to Mújica and Galdós (2016), however, the ranking did not accurately indicate the extent of the problem or the effectiveness of the National Plan to Combat Money laundering because it measured policy design without considering whether laws had been enforced. The Basel Institute has since readjusted its figures, and the Andean country has been repositioned to better reflect the extent of its illicit financial flows. In the organization's last report, Peru ranked 58th out of 125 countries (Basel Institute on Governance 2019).

The new score is undoubtedly related to improved and more accurate data gathering and processing. That said, it was only in 2012 that the Peruvian Financial Intelligence Unit (UIF) added illegal gold mining to the list of items associated with money laundering. In the space of only three years (2012–2015), the UIF registered USD 4299 million linked to this sector. This amount was almost half of the money illegally injected into the economy from 2007 to 2015, a total of USD 11,187 million. To some analysts, illegal mining seems "to generate more dirty money than drug trafficking" (Poder 2015) in a country that is one of the world's leading producers of coca (Zevallos Trigoso 2017). Over seven years, USD 5125 million was accounted for by the drug economy compared to the USD 4299 of the gold economy in the space of only three years.

Article 3 of the National Mining Law (4 June 1992) states that the commercialization of gold is free in Peru. That is, anybody can buy the metal provided they obtain a traceable receipt for its purchase. Peru is

the largest gold producer of South America and ranks sixth in the world with an average extraction rate between 160 and 200 tons per year, 20% of which is sourced by ASGM. The country is considered a new gold giant, a testament to the commodity frontier's rapid expansion through ASGM. This informal sector employs 150,000 miners and provides indirect work to 300,000–500,000 people (Salo et al. 2016). To the Peruvian economist Victor Torres Cuzcano (2015) the industry is worth an average of USD 1315 million per year, a figure that amounts to between USD 3 billion and USD 5.6 billion according to The Global Initiative Against Transnational Organized Crime (2016: 18).

7.3.1 The Peruvian ASGM Regularization Attempt

In 2012, the Peruvian government launched a comprehensive strategy to regulate ASGM. Despite the industry's contribution to the economy and its potential to create employment opportunities for the poor, it has detrimental environmental and social impacts due to its unregulated nature. The ecological harm has been particularly widespread in the area of Madre de Dios where 110 points of illegal extraction were identified in a newly compiled map of illegal sites within the Amazon basin (RAISG 2019). ASGM leads to the deforestation and pollution of forests and rivers, and it is especially detrimental to the ecosystem due to the extended use of mercury. Mining in protected areas and water bodies is illegal in Peru, two restrictions that affect Madre de Dios greatly due to the wealth of its biodiversity and the fact that its richest deposits are along the Amazon river and its tributaries. ASGM in this Andean state has also been linked to sexual and labor exploitation, and human trafficking of children, women and men (Cortés-McPherson 2019b). In some areas, the activity becomes increasingly violent with the infiltration of criminal organizations that control access to mining camps (El Comercio 2017).

Peruvian ASGM policies are in line with the international mainstream, assuming that formalized miners will comply with fiscal, environmental and social requirements (Geenen 2012; Siegel and Veiga 2009; Verbrugge 2015). Yet, as has been the case in other countries, the Peruvian formalization process has not been successful (Salo et al. 2016). In 2012, over 74,000 miners signed up to formalize their operations, but 7 years later no real settlement was reached between them and the state. Although

the number of licensed miners has since increased, the process of formalization, mainly understood as the acquisition of "full legal and transferable mining titles to their claims" (Barry 1995), remains hampered by bureaucratic obstacles and structural limitations within the land regime (Damonte 2016, 2018; Dargent and Urteaga 2016; Pachas 2012; Perz et al. 2016).

For over a decade, Madre de Dios was responsible for 80% of the informal gold extraction in Peru. This extraordinary productivity can be partly explained by the emergence of small-scale mining entrepreneurs (Fisher 2007; Verbrugge 2014) who managed to accumulate capital, and introduced division of labor and the use of heavy machinery (Cortés-McPherson 2019a). These first miners, who had migrated from the Peruvian highlands to Madre de Dios in the early 1970s, were followed by successive waves of gold rushers with whom they competed for land. Madre de Dios has been the main focus of the eradication policy implemented by the Peruvian authorities since 2012, but military operations often targeted old miners, many of whom were already engaged in previous formalization processes. Thousands of police officers were deployed to the area in repeated military interventions which led to protests and deadlocks (GOMIAM 2015). In 2019, three military bases were established in La Pampa, an area where violence had escalated out of control.

Together with policies designed to formalize extraction and eradicate illegal mining sites, regulations to prevent the smuggling of gold were also enforced. Activos Mineros SAC was appointed as the official entity to buy gold sourced from ASGM (decree 012-2012-EM). A cadastre portal for gold traders (249-2013-EM) was enforced, and new rules were issued to control land routes and airports. Control checks were strengthened in the cargo areas of the Jorge Chávez International Airport in Lima, and detectors were installed in X-ray machines to find high-density metals carried by passengers. A task force was created[2] to improve surveillance at the airport, which is a South American hub. In addition to cargo surveillance, X-ray detectors for high-density metals were also installed in the key domestic airports of Cusco, Juliaca, Arequipa and Madre de Dios, disrupting the complacency with which passengers carried gold on domestic flights.

7.3.2 *Airports as Bottlenecks for Smugglers*

Approximately 80% of the ASGM-gold has historically been shipped through the Jorge Chávez International Airport via commercial cargo carriers or in hand luggage (El Comercio 2014) and, thus, particular emphasis was placed on monitoring this route. As a result, from the end of 2013 to June 2015, the Peruvian National Custom and Tax Administration Superintendence (SUNAT) seized USD 37 million in 35 interventions at the facility (Congreso Peru 2015). Investigations conducted by the country's Financial Intelligence Unit also led to the identification of shell companies stored their merchandise at the airport. In December 2013, law enforcement officials seized 508 kg of gold awaiting shipment to six Refineries abroad.

During these operations, another web of local intermediaries was exposed. The Peruvian District Attorney's Office for Anti-Laundering Crimes of the Public Ministry identified a money laundering organization that smuggled 13,289,107 kg of gold worth USD 626 million between April 2012 and April 2016 (Caretas 2017). The head of the network was Pedro David Pérez Miranda, a character well-known to Peruvian law enforcement officials and the media. An intermediary between the miners and the Refineries, Miranda was nicknamed *Peter Ferrari* due to his inclination for expensive cars and luxury goods. On the day he was sentenced to 18 months in jail, Miranda stated: "I have always been very proud that all the gold I have exported is legal. It might be informal, but it is legal" (Caretas 2017).

7.3.3 *The Regionalization of the Gold Commodity Frontier*

The new restrictions on trade provoked a 70% decrease in Peruvian gold exports (Gibbons 2017). Accordingly, other neighboring countries of the Andean region increased their trade. Bolivia acquired a special role in this context. A small producer, between January and August 2014, the country exported 24 tons of the metal, six times more than it had produced in the first seven months of 2014, and more than tripling its 2013 gold exports (Reuters 2014). Bolivia's southern border extends 1000 km along the most productive ASGM regions in Peru, Madre de Dios and Puno, from which the mineral was smuggled by land into Bolivia taking advantage of the porous borders between the two countries.

According to one local dealer, in a testimony published by Reuters, the gold was transported into Bolivia by motorcycle, mule, armored car and by plane using light aircraft. The latter method was the safest "to avoid losing a consignment to bandits stalking lawless borderlands" (Reuters 2014). The volume of the cross-border trade was such that shipments were restricted to 200 kg so as not to risk unbalancing the plane. In a new twist of events, the Peruvian gold smuggled into Bolivia was once again transported to the global market using Lima's Jorge Chávez International Airport. In 2014, suspicious commercial flights from Bolivia carrying 35 tons of gold stopped over at the Peruvian airport en route to their final destination (Castilla 2014).

Thus, these trade management policies when coupled with investigations into money laundering have had a significant impact. In particular, measures directed at improving Peruvian airport surveillance prompted an adjustment of ASGM-gold trade patterns, which generated increased interaction between the formal, informal and illicit sectors. This point is neatly illustrated by the case of the US refinery that closes the chapter.

7.3.4 Global Refineries and Their Intermediaries

NTR metals made international media headlines, such as: "Peru Crackdown on Illegal Gold Leads to New Smuggling Routes" (Reuters 2014) and "Peru-Us Gold Case Show How Importer Shifted Gears" (InSight Crime 2017). The case was extensively documented. According to a US Homeland Security Investigation, between 2012 and 2015, NTR bought USD 3.6 billion worth of gold in Latin America. The US-based refinery started to buy Peruvian gold in 2012 and had imported USD 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 Metals. That marked a turning point.

> Controls and checks intensified as a result, leading to a massive decline of NTR's imports from Peru - from an estimated $980 million in 2013 to only $79 million in 2014. Nonetheless, illegal gold routes only took another path. Peruvian smugglers began moving illegally mined gold into neighboring countries, from which the minerals were sent to the United States. As figures from the affidavit show, after Peru's illegal gold crackdown, NTR imports from Ecuador and Bolivia grew by $485 million. At the same time, the US company imported gold from other countries

> in the region, most notably Colombia, as well as Chile, Guyana and the Caribbean. (InSight Crime 2017)

In order to continue purchasing Peruvian ASGM-gold, the refinery resorted to involving informal and illegal actors capable of navigating the obstacles they encountered. A web of middlemen negotiated on their behalf in the Andean region.

> Authorities believe that Granda and his associates cut off competitors by offering quicker payments to costumers, and personally traveled to Peru and neighboring countries to meet with their sources of illegal gold. (InSight Crime 2017)

Intercepted WhatsApp messages indicate that members of the firm back in the United States were aware of the illegal nature of the gold business. As mentioned earlier in this chapter, in one of the messages, NTR operations manager, Juan Pablo Granda, compared himself to the Colombia drug lord Pablo Escobar. In other exchanges, NTR employees made references to the use of "mules" to carry the gold out of Peru. As Homeland Security Investigations (HSI) Special Agent Colbert Almeida wrote in an affidavit filed in March 10, 2017, the refinery sent the money "with the intent to promote the carrying on of organized criminal activity, including illegal gold mining, gold smuggling and the entry of goods into the U.S. by false means and statements, and narcotics trafficking" (InSight Crime 2017) an indication of how licit and illicit buyers, shell companies and Refineries reacted to the restrictions on transporting gold.

7.4 Discussion and Conclusion

This chapter has outlined how ASGM-gold ends up in international markets as part of the global gold production system, a topic that has not yet received sufficient scholarly attention. It has demonstrated the flexibility of the ASGM trade and its network of intermediaries in the face of external pressures. Paradoxically, efforts on the part of the Peruvian state to root out illegal cross-border smuggling using commercial flights have enabled the emergence of a clandestine regional gold trading system that offers ample opportunities for unscrupulous entrepreneurs.

These findings have important policy implications and serve as a stark reminder that policies aimed at formalizing ASGM need to look beyond

mining and approach the gold production system as a whole. Comprehensive policy development will need to acknowledge this complexity in order to reach political settlements among the various industry actors. The Peruvian case demonstrates the fact that measures aimed at improving trade management have proven to be effective in terms of seizing merchandise and disrupting the modus operandi of networks. In particular, as the chapter highlighted, airports are critical avenues to preventing the illegal transportation of gold overseas. But effective trade management will only be successful in conjunction with money laundering investigations and surveillance of illicit financial flows associated with the industry. In addition, more attention needs to be paid to strengthening customs procedures and border management.

Finally, this chapter also reveals the changing narrative of the gold economy in parallel to the expansion of ASGM worldwide. The informalization of gold production and the dynamics involved in smuggling the mineral has resulted in a growing infiltration of illicit intermediaries contributing to a narrative in which the gold economy is increasingly perceived as illicit or illegal. This factor further complicates the already difficult process for effective gold management and successful regulatory attempts within the global gold production system.

Notes

1. The list include: tobacco, alcohol, tea, drugs, cotton, wool, pepper and butter.
2. The task force was composed by the public and private institutions in charge of managing the Jorge Chavez International Airport. The public ones being: Customs, the Money laundering Unit of the Ministry of Justice, the Financial Intelligence Unit and the National Reserve Bank, and the private involving airlines and the conglomerate Lima Airport Partners.

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