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EIAs, power and political ecology

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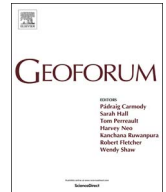
EIAs, power and political ecology: Situating resource struggles and the techno-politics of small-scale mining

Samuel J. Spiegel

School of Social and Political Science, University of Edinburgh, United Kingdom

ABSTRACT

Academics across disciplines are increasingly employing political ecology lenses to unpack conflicts related to resource extraction. Yet, an area that remains under-researched and under-theorised is how environmental impact assessments (EIAs) are embedded in politics and imagined as sites of power relations. Drawing on long-term fieldwork in Zimbabwe engaging small-scale gold miners, EIA consultants and government officials, this article examines the changing social significance of EIAs during and after a nationwide police operation that was framed by authorities as targeting non-compliance with environmental policy, illegal mining and illicit trading. Among other articulations of dissent, small-scale miners associations protested that EIA enforcement rhetoric served unjustly as a rationale for halting livelihoods and extracting rent from miners in times of economic difficulty. The article challenges EIA narratives that focus narrowly on risk management or governance failure, exploring technocratic obfuscations and how enforcement rhetoric was perceived in relation to criminalisation and coercion, expert environmental consultancy cultures and adapted legacies of colonial practice in contemporary dynamics of rule. Heavy-handed policing under the banner of enforcing order impinged on livelihoods and had counterproductive effects in addressing environmental problems, while complying with expensive EIA report-producing requirements was far beyond the means of most small-scale miners. The article rethinks how technical EIA rhetoric becomes entangled in spaces of contentious politics, the perils of looking only at particular scales of relations to the exclusion of others, and what it means to re-engage Donald Moore's notion of "shifting alignments and contingent constellations of power." Suggesting future directions in political ecology theorising in relation to extractive sectors, it calls for careful attention to the situated politics of EIAs – situated in time and space, amid varying relations of power – and how multiple hegemonic practices are conceptualised and challenged.

1. Introduction

In 2012, Anthony Bebbington's published lecture entitled "Underground Political Ecologies" argued that mineral extraction had been chronically understudied in political ecology and called for more research on power struggles in extractive sectors (Bebbington, 2012). Since then, geographers have produced a growing body of political ecology literature on extractive sector contestations (Allen, 2017; Williams and Le Billon, 2017; Andrews and McCarthy, 2014), including much conceptually and empirically rich work devoted to nuances of hegemony, dispossession and resistance in large-scale mining contexts (Horowitz, 2015; Perreault, 2013; Perreault et al., 2015; Bedi, 2013). However, a far smaller body of political ecology work has addressed

artisanal and small-scale mining (ASM), a sub-sector expanding in many parts of Africa, Asia and Latin America, providing income to a larger number of people than large-scale mining and widely linked with marginalisation and environmental degradation (Huggins et al., 2017; Hilson and Maconachie, 2017; Campbell, 2016). Tschakert and Singha (2007) explored how mainstream pollution discourses in Ghana interact with political forces to give ASM communities "contaminated identities." Hirons (2011) discussed anti-deforestation discourses and artisanal mining through a post-structural political ecology lens, warning that global initiatives such as Reducing Emissions from Deforestation and Degradation (REDD) can further marginalise artisanal miners in Africa, forcing livelihoods further into illegality. Adding to these contributions, the present article examines the political ecology of

environmental impact assessment (EIA) policy discourses and enforcement practices in the ASM sector, drawing on long-term research in Zimbabwe addressing dynamic and territorially uneven struggles. The article argues that unpacking situated contestations around EIAs presents a critical avenue for rethinking diverse social, material and symbolic meanings attached to techno-political[1] practices for controlling resource extraction. It suggests how rethinking EIA power struggles can become a key entry point into re-imagining territorial politics "in 3-D" (Bridge, 2013) – linking subsurface resource politics with changing environmental regulations, what transpires in the name of environmental governance (including criminalization of marginalized constituencies), contested expert practices and diversely experienced and dynamic geographies of power.

Recent literature has investigated inequalities of political power and notions of "community-controlled" in relation to large-scale mining EIAs (O'Faircheallaigh, 2017). Fabiana Li's book *Unearthing Conflict* elucidates the power dynamics of how large-scale mining EIAs were part of an "expert" environmental management system that served to undermine public trust in Peru (Li, 2015). There is a burgeoning body of scholarship addressing the problem whereby EIAs for large-scale mining are, as Leonard (2017) writes, "tokenistic tools to approve developments rather than to genuinely engage with the concerns of interested and affected groups" (p. 1). Yet, although EIA policies can be crucial instruments for environmental management in many situations, their entanglements in political processes and power relations remains under-studied in a range of ways. As noted by Wells-Dang et al. (2016) there are surprisingly "few examples" of EIA research through a "political economy" lens. While the importance of EIAs as tools for governance might sometimes appear to be as "universal" and "self-evident" as the "rules of property" that Timothy Mitchell (2002) famously described in *Rule of Experts*, the material, political and symbolic significance of EIA policies can vary greatly – eliciting a range of perspectives (Cashmore and Richardson, 2013).

The present study explores a context in which the enforcement of EIA requirements became a discursive rationale for a widespread crackdown against artisanal and small-scale miners and afterwards continued to present (and add to) formidable obstacles to de-criminalising gold mining livelihoods in the years that followed. It focuses specifically on Zimbabwe in a period shaped by deep economic and political crises. Nationwide police operations emerged in November 2006 when state authorities launched *Operation Chikorokoza Chapera* (meaning "No More Illegal Mining" in ChiShona), leading to more than 25,000 artisanal and small-scale miners being arrested, with thousands displaced from mines that had provided them with livelihoods (Kanyenze, 2011; Spiegel, 2014). Rhetorically, the need to enforce EIA policies served as a chief rationale for expanding police campaigns, following the Ministry of Environment and Tourism's move – in January 2007 – to start strictly enforcing EIA policies for all types of mining (New Zimbabwe, 2007). Since then, the EIA requirement has continued to provoke tense debate in mining communities, where dynamic struggles raise important avenues for understanding how discourses of environmentalism are situated and contested in a complex political terrain.

Struggles in mining communities elicit wide-ranging debate among academics concerned with rural place-making, marginalisation, power, dispossession and conflict, leading to different views on where empirical and conceptual attention should be placed (Huggins, 2016;

Hilson and Maconachie, 2017; Bush, 2009; Lahiri-Dutt and Dondov, 2017; Côte and Korf, 2016; Fisher and Mwaipopo, 2013; Childs, 2014; Geenen and Claessens, 2016; Bryceson and Geenen, 2016; Verbrugge et al., 2015; Hatcher, 2016; Salman and de Theije, 2017; Werthmann, 2017; Luning and Pijpers, 2017). Hirons' (2011) notion of "hegemonic environmental management discourses" suggests a focus on discursive politics and how dominant discourses mask the challenges facing poorer artisanal miners. My analysis here adds to this discussion and also to critiques of a longer history of coercive state responses to informality (Kamete, 2008a,b, 2017), the roles of technical planning experts in systems of political violence (Mitchell, 2002) and environmental discourses and policies in Zimbabwe that have privileged the narrow interests of political and economic elites (Alexander and McGregor, 2000; McGregor, 2005; Moore, 1993). An important historical analogy lies in the work of McGregor (1995), which examined how colonial environmental discourses "drew on scientific understandings promoted by their technical training and a hegemonic colonial ideology of disrespect for African production," resulting in "coercion and punitive restrictions on resource use" (p. 272); this work brought critical attention to how particular combinations of hegemonic environmental discourse and coercion were major components of colonial era governance regimes. My approach is also informed by political ecology work addressing resource conflicts in Zimbabwe's eastern highlands in the early 1990s, where Donald Moore (1993) explored how Gramsci's concept of hegemony helps move beyond a narrow materialistic understanding of resource conflict in which power might be seen in strictly institutional terms or as forms of physical domination. In considering how hegemonic power shapes mainstream discourses and meanings, Moore also reminds us that with Gramscian notions of hegemony, "dominant meanings are always contested, never totalizing, and always unstable, even when they encourage degrees of subordinate people's 'consent' to particular forms of oppression" (1993, p. 383).

In this vein, my analysis emphasizes how engaging the political ecology of EIA discourses and enforcement practices requires a careful focus on situating meanings and precisely their *unstable* nature, paying attention to how power relations around resource extraction can change over time and space, articulated from diverse vantage points. This requires heeding the caution that analysis of "the state" is often liable to "reproduce in its own analytical tidiness" an "imaginary coherence" that misrepresents "the incoherence of state practice" (Mitchell, 2006, p. 169). Confronting this risk requires academics to consider diverse ways in which state practices and effects of state power can be manifested, rethinking the shortcomings of narrow conceptualisations of power. Elsewhere Mitchell (1990) has challenged narrow conceptualisations that simplistically read power through an imagined binary between hegemonic and coercive power, and Moore (2005) has stressed that the effects of 'national' politics may be inflected through varying micro-political struggles. Addressing the 2006–2016 period, others have discussed numerous ways in which political elites in Zimbabwe turned to new tactics of controlling mineral wealth; at certain points in time this coincided with attempts "to regain slipping hegemony" (Saunders and Nyamunda, 2016, p. vi) amid spiralling economic crisis and deep political tensions between the ruling party, the Zimbabwe African National Union – Patriotic Front (ZANU-PF), and its opposition as well as within differing factions of ZANU-PF. During the period of *Operation Chikorokoza Chapera* in 2007–2008, economic relations were shaped significantly by criminalized networks of mineral extraction and trading in both gold and diamonds; and intensified repressive measures in the mining sector could be seen, among other explanations, as consequences of temporarily de-stabilized political hegemony along with dramatically changing political dynamics around resource capture and control, with a plethora of powerful elite actors involved (Saunders and Nyamunda, 2016; Spiegel, 2015a). I especially build here on Gramscian-inspired political ecology work calling for attention to both macro-structural forces and the micro-

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[1] My use of the notion of "techno-politics" builds on past definitions that refer to "the strategic practice of designing or using technology to embody, or enact political goals" (Hecht, 1998, p. 56) and "the kinds of social and political practices that produce simultaneously the powers of science and the power of modern states" (Mitchell, 2002, p. 312, note 77). In situating techno-political practices surrounding EIA discourses, I use this term, as these authors do, with a caution against determinism – stressing that the material and power effects of techno-political practices are variable, at times unpredictable and produced by diverse assemblages of actors.

politics of resource conflicts, stressing their contingent sociocultural, environmental and economic interpretations, seeing the "environment" as an important terrain of material and symbolic struggle (Moore, 1993; Bridge, 2014; Ekers, 2009).

This study draws on interviews over a ten-year period with more than 200 artisanal and small-scale gold miners in the districts of Insiza, Umzingwani, Kadoma, Shamva and Mazowe as well as in Harare and Bulawayo, with fieldwork in mining areas in 2005, 2006, 2007, 2009, 2012, 2013 and 2015. After national authorities introduced a new EIA requirement in 2007, field research turned to interrogating the drivers of new enforcement discourse, how artisanal and small-scale miners were affected in the short term as well as longer-term legacies. Unpacking this required interrogating a myriad of power relations that shaped divergent experiences in mining areas, including for mining groups seeking to "de-criminalise" their livelihoods. Interviews were also conducted with EIA consultants and officials from the Ministry of Environment and Tourism, Ministry of Mines and Mining Development, Zimbabwe Republic Police and Gold Collections Unit of the Reserve Bank, complemented by reviews of newspaper articles, policy documents and EIA reports for mines in the above districts. Ethnographic work at digging sites, gold milling and processing areas, riverbed gold panning sites, gold buying locations, homes of artisanal and small-scale miners and other locations shaped a political ecology orientation that emphasizes diverse temporally and geographically contingent articulations, as well as analysis of media coverage of a dynamic national EIA controversy.

The section below situates changing EIA requirements and discourses in Zimbabwe's mining sector in the 2000s. The subsequent sections unpack ecological and political processes at play, discussing concerns about EIA ineffectiveness along with criminalization, technocratic obfuscation and the "rule of experts" (Mitchell, 2002) in environmental consultancy cultures as well as unevenness in enforcement. After examining how state actors' use of a universal EIA requirement as a rationale for policing produced new forms of marginalisation and protracted waiting for miners struggling to resume livelihood activities, the discussion explores how small-scale miners associations made efforts to resist and advocate for more effective environmental policy alternatives, in some cases protesting EIA impositions as forms of modern colonialism. The conclusion briefly outlines some wider implications for political ecology, particularly for situating socio-ecological and power struggles in relation to multiple hegemonic forces and practices in contexts of resource extraction. Recognising that environmental risk mitigation policies can be critically important but also contentiously used and at times invoked selectively to maintain the hegemony of elite actors, it cautions geographers to be vigilant in interpreting the variable ways in which EIA policies are socially and politically significant in mining areas.

2. Situating a changing mining environment and new EIA enforcement narratives

Political ecology literature has widely deliberated on dilemmas of contextualisation – where to start one's analysis, and how to begin conceiving of complex webs of relation and/or chains of causation that shape environmental conflicts (Rocheleau, 2008; Escobar, 2006; Huber, 2017; Turner, 2017; Cavanagh and Himmelfarb, 2015; Sundberg, 2017; Sultana, 2011; Harris, 2004). There is also a longstanding body of political ecology scholarship on coercive resource control and state violence, especially surrounding conservation agendas where "the state's mandate to defend threatened resources and its monopolization of legitimate violence combine" (Peluso, 1993, p. 199). Zimbabwe's tense climate for environmental governance over the past decade is the product of years of economic and political crisis – exacerbated by complex tensions with foreign powers as well as the negative legacies of the Economic Structural Adjustment Programme (ESAP) policies promoted by the World Bank and International Monetary Fund

(Sachikonye, 2012; Carmody, 2001).

As Zimbabwe experienced economic downturns in the 1990s and early 2000s, rural populations increasingly depended on artisanal and small-scale mining, involving diverse networks of people in mineral extraction, processing, selling and buying (Mabhena, 2012; Spiegel, 2015b). Mabiza (2013) discussed recurrent drought and the negative impacts of ESAP – which resulted in reduced government spending and general economic decline characterised by massive retrenchments in both the public and private sectors – as some of the factors behind the increase in gold mining activities in the 1990s. Carmody (1998) and Carmody and Taylor (2003) provided detailed analysis of how the government's embrace of ESAP and related policies in the 1990s devastated industrial sectors and created widespread joblessness – constituting a remarkable reversal for what had once been one of the most industrialised economies in Sub-Saharan Africa.

In the mid and late 2000s, economic crisis and eventually extreme hyperinflation created new pressures that further heightened the importance of mineral extraction. Official annual inflation levels rose above 1000 percent in 2006, above 60,000 percent in 2007 and above 230 million percent in 2008 – with unofficial inflation running above 80 sextillion percent (Hanke, 2008). Inter-linked economic and political crises – marked by the drastic distortion of state budget funds to pay the military, among other influences[2] – negatively affected agriculture and all other sectors (Sachikonye, 2012), amid much debate on how land reform impacted livelihoods (Scoones, 2017; Scoones et al., 2012; Rutherford, 2016), with ASM again becoming an exceedingly widespread economic coping strategy (Spiegel, 2009a; Kamete, 2008a,b). Such mining provided incomes for diverse populations of technically skilled and unskilled miners, including many people without prior mining experience (Mabhena, 2012; Kamete, 2008a,b). Estimates suggested that ASM, largely involving people without mining licenses, provided income directly or indirectly for more than two million people nationally (Hayes, 2008). Research in Zimbabwe also profiled negative social impacts of mining including injustices arising from exclusionary modes of mineral resource governance – for example, relating to forced relocation of communities from the contested Marange diamond mining areas (and the non-applicability of "indigenisation and empowerment" policies to artisanal and small-scale mining) (Muchadenyika, 2015; Bhatasara, 2013; Murombo, 2013; Dube et al., 2016) – and how political elites created new networks to accumulate wealth from small-scale mining (Mawowa, 2013).

Tunhuma et al. (2007), assessing small-scale gold mining in the Limpopo Basin of Zimbabwe, linked ASM with land erosion, sedimentation of rivers and pollution, attributing the most significant environmental degradation to gold panning in rivers, which elevated aquatic sulphates and introduced mercury into water systems. Like several other environmental scholars (e.g. Maponga and Ngorima (2003)) and Zwane et al. (2006)), they recommended that ASM activities, such as gold panning, be legalized so that risks could be better managed – particularly through decentralized regulatory systems where Rural District Councils could be actively involved in licensing and technically assisting groups of artisanal miners in methods that would reduce riverbed impacts. Indeed this policy view has long been advanced in environmental scholarship in Zimbabwe (Shoko, 2002). However, as hyperinflation increased, political crisis deepened and economic struggles intensified in the 2005–2008 period, state agencies introduced coercive policies in several sectors of the economy (Jones, 2010a) – part of what has been written about in detail elsewhere as a resort to authoritarian practices (Sachikonye, 2012; Dorman, 2016). In 2006, national authorities repealed the legal statute[3] that allowed Rural

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[2] For wider discussion of the contentious framings and genesis of Zimbabwe's political crises, see (for example) Hammar et al. (2010), Dorman (2016), Rutherford (2016) and Raftopoulos (2010).

[3] Statutory Instrument 275 of 1991 (Alluvial Gold and Public Streams Regulation).

District Councils to license one of the most common forms of ASM, alluvial gold panning along rivers, citing environmental reasons. This *re-centralised* power over gold – reasserting the power of the *national* state apparatus as the arbiter of legitimate extractive practice – effectively leaving only land-based hard rock (primary ore) gold mining as a potential legal source of ASM-related income in gold-rich regions. Thereafter, the Ministry of Mines still issued some special grants for riverbed alluvial gold mining to powerful companies and businessmen partnered with state agencies, but acquiring such grants cost thousands of dollars, far above artisanal and small-scale miners' means (interview with President of Zimbabwe Miners Federation, February 2014). Accompanying other reconfigurations of state power and modes of political and social 'disciplining' amid hyperinflation (Jones, 2010a), the government then deployed police campaigns as part of *Operation Chikorokoza Chapera*, initially launched in November 2006 as an initiative of the Reserve Bank of Zimbabwe and the Zimbabwe Republic Police to curb smuggling and illegal mining (Spiegel, 2014). Some news media started to cover this operation as a matter of "pillage and patronage" – outlining economic and political motivations for the crackdowns, while also predicting that government leaders would start to claim that *environmental* concern was behind the operation: *"They will plead the excuses of trying to prevent a cholera outbreak, or protecting the environment - fine! - but this isn't how it should be done, and they know it"* (Sokwanele, 2007).

Indeed the above statement foreshadowed the next 'discursive turn' in policing; the operation started to be branded as a nationwide *environmental* initiative in January 2007, when the Ministry of Environment and Tourism suddenly began requiring all miners to have approved EIA reports and Environmental Management Plans, making most mining illegal. The Ministry of Environment and Tourism introduced Statutory Instrument 7 of 2007 (Environmental Impact Assessment and Ecosystems Protection) Regulations, which compelled activities listed under the first schedule of the Environmental Management Act CAP 20:27 (including mining) to undergo an EIA process. Debates soon emerged about how police were "overzealous" in imposing laws, with small-scale miners widely reporting that police cited the lack of an EIA while confiscating gold, ore and equipment, in some cases destroying miners' houses and seizing household possessions (Metcalf and Spiegel, 2007). Environmental officials became involved in closing down mines, with police in some cases arresting hundreds of miners at a time, including many working in licensed mining areas, as both illegal mining and smuggling became the basis for new stiff penalties (Spiegel, 2014).

Connections between risk, environmental policy and politics have long been debated in Zimbabwe, with scholars calling for critical understandings of how state actors use environmental crisis narratives (Keeley and Scoones, 2000). In 2007, the Deputy Minister of Environment and Tourism declared to the media: *"The law applies to all mining operations - big or small. It does not matter who owns the mine, it will be closed if they fail to meet the stipulated [EIA] requirements"* (Mineweb, 2007). EIA enforcement and the violence of *Operation Chikorokoza Chapera* came as a surprise to many miners. The initial move to start enforcing EIA requirements also came as a surprise to numerous officials in the Ministry of Mines and Mining Development who were also not consulted prior to the enactment of Statutory Instrument 7 of 2007; this lack of consultation was expressed to me by several officials from the Ministry of Mines in 2007 and constitutes just one illustration of some of the fragmentation within state institutions. By March, some newspapers outlined the ramifications with headlines such as "*25,000 small scale miners lose claims since November*" (New Zimbabwe, 2007), highlighting some of the ways in which EIAs quickly became significant on a national scale. New discursive terrains for debating environmentalism henceforth emerged. National environmental authorities spoke about EIAs in technocratic terms as a matter of switching from voluntary to mandatory due diligence. Before Statutory Instrument 7 of 2007, authorities did not require the full EIA report approval

process for most mining activities.[4] By early 2007, in the midst of pressures to support the government's operation, one newspaper writer asserted that *Operation Chikorokoza Chapera* should be "*applauded*" (The Herald, 2007b). As unpacked in the next sections of this article, such a view needs critical scrutiny for several reasons, as it concealed not only different political and economic logics of control but also highly contentious - in some cases devastating – impacts in mining areas.

Between January and June of 2007, I participated in a series of meetings with artisanal and small-scale miners who were grappling with difficulties in complying with EIAs, with many miners expressing concern about deteriorating relations with authorities, the prohibitive costs of completing EIA reports to comply with government policy, the lack of institutional support, steep fines and unpleasant encounters with aggressive police. These problems not only fuelled deep frustration; in many cases they halted income generation activities in 2007. Two years later I interviewed some of the same miners who felt that the EIA system was still being severely misused, both rhetorically and in material terms. In meetings organised by small-scale miners associations in May 2009, I also participated in discussions with miners and government authorities, including one where Honourable Francis Nhema, the (then) Minister of Environment and Tourism, urged small-scale miners to complete EIAs or face legal consequences, arguing in a speech that "*EIAs are for you, so you can be better miners, more responsible, more caring with the environment*" (field notes, Harare, May 15, 2007). Given "*the complete absence of community consultation before the operation,"* as one Kadoma-based small-scale miner phrased the problem, this government rhetoric was met with scepticism, though some small-scale miners agreed that more should be done to improve risk mitigation and the idea of countering a hegemonic system of environmental policy enforcement was perceived in varying ways. As one Bulawayo-based small-scale miner articulated it, miners became a "*national scapegoat*" – with miners' "parallel economy" activities (particularly including selling to non-official gold buyers) blamed for exacerbating the country's economies woes, while the EIA issue created an environmental "*excuse*" for aggressively policing miners. The approach used by authorities elicited critiques of both injustices in the 'implementation' approach as well as much wider injustices in the socio-political relations in which EIA enforcement discourses were situated, both discussed below.

3. Encountering EIA geographies: The 'Rule of Experts' and the Politics of Waiting

While interpretations of enforcement rhetoric in relation to the politics of violence and control are discussed further in Section 4 of this article, it is instructive to first unpack the EIA controversy by considering how an imposed "rule of experts" – to borrow Timothy Mitchell's phraseology – was encountered within a (changing) techno-bureaucratic logic. To resume mining after *Operation Chikorokoza Chapera* began, a miner was required to enlist an expert from the Ministry of Environment and Tourism's roster of qualified consultants to conduct the EIA. In interviewing small-scale miners in Kadoma, Mazowe, Insiza, Umzingwani and Shamva several trends emerged. Among small-scale miners who held licenses for mining, some – amongst the more economically well-off 'class' of small-scale miners – explained that they had managed to recruit environmental experts[5] to

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[4] Guidelines introduced in the 1990s had recommended the use of EIAs for mining, with large-scale mining models in mind (Hollaway, 1997). The practice of conducting EIA reports had been widely referred to as a "voluntary" and "ad hoc" practice until the Environmental Management Act of 2003 (Gwimbi, 2014), which technically required EIAs for a list of prescribed activities (including mining), although in practice this was largely not enforced actively until 2007. Statutory Instrument 7 elaborated on the Environmental Management Act, outlining required procedures for conducting EIAs, registration of EIA consultants, issuance of EIA certificates and fines.

[5] These were generally professionals based in cities far from the mines.

write EIA reports but were waiting over long periods while the Ministry of Environment and Tourism (through the Environmental Management Agency [EMA]) processed their EIA paperwork; this included delays in excess of 6 months or even a year. However, by far, *most* artisanal and small-scale miners interviewed said that they could not afford to pay EIA experts the necessary fees, which were prohibitive. The amounts in 2007 varied partly because of hyperinflation and variable currency conversion rates but were equivalent to thousands of US dollars. By 2009, the costs linked with the EIA reporting requirements included an US$4000 fee paid to expert consultants plus a government EIA registration fee of US$100[6] in addition to 1.5% of the "project cost"[7] (paid to the Ministry of Environment and Tourism). Under national EIA policies, the same generic environmental guidelines and EIA reporting requirements existed for a rural villager digging a hole on her/his own as for a large or medium-sized mining operation.

Mitchell's discussion of expertise articulated how the "appearance" of "universal rules of property" (Mitchell, 2002, p. 56) served as a cornerstone to colonial order and violence in Egypt, with "expert" planning promoted by authorities to advance "modernity." In Zimbabwe, the universality of the EIA requirement in 2007 became a bureaucratic rationale within a modernist frame among state officials. Yet meeting the EIA stipulation was the final stage in an already-arduous process of becoming a legal miner – after securing a prospecting license, pegging a mining area (which also required hiring an expert – a professional geologist) and securing a mining license. Most small-scale miners interviewed in all of the study areas spoke of being victimized rather than assisted by authorities during *Operation Chikorokoza Chapera* – and knew people in prison for illegal mining or smuggling as well as people who had to pay steep fines to environmental officials. Addressing the years following *Operation Chikorokoza Chapera*, Murungu et al.'s (2012) analysis of mining sector licensing showed how regulatory requirements continued to be onerous and had particularly discriminatory effects on female artisanal miners, who disproportionately could not meet the requirements – partly as women involved in mining tended to have especially limited economic means[8]. In the midst of *Operation Chikorokoza Chapera*, I conducted interviews with several women who outlined how the EIA requirement and related policing made it such that they repeatedly had to stop mining from 2007 to 2009. EIA reports had to include full accounts of the environmental context, risks, mining plans and public consultations, with ultimate approval from five government agencies. While some women's groups of small-scale miners were seeking to put together resources to try to pay the costs of an EIA consultant, others gave up, informing me that they were "waiting" for EMA to change its approach.

A further set of particularly disconcerting problems also became apparent, pertaining to how materialities and the "matter of nature" (Bakker and Bridge, 2006) were being treated: many of the EIAs that were completed did not address the real risks and management issues in the ASM operations. In an over-simplified and over-optimistic account, in 2007, a United Nations Environment Programme (UNEP) website reposted a story that had been printed in a Zimbabwe newspaper (The Herald, 2007a) with this assumption made: "*From the [EIA] report, will*

emerge a clear picture of the environment in which a miner is operating and the suitability of the site for mining operations.*" Interviews with EIA consultants, government officials and small-scale miners - including members of the Zimbabwe Miners Federation (ZMF) (an umbrella association that represents 30 associations nationally) – suggested that this statement significantly misstates reality. Some EIA consultants acknowledged that the EIA model was expert-driven, expensive, and often provided little or no consideration to specific practices used in the small-scale mining operations. One of the self-reflexive critiques they offered was that strategies to manage mercury and minimize mercury pollution – crucial in ASM but not in large-scale mining – were not addressed in many EIAs. This is despite the known concern that mercury use in small-scale gold mining poses health and environmental risks (Spiegel and Veiga, 2010; Spiegel, 2009b; Selin, 2014). This oversight was largely due to the fact that consultants were experienced in conducting EIAs with mining generically (many of whom schooled in EIAs for larger-scale mining operations) but often less focused on ASM practices specifically. As one Bulawayo-based EIA consultant noted (based on his experiences with EIAs in the Bulawayo region and elsewhere in Zimbabwe), in many cases EIA reports drew attention to the types of vegetation in an area and different aquatic species and "butterflies on the premises"[9] while neglecting issues relating to how miners were planning to mitigate risks in ASM. As the EIA was a separate process from the Environmental Management Plan that dictates on-the-ground strategies for risk mitigation, the requirement for two separate processes became critical in the eyes of many small-scale miners, who widely felt they should indeed have to do the latter, but not the former.

While it was becoming increasingly apparent to some people that the EIA was a controversial rationale to exert control over small-scale miners for a variety of economic reasons, there was also significant variation in how EIA consultants performed their work, with some consultants sympathetic to the fact that the system was problematic. Machaka et al. (2013), while not discussing mining specifically, unpacked relationships between consultants responsible for writing EIAs and the Environmental Management Agency, noting "expectations between the regulatory authority and the consultants which are not being fulfilled by either party," questioning the quality of reports produced as "EIAs." Indeed such concerns were encountered in my fieldwork as well. In some cases, flaws with EIAs were attributed to EIA consultants being government employees themselves. The requirement to do a consultancy report seemed, to some miners, to do little more than financially reward such individuals and a small number of independent professionals registered as EIA consultants – in addition to making the process of 'legitimate' mining more expensive, criminalising large populations and altering the dynamics of the political economy of accumulation and control in the gold sector. In numerous cases, the consultants would copy the report that they completed for Region X in order to do a second EIA report for Region Y. I met five EIA consultants who reported this trend. This was conveyed, for instance, in this interview[10] in Insiza District:

Question: As you have done EIAs for different mines, could you tell me about the differences and similarities?"
Respondent (EIA consultant): "I copied the EIA report I did for a mill at Kadoma-Chakari…there were some differences [with the Bulawayo mine area which was also assessed by the same consultant] but it is easiest to copy and paste, you know, because the issues are the same."
Question: "Do you think the EIA report helps significantly to manage environmental risks?"
Respondent (EIA consultant): "To be honest, it is just a formality.

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[6] Government fees that miners had to pay varied and often exceeded this amount, depending on the government officer in question and particular moment in time. Some of the dynamics in setting government fees are discussed further in Section 4 of this article, along with informal systems of payment.

[7] The notion of a "project cost" is officially inscribed in the government's EIA policies and reflects a model of well-capitalized mining ventures rather than subsistence/survival-driven small-scale or artisanal mining. As discussed in Section 4 of this article, paying the government a percentage of a "project cost" is one of many points of contention that small-scale miners and environmental officials debated in the years that followed.

[8] In addition to documenting gendered economic disparities and experiences of harassment experienced by women and men, their survey shows how women in mining also - on average - tended to have less legal literacy and specialized technical knowledge, making attempts to navigate the numerous licensing processes even more difficult or impossible.

[9] Interview with Bulawayo-based Gold Collections Officer, Reserve Bank of Zimbabwe, and part-time environmental consultant (EIA report writer), April 27, 2009, Bulawayo.

[10] Interview with Bulawayo-based environmental consultant (EIA report writer), April 23, 2009, Filabusi, Insiza District.

Nobody reads the report but it is still necessary."

Question: "Necessary according to the law?"

Respondent (EIA consultant): "Yes."

Question: "Did the small-scale miners participate in the EIA studies?"

Respondent (EIA consultant): "No, the owner [of the mine] asked me to do the report…The miners were not involved."

Question: "Will the EIA help to ensure that small-scale miners are aware of the main risks with mercury management?"

Respondent (EIA consultant): "No… There need to be other programmes to educate the miners… The EIA is a report for the government. Maybe nobody will read it."

The above thoughts resonate with the work of Chimhowu et al. (2010) who provided a multi-sector overview of environmental concerns and noted the political nature of EIA processes in Zimbabwe, including that "the whole EIA process is considered flawed and, according to an EIA consultant, characterised by corruption, cronyism and shocking quality of EIA reports which are often compiled from a desk study using cut-and-paste" (Chimhowu et al., 2010, p. 66). Their work did not specifically focus on EIAs for gold mining, nor did they seek to unpack the dynamic power relations involved in creating an environmental rationalization for *Operation Chikorokoza Chapera* as this article is addressing; nonetheless, the findings in this study echo their observation regarding a "conflict of interests between developers who commission EIAs, consultants who carry out the EIAs and produce reports, and officers who are responsible for reviewing, approving and monitoring" (p. 66).[11] In 2009, an EIA consultant and a small-scale miner, interviewed together near Harare, spoke of the EIA system as a "*superficial paper exercise.*" As one small-scale miner articulated in an interview in Insiza District, at a mining site near Filabusi in December 2012, *"This was protecting the environment on paper, just on paper."* As such, the experiences that unfolded in Zimbabwe, while in a vastly different political context, resonated with arguments made elsewhere in Africa; for example in Ghana, studies on mining conflicts have noted that efforts to implement EIAs in artisanal mining situations were seen "as more of a bureaucratic hurdle and money-making initiative than sound regulatory practice" (Hilson and Yakovleva, 2007) and have indicated that general EIA reporting requirements are not suitable mechanisms for governing all kinds of mining.[12]

Some media discourses in Zimbabwe noted that the heavy-handed enforcement regime was also a cause of new economic problems with significant impacts. In 2009, "High Fees Drive Out Small-Scale Miners" was the headline of one news article (Kawaza, 2009) which observed that "only about a quarter of the estimated 1.5 million small-scale miners who were affected by the government's clean-up operation code-named *Operation Chikorokoza Chapera* have resumed operations due to the high registration fees and Environmental Impact Assessment consultant costs." This news piece indicated that expensive and bureaucratic EIA processes added to illegality in the mining sector by turning primary ore miners into illegal unregulated riverbed panners while "depriving the country of much needed foreign currency." The ZMF argued that aggressive enforcement drove large numbers of miners into more rudimentary gold panning activities (such as searching for gold in rivers with basic equipment), explaining that compared with small-scale mining of primary ores and milling, basic alluvial gold panning was often less easy to monitor and control due to its dispersed nature. While the zealousness of police forced small-scale miners into precarious mining (including working at night), further hindering the adoption of safety and environmental risk management procedures, these dynamics in turn fanned the flames of the anti-ASM environmental discourse; in this sense, a 'vicious circle' was created with *Operation Chikorokoza Chapera*, prompting growing sentiments that authorities were hurting the cause of environmental protection. As conveyed by one small-scale miner, "*In Mazowe, people see EMA [the Environmental Management Agency] and they literally run away in the mountains…they disappear or try*" (interview, Harare, February 2013), adding: "*the CID [police in the Criminal Investigation Department] would come and ask for money and EMA papers [i.e. Environmental Management Agency EIA papers] without understanding the environmental management issues.*" He described fleeing miners as "waiting" before returning to mining.

Indeed, while Jeffrey (2010) and Bayart (2007) referred to the mid-2000s period in Zimbabwe as one where the whole nation was engaged in "the politics of waiting" in the sense of "waiting for the future", intensified policing contributed to specifics forms of waiting in gold mining-dependent communities: for some miners, migration to other gold mining areas was the only answer and this sometimes meant mining in more ecologically sensitive areas; for others, waiting took place in the form of secretive processing of ores and an increased use of labour-intensive hand milling methods; some mill owners described perpetually paying EMA officials to look the other way when they visited mills – and then "waiting" for those officials to return again, and still other forms of waiting emerged also as some miners spoke of waiting for their relatives to come out of jail. Perhaps one of the most powerful illustrations of the EIA system's 'embeddedness' in a 'politics of waiting' was provided by a Harare-based EIA consultant who, when interviewed in December 2012, was awaiting payment from three different small-scale miners who were engaging in what he called "not authorised" gold mining. Having completed his EIA reports for his customers, he described how the economic situation was such that many small-scale miners found it difficult to comply and pay consultants, but he was hoping that payments could be made incrementally. When interviewed again in February 2013, he had not yet received payment and thus abandoned his work as an environmental consultant; in what might be interpreted as a microcosm of the much wider political and economic challenges unfolding at the time, he described how he then joined the Central Intelligence Organisation (CIO) instead, becoming "a government spy", one of the more financially rewarding jobs available to talented young professionals.[13] The point here is to stress that multiple kinds of waiting were inextricably tied to the techno-politics of a new enforcement regime, with state actors explicitly invoking the need to wait for expert review before proceeding with approval, in a system where costs and technical obstacles for 'legitimization' were – for most – insurmountable. Speaking of 'techno-politics' here in the sense of a "legal legitimisation" difficulties thus provides a necessary – though partial and incomplete - analytical window into changing struggles that were also situated within larger projects of control and accumulation by powerful actors. Some of these complex aspects of *Operation Chikorokoza Chapera* and its aftermath are further discussed below.

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[11] Differing sets of EIA challenges have been experienced in other sectors beyond gold mining; for example, in Zimbabwe's large-scale platinum mining sector, Gwimbi and Nhamo (2016) discuss problems of EIA ineffectiveness and follow-up.

[12] While *Operation Chikorokoza Chapera* created deep strains on relations between miners and authorities, in a policy design sense, some of the EIA problems during the operation were predicted years earlier; academics previously advocated for a more user-focused system where miners – instead of consultants – were involved as the central actors in risk identification. Hilson (2002) noted that a generic "all-encompassing EIA process" for small- and large-scale mines can fuel problems especially if a system was "designed for evaluating the environmental aspects of large-scale mines but is being used concurrently to assess comparatively simpler industrial activities." In the process, he wrote "a number of evaluation criteria can be made redundant, which can make the procedure less rigorous overall (p. 163).

[13] Tendi (2016) and McGregor (2013) provide wider discussions of the 'pulls' into the CIO in this period, with the numbers of people in the CIO and the power of secret intelligence surveillance (in support of the ruling political party) increasing in several realms of state politics, while civil servants in other state bureaucracies struggled (and waited long periods) to get paid at all.

4. Interpreting economic and political geographies of EIA impositions

4.1. EIA discourse as rhetorical politics - Operation Chikorokoza Chapera as 'Another Operation Murambatsvina'

While certain political ecology approaches give primary attention to scientific knowledge production about environmental impacts and resource conflicts on local scales, others focus on hegemonic processes at play in the rhetorical framings of power on wider scales, class, race, party politics and broader histories in which national tensions are situated (Mann, 2009; Cavanagh and Himmelfarb, 2015). Studying narratives around *Operation Chikorokoza Chapera* through a political ecology lens gives rise to a vast array of analytical possibilities. As this operation was a drastic campaign to police mining nationwide it might appear to fit tidily within a broad macro-narrative about the political economy of patronage and calculated corruption at the top levels of government, with environmental justifications merely serving as a mask for 'non-environmental' interests – a "façade for corruption," as one international mining consultant suggested to me. Notwithstanding the strong significance of such dynamics, Donald Moore's pleas for critical nuance in political ecology theorizing are still relevant here. In "*Suffering for Territory: Race, Place, and Power in Zimbabwe*," Moore (2005) expressed ambivalence about de-territorialized broad-sweeping accounts of the power of "the state" and emphasizes the notion of "shifting alignments and contingent constellations of power" (p. 7) to express how "micropractices matter" (p. 2) when making sense of situated, culturally and historically produced discursive practices and power relations that link with "state" projects. Without any ambiguity, injustices in *Operation Chikorokoza Chapera* were clearly not the mere result of sudden poor planning within one ministry or reducible to a mere single moment of state power. For small-scale miners, the operation – while clearly driven because of gold's significance as a key source of foreign currency – kept *continually* producing new stories of power – with devastating effects. These were perceived according to diverse social relations affected in different regions of the country and through different techniques of control. *Operation Chikorokoza Chapera* was *initially* an effort led by the Reserve Bank and the police - and those to whom police reported – to monopolise control over the gold sector. However, at times some small-scale miners came to feel that "EMA [the Environmental Management Agency]" was leading *Operation Chikorokoza Chapera*" (interview, February 2013). While some people welcomed efforts at stopping potentially destructive mining in a difficult economic situation, others endured the effects of state power through experiences of going to prison; some encountered injustices as police confiscated equipment and some felt squeezed by environmental officials' demands and repeat visits in mining sites; and some engaged in conflict with farmers who long wanted miners off their land before *Operation Chikorokoza Chapera* began. An overarching project of control – led by elites within ZANU-PF – was clearly central to the operation, yet the danger of telling 'a single story' of power would be to overlook the numerous social, political and economic frictions in which the operation was embedded. A related analytical danger would be to assume that power was only operating in a coercive mode to control "things" (resources) without seeing how the operation also gained force from hegemonic environmental narratives and discourses of proper social conduct; as Moore (2005) stressed, the power of governmentality lies precisely in how it targets "relations *rather* than things" (my emphasis), ultimately "entangling subjects, space, and resources" (Moore, 2005, p. 7).

In various ways, this operation produced new kinds of fear. One miner reflected on how "Arrests were indiscriminate. Sometimes police came to check if you were recording your gold sales and to get gold themselves, and used the environmental rationale…If you don't fence in a shaft, that's 2 years in prison for that…but even if you didn't do anything wrong you were punished" (interview, Harare, February

2013). Several small-scale miners I interviewed during *Operation Chikorokoza Chapera* suggested specifically that this operation be understood as a "crackdown in the context of other crackdowns" and drew explicit parallels with Operation Murambatsvina (translated as "Operation Drive out the Rubbish"), a much-critiqued aggressive government campaign in urban areas that took place in 2005. Operation Murambatsvina, introduced by authorities allegedly to "cleanse" urban spaces of disorder, also affected hundreds of thousands of people (Potts, 2006; Kamete, 2017; Hammar, 2008). In numerous cases, people who came to depend on small-scale mining were affected by both operations, having had to change their livelihood and survival strategies.[14] The use of modernist 'planning' rhetoric in *Operation Chikorokoza Chapera* resonated with that used in Operation Murumbatsvina, as did the vilification of informality; and both used police in confiscating goods, destroying homes and devastating income sources for already-marginalised populations. Some media made analogies with Operation Murumbatsvina and suggested that the ruling party was using *Operation Chikorokoza Chapera* to 'punish' communities for not giving it strong support in 2006 elections (Sokwanele, 2007). While this framing may over-play a particular electoral politics logic, since *Operation Chikorokoza Chapera* affected diverse people in rural locations, including areas that were historically ZANU-PF strongholds, discourses on "unruliness" took on prominence as an obfuscation of policing, rent-seeking and new strategies of resource control.

Without doubt, many people working in the Ministry of Environment and Tourism aspired to see the well-intentioned implementation of EIAs in order to reduce mining sector risks – and material concerns about pollution, waste management, river destruction and lack of land rehabilitation all fuelled interventionist discourses. Yet, amid hyperinflation in 2007 and 2008, officials in mining, environment and finance ministries as well as police units all mobilised –and, importantly, at times competed – to assert power in the country's unstable state of affairs in the mining sector, rendering notions of technocratic 'planning' exceedingly political.[15] Policies of the Reserve Bank– which set low gold prices for miners – exacerbated powerful actors' exploitation of parallel market (informal) trade channels outside of official gold buying channels. Under the Gold Trade Act, all gold had to be sold to the Reserve Bank or Fidelity Printers, an arm of the Reserve Bank; however, the price paid for the gold was linked to the Zimbabwe dollar value, which was (until 2009) a fraction of the international trading rate. Several small-scale miners argued that police aggression allegedly because of "illegal gold trade" was fuelled by the anti-miner sentiments of "EMA mentalities" (interview, December 2015). Conversely, sometimes police aggression against small-scale miners was reported as being sparked by illegal trade and smuggling and then penalties were eventually given for environmental policy infractions. Even if partly "ecological," EIA enforcement could certainly be seen at least *partly* as an "excuse" for officially shutting down mines as gold pricing proved to be problematic throughout the 2006–2009 period before the government accepted the U.S. dollar as its currency (which miners and others had lobbied for intensely).

Importantly, while the Reserve Bank's low gold prices fuelled selling to illegal gold buyers and heightened technocratic interest in temporarily halting illegal mining activities (with the EIA requirement as an excuse), the economic situation also meant that salaries for police and public sector workers were meagre, leading to diverse officials

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[14] Several analogies with *Operation Murambatsvina* and *Operation Chikorokoza Chapera* can be drawn: both produced a myriad of political interpretations, involve large numbers of police and costing the country large sums of money (see Zimbabwe Independent, 2007). Kamete, 2008a,b; Kamete, 2017 wrote about *Operation Murambatsvina* stressing the convergence of modernist planning rhetoric and political interests, with elites using violence as a strategy of control along with rhetoric on "stamping out spatial unruliness."

[15] During *Operation Chikorkoza Chapera* and after, there was a noticeable increase in powerful high-ranking politicians publicly blaming others (within the ruling party) for mining sector corruption and mismanagement.

themselves becoming reliant on mining income. While there are numerous reported cases of high-ranking politicians being directly involved in mining and using *Operation Chikorokoza Chapera* as a basis for accumulation, police also were miners or became part of the value chain by requiring payments as a condition for allowing mining or milling. For example, in Insiza, miners reported (in 2007, 2009 and 2012) that police regularly demanded bribes from both registered mill owners and artisanal miners who did not have licenses. Insiza experienced considerable violence during *Operation Chikorokoza Chapera* as well as election-related violence in 2008. In Insiza, many small-scale miners described how the motivation for the operation was neither 'just economic' nor 'just environmental,' and that police aggression during *Operation Chikorokoza Chapera* was excessive, revealing a level of violence and a political nature that defied a simple logic of economic or environmental control.[16]

Ultimately, as *Operation Chikorokoza Chapera* involved several arms of state power including the Zimbabwe Republic Police, the Reserve Bank, the Ministry of Environment and Tourism, the Ministry of Mines and Mining Development as well as the CIO among others, it is necessary to conceptualise the operation as product of *converging* struggles with wide-ranging – and sometimes clearly contradictory – interests at play rather than a coherent state project. While government officials espoused a "modernization" discourse and occasionally depicted the operation as paving a foundation to force artisanal miners to "grow up" and become "proper" miners, occasionally this ideology was tempered with views expressed by environmental officials who suggested that miners could "form groups" to complete a collective EIA – which again assumed a logic of forced social ordering. Regardless of what motives drove policy changes, in practice the "EIA" – in some situations – became a *divisive* instrument for subjugating artisanal miners in a system of informal politics and informal economics, working in what Jones (2010b) called the "*kukyia-kiya* economy" (referring to the "multiple forms of making-do"). State actors' actions in the name of EIA enforcement were experienced in a wide range of ways, sometimes accompanying other allegations against miners, including illegal gold possession. In some locales, police crackdowns led to companies being given rights to mine areas where communities previously mined; disconcertingly, in some instances companies that took over sometimes mined without EIAs, even though environmental impacts were the stated reason for stopping earlier mining.

One example of this occurred in the Umzingwani River, where artisanal miners, during a research visit in 2012, spoke angrily of a Chinese company mining being given the rights to mine by the Ministry of Mines and Mining Development[17], then destroying the Umzingwani River. Local small-scale miners urged me to take note of the damage caused by a company in this regard – it was hardly recognizable as a 'river' after the company was finished mining. The area had previously been a gold panning site for those living in the area. Rural district councillors from both of the two main political parties acknowledged in interviews that this company had badly damaged the river and produced impacts far worse than those attributable to local artisanal and

small-scale miners. "*The rivers will never flow the way it used to flow,*" voiced one small-scale miner, who expressed concern for those who used to conduct alluvial gold panning there and downstream as well as the wider community.[18]

A different kind of EIA politics was encountered at a gold mining site in Insiza District near Filabusi, at a mine that had existed for 15 years prior to the crackdown. Some mines and mills were abandoned during *Operation Chikorokoza Chapera*, but this mine had the involvement of a Member of Parliament and Rural District Council Members from the ZANU-PF. As some of the other mills in the region were not functional, miners were sometimes pressured (given the lack of options) to use this mine's milling services and work in its mines. When *Operation Chikorokoza Chapera* began and police came, some miners were able to continue working there, despite having not conducted an EIA, and the ability to continue operating was attributed to personal connections with ZANU-PF. Concerns were raised by artisanal miners in Insiza that powerful miners used political connections to harass other miners during the period of the crackdown.[19] According to a Filabusi-based small-scale gold miner, the owners used the Green Bombers (ZANU-PF youth brigades[20]) to displace other miners in the district. "*The politics closed things down,*" he argued, emphasizing "*politics*" before explaining that opposition party supporters also rebelled against powerful ZANU-PF-affiliated businessmen who were seeking to monopolise mineral resource access. The point here is not to suggest that police crackdowns and EIA rhetoric should be understood purely within the context of ZANU-PF domination and control on local scales, but instead that the crackdowns were adapted to *multiple* economic and political interests, and was indicative of changing forms of politicized environmentalism. While government rhetoric played on the notion of miners as environmentally irresponsible subjects who needed to conduct EIAs and be policed to prevent degradation, punishing miners for not completing the EIA report process was also used as a control tactic and economic accumulation strategy, a political survival strategy, a spectacle of state power and a way of politicizing "informality."

4.2. Contesting a sense of hegemony, seeking an alternative

Loftus and Lumsden (2008) revisited how "[f]or Gramsci, the stabilisation of a particular worldview, and the acceptance of this view by different groups (often against the interests of the individuals involved) are achieved through the operation of hegemony" and they explored attempts to challenge hegemonic power in South African contexts of water politics. In the context of *Operation Chikorokoza Chapera* in Zimbabwe, violent coercive power and hegemonic discourse went hand

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[16] In some cases police visits made it apparent to miners that intimidation was a means to shaping both economic and political alliances, with pressure placed on artisanal miners to show support for the ruling party. In some (though not all) cases, indicating varying degrees of what could be theorised as consent or 'outwardly projected consent,' some artisanal miners tried to show and instrumentalize membership to the ZANU-PF party (and sometimes particular factions therein) to protect themselves from potential state violence and eviction.

[17] As discussed elsewhere, ZANU-PF-China ties have been marked by deals involving mineral extraction rights as well as weapons transfers that drew intense critical global scrutiny (particularly in 2008) (see Spiegel and Le Billon, 2009). Having said that, regardless of the particular arrangements in the high-level geopolitical relations that have influenced mineral rights allocations, the crucial point here is that, after *Operation Chikorokoza Chapera*, the injustices of criminalising artisanal miners' livelihoods were witnessed locally in a context where the physically observable illegal activities of a company in a river went unpunished.

[18] While this episode in Umzingwani did not draw much media coverage, the more infamous example of eviction and EIA politics was diamond mining in Marange District; artisanal miners were violently displaced from a diamond mining area in Marange in 2008 in a campaign that drew global news headlines because of military shootings and violence. While much scholarly criticism addressed the militarization and how Russian and Chinese companies were given rights to mine diamonds, groups such as the Zimbabwe Environmental Lawyers Association sought to highlight one of the less prominent narratives - that the contracted companies lacked proper EIAs and environmental monitoring and proceeded to pollute Odzi River and degrade the area. In 2015, the government's Auditor General on the Environmental Monitoring of Mining Operations published a damning critique of the companies and the responses by EMA under what (by then) was rebranded the Ministry of Environment, Water and Climate, noting that EMA's penalty system "proved to be non-deterrent." The report stressed a problem where offenders could be "penalized more than once" for pollution and simply pay their way out of problems "without taking any measures to prevent environmental pollution" (Chiri, 2015, p. v).

[19] This point was stressed by a gold panner I interviewed on May 4, 2009, in Filabusi. The same point was made by an MDC Council Member in Insiza during an interview on April 24, 2009.

[20] While my study is one of the first to document the use of Green Bombers in *Operation Chikorokoza Chapera*, Kamete (2010) discusses the use of "Green Bombers" in *Operation Murambatsvina*, explaining that 'Green Bomber' is a term for "a graduate of the controversial National Youth Training Service regarded by critics as a political survival project designed to produce militia for ZANU-PF's campaign of violence" (p. 60).

in hand, and the hegemonic languages of 'order' in the mining sector were shaped by longstanding histories of technocratic resource governance as well as rapidly deepening political tensions in the 2006–2008 period and after. Raftopoulos (2010) examines this period as one that produced a "passive revolution" – where the two main political parties, after the contested 2008 election, formed a short-lived 'power-sharing' government (the 'Government of National Unity') but where effectively all the main political powers (including powers over mining) resided with ZANU-PF and where opposition voices were constricted. This is not to say, though, that small-scale miners were passive. Although a lengthy analysis of the agency and advocacy of various groups of artisanal and small-scale miners is beyond the scope of this article, recognizing that some of these groups sought to contest aspects of hegemonic discourse, policing and technocratic governance during and after *Operation Chikorokoza Chapera* is indispensible. In addition to the 'everyday' acts of resistance that many small-scale miners employed in trying to evade police and state agents, starting in 2007, the ZMF engaged in meetings with mining and environmental ministry authorities; their advocacies included both pleas for short-term reforms to give small-scale miners a "reprieve" as well as wider long-term changes. In a context where multiple other forms of population displacement, economic contraction and political violence were unfolding (Hammar et al., 2010; Alexander and McGregor, 2013), these both had limitations.

In 2007, the ZMF – which represented a significant political constituency, despite small-scale miners being generally criminalized – sought to engage government officials in policy dialogue. The immediate short-term proposal was to allow miners to pay the EIA processing costs to the government in three instalments. It was hoped that both the Ministry of Environment and Tourism would agree to give small-scale miners this "reprieve" so they could return work as soon as the first instalment was paid. In some cases EMA officials granted this reprieve, although variations existed regarding the official government payment required, according to different individuals' connections and negotiation abilities (as well as variable currency translation values amid hyperinflation until 2009). Sometimes when confronted by small-scale miners, EMA officials engaged in what small-scale miners saw as a hegemonic 'politics of deflection' by indicating that some expert consultants were *"unfortunately unscrupulous"* (meeting in Harare, December 2012) but that miners had to abide by the prescribed expert system nonetheless.

The idea of promoting "group" EIAs might superficially appear to align with technical ideas put forward in other countries such as Tanzania, where suggestions have been made to start "introducing block EIA and management plans to accommodate a number of ASM operators and for joint responsibilities" (Mwakaje, 2012). Yet, forcing artisanal miners to pay for and submit expensive technical expert EIA reports still perpetuates widespread criminalization and elitism[21], while relying on central state officials as key permission-brokers also reproduces long-established patterns of centralized control over mining. Although past scholarship in Zimbabwe has argued that powers over mineral resource management should be established at district and village levels, to develop a sense of local ownership and a more decentralized system for overseeing simplified environmental guidelines and resource management procedures (Shoko, 2002), national shifts towards a *re-centralisation* of power over the past decade has signaled a conspicuous trend in the opposite direction. For years, miners have lobbied to try to force an amendment to the 1961 Mines and Minerals Act, which carries forward colonial era injustices by vesting vast powers in the hands of the President and Minister of Mines without creating specific legal provisions for artisanal and small-scale mining or modes

of democratic participation in processes governing mineral licensing[22] (see Transparency International Zimbabwe, 2013). Efforts to amend the EIA policy regime thus need to be understood in relation to long-standing struggles by small-scale miners, who have argued that resource laws have been historically biased.[23]

Bringing critical scrutiny to one of the aspects of hegemony most of interest to Gramsci – the *hegemony of language*[24] - some associations argued to the media that the forced use of the English language for all expert EIA reports was itself a form of injustice that re-entrenched colonial practice. Since small-scale miners were not allowed to use Shona or Ndebele (the historical languages of indigenous Zimbabweans) to meet environmental reporting requirements, both the English language imposition and the required technical jargon of expert EIA reports were seen as imperial, unnatural and even absurd requirements in mining areas. As a leader of one of the national small-scale miners federations argued to the media, *"Small-scale miners are being fined between $200 and $500 by government. We are asking how you can fine someone for not understanding a book written in a language they don't read"* (The Zimbabwean, 2014). The ZMF also argued that forcing small-scale miners to engage experts was exacerbating corruption among officials, who were said to have demanded bribes to fast-track EIA approvals (for those who could afford EIAs), pointing to demands of Rural District Councils in addition to EMA charges for EIA processing.

A sense of the dynamic nature of the struggle was expressed memorably in the words of a small-scale miner who reflected on changing fee demands from various agents of government, who continually invoked miners' illegality: *"The EIA was a monster. The EIA problems kept multiplying. More officials kept asking for money"* (interview, December 2015). This articulation – evocative of how socio-economic processes in mining areas need to be understood as dynamic, not fixed – speaks to the ways in which multiple 'faces' of state power appear and re-appear in different moments and places, with different demands. While power may rely on varying combinations of hegemony and coercion, with the state "appropriating the language of conservation to legitimate both its claims and its enforcement methods" (Peluso, 1993, p. 201), experiences of *Operation Chikorokoza Chapera* also highlighted how individuals associated with state agencies were perceived in varying ways, with miners seeing some civil servants and politicians as allies and others as clearly antagonistic.

Meanwhile, as exorbitant fees, rent-seeking and hegemonic expert language became some of the concerns voiced in the advocacies of miners' associations, focussing on these also risked replicating hegemonic assumptions about expert EIA systems as an appropriate system in the first place. *Slightly* modifying the EIA system by allowing new languages for expert reports and a different fee structure could make the expert system more palatable but not necessarily more effective. Small-scale miners in some cases advocated that there needs to be a simplified user-oriented 'checklist' system instead of an expensive EIA system that criminalizes livelihoods; a checklist system could theoretically make artisanal and small-scale miners – not consultants – the

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[22] Beyond creating definitions for artisanal and small-scale mining, ASM association members have also argued that they should have representatives on the Mining Affairs Board, which is composed of people appointed by the Minister of Mines.

[23] For example, as stated by one small-scale miner at a meeting I attended, *"the minimum [in the Mines and Minerals Act] for pegging is 10 hectares. It is too large…The minimum should be 5 hectares. It's hard to find good areas that aren't pegged"* linking this to areas allotted to large companies *"that have certain shapes that make it hard to work around them"* (Interview, Small-scale miner, Harare, May 15, 2009). He argued that specific environmental management protocols should exist for artisanal and small-scale mining instead of the one-size-fits-all technocratic approach.

[24] See Ives (2004), Boothman (2008) and Carlucci (2013) for discussions on Gramsci, hegemony and language. Others have noted that the historical marginalisation of the Ndebele language in Zimbabwe should be read through a Gramscian lens on hegemony (Ndhlovu, 2006). In my interviews, some small-scale miners stressed that the EIA expert report requirement was hegemonic as an English imposition that entailed highly technical specialist terminologies that were "foreign" to many Ndebele and Shona speakers alike - and to many English speakers also.

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[21] High costs have also increased the power of wealthy sponsors; artisanal miners in some cases found themselves forming new alliances with wealthy sponsors who would cover the costs of licensing and regulatory paperwork, equipment, fuel, etc.

responsible agents for demonstrating comprehension of risk. Yet, state officials have repeatedly invoked languages of 'bringing order' to the mining sector, presenting a vision of modernisation wherein artisanal miners are mechanistically envisioned as either criminals or on a compulsory path towards becoming medium-scale businesses that could afford one-size-fits-all licensing fees. In some cases, miners described how they faced an 'either-or' choice early on in *Operation Chikorokoza Chapera* between working in clandestine mining or working with the Reserve Bank of Zimbabwe in state mining ventures, under conditions where payment for work was very low. *"It is not just about lowering fees,"* argued one small-scale miner, stressing, *"it is about recognising artisanal mining…Many lives have suffered because our mining has suffered"* (Harare, February 2013). Although the Environmental Management Agency eventually – in 2016 – very slightly modified the EIA system by replacing the "1.5% of project cost" fee component for small-scale mining with a flat rate of $210, arguing that this was favourable to miners (EMA, 2016), the net costs in meeting the EIA requirements (including the government processing fees and fees paid to consultants) ultimately *increased* from their initial levels. For some miners, EIA-related criminalisation and negative relations with authorities were some of the most significant and long-lasting legacies of *Operation Chikorokoza Chapera*. As reflected by one small-scale miner conveying his uneasy relation with environmental officials, *"It's like driving without a license. You become a criminal but you survive – that relationship is not healthy. It is a vulture situation"* (interview, February 2015, Harare).

Finally, re-articulating the politics of "difference" (Escobar, 2006) also became seen as a necessary (even if unfortunate) tactic of advocacy; some small-scale miners associations felt they needed to make compromises by publicly stating that small-scale miners associations supported the criminalization of certain modes of artisanal gold panning (in rivers), reflecting pressures to be seen as 'accepting the criminalization of some' in order to 'not' criminalize others.[25] Indeed other kinds of compromises were also made; some small-scale miners associations banned people on their boards from running for political elections, to create a sense of political neutrality, in some cases leading to some people leaving the associations temporarily. Some miners actively showed support for and alignment with ZANU-PF, to police and other officials (though it would be over-simplistic to assume that outward actions always mirrored choices made at the voting booth). As Moore (2005) argued in relation to earlier histories of resource conflict, tactics of *compromise* and adaptation have long been part and parcel of the political ecology of struggle, not in some sort of romanticized space 'outside' of the webs of state power but often within them. My purpose in this article here is not to create essentialising narratives about specific miners associations or privilege one time-bound or place-bound power dynamic above all others, but to stress the plurality of interrelated power dynamics and hegemonic forces operating at once. If a "hegemonic project," as the cultural theorist Stuart Hall defines it, aspires to "the remaking of common sense" (Hall, 1988, p. 149), state officials' use of new EIA rhetoric in 2007 could be conceptualized compellingly, amongst other intersecting interpretations, as a hegemonic project along these lines. Hegemonic power, regardless of how 'successful' it is in eliciting consent and obedience, relies on ideological conditioning, shaping the discussion of what is taken to be rational, and can *adapt* in its interplay with coercive elements of power (Mitchell,

1990). The 'environmentalisation' of *Operation Chikorokoza Chapera* is illustrative of how coercive power and elite actors' efforts to build, regain and maintain political and economic hegemony linked, through varying social relations, to an expanding nationally hegemonic environmental modernisation discourse.

These struggles were situated within a *diverse* set of evolving injustices, including a lack of fair resolution after police confiscated equipment, jailing miners for draconian laws (with some miners put in jail for 5 years for illegal mining or trading), the failure to reform mineral licensing laws that were vestiges of colonialism, difficulties of accessing mining equipment support to a phase-out of safety and ecological hazards, and the 'expertification' of processes required for legitimising resource use, amongst many others. A consideration of the 'political ecologies' of struggle in relation to EIAs thus requires recognising that EIA politics have been (and still are) nested in wideranging webs of relational injustices where technical languages of legitimacy and illegitimacy are heavily politically instrumentalised. Derman and Ferguson (2000) argued that it is not useful for political ecology work "to simply describe a hegemonic discourse and critique it" (p. 3); I echo this sentiment and stress that we need to pay attention to how actors have mobilised in response to perceived injustices, which are wrapped up both in contestations over technocratic rationality as well as explanatory frames that do not fit within tidy theories of state power, recognizing an unstable and fragmented state.

5. Concluding Remarks

Academics have for years studied EIAs as tools for protecting the environment, yet, as Cashmore and Richardson (2013) argued, critical research that focuses in a sustained way, either empirically or theoretically, on "power" dynamics surrounding EIAs has been a relatively recent development. I have argued that a political ecology approach for conceptualising EIA struggles needs to be carefully attuned to diverse social relations, temporal specificity, situated knowledge construction in relation to territorial and ecological tensions, as well as differentiated meanings associated with EIA enforcement discourse, particularly during periods of intense political and economic changes. In Zimbabwe, the move to start enforcing EIAs for all types of mining in January 2007 – amid hyperinflation and intense political instability – was widely perceived by small-scale miners as a strategy for generating revenue for state actors and EIA consultants while remaining an ineffective environmental management strategy. Yet it was more than that. *Operation Chikorokoza Chapera* set in motion new material and discursive contestations that shaped EIA struggles not only then but in the years thereafter. Analogous to other situations where state actors have pursued controversial campaigns while casting "peasants as environmental destroyers" (Bocarejo and Ojeda, 2016, p. 178), this case illustrates the need to critically understand how changes in resource management discourses and practices of control - rationalized in the name of 'enforcing technical standards' - are entangled in contentious power relations, with far-reaching short and long-term effects.

Although environmental impacts in mining – whether large-scale or small-scale – can be severe, as can health and safety impacts in this sector, governmental decision-making is rarely if ever guided by environmental concern devoid of politics. This article highlights how state measures to clamp down on artisanal and small-scale miners ostensibly for not abiding by EIA requirements can mask complex underlying economic interests and political power struggles. At the same time, a wider point also can be made in relation to the myriad of power dynamics and hegemonic relations at play. This was not merely a familiar case of large-scale mining attempting to maintain hegemony over smallscale mining, nor of subaltern groups' interests affected by a straightforward hegemonic form of global capitalism, nor even was it a case of a coherent state project; rather, a pluralistic lens is needed to see how multiple power relations were simultaneously shaping artisanal and small-scale miners' struggles. Ostensibly *technical* measures are

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[25] For example, making a distinction between artisanal gold panning and small-scale gold mining, a leader of one of the small-scale miners associations told the news media that 'We support fully the eradication of gold panning in this country but for legally licensed miners to be harassed in this manner is unacceptable' (Makoshori, 2007). Notably, in the years following *Operation Chikorokoza Chapera*, state approaches to the criminalization of alluvial riverbed gold panning evolved. After the government's 2006 repeal of the statutory instrument that had allowed Rural District Councils to license riverbed gold panning, state agencies formed partnerships (in some cases with foreign companies) to conduct river mining. In 2014 national authorities further restricted the distance that alluvial gold panning could be conducted from the riverbanks - changing from a minimum of 30 metres to 200 metres, generating further debate.

routinely invoked by a variety of actors in efforts to maintain hegemony over others, and a mix of coercive and hegemonic power dynamics need to be understood as often co-existing. In this case, some very powerful actors, from different ministries and networks that spanned national and regional scales, as well as within mining communities themselves, became part of the EIA story. EIA rhetoric took on a hegemonic character in artisanal and small-scale mining contexts through the techno-expertification of environmental management and the ideological framing of what a "modern" miner must do; the hegemony of an imposed English language requirement that represented a vestige of colonialism in expert reports; exorbitant EIA consultant fees that were out of reach for subaltern groups; and an array of practices rationalized in the name of policies for the national interest, that varied over time and space and in differing social formations. While large economic interests were at stake nationally, the ideological rationalisation of relations of social domination and subordination took different forms. This study thus underscores why it is critically important to understand social and environmental conflicts through a Gramscian political ecology lens, which rejects overly schematic theories of hegemony (and simple binaries between hegemony and coercive power), while stressing relational struggles in the interfaces of politics, space and nature (Ekers and Loftus, 2013) and the micro-political and social practices that produce meanings linked to resource control and subaltern struggles (Moore, 2005; Horowitz, 2015). As argued in this article, unpacking *situated EIA narratives* linked with a plurality of state practices and power relations creates significant possibilities for rethinking articulations of diverse meanings linked to techno-political measures of resource control and (de)legitimization.

To conclude, this article suggests why it is important to see the techno-politics of EIAs as intertwined with complex struggles to control extraction, revenues, environments *and people* in different moments and places. Exploring situated storylines about EIA politics also raises important questions, in particular, about how agency and social resistance are depicted. Recently, ASM associations in Zimbabwe have been increasing their advocacies about reforming colonial-style mining and environmental policy. This article builds on the call for scholars to engage the politics of EIAs in extractive industries to ensure that socioeconomic needs of local communities in mining areas are not undermined (Bedi, 2013), and encourages vigilance in recognizing how EIAs can be used as hegemonic instruments, paying attention to the imagined alternatives that small-scale miners' associations advance with regards to environmental stewardship. There are perils in looking only at particular scales of relations to the exclusion of others, and it is imperative that future work not overlook how advocacy groups have been mobilizing both to re-orient debates on unjust and ineffective EIA processes and to confront un-implemented EIA processes, and the relations in which these dynamics unfold. As EIA-focused political ecology evolves in the years ahead, critical scholarship will need to be open to new strategies for prioritising both the "ecological" and the "political" – with attention to the myriad of contested meanings that surface, sometimes subtly, when talking about EIAs and related technical resource management regimes in the midst of complex struggles.

Acknowledgements

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