Bridging the Divide Between Large-Scale Mining and Artisanal and Small-Scale Mining: The Acupan Contract Mining Project in the Philippines.

Abstract: *This article zooms in on the increasingly conflictual relationship between large-scale mining and artisanal and small-scale mining (ASM). It starts off with a critical review of existing evidence, suggesting a trend towards negotiated arrangements that aim to accommodate the interests of ASM as well as large-scale mining. Drawing on empirical evidence from the Acupan Contract Mining Project (ACMP) in the Philippines –a country that has similarly witnessed an increase in conflicts between ASM and large-scale mining– it is then argued that these negotiated solutions inevitably reflect, and may even reinforce, historically rooted inequalities. In addition to confirming earlier observations about the power imbalance between ASM and large-scale mining, critical attention is also drawn to inequalities within the ASM-sector, particularly between the ASM-workforce and a nascent ASM-elite. To remedy this situation, attempts to devise arrangements between ASM and large-scale mining need to be complemented with efforts to redress inequalities within the ASM-sector.*

1. INTRODUCTION

In recent decades, countries such as Tanzania, Bolivia, Ghana and Indonesia have witnessed a simultaneous expansion of capital-intensive large-scale mining (LSM) and low-tech, labor-intensive artisanal and small-scale mining (ASM). In many of these so-called ‘dual mining economies’ (Banchirigah, 2007; Hilson & Gatsinzi, 2013; Okoh, 2013), ASM and large-scale mining are now competing-, and in some instances even clashing, over access to mineral deposits (Hilson, 2002; Hilson & Yakovleva, 2007; Carstens & Hilson, 2009; Geenen & Claessens, 2013; Patel et al., 2016). A growing number of experts are now proposing negotiated solutions to these conflicts, which may range from basic ‘live and let live’ arrangements, to full-blown partnerships between mining companies and ASM-operators. Proponents of these arrangements, including influential institutions like the World Bank

(2009), emphasize the mutual benefits involved for both parties, which may include improved local security and legitimacy (for large-scale mining), legal recognition, and/or better access to markets (for ASM-operators). Critics, meanwhile, draw attention to the power imbalance between ASM and LSM, which is rooted in a neoliberal world order and a legal system that favors LSM-expansion, and which would need to be redressed before negotiated arrangements can become truly transformative (Aubynn, 2009; Hilson, 2013).

While lending further credence to these critical views, this article takes the critique one step further, by problematizing dominant views of a dual mining economy bifurcated between a modern and capital-intensive large-scale mining sector on the one hand, and a traditional and subsistence-oriented ASM-sector on the other. Not only do such views fail to entertain the possibility of historical and functional linkages between ASM and large-scale mining, they also fail to meaningfully differentiate within the ASM-sector (Verbrugge, 2015a). In many countries, the ASM-sector is no longer populated solely by traditional and subsistence-oriented 'smallholder miners'. Instead, growing evidence from a number of countries now indicates that it boasts an entire range of mining practices with varying degrees of capitalization and mechanization (Verbrugge, 2014; Ferring et al., 2016), with a fairly advanced division of labor, and with a growing differentiation between the ASM-workforce and a class of employers-cum-financiers (Fisher, 2007; Ojukutu-Macaulay & Keili, 2008; Verbrugge, 2015a). Building on these critical observations, it will be demonstrated in this article that negotiated solutions to ASM-LSM conflicts inevitably reflect, and even risk reinforcing, historically rooted inequalities between LSM and ASM, but also within the ASM-sector.

To develop this argument, section two of the article provides a critical overview to the ASM-LSM conundrum, and introduces the idea of 'negotiated solutions' to the increase in ASM-LSM conflicts. Section three starts with a historical introduction to ASM-LSM relations in the Philippines, before proceeding with a case study of the Acupan Contract Mining Scheme, a 'partnership' between Benguet Mining Corporation and small-scale gold miners in the north of the country. It will be demonstrated

that, while the company and selected ASM-interests (particularly ASM-contractors and -financiers) benefit rather handsomely from this arrangement, it is exerting strong downward pressures on the revenue share of the workers, who are subjected to an oppressive labor control regime.

2. THE ASM-LSM CONUNDRUM

2.1. The simultaneous expansion of ASM and LSM

Since the 1980s, as part of a broader logic of structural adjustment and liberalization, numerous countries have implemented investor-friendly mining laws (Bridge, 2004; Banchirigah, 2007). As a result, while traditional mining countries like Canada, Australia, South Africa, and the US still attract a substantial share of LSM-investment, we have also witnessed the emergence of new mining destinations like Peru, Chile, Indonesia, Ghana, Tanzania, Indonesia and Papua New Guinea. As mining projects in these countries penetrated increasingly remote frontier regions, heated debates unfolded over the relationship between mining companies and local (indigenous) populations, and more broadly about the impact of mining on development (Ballard & Banks, 2003; Pegg, 2006; Bebbington et al., 2008).

One factor that has long remained overlooked in these debates is the fact that many of these new mining countries are also home to a sizeable ASM-population. Paradoxically, the massive expansion of ASM since the 1980s was partly a by-product of the same logic of liberalization and structural adjustment that aimed to attract foreign LSM-investments (Hilson & Potter, 2005; Banchirigah, 2007). More precisely, the dramatic impact of structural adjustment on (smallholder) agriculture and public sector employment meant that a growing number of poor and unemployed were forced to look for alternative livelihood opportunities (Bryceson, 2002). In the mineral-rich regions of the developing world, ASM was one of the more accessible and viable livelihood options. Moreover, in countries like Ghana (Hilson & Potter, 2005), the DRC (Geenen, 2011), Bolivia (Salman et al., 2015), and the Philippines (Verbrugge, 2015a), the dismantling of 'inefficient' state-led mining companies gave further impetus to ASM-expansion, by releasing a pool of (semi-)skilled mining labor. So far, these

observations are in line with a dominant ‘poverty-driven’ view of ASM, which treats it as wholly distinct from LSM, and composed of self-employed individuals engaged in traditional, low-tech, and mostly informal mining activities. As argued elsewhere (Verbrugge, 2015a), this poverty-driven view is in line with dominant dualistic views of informal sector activity, which treat it as comprised of *“marginal activities –distinct from and not related to the formal sector – that provide income for the poor and a safety net in times of crisis”* (Chen, 2008: 22).

Yet evidence from a growing number of countries, including Brazil (Cleary, 1990), Suriname (Clifford, 2009), Tanzania (Fisher, 2007), Ghana (Ferring et al., 2015) and the Philippines (Verbrugge, 2014) suggests that ASM is a highly heterogeneous phenomenon, not only in terms of the types of activities and their level of mechanization, but also in terms of the division of labor, and a growing differentiation between the ASM-workforce and a class of financiers-cum-employers. Furthermore, in countries like Tanzania and the Philippines, the capitalization of ASM has given rise to complex revenue-sharing mechanisms that favor those with capital, and to a lesser extent those with valuable skills (Fisher, 2007; Verbrugge, 2015a).

2.2. Legal complexities and the licensed exclusion of ASM

Confronted with this growing ASM-presence, many countries have undertaken attempts to regulate the sector. However, these formalisation efforts, which have mostly been directed towards the recognition of mineral tenure rights (Verbrugge & Besmanos, 2016), have largely failed to materialise, so that most ASM continues to take place without government recognition (Siegel & Veiga, 2009). The persistence of informality in the ASM-sector is partly the product of fiscal-administrative barriers that prevent ASM-operators from obtaining the necessary permits and licenses (Hentschel, Hrushchka & Priester, 2002). Arguably more importantly, LSM-companies often take precedence over ASM in the awarding of mineral rights (Hilson, 2013), and in several countries ASM-legislation was a ‘legislative afterthought’ (Banchirigah & Hilson, 2010), introduced long after liberal mining legislation enabled LSM to monopolize access to mineral-bearing land.

In short, in addition to being plagued by a series of complexities and inconsistencies (Spiegel, 2012; Verbrugge, 2015b), legal regimes for the mining sector are often skewed in favor of (multinational) LSM-interests to the detriment of ASM (Hilson, 2013). In an increasing number of cases, the legal claims of LSM-companies are now overlapping with the informal claims of ASM-operators (Patel et al., 2016), which put the latter at risk for being dispossessed (Ayelazuno, 2014). Hence, by sanctioning the 'licensed exclusion' (Hall et al., 2011) of ASM-operators, governments across the global south play a key role in the continued marginalization of ASM-operators.

2.3. ASM-LSM interactions

There is a strong tendency to frame the relationship between ASM and LSM in terms of competition, with both parties seen to struggle for control over the same mineral resources (Okoh, 2013; Patel et al., 2016). In addition to its dominant position in the politico-legal sphere, analysts emphasize that LSM manages to gain the upper hand over its ASM-counterparts using a combination of financial power; access to geological knowledge and to modern mining technologies; and sheer force, either at the hands of state security forces and/or -company guards. For Carstens and Hilson (2011), this situation fuels grievances among ASM-operators, which increases the likelihood of violent conflict with LSM. In addition to the well-reported conflicts between ASM and LSM in Tanzania (Carstens & Hilson, 2011) and Ghana (Hilson, 2002; Hilson & Yakovleva, 2007; Okoh, 2013; Patel et al., 2016), a range of other countries have also witnessed incidents between rights-wielding LSM-companies and ASM-operators (World Bank, 2009).

Transcending this preoccupation with outright ASM-LSM conflict, several authors provide us with detailed, empirically rich case study evidence of ASM-LSM relations in countries like Tanzania (Chachage, 1995), the DRC (Geenen & Claessens, 2013) and Burkina Faso (Luning, 2008, 2014; Mégret, 2011). These accounts demonstrate that, rather than 'a simplistic contrasting of small-scale mining and large-scale mining' (Mégret, 2011: 394), ASM-LSM interactions often involve an entire range of actors and relations that cut across the ASM-LSM divide. Furthermore, ASM-LSM relations may change

throughout the mining cycle. During the exploration phase, they often involve a high degree of tolerance, and mining companies may use ASM-operators as 'pathfinders' (Luning, 2014) or as 'barefoot geologists' (Carstens & Hilson, 2011). And while relations often deteriorate when LSM moves into the production stage, mining companies may still opt to tolerate ASM-operators in marginal parts of its concession, rather than attempting to evict them altogether.

Chachage (1995), in his highly critical account of the 'politics of accumulation' in the Tanzanian mining sector, also provides important insights into the nature of ASM-LSM relations. Since the national crisis of the 1970s and 1980s –which also wreaked havoc in the state-led mining sector– ASM emerged as a popular survival economy, and as a site for accumulation for a nascent class of financiers. Yet at the same time, the government created 'a favourable protective environment for so-called large-scale miners' (82). 'So-called', because most of the companies that obtained a permit did not directly engage in mining activities, but ended up in 'speculative investments, combined with the buying of minerals from "small-scale" miners' (Ibid.). This leads Chachage to suggest that 'What has occurred is essentially the selling off to foreign companies of the right to levy rents on local small-scale mining' (Ibid.). This situation is now leading to a growing antagonism between ASM and corporate claim-holders.

Still others situate ASM-LSM relations in a context of legal pluralism, or the coexistence of two or more legal systems (Merry, 1988). More precisely, while LSM-claims are usually based on statutory law, ASM-operators often refer to traditional, customary land tenure systems in defense of their mining rights (Hilson & Yakovleva, 2007; Nyame & Blocher, 2010; Geenen, 2014). For some analysts ASM, and the ways in which it is rooted in traditional, community-based economies and land tenure systems, should be seen as a form of bottom-up resistance against a neoliberal development paradigm that prioritises LSM-expansion to the detriment of local 'mining communities' (Lahiri-Dutt, 2004; Bush, 2009).

What all of these authors share is a strong conviction that ASM-LSM relations are characterized by a power imbalance that is rooted in legal structures and a global neoliberal order enforced by the state

and its coercive apparatus. There is also widespread agreement that as long as this situation persists, relations between rights-wielding companies and ASM-operators will remain tense, and may even involve violence. Furthermore, most of analysts emphasize the need to organize and subsequently formalize ASM as a basis for redressing this power imbalance, and moving towards more sustainable ASM-LSM relations (Aubynn, 2009; Carstens & Hilson, 2011; Hilson, 2013).

2.4. Towards a negotiated solution?

Recognizing these realities, a growing number of analysts, policymakers and development practitioners have grown sympathetic towards the idea of a negotiated solution to ASM-LSM conflicts. Geenen (2014: 99), concluding her analysis of ASM-LSM relations in a mining concession in the eastern DRC, advises that 'both the company and the government ought to take due account of their position with a view to attaining a sustainable solution based on a model of coexistence between (former) artisanal miners and industrial concerns.' Similarly, based on their assessment of the Tanzanian situation, Carstens and Hilson (2009) propose that mining companies extend assistance to ASM and/or relinquish parts of their concession to those displaced by LSM-operations. In 2009, the World Bank published a report entitled 'Mining Together: Large-scale Mining meets Artisanal Mining'. 'Mining together' contains a tentative list of actions that LSM-companies can take to improve relations with ASM, which may range from simply tolerating ASM, over providing it with technical- and legal support, to full-blown marketing- and outsourcing arrangements. 'Mining Together' evaluates ASM-LSM arrangements in a very positive light, emphasizing the mutual benefits involved for both LSM (e.g. increased local acceptance and diminished political risks) and ASM (e.g. outside assistance and legal recognition).

Andrew (2003) and Echavarria (2014), while principally sympathetic towards ASM-LSM arrangements, adopt a more critical stance. Recognizing the power imbalance between both parties, they emphasize the importance of transparency, as well as the involvement of a neutral third party. For Andrew, this third party should be non-governmental, since the government is a key stakeholder in ASM-LSM

relations. Aubynn (2009) provides a critical evaluation of the 'live and let live approach' adopted by Abosso Goldfields in Ghana, which consists in selectively tolerating- and engaging with organized ASM-operators in 'marginal parts' of its concession. While recognizing the mutual benefits involved, Aubynn is skeptical with regards to the company's commitment to this approach, which might become obsolete once mineral prices go up and 'marginal' areas suddenly become profitable.

In the remainder of this article, I zoom in on the situation in the Philippines, a country that has similarly witnessed a simultaneous expansion of ASM and LSM. In the first instance, the Philippines case lends further credence to the findings discussed so far, with a power imbalance between ASM and LSM that is rooted in legal structures and a neoliberal policy paradigm; as well as a highly complex set of interactions between ASM and LSM on the ground. At the same time, my analysis underscores the need to differentiate within the ASM-sector, and to analyze the current ASM-LSM conundrum against the background of historical trends in the mining sector. To substantiate these claims, I present a critical case study of the Acupan Contract Mining Project (ACMP). This case study forcefully demonstrates that negotiated solutions to ASM-LSM conflicts inevitably reflect historically rooted inequalities in the mining sector, both between LSM and ASM, and within the ASM-sector.

3. ASM-LSM RELATIONS IN THE PHILIPPINES

3.1. Historical background: the simultaneous expansion of ASM and LSM

Historical accounts indicate that artisanal mining has a centuries-old tradition in the Philippines in the Cordillera mountain ranges in the north of the country (Caballero, 1996). This 'traditional' mining sector was firmly embedded in regional networks dominated by Chinese traders, and emerged largely intact from Spanish colonialism (1521-1898) (Habana, 2000). It underwent significant changes during the American colonial period (1898-1940), when 'unsystematic and fanciful prospecting' (Habana, 2001: 4) on the part of American soldiers evolved into a corporate mining sector dominated by US capital. This growing presence of LSM was particularly strong in the areas surrounding Baguio City (the

capital of Benguet province), a region with abundant gold deposits (Lopez, 1992; Habana, 2001). While traditional mining practices persisted, and may even have benefited from the presence of LSM-companies in the form of enriched panning streams, traditional miners soon found themselves subordinated to LSM-interests, who became 'the main gold buyers, principal employers, and sources of credit and patronage.' (Habana, 2001: 33). This US-dominated mining regime ended rather abruptly with the economic crisis of the late 1930s and the subsequent outbreak of the second World War. During the war, Japanese invaders all but destroyed the Philippines' buoyant gold mining sector, and focused instead on the extraction of base metals, which were badly needed for the war effort (Chaput & Grey, 1984).

After a gradual recovery in the 1950s and early 1960s, the period between the mid-1960s and early 1980s presented itself as the golden era of Philippine mining. Major mining companies like Atlas, Marcopper and Lepanto mining –which were now often co-owned by Filipino, Japanese and/or American investors– initiated big mining projects throughout the country, and increasingly penetrated mineral-rich frontier regions such as Mindanao (Lopez, 1992). On the one hand, this expansion was made possible by increased global demand for base metals, particularly on the part of newly industrializing countries like Japan and Korea, who used the Philippines as a resource basin (Santos, 2001; Camba, 2015). On the other hand, the regime of Ferdinand Marcos (1965-1986) played a direct role in LSM-expansion, by putting in place a legal infrastructure that supported the capitalization of mining companies, by providing cheap commercial loans to these mining companies, and by undertaking infrastructural projects in the vicinity of mining areas (Lopez, 1992; Camba, 2015).

By the mid-1980s, rising political-economic instability contributed to the collapse of this 'state-led mining regime' (Camba, 2015). The debt-driven growth strategy of the Marcos regime had reached its limits. Marcos and his allies were facing allegations of graft and corruption, and growing opposition on the part of opposition politicians, civil society activists, and armed communist and Muslim rebellions eventually led to the regime's downfall in 1986 (Overholt, 1986). This was followed by a highly

uncertain transition period, marred by localized violence throughout the country (Hedman & Sidel, 2000). Hyperinflation and severe credit shortages (Lim & Montes, 2000) led to production costs in the mining sector spiraling out of control. Mining companies responded through a combination of targeted investments in technological improvements and cost-saving measures, prime amongst which the massive retrenchment of workers (Lopez, 1992: 317-319). In addition to rising social unrest within the mining companies, the 1980s also witnessed the emergence of a virulent anti-mining movement that denounced the social dislocation and ecological degradation caused by LSM-projects (Holden, 2005). Many of these projects were also falling prey to mismanagement and corruption, and the sector witnessed a proliferation of *“one-of-kind arrangements and special deals”* (Clad, 1988: 76). Finally, and arguably most importantly, the profitability of capital-intensive LSM suffered amidst decreasing copper and gold prices (Lopez, 1992; Santos, 2001). By the early 1990s, this combination of political instability, economic crisis, a slump in global mineral markets, and rising opposition to LSM, led to the bankruptcy of a growing number of medium- and large-scale mining companies, and the closure of mining projects throughout the country (Ofreneo, 2009).

This breakdown of the state-led LSM-regime coincided with a massive expansion of small-scale gold mining, particularly in the mountainous interior of northern Luzon –the epicenter of ‘traditional gold mining’ (Caballero, 1996)– and eastern Mindanao. In the first instance, this nascent ASM-sector provided refuge to a growing number of poor and unemployed, including retrenched LSM-workers with valuable mining experience. Yet rather than simply a subsistence-oriented response to crisis, the ASM-sector also provided accumulation opportunities for a heterogeneous class of financiers, which came to include local businessmen and ‘professionals’ like lawyers and teachers, local politicians, but also higher-ranking LSM-personnel. These financiers would play a central role in the gradual capitalization and professionalization of ASM in subsequent decades (Verbrugge, 2014). This transformation of ASM went hand in hand with the emergence of a multi-tiered division of labor, and complex revenue-sharing schemes that skewed in favor of the financiers, to the detriment of the workforce. In short, rather than witnessing a sudden emergence of a subsistence-oriented ASM-sector,

the Philippines witnessed a gradual informalization of its mining sector, epitomized by a transition away from a state-led, capital-intensive LSM-sector, towards a labor-intensive ASM-sector that is characterized by a flexible logic of production and accumulation (Verbrugge, 2015a). The magnitude of the ASM-phenomenon in the Philippines became clear in the 1990s and 2000s, when yearly gold production from ASM repeatedly surpassed that of LSM.

Confronted with these realities, successive national governments have attempted to increase the state's fiscal-regulatory control over ASM. Since 1991, these efforts have become centered around Republic Act No. 7076 (the People's Small-Scale Mining Act), which devolved the authority to issue ASM-permits to Provincial- and City Mining Regulatory Boards (P/CMRB). Yet in line with the situation in other countries, efforts to formalize ASM through RA 7076 have largely failed to materialize (Verbrugge, 2015a). In the first instance, the ineffectiveness of the P/CMRBs and a range of fiscal-administrative barriers prevent ASM-operators from acquiring the necessary permits. At the same time, the formalization process is prone to political instrumentalization, with permits being issued to political allies of the governor or mayor. Furthermore, by focusing rather one-sidedly on the issuance of mineral tenure rights to cooperatives that are effectively controlled by financiers –and in some cases by local land claimants– these formalization efforts tend to overlook the interests of the workforce, thus reinforcing the power imbalances and exclusionary tendencies inherent to the ASM-sector (Verbrugge & Besmanos, 2016).

Yet another factor underlying the persistence of informality in ASM is the fact that the formal recognition of ASM-rights has been hampered by the renewed expansion of LSM. More often than not, ASM-activities are now taking place inside the concession of rights-wielding companies, who fail to consent to the presence of ASM. The basis for this renewed expansion of LSM was laid in 1995 when, in response to pervasive regulatory uncertainties in the mining sector, and as the product of a long series of political deliberations, Philippine congress enacted Republic Act 7942 (the Philippine Mining Act). RA 7942 and subsequent policy interventions were widely interpreted as signaling a shift towards a 'neoliberal' mining regime that is oriented towards attracting foreign investment in the mining sector

(Holden et al., 2012; Camba, 2015). While many politico-legal uncertainties remain unresolved –the centralist tenets of the Mining Act sit uncomfortably with the decentralized nature of Philippine politics (Verbrugge, 2015b)– since the mid-1990s and particularly since the early 2000s, when the Arroyo presidency identified mining as an engine for development, the Philippines has witnessed a notable increase in LSM-applications (Holden & Jacobson, 2012). As of February 29, 2016, the country hosted 44 producing metallic minesⁱ, and nearly 800,000 hectares of its surface area are now covered by approved mining permits, either for exploration and/or for production. Most of these permits were issued to Filipino junior mining companies, who often act in tandem with foreign (mostly Australian, Canadian and/or Chinese) investors. Yet as confirmed by numerous key informants many of these company claimants, instead of developing full-blown mining activities, are engaged in limited exploration or -extraction activities, or are simply holding on to their claim as a speculative asset. In short, the situation in the Philippines is reminiscent of that in other countries, with a mineral resource governance system that is skewed in favor of LSM-interests, to the detriment of ASM-operators. In addition, attention has been drawn to the existence of power imbalances within the ASM-sector, and how these are reinforced by a formalization system that prioritizes the issuance of mineral tenure rights to the ‘capital interests’ (Verbrugge, 2014).

3.2. Mounting tensions

As a result of these trends, a large number of ASM-operations are now taking place inside LSM-concessions. The ensuing interactions between ASM and LSM are extremely difficult to investigate, not only because of high degrees of informality (or ‘illegality’) in the ASM-sector, but also because of the political sensitivities involved, with local politicians and armed actors often being among the vested interests in the sector (Verbrugge & Adam, 2016). Furthermore, ASM-LSM relations exhibit a high degree of variation across localities and depend, amongst others, on the size and type of ASM- and LSM-operations, the stage in the mining cycle, and the type and geological specificities of the minerals in question –although ASM is primarily targeting gold. Still, some general observations can be made.

In cases where the presence of LSM is limited to exploration activities, where the company is simply holding on to its claim as a speculative asset, or where ASM remains confined to the periphery of the LSM-concession; the company will often adopt a permissive stance towards ASM. It is usually when LSM (unveils concrete plans to) move(s) into the production stage that relations become more complicated, and the likelihood of conflict increases. In some mining areas, ASM-LSM relations still evolve into some kind of mutual understanding. One example is the municipality of T'Boli in South Cotabato province where, despite occasional tensions, ASM-operators and LSM (in the form of Tribal Mining Corporation) have managed to co-exist—their tunnels even meet underground—for many years now (interviews with ASM-operators, T'Boli, 1-4 February 2012).

Yet in several other areas, ASM-LSM relations have taken a turn for the worse. Many of these cases are located on the southern island of Mindanao, which is characterized by the presence of a range of armed actors, including the Philippine Army, Muslim and communist rebels, and various paramilitary militias. To make matters more complicated, these armed actors often have (indistinct) ties to local politicians, and have interests in the mining sector themselves (Verbrugge & Adam, 2016). In this militarized environment, efforts on the part of rights-wielding LSM-companies to operate in areas with a strong ASM-presence may trigger confrontations between indistinct actor coalitions with ties to ASM and/or LSM. These localized ASM-LSM conflicts often become entangled with political-electoral conflicts, and in some cases even with the wider conflict between the government and rebel forces (Verbrugge, 2015b). In Bayog, in Zamboanga del Sur province, what started out as a legal conflict between TVI-RD (the Philippine affiliate of a Canadian mining company) and local ASM-operators, both of which were supported by local politicians, gradually evolved into a highly militarized situation and a spate of violent encounters in the early 2010s. One media report claimed that in 2012 alone, 37 ASM-workers had been killed by interests associated with LSM ("Cobs nab", 2012). In the municipality of Monkayo, in Compostela Valley province, the entry of a LSM-company (SEMCO) in the gold rush area of Diwalwal in the 1990s, and its subsequent alliance with one of the ASM-groups present in the area, led to an escalation of tensions with other ASM-groups (Regelado, 2000). More recently, efforts on the

part of NADECOR and its Canadian investor St. Augustine to prepare the grounds for an open-pit mining project in the municipality of Pantukan (also in Compostela Valley) have led to a spate of extrajudicial killings of ASM-activists (Mindanews, 2016a), and a notable increase in armed encounters between the Philippine Army and company guards on the one hand, and communist rebels of the New People's Army—who have a keen interest in ASM as a source of revolutionary taxes (Verbrugge & Adam, 2016)—on the other (Mindanews, 2016b).

During an interview in late 2012 a key informant confided to me that, partly in response to escalating tensions inside some of Mindanao's mining areas, some officials inside the Mines and Geosciences Bureau (MGB) regional office were trying to convince LSM-companies to adhere to a 'big brother, small brother principle', by 'teaming up' with ASM-operators (interview with anonymous informant, 16 November 2012). While the national government, through the MGB national office, maintains a tough stance on 'illegal mining', there are now initial indications that at least some people in the LSM-sector are willing to 'explore ways to draw small-scale miners into the mainstream' (Torres, 2015).

3.3. The Acupan Contract Mining Project (ACMP)

One example of what such a 'big brother, small brother' arrangement between LSM and ASM might look like is the Acupan Contract Mining Scheme (ACMP), which was devised in the municipality of Itogon, in Benguet province, in the early 2000s. In what follows, I will present a short albeit critical case study of the ACMP, in an attempt to understand how it reflects historically rooted inequalities, both between ASM and LSM—although in practice this distinction is sometimes difficult to maintain—and within the ASM-sector.

3.3.1. Historical background

Benguet Corporation is the oldest mining company in the Philippines, and for a long time it was also the country's largest gold producer. First registered by American prospectors as Benguet Consolidated Mining Company (BCMC) in 1903, under American colonial rule it acquired control of a range of mining properties in the vicinity of Baguio City (Habana, 2001). The company continued to play this prominent

role in the post-independence mining sector, first as Benguet Consolidated Inc. and then, since 1980, as Benguet Corporation. In her historical account of ‘traditional gold mining’ in Benguet province, Caballero (1996) describes the historical interaction between Benguet Corporation and small-scale miners operating inside the company’s concessions. On the one hand, Benguet Corporation always exhibited a fair degree of tolerance vis-à-vis ASM-operators, who are often reworking the company’s tailings. Vice versa, from the 1970s onwards Benguet Corporation (amongst other mining companies) started buying tailings from ASM-operators (Caballero, 1996). While Benguet Corporation weathered the LSM-crisis of the 1980s –amongst others by investing in productivity-enhancing measures and by slashing labor costs (Lopez, 1992)– by the 1990s a combination of growing indebtedness, a prolonged decrease in gold prices and natural calamities, had forced Benguet Corporation to suspend many of its Baguio operations, beginning with the closure of the Acupan gold mine in Itogon in 1992 (PR newswire, 1992).

In line with what was happening in several other mining regions in the country (Verbrugge, 2015a), the gradual suspension of LSM-operations in the Acupan mine went hand in hand with a proliferation of ASM, mostly practiced by former company employees. While the company maintained a small contingent of guards, they were unable or unwilling –several respondents mentioned that the guards soon became implicated in these ASM-activities (interview with barangay captain of Virac, 8 February 2014)– to prevent miners from entering the company premises. Rather than independent operators engaged in subsistence mining, many of these ASM-operators had outside financiers that provided them with mining equipment, and sometimes even with dynamite (interview with ASM-contractor, 11 February 2016). In return, these financiers became entitled to one or several shares of the net income, i.e., the income remaining after the financier has recovered all expenses incurred on behalf of the miners. As some of these financiers started setting up their own carbon-in-pulp (CIP) processing facilities –often with the help of skilled personnel (previously) active inside the company– they started competing with LSM-companies over access to ASM-tailings (interview with financier and tailings buyer, 5 february 2014). Probing into the background of these financiers, respondents mentioned local

gold buyers, politicians, businessmen, oversees foreign workers (OFWs), but also people (previously) active inside the LSM-companies, particularly engineers.

It was against this background that in the early 2000s, Benguet Corporation and selected ASM-operators represented by the financiers, negotiated the Acupan Contract Mining Project. Under the ACMP, Benguet Corporation retained –or regained– full control and possession of the mining premises, and became responsible for the overall planning of the mining operations; for maintaining the main tunnel portal and the gold processing facilities; and for processing and selling all the gold to the Central Bank. The actual mining operations, meanwhile, are outsourced to ASM-operators, who are organised into associations represented by a president, who assumes the role of legal contractor. At first glance, this scheme –which has been described by its proponents as ‘mining in partnership with the community’– offers benefits for the company as well as ASM-operators. In addition to maintaining control over its concession, Benguet Corporation was now able to generate revenues in a climate wherein a resumption of LSM-activities inside the Acupan mine was unrealistic. For ASM-operators, while not amounting to full-blown formalization, participation in the ACMP does imply some sort of recognition of their mining rights. Furthermore, the operational support offered by the company should enable them to more easily identify gold deposits, and to penetrate deeper inside the mountain (interview with barangay captain of Virac, 8 February 2014). In what follows, I will zoom in on three central features of the ACMP, namely the allotment of working places to ASM-contractors, revenue-sharing arrangements, and labor regimes. In doing so, I aim to provide critical insights into who benefits and who loses from the ACMP, and how this reflects historically rooted inequalities and power relations in the mining sector.

3.3.2. The bidding process

The ASM-operations are taking place in 22 clearly delineated ‘working places’ inside the company’s tunnels. These working places were assigned to ASM-operators by the company soon after the inception of the ACMP, through a purportedly open bidding process. Yet in practice, several barriers

have turned this bidding into a highly selective process. In the first instance, according to the formal agreement between the company and the contractors, the latter have to be able to deliver a performance bond of P150,000 (approximately US\$ 4050) and a revolving fund of P100,000 (approximately US\$ 2700), which must be replenished on a regular basis. In addition to these stringent capital requirements, contractors have to adhere to strict production quota and an acceptable minimum ore grade. To do this, they have to maintain the required manpower to fulfill these quota. I will return to this latter point in more detail below.

In addition to these formal requirements, several respondents suggested that the bidding process was rigged in favor of the dominant ASM-financiers, and local elites with money, political power, and/or connections inside the company. According to these same respondents, the most powerful contractors have been able to monopolise access to the best working places, and this continues to be a source of tensions among contractors (interview with president of Benguet Federation of Small-scale Miners, 10 February 2016; interview with ASM-contractor, 11 February 2016). Based on these initial observations about the bidding process, critical questions may be raised with regards to why the contractors have agreed to the unequal terms of the ACMP (see below), as it might have been a convenient way for some of them to consolidate control over the Acupan area.

3.3.3. Unequal revenue sharing

The ACMP also introduced a complex and multi-layered sharing arrangement. The crux of this arrangement is a 40-60 sharing scheme involving Benguet Corporation and ASM-contractors. Initially, this sharing was based on ore sharing: out of every 100 sacks of ore produced by ASM, the company retained 40, and the remaining 60 accrued to the contractor. The contractors subsequently processed their ore share inside the company's processing facilities, paying the company a 'milling fee'. However, as ASM-operators duly admitted, ore sharing left plenty of scope for cheating, as they could mark the bags with a higher (presumed) gold content, and bribe the guards who oversaw the sharing (interview with ASM-contractor, 11 February 2011). This is why, in 2011, the company introduced a system of

cash sharing. After a contractor reaches his/her quota, the company processes the ores, selling the gold to the central bank. After deducting its 40 percent share, the company deducts all expenses it incurred on behalf of the contractors from the remaining 60 percent, and pays the remaining share to ASM-operators in the form of a cheque (so 60 percent less expenses). These expenses include, amongst others, ore milling charges (P 3385/ton plus cost of chemicals), costs for the maintenance of common areas, the cost for sacks and other mining equipment, and a range of government fees and taxes. In addition, several contractors claimed that they were also shouldering part of the guards' salaries.

A second round of sharing involves the contractor and the workforce, which is organised into teams that work particular tunnels, and are headed by a team leader –usually an experienced miner trusted by the contractor. After deducting a 10 or in some cases a 15 percent share from the 60 percent share of the contractor, the contractor reclaims any expenses he has incurred on behalf of the workforce from the remaining 45-50 percent share. These expenses include costs for mining equipment like boots, flashlights, generators, and timbering; for workers' permits issued by local government authorities; and in some cases –particularly in the case of migrant workers– also for food and shelter. The share that remains (so 60 percent less 10-15 percent less expenses) is distributed equally among the workers.

Yet in an increasing number of cases, there is now a third round of sharing, this time between the miners and their financier(s). As observed in other areas of the country (Verbrugge, 2014), financiers play a central role in ASM-expansion, by injecting sorely needed capital, thereby lifting ASM beyond subsistence level. In the specific case of Acupan, financiers assume part of the contractor's responsibilities, financing the cost for (amongst others) mining equipment or food for particular mining teams. In return they become entitled to one or more shares –depending on the specific agreement– of the workers' share of the revenues. For example, in the case of a mining team composed of 10 miners and a financier, the financier will first deduct any expenses incurred on behalf of the workers. The remaining share (so 60 percent less 10-15 percent less the contractor's expenses less the

financier's expenses) is then divided into 11 or 12 shares: one for each of the workers, and one or two for the financier.

Various respondents raised concerns about these revenue-sharing schemes, which are widely seen to benefit the company, and to a lesser extent the contractors and financiers, to the detriment of important sections of the workforce. There is widespread agreement that the company is inflating expenses it incurs on behalf of the contractors, and some respondents were also convinced that the company cheated on them during the processing stage (FGD with ASM-contractors, 6-7 June 2013). Many workers are in turn convinced that contractors and financiers are also cheating on them, although the relationship between these parties may vary substantially from one mining team to the next. Ultimately, these revenue-sharing arrangements, and the entire range of actors and expenses involved, put strong downward pressure on the workers' share, and while some of them manage to have decent earnings, for many others it is nothing more than "a hand to mouth" (interview with mine worker and labor organiser, 8 February 2016).

3.3.4. The labor control regime

Together with the long cash-strapped periods in-between different rounds of sharing, these (perceived) injustices in the revenue-sharing were cited by respondents as the key reason why workers reverted to the practice of 'highgrading': the secret extraction of ores from inside the company tunnels. While the company treats this as theft, ASM-operators, including contractors and financiers who often collude with workers in highgrading offenses, see it as a legitimate practice. It is important to note here that highgrading is not the same as 'golgolait' –outsiders secretly entering the company's tunnels to undertake mining activities– which is widely condemned as an act of theft.

These attempts on the part of the workers to cheat on the company, combined with the fact that the mining population has become increasingly mobile, means that for both the company, the contractors and financiers, the ability to muster a stable, reliable and preferably cheap workforce is of paramount importance for the success and continuity of the mining operations. This observation is also reflected

in the formal agreement between the company and the contractors, which emphasises the latter's role as 'job contractors', who are expected to not merely 'maintain the required manpower in order to produce the prescribed quota', but also 'to discipline and impose on his miner/s or worker/s the appropriate penalty for any offense committed'. As one respondent stated: 'contractors are the dominant people in the community, because they are able to find workers' (interview with financier and tailings buyer, 5 february 2014). ASM-contractors are further expected to prevent highgrading and unauthorised intrusion into their working places. As has been demonstrated elsewhere (Verbrugge, 2015a), financiers and contractors can use various mechanisms to exercise control over the workforce. Debt bondage plays a key role in this regard: by advancing an entire range of expenses, and in some cases also (part of) the salaries or costs for food and shelter, financiers instill a strong sense of obligation in the workforce. Furthermore, the agreement between the company and the contractor explicitly prohibits workers from transferring from one contractor to the other. Finally, the team leader also plays a key role in monitoring the workers, as the 'eyes and ears' of the contractor or financier inside the working place.

The company, meanwhile, maintains a 'mine patrol' composed of armed guards, whose main function consists in preventing highgrading and golgolait. Somewhat ironically, the costs of this mine patrol are at least partly shouldered by the ASM-contractors, and hence by the workforce. However, several respondents confirmed that the guards often become implicated in highgrading offenses themselves. In addition, working in tandem with the contractors, Benguet Corporation maintains a register of the workforce, and has put in place an ID-system that allows it to monitor who is active inside the company premises. At the same time –and this is a critical observation– the formal agreement explicitly states that 'there shall be no employer/employee relationship between the COMPANY and the CONTRACTOR or the CONTRACTOR's workers under this agreement'. And while the contractors are principally responsible for ensuring that the operations are in compliance with existing labor legislation, in practice the workers remain without a contract, and the coverage of formal social security schemes is extremely limited (interview with labor union organiser, 6 February 2013).

Finally, barangay (village) officials also play a key role in monitoring and disciplining the workforce. In the first instance, the barangay is responsible for registering new miners, and for providing them with clearances. When asked to define the barangay's role in the ACMP, the barangay captain mentioned the maintenance of peace and order, with an emphasis on monitoring the area for highgraders and outside intruders (interview with barangay captain of Virac, 8 February 2016). During a visit to the barangay hall, the author noticed a 'blacklist' of miners on the wall behind the barangay secretary. According to the secretary, this list included miners who had 'misbehaved', and were therefore no longer able to secure a clearance. Asked about the offenses they had committed, she mentioned highgrading offenses, and a failure on the part of workers to repay their debts to the financier (interview with barangay secretary of Virac, 7 February 2016). These observations about the involvement of barangay authorities in monitoring and disciplining the workforce become even more striking when considering the fact that the barangay captain as well as several barangay council members are among the ASM-contractors, or alternatively benefit from the company's presence in the form of other types of job orders, such as the construction of waiting sheds, or the maintenance of company buildings (interview with barangay council member, 9 February 2016).

4. DISCUSSION AND CONCLUSION

So what does the case of the ACMP tell us about the fate of negotiated ASM-LSM arrangements, which are now gaining popularity in the face of a growing number of conflicts? In the first instance, the ACMP-case lends further credence to existing observations about a power imbalance between ASM and LSM, which is rooted in a mineral resource governance regime and a neoliberal economic order that promote the expansion of capital-intensive LSM, to the detriment of ASM. There was widespread agreement amongst respondents that ASM-operators would be better off without Benguet Corporation. However, due to the fact that they are unable to obtain a permit, they are essentially forced into accepting the terms set by the company, which still holds the mining rights (FGD with ASM-

contractors, 6-7 June 2013). Here, attempts to reduce barriers to formalization, combined with some form of mineral tenure reform that may or may not involve the redistribution of control over mineralized lands, may provide part of the solution (Hilson, 2013).

Yet in addition to this power imbalance between ASM and LSM, the ACMP has also absorbed, and has arguably reinforced, pre-existing inequalities within the ASM-sector. In many ways, these inequalities correspond to Fisher's analysis of dimensions of exclusion in Tanzanian ASM, which revolve around access to mining rights; the ways in which actors are incorporated into the labor process; and access to state institutions (Fisher, 2007). In the first instance, the ACMP harbors processes of 'licensed exclusion' (Hall et al., 2011), whereby more powerful ASM-contractors –particularly those with good connections inside the company and the local government– succeed in monopolizing access to good working places. More importantly, the ACMP has absorbed the unequal organizational arrangements that connect the ASM-workforce to its employers-cum-financiers. While the latter now enjoy at least some degree of legal protection, the situation of the workers remains highly precarious. In this sense, the ACMP is replicating an important shortcoming of existing formalization efforts in the ASM-sector, which –in rare cases where they are successful– tend to benefit elite actors who are awarded with mineral tenure rights, to the detriment of the informal ASM-workforce (Verbrugge & Besmanos, 2016). Instead, by introducing additional rent-seekers in the form of the company and the contractors, the ACMP has even put further downward pressures on the worker's share.

Set against the background of longer-term trends in the mining sector, the ACMP seems to correspond to Alessandra Mezzadri's description of dynamics in the Indian garment sector, where exporters are calling for 'the formalisation of the informalisation of labour, and the institutionalisation of precarious and insecure working conditions as the new legal framework of industrial relations in this sector' (Mezzadri, 2010: 27). Similarly, the ACMP represents an implicit recognition of the logic of 'informalization' that has pervaded the Philippine mining sector since the 1980s, epitomized by a transition from a moribund regime of accumulation built around capital-intensive LSM, to a flexible

regime of accumulation built around labor-intensive ASM. Negotiated arrangements like the ACMP can provide formal sector mining interests with a convenient instrument to lay claim to mineral rents produced by the informal workforce, in environments where capital-intensive LSM cannot be profitably undertaken, either due to low mineral prices, due to the nature of mineral deposits, or due to sociopolitical risks –including the presence of ASM.

These findings have important implications for policy responses to ASM-LSM conflicts. So far, attempts to remedy these conflicts have largely revolved on redressing the imbalances between ASM and LSM through mineral tenure reform, possibly combined with the fostering of direct production- and marketing linkages between mining companies and ASM-operators. Yet even where the distribution of risks and benefits between ASM and LSM is perceived as fair –which is usually not the case– these arrangements still tend to overlook the heterogeneity and associated inequalities that exist within the ASM-sector. It is partly because of this failure to acknowledge and remedy these imbalances within the ASM-sector that Benguet Corporation now has to contend with growing resistance on the part of the ASM-workforce, but even on the part of some of its contractors. To remedy this situation, ASM-LSM arrangements need to be complemented with efforts to redress inequalities within ASM-sector. Here, a useful starting point would be more inclusive formalization policies that move beyond a focus on mineral tenure rights –which tends to benefit elite actors– by paying central attention to the needs and concerns of the ASM-workforce (Verbrugge & Besmanos, 2016).

BIBLIOGRAPHY

- Andrew, J. S. (2003). Potential application of mediation to land use conflicts in small-scale mining. *Journal of Cleaner Production*, 11, 117–130.
- Aubynn, A. (2009). Sustainable solution or a marriage of inconvenience? The coexistence of large-scale mining and artisanal and small-scale mining on the Abosso Goldfields concession in Western Ghana. *Resources Policy*, 34, 64–70.
- Ayelazuno, J. A. (2014). The “new extractivism” in Ghana: A critical review of its development prospects. *The Extractive Industries and Society*, 1(2), 292–302.
- Banchirigah, S. M. (2007). How have reforms fuelled the expansion of artisanal mining ? Evidence from sub-Saharan Africa. *Resources Policy*, 31, 165–171.

- Banchirigah, S. M., & Hilson, G. (2010). De-agrarianization, re-agrarianization and local economic development: Re-orientating livelihoods in African artisanal mining communities. *Policy Sciences*, 43(2), 157-180.
- Ballard, C., & Banks, G. (2003). Resource Wars: The Anthropology of Mining. *Annual Review of Anthropology*, 32(1), 287–313.
- Bebbington, A., Hinojosa, L., Bebbington, D. H., Burneo, M. L., & Warnars, X. (2008). Contention and Ambiguity: Mining and the Possibilities of Development. *Development and Change*, 39(6), 887–914.
- Bridge, G. (2004). Mapping the Bonanza: Geographies of Mining Investment in an Era of Neoliberal Reform. *The Professional Geographer*, 56(3), 406–421.
- Bryceson, D. F. (2002). The Scramble in Africa: Reorienting Rural Livelihoods. *World Development*, 30(5), 725–739.
- Bush, R. (2009). “Soon there will be no-one left to take the corpses to the morgue”: Accumulation and abjection in Ghana’s mining communities. *Resources Policy*, 34, 57–63.
- Caballero, E. (1996). *Gold from the Gods: Traditional small-scale miners in the Philippines*. Quezon City: Giraffe Books.
- Camba, A. (2015). From colonialism to neoliberalism: Critical reflections on Philippine mining in the “long twentieth century.” *The Extractive Industries and Society*, 2(2), 287–301.
- Carstens, J., & Hilson, G. (2009). Mining , grievance and conflict in rural Tanzania. *International Development Planning Review*, 31(3), 301–326.
- Chachage, C. (1995). The Meek Shall Inherit the Earth but not the Mining Rights: The Mining Industry and Accumulation in Tanzania. In P. Gibbon (Ed.), *Liberalised Development in Tanzania* (pp. 37–108). Uppsala: Nordiska Afrikainstitutet.
- Chaput, D., & Gray, B. A. (1984). When Copper Supplanted Gold. *Philippine Studies*, 32(3), 273-289.
- Chen, M. (2008). Informality and Social Protection : Theories and Realities. *IDS Bulletin*, 39(2), 18–27.
- Clad, J. (1988). Exploring for Policies. *Far Eastern Economic Review*, 142(43), 76–77.
- Cleary, D. (1990). *Anatomy of the Amazon gold rush*. Hampshire: Macmillan.
- Clifford, M. J. (2011). Pork knocking in the land of many waters: Artisanal and small-scale mining (ASM) in Guyana. *Resources Policy*, 36(4), 354–362.
- “Cops nab illegal miners in Zamboanga del Sur” (2012). Available online at <http://www.philstar.com/nation/article.aspx?publicationsubcategoryid=200&articleid=860479>. Date accessed 29 March 2016.
- Echavarria, C. (2014). *‘What is legal? Formalizing artisanal and small-scale mining in Colombia*. London: International Institute for Environment and Development.
- Ferring, D., Hausermann, H., & Effah, E. (2016). Site specific: Heterogeneity of small-scale gold mining in Ghana. *The Extractive Industries and Society*, 3(1), 171-184.
- Fisher, E. (2007). Occupying the Margins : Labour Integration and Social Exclusion in Artisanal Mining in Tanzania. *Development and Change*, 38(4), 735–760.
- Geenen, S. (2011). Relations and regulations in local gold trade networks in South Kivu , Democratic Republic of Congo. *Journal of Eastern African Studies*, 5(3), 427–446.
- Geenen, S., & Claessens, K. (2013). Disputed access to the gold sites in Luhwindja, eastern Democratic Republic of Congo. *The Journal of Modern African Studies*, 51(1), 85–108.

- Geenen, S. (2014). Dispossession, displacement and resistance: Artisanal miners in a gold concession in South-Kivu, Democratic Republic of Congo. *Resources Policy*, 4, 90–99.
- Habana, O. M. (2000). Gold mining in Benguet to 1898. *Philippine studies*, 48(4), 455–487.
- Habana, O. (2001). Gold Mining in Benguet: 1900–1941. *Philippine Studies*, 49(1), 3–41.
- Hall, D., Hirsch, P., & Li, T. M. (2011). *Powers of exclusion - Land dilemmas in Southeast Asia*. Singapore: NUS PRESS.
- Hedman, E-L; Sidel, J. T. (2000). *Philippine Politics and Society in the Twentieth Century - Colonial legacies, post-colonial trajectories*. London: Routledge.
- Hentschel, T., Hruschka, F., & Priester, M. (2002). *Global report on artisanal and small-scale mining*. Geneva: International Labour Organization
- Hilson, G. (2002). Land use competition between small- and large-scale miners: a case study of Ghana. *Land Use Policy*, 19(2), 149–156.
- Hilson, G. (2013). “Creating” Rural Informality: The Case of Artisanal Gold Mining in Sub-Saharan Africa. *SAIS Review*, 33(1), 51–64.
- Hilson, G., & Potter, C. (2005). Structural Adjustment and Subsistence Industry: Artisanal Gold Mining in Ghana. *Development and Change*, 36(1), 103–131.
- Hilson, G., & Yakovleva, N. (2007). Strained relations : A critical analysis of the mining conflict in Prestea , Ghana. *Political Geography*, 26, 98–119.
- Hilson, G., & Gatsinzi, A. (2014). A rocky road ahead? Critical reflections on the futures of small-scale mining in sub-Saharan Africa. *Futures*, 62, 1–9.
- Holden, W. N. (2005). Civil Society Opposition to Nonferrous Metals Mining in the Philippines. *Social Change*, 16(3), 223–249.
- Holden, W. N., & Jacobson, R. D. (2012). *Mining and Natural Hazard Vulnerability in the Philippines: Digging to Development Or Digging to Disaster?* London: Anthem Press.
- Lahiri-Dutt, K. (2004). Informality in mineral resource management in Asia: Raising questions relating to community economies and sustainable development. *Natural Resources Forum*, 28(2), 123–132.
- Lim, J. Y., & Montes, M. F. (2000). The structure of employment and structural adjustment in the Philippines. *Journal of Development Studies*, 36(4), 149–181.
- Lopez, S. P. (1992). *Isles of Gold: A history of Mining in the Philippines*. Oxford: Oxford University Press.
- Luning, S. (2008). Liberalisation of the Gold Mining Sector in Burkina Faso. *Review of African Political Economy*, 35(117), 387–401.
- Luning, S. (2014). The future of artisanal miners from a large-scale perspective: From valued pathfinders to disposable illegals? *Futures*, 62, 67–74.
- Mégret, Q. (2011). Gaining access to a globally coveted mining resource : a case study in Burkina Faso. *International Social Science Journal*, 61(202), 389–398.
- Merry, S. E. (1988). Legal Pluralism. *Law and Society Review*, 22(5), 869–896.
- Mezzadri, A. (2010). Globalisation, informalisation and the state in the Indian garment industry. *International Review of Sociology*, 20(3), 491–511.

- Mindanews (2016a). Anti-mining activist dies in hospital after assassination attempt. Mindanews, January 30. Available online at <http://www.mindanews.com/top-stories/2016/01/30/anti-mining-activist-dies-in-hospital-after-assassination-attempt/>. Date accessed 15 February 2016.
- Mindanews (2016b). NPA killed in ComVal clash. *Mindanews*, February 11. Available online at <http://www.mindanews.com/top-stories/2016/02/11/npa-killed-in-comval-clash/>. Date accessed 15 February 2016.
- Nyame, F. K., & Blocher, J. (2010). Influence of land tenure practices on artisanal mining activity in Ghana. *Resources Policy*, 35(1), 47–53.
- Ofreneo, R. E. (2009). Failure to launch: industrialisation in metal-rich Philippines. *Journal of the Asia Pacific Economy*, 14(2), 194–209.
- Okoh, G. A. (2013). Grievance and conflict in Ghana's gold mining industry: The case of Obuasi. *Futures*, 62, 51–57.
- Ojukutu-Macauley, S., & Keili, A. K. (2008). Citizens, subjects or a dual mandate? Artisanal miners, "supporters" and the resource scramble in Sierra Leone. *Development Southern Africa*, 25(5), 513–530.
- Overholt, W. H. (1986). The rise and fall of Ferdinand Marcos. *Asian Survey*, 26(11), 1137–1163.
- Patel, K., Rogan, J., Cuba, N., & Bebbington, A. (2016). Evaluating conflict surrounding mineral extraction in Ghana: Assessing the spatial interactions of large and small-scale mining. *Extractive Industries and Society*, 3(2), 450–463.
- Pegg, S. (2006). Mining and poverty reduction: Transforming rhetoric into reality. *Journal of Cleaner Production*, 14(3–4), 376–387.
- PR Newswire (1992). Benguet announces shutdown of mine operations. Available online at <http://www.thefreelibrary.com/BENGUET+ANNOUNCES+SHUTDOWN+OF+MINE+OPERATIONS-a012773660>. Date accessed 30 March 2016.
- Regelado, E. (2000). Rival Mining Firms in Diwalwal Clash, 15 Injured. Available online at <http://www.philstar.com/headlines/86812/rival-mining-firms-diwalwal-clash-15-injured>. Date accessed 3 November 2013.
- Santos, T.M. (2001) 'Growth of Copper Production: Determinants and Empirical Evidence'. *Social Science Diliman*, 2(2).
- Siegel, S., & Veiga, M. M. (2009). Artisanal and small-scale mining as an extralegal economy: De Soto and the redefinition of "formalization." *Resources Policy*, 34, 51–56.
- Spiegel, S. J. (2012). Governance Institutions, Resource Rights Regimes, and the Informal Mining Sector: Regulatory Complexities in Indonesia. *World Development*, 40(1), 189–205.
- Torres, T. (2015). Mining industry seeks ways to draw small-scale miner into mainstream. Available online at <http://www.philstar.com/nation/article.aspx?publicationssubcategoryid=200&articleid=860479>, date accessed 29 March, 2016.
- Verbrugge, B. (2014). Capital Interests: a Historical Analysis of the Transformation of Small-scale Gold Mining in Compostela Valley Province, Southern Philippines. *The Extractive Industries and Society*, 1(1), 86–95.
- Verbrugge, B. (2015a). The Economic Logic of Persistent Informality: Artisanal and Small-Scale Mining in the Southern Philippines. *Development and Change*, 46(5), 1023–1046.
- Verbrugge, B. (2015b). Decentralization, institutional ambiguity, and mineral resource conflict in Mindanao, Philippines. *World Development* 67(2), 449–460.

- Verbrugge, B., Cuvelier, J. & van Bockstael, S. (2015). Min(d)ing the land: The relationship between artisanal and small-scale mining and surface land arrangements in the southern Philippines, eastern DRC and Liberia. *Journal of Rural Studies*, 37(3), 50-60.
- Verbrugge, B., & Adam, J. (2016). Questioning the state-rebel divide in Mindanao: A comparative analysis of North Cotabato and Compostela Valley province. *Asian Journal of Social Science*, 44(1-2), 246-277.
- Verbrugge, B., & Besmanos, B. (2016). Formalizing Artisanal and Small-Scale Mining: Whither the Workforce? *Resources Policy*, 47(1), 246-277.
- World Bank (2009). *Mining Together: Large-Scale Mining Meets Artisanal Mining, A Guide For Action*. Washington DC: World Bank. Available online at <https://openknowledge.worldbank.org/handle/10986/12458>.

ⁱ A complete list can be consulted at <http://www.mgb.gov.ph/2015-05-13-01-44-56/mining-projects-directory>.