



Linking or de-linking sustainable mining practices and corporate social responsibility? Insights from Ghana



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ABSTRACT

In spite of the growing popularity of this endeavor, it can be argued that it is not a corporation's primary objective to advance development in areas where they operate. However, due to prevailing community concerns and the negative ramifications of their activities on local livelihoods, they tend to embrace this idea both in discourse and actual corporate social responsibility (CSR) initiatives. Thus, our goal is not to argue that mining companies have not embraced the notion of 'sustainable development'. Instead, we seek to highlight the discrepancy that exists between practices they consider to be sustainable and the experiences and perceptions of local communities regarding such activities. Based on our analysis of two gold mining companies in Ghana, we suggest that this discrepancy prevails due to the mere focus on land reclamation and other disjointed CSR programs instead of a more nuanced framework that places affected communities at its core.

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1. Introduction

Despite extensive concerns about sustainability in the mining industry, integrating sustainability in mining continues to pose a big challenge for most mining companies. As was noted by Cowell et al. (1999) several years ago, there is tremendous amount of variation in the approaches used to advance sustainability in the global mineral sector, based on expectations, interests and values of both corporations and society (cited in Giurco and Cooper, 2012). In framing the notion of sustainability in mining, Onn and Woodley (2014) have examined three different tiers. The first tier is perpetual sustainability, which entails the idea that a process can be sustainable if it can continue forever. This tier considers issues such as the viability of the business, strong sustainability,¹ revenue replenishment and technological advancement used to overcome the constraints of mining. The second tier is transferable sustainability, which is underscored by the position that different types of capital can be traded in order to achieve greater social and environmental benefits. This tier is tilted towards extracting resources for development and examines issues such as environmental sustainability, social sustainability, economic

development, sustainable fairness and weak sustainability.² The final tier is transitional sustainability, which describes how the mining industry can contribute towards intergenerational sustainable development. The focus is to assess the life cycle of mines and transitions in development.

In light of the preexisting challenge to define and properly frame the topic, the Global Mining Institute (GMI) was created in 1992 to formally lay the foundation for sustainable mining and it was widely accepted by mining firms in 1998. The discussions about sustainable mining deepened in the post-Johannesburg plan of action at the World Summit on Sustainable Development in 2002 (Whitmore, 2006). Two major institutions, the International Council on Mining and Metals (ICMM)³ established in 2001 and the Mining, Minerals and Sustainable Development Project (MMSDP)⁴ created in 2002 have been tasked to assess sustainable mining practices by mining companies. Mining companies report their activities to these institutions through the Global Reporting Initiative (GRI).⁵ This is an assessment of mining firms' past

² Weak sustainability is inherent in the view that manufactured capital can replace natural capital and that transfers of capital will lead to the maintenance of intergenerational equity (Neumayer, 2003).

³ The International Council on Mining and Metals acts as a catalyst for performance improvement in the mining and metal industry (Fonseca et al., 2013).

⁴ The Mining, Minerals and Sustainable Development Project examine how the mining sector could contribute to the global transition to sustainable development (Fonseca et al., 2013).

⁵ The Global Reporting Initiative is a document which spells out the guidelines on how to report and what to report from the activities of the metals and mining industry. The responsibility lies on mining companies to publish annually their practices in their areas of operation (GRI, 2010).

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¹ Strong sustainability maintains that natural capital cannot be substituted for manufactured capital and that environmental, economic and human capital must be sustained independently of each other across generations (Neumayer, 2003).

performances measured against environmental, social and economic indicators (Fonseca et al., 2013; Esteve, 2008; Onn and Woodley, 2014). As such, this reporting mechanism ensures that mining firms present to their stakeholders evidence of their social and environmental responsibilities such as infrastructure development and ways to curtail water pollution (Pellegrino and Lodhia, 2012).

Interestingly, Whitmore (2006) argues that the declaration on sustainable mining practices in 2001 contains half-truths, as it does not address important mining issues. The half-truths, Whitmore claims, are: “the supposed need for more minerals from every mine, the claim that mining catalyses development, the belief that technical fixes can solve every problem and also that the main opposition to mining comes from community members and NGOs” (cited in Lodhia and Hess, 2014:45). This is because mining activities continue to dispossess people off their lands without consent, and the effects of mining on the lives of people, environment and health keeps worsening (see for instance, Akabzaa, 2009; Garvin et al., 2009; Asamoah et al., 2013). Indeed, many NGOs have suggested that mining cannot be sustained due to the levels of resources that are taken from the earth from time to time by mining firms (Young and Septoff, 2002). In the case of Ghana, although most mining firms have focused on developing their communities through various corporate social responsibility (CSR) programs, this has not translated completely to sustainable development because community members still complain about environmental and economic issues such as water and air pollution and unemployment, among other concerns (see Aboagye-Amponsah, 2015; Aubynn, 2003).

The neglect of the social aspect of sustainability as some authors argue (see Freeman, 1984; Korhonen, 2003; Gauthier, 2005) created an avenue for CSR to be advanced by corporate organizations. Yet, CSR also has the potential to create dependency by shifting focus from government to private companies – which is not a sustainable practice (Boon and Ababio, 2009). This notwithstanding, mining can lean towards sustainability when it achieves a net environmental and human benefit, thus a so-called ‘win-win’ situation for both the operating company and the host community (Hodge, 2001). Admittedly, mining generates revenue in the form of export earnings and contributes towards the gross domestic product (GDP) of a country. However, pressing issues that need to be addressed include making the mining firms accountable to their communities other than just governments and drawing a line between where mining firms ought to contribute to development and where the state has to be involved. But there are others such as Holmberg (1998) who insists that society can only be sustainable if nature's future and diversity are not subjected to an increasing concentration of substances extracted from the earth crust (cited in Cowell et al., 1999).

In the specific context of Ghana, the continuous expansion of economic globalization through the adoption of structural adjustment policies in the 1980s led to the influx of multinational mining companies. This rise in the mining economy was facilitated by the quest of both international financial institutions and governments to promote foreign investments, resulting in a ‘race to the bottom’, a phenomenon where governments relax environmental laws to attract multinational resource extraction companies into their economies with the expectation of massive windfalls (Carmin and Agyemang, 2011; Campbell, 2010). Although gold is the leading mineral extracted in Ghana and continues to account for about 90% of mineral revenues (Amponsah-Tawiah and Dartey-Baah, 2011), its benefits for local communities are controversial and in some cases non-existent (Akabzaa and Darimani, 2001; Yankson, 2010; Lawson and Bentil, 2014; Ontoyin and Agyemang, 2014). It has been posited that these problems could be addressed when/where there is a strong cooperation and commitment to

sustainable practices (Esteves and Vanclay, 2009). But since proper ‘cooperation’ or ‘commitment’ is usually not in place, one can question the purported development or trickle-down effect that such enormous investment in the mineral sector is supposed to bring.

Thus, our primary goal is to critically evaluate the extent to which mining companies are operating in a manner that is supposed to leave a positive inheritance for future generations. To advance this objective, the paper begins with a synopsis on political ecology as a conceptual framework. A brief background of the study follows, with details on the methodology that guided the collection of primary data. The bigger chunk of the paper is devoted to an analysis of what we see to be the pyramid of sustainable mining practices in Ghana, which draws upon interviews with different stakeholders in the sector and captures three different tiers of sustainability as defined by corporate endeavors. The underlying objective is that the analysis here will help advance knowledge about the topic of sustainable mining practice by highlighting the different conceptions and activities that inform the discourse.

2. Political ecology as a conceptual lens

As a conceptual approach, political ecology addresses issues of environmental change in the context of differential powers of actors with conflicting agendas (Bryant and Bailey, 1997). As such, it dwells on examining the power relationships between various state actors and the effect that they have on the socio-economic and bio-physical environment (Hitch, 2006). Similarly, Blaike and Brookfield (1987) define political ecology as that which combines the concerns of ecology and a broadly defined political economy. Two major theoretical perspectives, political economy and ecosystem thinking, have influenced political ecology. Political economy is based on the interplay between the economy and politics whilst ecosystem thinking examines the complex interactions within the biophysical and socio-economic relationships (Hitch, 2006).

According to Robbins (2012), political ecology thrives on the notion that environmental change and ecological conditions are the product of political processes. Since its inception in the 1970's, political ecology has undergone different paradigm shifts. Stott and Sullivan (2000) see political ecology as the political circumstances that causes people (mostly local) to engage in activities that results in environmental degradation without any alternative form of survival as well as rejecting the environmental narratives that emerges from international environment and development organizations. As a field of inquiry, Robbins (2012) posits that there are several critical tools that help to understand the work done by political ecologists. Two of these include the common property theory and feminist development studies. The common property theory is based on the assumption that resources such as “land, forests, fisheries, rangeland, genes and other resources, like many of the environmental systems over which struggles occur, are traditionally managed as collective or common property” (Robbins, 2012: 51). These resources are managed primarily by local management structures with some laid down rules and regulations that members of the community are familiar with.

Feminist development studies' contribution to political ecology is based on the notion that human-environment interaction and its antecedent processes are gendered, implying that men, women and children experience the environment differently. Therefore, their access to land and control over ecological systems is shaped by their different social and cultural roles (Rocheleau et al., 1996). This theory comes against the backdrop of post-World War II where development assistance swept the globe with international

organizations providing assistance in order to improve the livelihood of people after the destruction caused by the war. However, in the process it became visible that the livelihoods of the people they claimed to improve were actually becoming more impoverished, especially women. For instance, the green revolution in the 1980s which introduced new ways of farming through improved investments in the form of sophisticated technologies and the changes that occurred to cash crop farming made more women poorer and hungrier (Soysa, 1987 cited in Robbins, 2012). As such, critical feminist theorists therefore argue that since men and women's access to ecological systems are different, there is the need to access the impacts of ecological change through a gendered approach. Political ecologists consider this assumption worthwhile and have inculcated it into their work in order to better understand environmental degradation and conflict issues (Robbins, 2012).

In order to espouse understanding of political ecological issues, Robbins (2012) identifies five theses that are useful to this discussion. They include: degradation and marginalization; conservation and control; environmental conflict and exclusion; environmental subjects and identities; and political objects and actors. For the sake of brevity, emphasis is placed on the degradation and marginalization thesis which states: "otherwise environmentally innocuous production systems undergo transition to over exploitation of natural resources on which they depend in response to state development intervention and/or increasing integration into regional and global markets" (Robbins, 2012: 159). This situation arises from capitalist producers who seek to reduce production costs and in the process shift these costs onto local producers who have no other option than to exploit the land in order to meet global or national demands. Similarly, the thesis is based on the fact that sustainable community management is made unsustainable due to strategies by state authorities or outside firms who want to impose new/foreign ideas on local production systems. The underlying assumption is that these new ideas or institutions will result in improved local production and in the long run bring about the development of the local economies. However, the results of such interventions in most cases have resulted in poor people becoming more impoverished, resources becoming over-exploited, local practice becoming less sustainable than it used to be, and an unequal distribution of environmental resources (Robbins, 2012).

The conservation and control thesis also highlight the extent to which official efforts to preserve 'sustainability,' 'community,' 'nature' or the 'environment' has resulted in the seizure of resources from local producers or producer groups who are identified by class, gender and ethnicity, thereby disabling local livelihoods, production and socio-political organization (Robbins, 2012). This argument lays claim to the degree to which reasons that have been given for the conservation of lands have failed because traditional land managers no longer have access to their lands and lands have been given to elites and foreign companies who may not have any title to the land and or ecosystem management practices. Multinational mining companies had access to Ghana through the implementation of the structural adjustment policies advanced by bigger political actors such as the World Bank and International Monetary Fund (Campbell, 2010). This led to changes in the laws governing mining in Ghana, particularly permitting foreign multinational companies to wrestle lands from local producers in a bid to generate more revenue for the state (Campbell, 2010). To be specific, mining companies have enclosed farmlands and the spin-off effect that arises from this is increased marginalization due to loss of livelihoods (Akabzaa and Darimani, 2001).

In a bid to generate more profits, mining companies through surface mining activities have exploited and thereby degraded a

huge amount of land. Loss of land means that people's survival base is threatened or lost. This leads to scarcity and community members are forced to survive without their lands. The resultant effects are problems such as unemployment, poor water quality, land degradation and inadequate compensation as was revealed during fieldwork. To conserve lands through private ownership, mining companies have put in place measures to address landlessness but these measures have been deemed unsustainable by community members. It is this connection between the ecosystem, economy, and institutions that leads us to adopt political ecology as a conceptual lens. While sustainable mining practice is the specific focus, this underlying framework helps to unveil how the imbalance of power on lands and resource management influences the goal of long-term development.

3. Background and methodology

To provide a brief context, Ghana is the second largest gold producer in Africa after South Africa – ranking as the tenth gold producing country worldwide with the largest gold deposits found in Ashanti, Western, Central and Brong-Ahafo regions (see Fig. 1 for the geographic concentration of gold mining in Ghana). There are currently 23 large-scale mining companies producing gold, diamonds, bauxite and manganese, with over 300 registered small-scale mining groups and 90 mine support service companies. Despite the variety of minerals available in Ghana, gold is by far the predominant one based on recent data (see Fig. 2).

Relevant data for this study were collected from a variety of sources including books, journal articles, and other publications (both scholarly and non-scholarly), internal government documents, company reports, information on company websites, and fieldwork conducted between 2013 and 2015 in different mining locations. For Goldfields Ghana Limited (Damang), 22 interviews were conducted with participants out of which 20 were drawn mainly from four catchment communities in the mining area, while the remaining two were with the Community Affairs Manager of Goldfields Damang and a staff member of the Ghana Chamber of Mines. These catchment communities, Damang, Koduakrom, Subri, and Huni-Valley, were selected due to their closeness to the mining company's operations, the large size of the communities as compared to other satellite communities in the district and the benefits residents have derived from the mining company. Through purposive sampling, several mining stakeholders such as resettled community members, opinion leaders, and women who have benefited from Goldfields' Sustainable Empowerment and Economic Development (SEED) program participated.

For Newmont Ghana Gold Limited, data was collected in three of its 10 catchment areas – Kenyase No. 1, Kenyase No. 2 and Ntotroso – primarily based on the goal to involve the towns or villages that are in the immediate vicinity of the companies. Overall, 32 participants were involved including three company officials, one of them being the Programs Director of the Newmont Ahafo Development Foundation (NADeF). Five interviews were with government officers and four with civil society groups. The 15 interviews conducted at the local level were split between ordinary community members, community consultative committee members, opinion leaders, youth leaders, and leaders of community-based organizations. The notion of 'sustainability' was addressed by the question that asked how the communities envision their lives five to ten years after the company leaves. For the fieldwork, one focus group was organized with women in these catchment areas. Similar to the objective of interviewing eight women in the Goldfields case, the focus group helped in identifying the gender-specific concerns that people in mining areas face

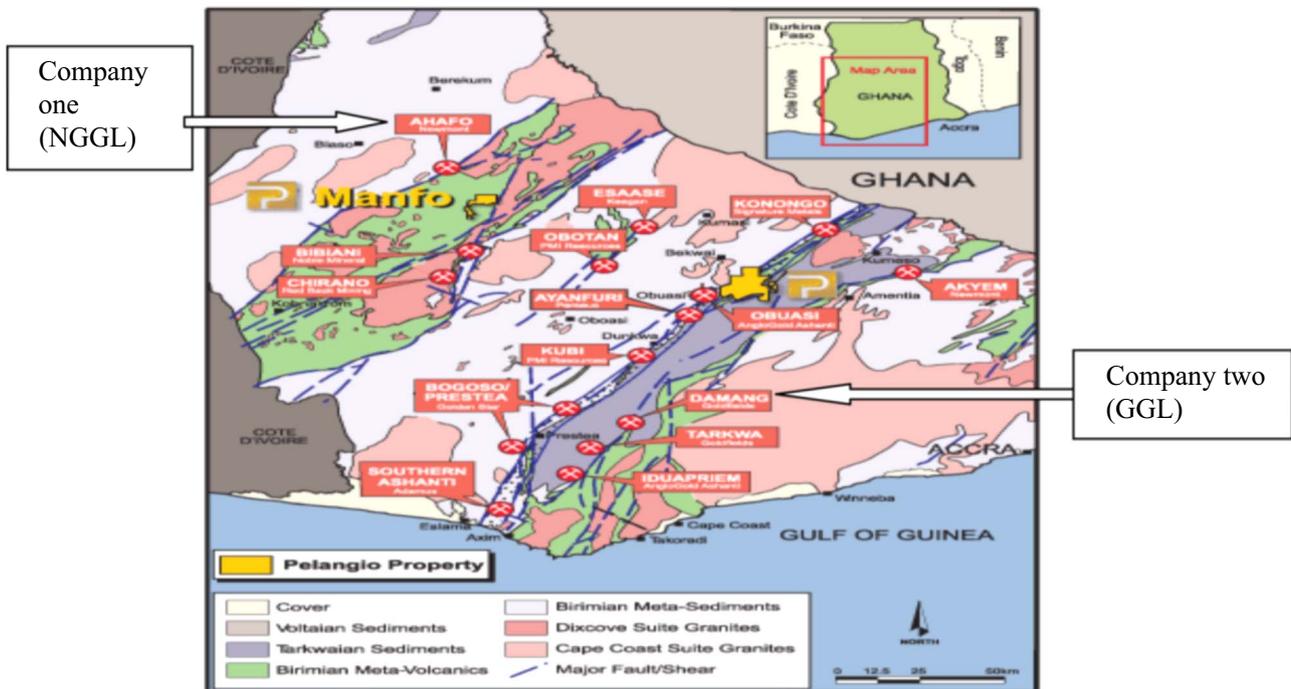


Fig. 1. Main Mineral Deposits in Ghana. Source: Pelangio Exploration Inc. See http://www.pelangio.com/cmsAssets/images/news/Image1_Aug3.gif (accessed April 24, 2012).

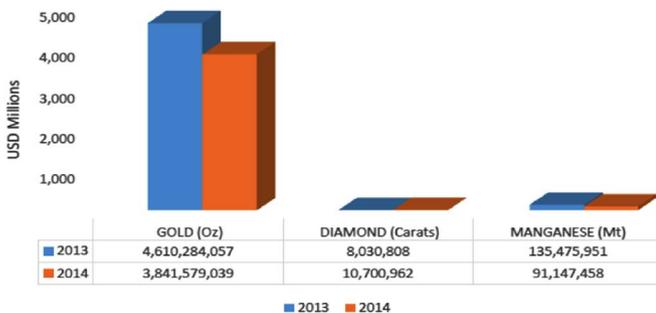


Fig. 2. Comparison of mineral revenue for 2013 and 2014. Source: Ghana Chamber of Mines (2015)

since there is little information about that in the literature. Five women formed the group, purposively selected to represent a wide range of age groups from 18 to over 50 years. It must be noted that the longer fieldwork was preceded by a two-week pilot study in these areas, which helped to shape the focus of the study by soliciting street-level information from 12 community members in both Kenyase No. 1 and Kenyase No. 2.

All primary interviews were transcribed and qualitatively analyzed to identify common themes, one of which is the topic of sustainability we are discussing in this particular paper. In addition to the strength that comes with over 50 combined interviews with a variety of mining stakeholders, the triangulation of multiple sources of data particularly enhanced our analysis and ensured rigor that otherwise could not have been attained with just one or two sources of data. Also, both Goldfields Damang and Newmont Ahafo mine were selected for a few reasons. Firstly, both companies have had their fair share company-community clashes over land use, compensation, and displacement/relocation, among others. In particular, the presence of the Damang mines has gained notoriety for constant land use conflicts between small-scale and large scale mining companies in the area with specific reference to

the Rex pit (see Aubynn, 2006, 2009; Teschner, 2013). However, in recent times, these clashes have reduced hence the need to understand and assess the measures that were put in place to prevent this conflict. Secondly, both Newmont and Goldfields have the NADEF and SEED programs, respectively, which were established to empower local communities even beyond mine closure. While these programs have received some recognition for proactive corporate citizenship, there is the need to examine the dis-juncture between these initiatives and prevailing issues in sites of implementation. Thirdly, both companies see themselves as global leaders of corporate 'best practices' in their own right. Goldfields, persistently makes reference to striving to remain a global leader in sustainable mining practices (Goldfields, 2015). In both cases, it is interesting to explore what the companies consider to be sustainable mining practices and whether or not indeed community members also view those practices as sustainable. And finally, from Fig. 3 below, both companies are in the top 10 of gold producers in Ghana and therefore a good representation of the trends in this sector.

4. Sustainability as land reclamation

Proponents of corporate environmental responsibility (CER) introduced the concept of sustainable economics to replace the neoclassical models of market economics and CSR itself (see Desjardins, 1998). The idea that proper environmental governance is good for business is quite popular in the literature. There is research evidence to show that corporations that embrace environmental responsibility have the potential to increase their overall market value (Wahba, 2008). While profitability is a driver, government intervention in terms of policies and legislation is also known to encourage or even force greater CER (Dummett, 2006). In Ghana, the environment did not receive significant attention in previous Acts of Parliament so the Environmental Protection Agency (EPA) was established through the Environmental

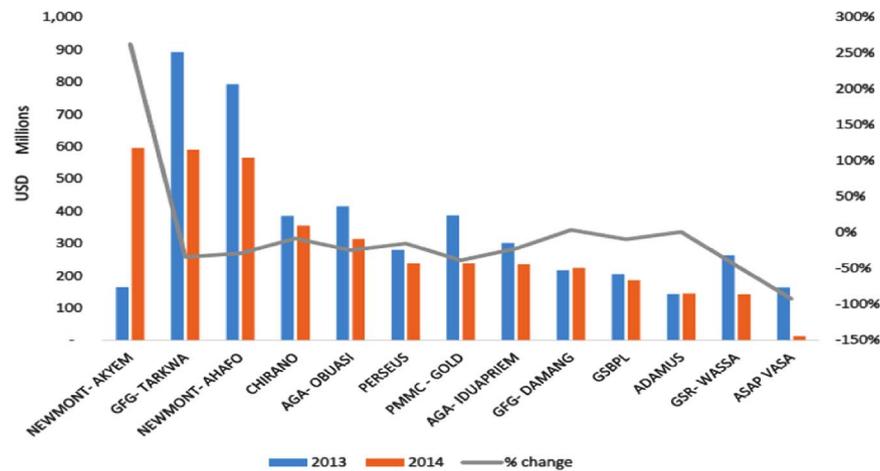


Fig. 3. Share of mineral revenue by members of the chamber of mines (2013 & 2014).
Source: Ghana Chamber of Mines, 2015

Protection Agency Act, 1994 (Act 490). This was an Act meant to amend and consolidate existing laws that relate to the environment. One of the key functions of the EPA is to “to prescribe standards and guidelines relating to the pollution of air, water, land and any other forms of environmental pollution including the discharge of waste and the control of toxic substances” (Act 490, Section 2h). The Act establishes that every undertaking or project that may have an impact on the environment must register with the EPA. The EPA has the mandate to request an Environmental Impact Assessment (EIA) in respect of any undertaking that it considers potentially detrimental to the environment. This means that until an EIA is properly done and submitted, a mining license or permit should not be granted.

It must be said that one of the developed disclosure and perhaps ‘actionable’ instruments for Ghana’s mining sector, the Environmental Protection Rating Disclosure (known as AKOBEN), comes from the EPA. It is not so much in terms of the robustness of the instruments as it is of the proactive steps to ensure compliance. The AKOBEN instrument has Ghanaian roots and it does involve attributes of both physical and human environment in its methodology. The name ‘AKOBEN’ is a traditional symbol of the Akan ethnic group in Ghana which stands for vigilance and wariness, representing a set of behavior that is appropriate for environmental conservation. AKOBEN also signifies alertness and readiness to serve a good cause. These ratings are annually disclosed to the public and the media with the aims of strengthening public awareness and participation. Under the AKOBEN program, the environmental performance of mining and manufacturing operations is assessed using a five-color rating scheme: GOLD, GREEN, BLUE, ORANGE and RED, each of which showcases environmental performance ranging from excellent to poor.

The GOLD rating represents the highest standard of performance beyond formal legal requirements, and it does also show that a company is abiding by some internationally recognized best practice for environmental management and corporate social responsibility. ORANGE is unsatisfactory performance, and a company with such a rating could potentially be downgraded to a RED rating (being the poorest rating assigned to companies without a valid permit or certificate) if prompt measures are not put in place to improve its performance. The other two intermediate rating categories – GREEN and BLUE – signify that a company is in full environmental compliance although there is room for improvement regarding the implementation of its social responsibility policies, more so in the case of a BLUE rating. The rating evaluates over a hundred performance indicators that include quantitative data as well as qualitative and visual information. Since its first

report in 2009, many companies have gradually become committed to submitting the requisite data in order to be included in the rating, which is now a positive advocacy tool for some civil society groups in Ghana. Table 1 below shows the performance of the two companies under study in all eight AKOBEN issue-areas or categories up till 2012 when the last report was made available on the website.

From the table above, both companies have a great number of BLUE ratings covering a variety of categories and even for overall rating. BLUE being three out of five, it can be postulated that both GGL and NGGL are currently at a maximum of 60% performance in all areas of CER. This trend also signifies that companies are basically doing the barest minimum in terms of legal compliance – and most of them are not going the extra mile beyond what is legally required. NGGL in particular has been fluctuating between a poor performance in 2009 to an average performance in 2012.

Despite the different categories/areas that the AKOBEN rating covers, the primary reference to how sustainable a mining company is from our fieldwork is often predicated on the extent to which the land on which they conduct their activities are reclaimed for future generations. This tends to be the case because there is much stricter environmental regulation on what companies ought to do in this direction. Companies are therefore required by law to plan towards land reclamation. And for both companies under focus, this goal forms part of their day-to-day mining processes to the extent that one official refers to what they do generally as ‘community sustainability. Even though the popular knowledge is that reclamation can restore scarred land to its former state (Cao, 2007), there is evidence elsewhere to show that post-mining rehabilitation can only lead to a partial restoration of biodiversity even after several years (Gould, 2011). The nitrogen, potassium and calcium could all be present in the soil post-mining, but there could also be other elements in the soil (for instance, mercury and cyanide) that hinder proper and complete restoration. Yet, both companies confirmed they are championing the cause of restoration long before they close shop. A community relations officer at Newmont noted that “we don’t wait to finish mining before we do reclamation. It is a process [in that] when we are moving from one land to another we reclaim it; we don’t wait” (interviewed on 19 June 2013, Ntotroso).

In a similar vein, Goldfields argue strongly that their reclamation policies seem to be working because community members are happy with it. A community affairs officer at Goldfields Damang also noted that “Our reclamation plans are in accordance with the EPA guidelines with support of our environment department. Any land that we clear for our activities are reclaimed with plant

Table 1
AKOBEN Rating for GGL & NGGL, 2009–2012. Source: Authors' amalgamation of AKOBEN data, 2009–2012

	Legal Issues	Hazard Waste Management	Toxics Releases	Non-Toxics Releases	Monitoring and Reporting	Environment Best Practices	Community Complaints Management	CSR	Final Rating
2009									
GGL	Blue	Blue	Blue	Blue	Orange	Orange	Green	Gold	Orange
NGGL	Blue	Red	Blue	Orange	Orange	Blue	N/A ⁸	Gold	Red
2010									
GGL	Blue	Blue	Blue	Blue	Blue	Blue	Green	Gold	Blue
NGGL	Blue	Blue	Blue	Blue	Blue	Blue	N/A	Gold	Blue
2011									
GGL	Blue	Red	Red	Orange	Blue	Blue	Green	N/A	Red
NGGL	Blue	Blue	Blue	Orange	Blue	Blue	N/A	Gold	Orange
2012									
GGL	Blue	Blue	Blue	Orange	Blue	Blue	Green	Gold	Orange
NGGL	Blue	Blue	Blue	Blue	Blue	Blue	N/A	Gold	Blue

Source: Authors' amalgamation of AKOBEN data, 2009 to 2012

seedlings from our nursery. We have planted oil palm on one of our former tailings dam which the Kyekyewere women group harvest for profit" (interviewed on 5 January 2016, Damang).

Although the two companies clearly confirmed that they are putting in place sustainable exit strategies, the interviews and focus group discussion with community members revealed illuminating issues of concern. This is because while environmental policies are quite solid, the desperate desire for increased investment in the mining sector tends to place environmental concerns on the back burner. This is beside the EPA's logistical problems and the lack of coordination among the responsible institutions (Akabzaa and Darimani, 2001). Also, since environmental issues are often perceived to be technical, many people that should participate in these endeavors tend to be unwilling, unable or entirely excluded from the negotiation process (Appiah-Opoku, 2001; Bawole, 2013). Additionally, our finding suggests that by making land reclamation a key component of what they refer to as sustainable practice, mining companies continue to marginalize many other critical issues of concern such as unemployment, land dispossession, and socio-economic marginalization or deprivation. If one were to put these different interpretations into a hierarchy, sustainability as land reclamation will be at its base followed by sustainability as disjointed CSR and long-term community development (see Fig. 4), both of which we turn to now.

The pyramid presented below is therefore our attempt to elucidate the fact that while long-term community development may be generally perceived as the basis of sustainable mining practices perhaps even judging from its position at the pyramid, this same position simultaneously implies that long-term development remains an area loosely covered by companies' sustainable activities. The position of land reclamation on this pyramid illuminates a fundamental premise of the conservation and control thesis of political ecology that turns our attention to the manner in which



Fig. 4. The pyramid of sustainable mining practices in Ghana.

after dispossessing people of their lands, these same used and degraded lands are expected to officially become 'sustainable' again.

5. Sustainability as disjointed CSR/social license activities

For specific CSR projects, Newmont designed the Livelihood Enhancement and Community Empowerment Program (LEEP) to help address the needs of the people directly impacted by project activities, including those who lost houses or farmland to the project. This involved training programs, micro credit provision and community infrastructure projects. According to NGGL, "international best practice does require a company to manage and be directly responsible for people and households in the transitional hardship vulnerability because it is the company's project that ultimately changed their status" (Newmont, 2006, 3). This led

them to design the Vulnerable Program with the goal to provide a safety net for those households directly impacted by the mining project. The company also introduced the Agricultural Improvement and Land Access Program (AILAP) to assist farmers who had previously received monetary compensation for lost lands to restart farming, particularly supporting them with such incentives as farming inputs and access to alternative land (Kapstein and Kim, 2011).

Newmont and International Finance Corporation (IFC) signed an agreement in February 2007 to jointly establish and implement the Ahafo Linkages Program, with the objective to improve the economic situation of local communities impacted by the mine operations by increasing income and employment opportunities (Newmont and IFC, 2009). The Newmont Ahafo Development Foundation (NADeF) was also established in May 2008 between Newmont and the Ahafo Social Responsibility Forum to support community development programs. The foundation is currently funded by Newmont Ahafo mine based on contributions from \$1 of every ounce of gold sold and one percent of net pre-tax profit. Based on this calculation, NADeF had received about \$13 million from the Ahafo mine by the end of 2015. The overall objective is to ensure that in 20–25 years when Newmont is no longer operating in those communities, people will see themselves better off instead of experience negative post-mining ramifications (interview with NADeF project coordinator). Through NADeF, several projects in the area of empowerment, scholarships, and livelihood improvement are undertaken. By having these projects in place, the company is able to implement a strategic public relations tactic to steer general public opinion – especially of people not living their day-to-day lives in host mining communities – in their favor. And, of course, there are several industry-sponsored awards won for implementing these initiatives.

In 2005, Goldfields Ghana Foundation also initiated and launched a five year community development program worth US\$5 million known as the Sustainable Community Empowerment and Economic Development Program (SEED). Authorities charged to implement this program were an international NGO known as Opportunities Industrialization Care International (OICI) working with government agencies at the local and regional level and community members. The vision of the program was to be “a high impact, result focused, sustainable and integrated community development program that focuses on economic growth, wealth creation, improvement in quality of life and empowerment through education, capacity building and infrastructural development which can be replicated in mine affected communities all over the world” (Goldfields, 2005). This program aimed at improving the livelihoods and quality of life of 30,000 poor and vulnerable men, women and children in 16 Goldfields Ghana (GGL) primary stakeholder communities by 2010 (Goldfields, 2005). The program was to be achieved under four main objectives, namely: increased income and economic opportunities; improved health; improved education and livelihood skills; and sustainable interventions and increased social license.

Considering the objectives outlined in the SEED program, the first was mainly about giving vegetable seedlings to community members to grow and livestock such as sheep and goats to rear in order to make a living. Others were also engaged in oil palm business, food processing, batik production and cassava growth (Yankson, 2010). This objective is intriguing in that the lands that are to be used to grow these crops and rear the livestock had already been taken away from community members. Only a select few who still had access to some lands benefited from these initiatives. It is not surprising that livestock rearing faced much challenges. However, Goldfields Ghana still maintains this objective was a success. The Community Affairs manager mentioned that “in the recently held farmer’s day celebration, a beneficiary of

our livestock program who is physically challenged won the best livestock farmer award in the district. We gave him only four sheep and he has hundreds of them now (Interview on 22 December 2015, Damang). The second objective was geared towards advocating for right behavioral changes, water and sanitation and access to basic medical services. The Vulnerable Nutrition Enhancement Program was also introduced to provide food for orphans, vulnerable children and people living with HIV/AIDS.

The next objective was focused on improving the educational and livelihood skills of communities but this initiative was short lived. A new scheme has been developed which offers scholarships to community members to pursue their education. A community affairs officer said that “Scholarships and bursaries are spelt out in our CSR policies which we give to our community members, especially those whose lands have been affected by our activities. Currently, we have about three hundred and ninety people as beneficiaries of our scholarship. Some have graduated and others are still in school” (Interview on 23 December 2015, Damang). We observed that some scholarships beneficiaries who could not get the required grades to further their education at the tertiary level were left unattended by the mining company.

With regard to AKOBEN, which was introduced above, it is noteworthy that since its first report in 2009, no company (apart from those who did not have adequate information/data) has received a CSR rating lower than GOLD. This may create the impression that a majority of mining companies in Ghana uphold a ‘golden standard’ when it comes to social (and by implication environmental) responsibility but this is not the case if one should visit specific project-impacted communities. To start with, it is not convincing that a company with a N/A rating for complaints management and community relations receives a GOLD rating for CSR, as was the case of Newmont between 2009 and 2012 (see Table 1 above). This is because effective community relations and proper complaints management should be considered crucial to a company’s overall social responsibility – not merely the symbolic structures or cash handouts they provide. Additionally, it is also unclear how Goldfields’ N/A rating for CSR in 2011 turns into GOLD in the subsequent year.

The other reality lies in the challenge with the quantification of social performance itself. Critics even question what the ‘s’ is doing in C’S’R, particularly since it cannot be methodically measured (see Norman and MacDonald, 2004; Robins 2006). Hopkins also suggests that there is no consensus on whether CSR should be classified as a voluntarily concept or that which must be strictly regulated to ensure companies oblige. As there is currently no widely accepted framework for assessing social responsibility, the AKOBEN rating basically evaluates three key aspects including the intent of the company towards social issues, financial commitment measured by its voluntary annual CSR expenditures, and actions it undertakes in alignment with its CSR policy. In short, the “AKOBEN rating methodology does not impose any mandatory performance standards on companies. Instead it has been selected to assess performance of companies solely on the basis of how well each company implements its own corporate social responsibility policy. In other words, each company would be held accountable only on the basis of the policies its corporate headquarters has mandated” (EPA-Ghana, accessed 26 November 2013). Based on this approach that leaves the CSR category of AKOBEN to the discretion of companies, it is not surprising that almost every company receives a GOLD rating. The website implies that in addition to a review of company reports and specific projects, a team from the EPA visits the communities and conducts interviews to supplement the data provided by the company. Nevertheless, based on the three criteria noted above and also the fact that even some unpopular companies have received a GOLD CSR rating for the past four years, one can question how primary data collected by the

EPA team is fully incorporated into the often positive images corporations create for themselves in their own reports. Also, the fact that there is currently no available reports for 2013 onwards implies that companies could be dwelling on their past glories as both yardstick and scapegoat for their socio-environmental performance in local communities.

There is also another area of the disjuncture. Many mining companies have not been able to carefully weave the physical properties of their areas of operation such as topography, geology, hydrology, climate and other environmental concerns with the inherent social dynamics of nearby communities. This is because the former is considered technical and separate from the latter, which is considered to be a cultural thing. Dougherty and Olsen (2013: 2) argue that a local adaptation of CSR programming should consider the social terrain, which to them is “the literal ways that the physical properties of place – mineralization, topography, soil, hydrology, climate, etc. – shape social relations and acquire social meaning.” This begins with the understanding that the biophysical and social worlds are co-constitutive. In Ghana, one can easily point out that many companies have yet to understand the conjoined nature of these two attributes when it comes to addressing stakeholder concerns. For both companies under study, we were given more information about social mechanisms than about biophysical arrangements. The fact that each company has a ‘community relations’ unit devoted to the social relations and community development separate from an environmental or health and safety unit gives an indication of their world of thinking regarding what Dougherty and Olsen (2014) call ‘social terrain’.

The EPA Act itself says nothing about CSR or terms such as ‘social responsibility’, ‘social license’ or ‘social capital’. Even the word ‘social’ receives only one mention in the entire document, referring to the agency’s responsibility “to initiate and pursue formal and non-formal education programs for the creation of public awareness of the environment and its importance to the economic and *social life* of the country” (Act 490, Section 2m, emphasis ours). This lack of careful synthesis between the social and the physical environment cannot be overlooked, especially as the AKOBEN rating purports to have social categories such as ‘legal issues’, ‘complaints management and community relations’ as well as ‘corporate social responsibility’. However, the mining department director at the EPA maintains that CSR and environmental protection are autonomous because the social remains voluntary while a strict regulatory framework exists to protect the environment:

I think they are different because in Ghana there is no legal regime for corporate social responsibility. [But] it is mandatory by law in Ghana to undertake all the environmental management practices that will ensure sustainable operations, as such to protect the environmental resources of the country and the public safety. But then the corporate social responsibility hereby is just for companies to buy their social license (Interviewed on 17 July 2013, Accra).

This insight highlights the disjoint that prevails in the litany of CSR activities that are done in the name of sustainability. On the one hand, it seems such activities help to advance the goal of sustainable mining practice. But on the other hand, the discretionary nature of these activities suggest that no one can hold companies accountable and there is basically no established yardstick to ascertain the extent to which companies’ claims around sustainability are beyond rhetoric or merely an endeavor to buy their social license to operate. One is therefore left to argue that unless the law mandates the practice of sustainability in mining, however it ends up being defined, it is plausible companies will continue to pay lip service to it. But since degradation and

marginalization are associated with loss of livelihoods, as political ecology theory tells us, a great deal needs to be done to properly position corporate endeavors in a meaningful manner, if at all possible.

6. Sustainability as long-term community development

Giddings et al. (2002) argues that to draw a good analysis of sustainability, one’s philosophical underpinnings must be considered because concerns about sustainability are usually prioritized by the observer’s position. Since the work of the private sector is often linked with the topic of sustainability (Berggren, 1999; Steurer et al., 2005), a fundamental gauge of CSR effectiveness could potentially involve an assessment of what mining companies are doing to safeguard the present and future of host communities. This entails examining projects and interventions that advance long-term community development or livelihood alternatives in light of the depletion of whatever peoples’ primary source of subsistence or livelihood was prior to mining. For Newmont, the establishment of NADEF is part of their exit strategy as the work being done by the foundation only uses about 10% of its overall income. The hope is that after the closure of the mine (in about 20 years) the foundation would still be able to support community development. According to them, it is their concern for the future of the host communities “that is why we involve the communities; that is also why we don’t just sit in the office and decide to build a school; that is why we are looking at community members coming up with their own developmental needs and we support them to actually implement those needs at that level” (NGGL Community Relations Superintendent, interviewed on 19 June 2013). However in response to this so-called interest in the future of the community, a community leader in Ntotroso (one of Newmont’s catchment areas) gave a response that perhaps sums up the community feedback regarding their survival after mining:

We are all going to die in this community. Because they have possessed all our lands, how can we then live? Had it not been the government that brought up that small water project, from where can we get drinking water? The water that we drink from is being polluted by the mining activities. So with regard to the long-term effect, the future generation would suffer a lot. (Interviewed on 23 May 2013)

The usage of “die” is possibly not in the literal sense, but it sharply contravenes the official claims of both CSR and sustainable development. For someone like Howard Bowen, who is known as the “father of CSR,” business is essentially “of the people, by the people, and for the people” (1953, 5). Of course, this claim is questionable when one considers the primary interest of business to make profits. Ihlen (2009) contends that CSR is a mere corporate function because businesses define what is sustainable to align with their profit making motives. Later writers have developed this perspective to include a wide variety of things corporations do, beyond what is required by law, to address myriad social problems and position themselves in the long-term sustainability of society at large (see Vogel, 2005; Carroll 2008; Dashwood 2012). But judging that the concept itself lacks clarity and soundness (Sahlin-Andersson, 2006; White, 2005; Utting and Marques, 2010), it is not surprising that the concerns raised by community members contradict what CSR claims to do. One community member interviewed noted that “all they would leave us with are the pits they’ve dug which are death traps for someone who does not know the area well. There has been inadequate compensation for the lands that were taken so it would just bring more hardship” (Interviewed on 18 June 2013, Kenyase no. 1).

Among the various concerns raised by community members such as pollution (air, water, and noise), inadequate compensation, land degradation and mining-induced displacement/resettlement, unemployment was a major issue. Not all community members expect to be employed but majority of them believe that if the companies were to employ the youth in some permanent capacity, there will be dividends that will trickle down to the entire family. While companies do not have the capacity to absorb all employable young men and women in a particular location, there have been several actions that have deprived many of their sources of livelihood. For instance, about thousand workers were laid off when Goldfields' closed its three underground labor-intensive mines in 1999. Increased unemployment due to mine privatization between 1992 and 1998, and reduction in gold prices, has been major threats to employment in the gold mining industry in Ghana (Akabzaa and Darimani, 2001).

A study by Sarfo-Mensah et al. (2010) on youth unemployment challenges in gold mining areas of Ghana attributed the causes of unemployment to inadequate skills, unwillingness of some youth to work in any other establishment apart from the mine, refusal to go into farming, lack of capital to set up businesses after apprenticeship. In addition to these factors, fluctuations in the price of gold have also caused unemployment in the gold mining industry. For instance, the falling price of gold in 2014 resulted in about 8700 loss of jobs in the mining industry of Ghana. Thus, the sector was made up of 21,103 jobs/positions in 2013 but this reduced to 12,382 in 2014 due to measures geared at cutting down operational cost. This means that 41% of the workforce lost their livelihoods. Similarly, the Ghana Mineworkers Union data revealed that between January 2013 and March 2014, it lost 3080 members constituting about 16 person of its membership through retrenchment attributed to the fall in gold prices (Ghanaweb, 2015).

Goldfields has contributed towards employment in their communities but studies suggest that this is not enough as residents continue to complain about the lack of jobs in the area, especially with the mining company (Agergaard et al., 2009). As noted by one opinion leader at Koduakrom, "unemployment is a big issue over here. We have been saying to them to give our youths permanent jobs and not contract ones because most of these people can facilitate development in our communities" (Interviewed on 18 December 2015). The case is no different for Newmont. Local people interviewed alleged that available jobs are often given to outsiders at the expense of qualified people in the local communities. Although the discussion focused on CSR and sustainable mining practice, many of these participants saw the lack of employment opportunities as a way of delineating a company interested in the future of the community to one that is not. Even in cases where skills' training is provided to local women (an endeavor that both Goldfields and Newmont undertake) due to the identified gendered impacts of mining, there is hardly any start-up capital for them to establish their own enterprise.

Despite the extent to which communities are disgruntled over employment issues, the plethora of current CSR endeavors fail to adequately deal with it either through the provision of employment for those they can legitimately absorb or assisting with meaningful training towards alternative career options. Downing (2002) contends that employment in the mining sector cannot substitute for lost local jobs. This is so because in adhering to sustainability terms, the argument will only stand if the lifespan of the mine will be equal to the lifespan of the sustainable economy it destroys. Our position is quite in line with the argument of Downing but ideally, the rule of natural justice would have it that once a person has been deprived of his or her land, the necessary force of longer term compensation is employment. An opinion leader at Damang expressed this as follows:

We expect that once you take our lands from us, you employ our children so they can earn income to be able to cater for us. We are always told to educate our children before they can employ them. We use the little money we have to do so and the end result is that our children still do not get employment in the mines (Interviewed on 22 December 2015, Damang).

Having said that, it seems companies are aware of their role in long-term development. As highlighted by a community relations officer at Newmont, "we can't mine here after 10–15 years and the communities don't see change in their lives. We see that our being here should see communities better off than we came to meet our communities" (Interviewed on 19 June 2013, Ntotroso). Yet, the reality is that this ideal is not fully carried through in the manner intended, and in fact, mining companies are ill equipped to address long-term development concerns. The overarching point is that if mining companies are indeed concerned about sustainability and the non-financial bottom-line, as some proponents would have us believe (see Elkington, 1994, 1998, 2006; Slapper and Hall 2011; Willard 2012), then based on these perceptions one can resolve that these two companies have not succeeded in their quest despite the several 'long-term' projects undertaken. This is because the telling concerns appear to outweigh any existing project or program meant to appease host communities. Additionally, it is presently hard to believe the current practices of companies would advance community development in a manner expected by its strongest advocates and critics. Besides the already established challenge encountered in measuring the non-financial aspects of a company (Robins, 2006), negative community perceptions of what holds for community members upon mine closure accentuate another fundamental flaw of the discourse of sustainable mining – especially one that transcends land reclamation and disjointed CSR activities.

7. Conclusions and future research direction

Our analysis so far has shown how sustainable mining practice often contravenes what the notion is in principle. Examining the three different interpretations of sustainability deduced from the practices of mining companies in Ghana, this paper has shed light on the hierarchy that underscores what these companies consider as sustainable behavior or practice. The goal of the paper has not been to get companies to forcefully take up developmental responsibilities that exceed their abilities because research has already shown they cannot take up such a responsibility and carry it through in a meaningful manner (Frynas, 2005; Idemudia 2010; Andrews 2013). However, the argument has been that if mining companies will continue to showcase themselves as engaging in sustainable practices then there is the need to examine what they mean when speaking of sustainability and the extent to which such discourse could distort our understanding of how much they can and should do in host communities. Sneddon (2000: 525) argues that to understand sustainability, questions such as "what is being sustained, at what scale, by and for whom, and using what institutional mechanisms" must be critically investigated. Answering these questions will mean that researchers must be able to discover innovative responses to sustainability and also determine the responses that can be understood and utilized within a particular spatial and temporal dimension (Sneddon, 2000).

Based on the discussions above, it is prudent to give a number of suggestions for the improvement of the sector. First, for the legislature and the Ministry of Lands and Natural Resources, laws governing compensation and resettlements must be revised to address the injustices landowners face. Community members' input must be incorporated in revising these laws especially members whose lands have been affected by past and present mining

activities. Involvement of this nature should be in place from the licensing stage till the end of the mine. Secondly, in light of the inability to regulate CSR itself, there should be some clear legislation on what sustainable mining implies and the acceptable measures that need to be put in place to ensure that companies follow through. While we have argued that mining companies are ill equipped to pursue this goal, the fact that there is a great deal of rhetorical reference to it in corporate discourse implies that the Minerals Commission, for instance, could take the lead in framing the discourse.

Thirdly, since employment remains a fundamental issue of concern in host communities, district assemblies and appropriate governing authorities should take full responsibility of their developmental roles. While capacity building is useful, emphasis should be placed on opportunity as well. This will ensure that those who benefit from training will either be absorbed by the companies or be able to set up their own businesses. If royalties that go to the government were to effectively trickle down to the affected communities, some of these could be put towards providing the seed capital needed to set up a business instead of relying on non-existent jobs in the mines. In order “not to divert attention from systemic political and economic solutions that can come from within,” as argued by Andrews (2013: 69), “the Ghanaian government should play its part in addressing the basic concerns of communities.” In sum, sustainability of mining communities should not be left in the hands of corporations who have a primary objective to make profits and please their shareholders.

Lastly, this paper underscores the need for a proper introspection into responses to address the social aspect of sustainable development, which has largely been ignored by mining companies. While there has been a surge towards utilizing Social Impact Analysis (SIA) to incorporate sustainability and development in order to bridge the gap between companies and communities, this has not worked in a practical sense because most companies focus on Social Impact Analysis as project planning tools. Greater attention must be shifted to adopting Social Development Needs Analysis (SDNA) which “embed concepts of sustainability and social development into core business strategies by linking the future of the company with the future of the local community” (Esteves and Vanclay, 2009:137). This undertaking will require a major shift in a corporation's *modus operandi*.

In terms of direction, future research in the gold mining sector of Ghana could focus on how impact and benefit agreements can be a useful tool to address sustainable development in Ghana. Also, research geared towards understanding public participation as mechanism to ensure better CSR policies are implemented can also be examined. This is not to suggest that participation will necessarily salvage a concept that is usually at a crossroads, but there is currently no sufficient data that highlight the extent to which *proper* public involvement and buy-in could advance long-term developmental and livelihood projects. Also, there should be more research that seeks to understand community members' perceptions about mine reclamation, especially since that is a primary reference point of how sustainable mining companies consider themselves to be. This research will entail the breaking down of the process from a technical to a non-technical one so that the average local resident can understand. Another interesting future research would be to compare a mine in distress and a flourishing mine in order to understand how such circumstances influence companies' sustainability practices.

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References

- Aboagye-Amponsah, S., 2015. Accumulation, Poverty and Dispossession: Unequal distribution of mining benefits and the impact of Chirano gold on local communities in Ghana. Unpublished masters' major Paper. York University, Ontario, Canada.
- Aggergaard, J., Fold, N., Gough, K., 2009. Rural-Urban Dynamics: Livelihoods, Mobility and Markets in African and Asian Frontiers. Routledge, London.
- Akabzaa, T., 2009. Mining in Ghana: implications for national economic development and poverty reduction. In: Campbell, Bonnie (Ed.), Mining and Development in Africa: Regulation and Development. Pluto Publishers, Montreal, pp. 25–65.
- Akabzaa, T., Darimani A., (2001): Impact of Mining Sector Investment in Ghana: A Study of the Tarkwa Mining Region. A Draft Report for SAPRI, January.
- Amponsah-Tawiah, K., Dartey-Baah, K., 2011. The mining industry in Ghana: a blessing or a curse. *Int. J. Bus. Soc. Sci.* 2 (12), 62–69.
- Andrews, N., 2013. Community expectations from Ghana's new oil find: conceptualizing corporate social responsibility as a grassroots-oriented process. *Afr. Today* 60 (1), 54–75.
- Appiah-Opoku, S., 2001. Environmental impact assessment in developing countries: the case of Ghana. *Environ. Impact Assess. Rev.* 21 (1), 59–71.
- Asamoah, Y., Akyeampong, O., Barima-Antwi, K., Dauda, S., 2013. Residents' perception on the manifestation of the natural resource curse in the Tarkwa-Nsuaem Municipality. *Oguua J. Soc. Sci.* 7, 1.
- Aubynn, A.K., 2006. Live and let live: the relationship between artisanal/small-scale and large-scale miners at Abosso Goldfields, Ghana (Bourton-on-Dunsmore). Hilson, G.M. (Ed.), *Small-Scale Mining, Rural Subsistence and Poverty in West Africa*. Practical Action Publishing, Warwickshire, UK, pp. 227–240.
- Aubynn, A.K., 2009. Sustainable solution or marriage of inconvenience? The co-existence of largescale mining and artisanal and small-scale mining in the Abosso Goldfields concession in Western Ghana. *Resour. Policy* 34 (1–2), 64–70.
- Aubynn, E.A., 2003. Community perceptions of mining: an experience from Western Ghana (Master's thesis). University of Alberta, Canada.
- Bawole, J.N., 2013. Public hearing or 'hearing public'? An evaluation of the participation of local stakeholders in environmental impact assessment of Ghana's Jubilee Oil Fields. *Environ. Manag.* 52 (2), 385–397.
- Berggren, B., 1999. Industry's contribution to sustainable development. *Build. Res. Inf.* 27 (6), 431–435.
- Blaike, P., Brookfield, H., 1987. *Land Degradation and Society*. Mathuen, London.
- Boon, E. K., & Ababio, F., 2009. Corporate social responsibility in Ghana: Lessons from the Mining Sector. Impact assessment and human well-being. In: Proceedings of the 29th Annual Conference of the International Association for Impact Assessment, 16–22 May 2009, Accra International Conference Centre, Accra, Ghana.
- Bryant, R.L., Bailey, S., 1997. *Third World Political Ecology*. Routledge, London.
- Campbell, B., 2010. Revisiting the reform process of african mining regimes. *Can. J. Dev. Stud.* 30 (1–2), 197–217.
- Cao, X., 2007. Regulating mine land reclamation in developing countries: the case of China. *Land Use Policy* 24 (2), 472–483.
- Carmin, J., Agyeman, J., 2011. Environmental Inequalities Beyond Borders: Local Perspectives on Global Injustices. The MIT Press, Cambridge, Massachusetts.
- Carroll, A.B., 2008. A history of corporate social responsibility: concepts and practices. *Oxf. Handb. Corp. Soc. Responsib.*, 19–46.
- Cowell, S.J., Wehrmeyer, W., Argust, P.W., Robertson, J.G.S., 1999. Sustainability and the primary extraction industries: theories and practice. *Resour. Policy* 25 (4), 277–286.
- Dashwood, H.S., 2012. CSR norms and organizational learning in the mining sector. *Corp. Gov.: Int. J. Bus. Soc.* 12 (1), 118–138.
- Desjardins, J., 1998. Corporate environmental responsibility. *J. Bus. Ethics* 17 (8), 825–838.
- Dougherty, M.L., Olsen, T.D., 2014. Taking terrain literally: grounding local adaptation to corporate social responsibility in the extractive industries. *J. Bus. Ethics* 119 (3), 423–434.
- Downing, T., 2002. Avoiding New Poverty: Mining-induced Displacement and Resettlement. Working Paper 58, Mining, Minerals and Sustainable Development (MMSD) Project. International Institute for Environment and Development (IIED), London.
- Dummett, K., 2006. Drivers for corporate environmental responsibility (CER). *Environ. Dev. Sustain.* 8 (3), 375–389.
- Elkington, J., 1998. Partnerships from cannibals with forks: the triple bottom line of 21st century business. *Environ. Qual. Manag.* 37, e51.
- Elkington, J., 1994. Towards the sustainable corporation: win-win-win business strategies for sustainable development. *Calif. Manag. Rev.* 36 (2), 90–100.
- Elkington, J., 2006. Governance for sustainability. *Corp. Gov.: Int. Rev.* 14 (6), 522–529.
- Esteve, A.M., 2008. Mining and social development: refocusing community investment using multi-criteria decision analysis. *Resour. Policy* 33, 39e47.
- Esteves, A.M., Vanclay, F., 2009. Social development needs analysis as a tool for SIA to guide corporate-community investment: applications in the minerals industry. *Environ. Impact Assess. Rev.* 29 (2), 137–145.

- Fonseca, A., McAllister, M.L., Fitzpatrick, P., 2013. Measuring what? A comparative anatomy of five mining sustainability frameworks. *Miner. Eng.* 2013, 180–186.
- Freeman, R.E., 1984. *Strategic Management: A Stakeholder-Approach*. Pitman Publishing, Boston.
- Frynas, J.G., 2005. The false developmental promise of corporate social responsibility: evidence from multinational oil companies. *Int. Aff.* 81 (3), 581–598.
- Garvin, T., McGee, T.K., Smoyer-Tomic, K.E., Aubynn, E.A., 2009. Community–company relations in gold mining in Ghana. *J. Environ. Manag.* 90 (1), 571–586.
- Gauthier, C., 2005. Measuring corporate social and environmental performance: the extended life-cycle assessment. *J. Bus. Ethics* 59 (1–2), 199–206.
- Ghana Chamber of Mines Website, 2015. *Performance of the Mining Industry in 2014*. (http://ghanachamberofmines.org/media/publications/Performance_of_the_Mining_Industry_in_2014.pdf). (Accessed on October 20th, 2015).
- News Ghanaweb, 2015. "8700 Jobs lost in gold price fall". Retrieved from (<http://www.ghanaweb.com/GhanaHomePage/NewsArchive/8-700-jobs-lost-in-gold-price-fall-379007>) (15th January 2016).
- Giddings, B., Hopwood, B., O'Brien, G., 2002. Environment, economy and society: fitting them together into sustainable development. *Sustain. Dev.* 10 (4), 187–196.
- Goldfields Ghana, 2005. 'Sustainable Community Empowerment and Economic Development Programme (SEED)', unpublished report prepared by Opportunities Industrialization Centres International (OICI) for Gold Fields Ghana Ltd.
- Goldfields Ghana Website, 2015. Brief history of the Damang Mine Area. (Retrieved from) (https://www.goldfields.co.za/gl_west_damang.php) (16th March 2016).
- Newmont, 2010. Vulnerable Program—Ahafo South Project. Newmont Ghana Gold Ltd., Accra.
- Giurco, D., Cooper, C., 2012. Mining and sustainability: asking the right questions. *Miner. Eng.* 29, 3–12.
- Gould, S.F., 2011. Does post-mining rehabilitation restore habitat equivalent to that removed by mining? A case study from the monsoonal tropics of northern Australia. *Wildl. Res.* 38 (6), 482–490.
- Hitch, M., 2006. Impact and Benefit Agreements and the Political Economy of Mineral Development in Nunavut (Ph.D. thesis). Department of Geography, University of Waterloo, Waterloo, Ontario.
- Hodge, A., 2001. Building Canadian Capacity-Sustainable Production and the Knowledge Economy. Chateau Laurier Hotel, Ottawa.
- Holmberg, J., 1998. Backcasting: a natural step in operationalising sustainable development. *Greener Management International* 23, 30–52.
- Idemudia, U., 2010. Rethinking the role of corporate social responsibility in the Nigerian oil conflict: the limits of CSR. *J. Int. Dev.* 22 (7), 833–845.
- Kapstein, E., Kim, R., 2011. The Socio-Economic Impact of Newmont Ghana Gold Limited. Stratcomm Africa, Accra.
- Korhonen, J., 2003. Should we measure corporate social responsibility? *Corporate Social Responsibility and Environmental Management* 10 (1), 25–39.
- Lawson, E.T., Benti, G., 2014. Shifting sands: changes in community perceptions of mining in Ghana. *Environ., Dev. Sustain.* 16 (1), 217–238.
- Lodhia, S., Hess, N., 2014. Sustainability accounting and reporting in the mining industry: current literature and directions for future research. *J. Clean. Prod.* 84, 43–50.
- Neumayer, E., 2003. *Weak versus strong sustainability: exploring the limits of two opposing paradigms*. Elgar, London.
- Newmont, I.F.C., 2009. *Creating the Foundations for a Linkage Program in a Rural Setting*. NGGL/IFC, Accra & Washington, D.C.
- Vulnerable Program—Ahafo South Project 2006 Newmont Ghana Gold Ltd Accra.
- Norman, W., MacDonald, C., 2004. Getting to the bottom of "triple bottom line". *Bus. Ethics Q.* 14 (02), 243–262.
- Ihlen, O., 2009. The oxymoron of 'sustainable oil production'; the case of the Norwegian oil industry. *Bus. Strategy Environ.* 18 (4), 53–63.
- Onn, A.H., Woodley, A., 2014. A discourse analysis on how the sustainability agenda is defined within the mining industry. *J. Clean. Prod.* 84, 116–127.
- Ontoyin, J., & I., Agyemang I., 2014. Small-Scale Mining and its Impacts on the Natural Environment: A Case of Yale, Datuku and Digare Communities in the Talensi-Nabdam District of Northern Ghana.
- Pellegrino, C., Lodhia, S., 2012. Climate change accounting and the Australian mining industry: exploring the links between corporate disclosure and the generation of legitimacy. *J. Clean. Prod.* 36, 68–82.
- Robins, F., 2006. The challenge of TBL: a responsibility to whom? *Bus. Soc. Rev.* 111 (1), 1–14.
- Robbins, P., 2012. *Political Ecology: A Critical Introduction*, 2nd ed. John Wiley & Sons, West Sussex.
- Rocheleau, D.E., Thomas-Slayter, B., & Wangari, E., 1996. *Feminist Political Ecology: Global Issues and Local Experiences*/Ed. by Dianne Rocheleau, Barbara Thomas-Slayter, and Esther Wangari. London [etc.]: Routledge.
- Sahlin-Andersson, K., 2006. Corporate social responsibility: a trend and a movement, but of what and for what? *Corporate Governance. Int. J. Bus. Soc.* 6 (5), 595–608.
- Sarfo-Mensah, P., Adjalo, M.K., Donkor, P., 2010. Youth unemployment challenges in mining areas of Ghana. *FEEM Work.*, 122.
- Slapper, F.T., Hall, J.T., 2011. The Triple Bottom Line: what is it and how does it work? *Indiana Bus. Res. Cent.* 86, 1.
- Sneddon, C., 2000. "Sustainability" in ecological economics, ecology and livelihoods: a review. *Prog. Hum. Geogr.* 24 (4), 521–549.
- Steurer, R., Langer, M.E., Konrad, A., Martinuzzi, A., 2005. Corporations, stakeholders and sustainable development I: A theoretical exploration of business–society relations. *J. Bus. Ethics* 61 (3), 263–281.
- Stott, P., Sullivan, S., 2000. Introduction. In: Stott, P., Sullivan, S. (Eds.), *Political Ecology: Science, Myth and Power*. Arnold, London.
- Teschner, B., 2013. How you start matters: a comparison of Gold Fields' Tarkwa and Damang Mines and their divergent relationships with local small-scale miners in Ghana. *Resour. Policy* 38 (3), 332–340.
- Utting, Peter, and José Carlos Marques. "Introduction: The intellectual crisis of CSR." *Corporate Social Responsibility and Regulatory Governance*. Palgrave Macmillan UK, 2010, 1–25.
- Vogel, D., 2005. *The Market for Virtue: The Potentials and Limits of Corporate Social Responsibility* (Brookings Institution Press, Washington, DC).
- Wahba, H., 2008. Does the market value corporate environmental responsibility? An empirical examination. *Corp. Soc. Responsib. Environ. Manag.* 15 (2), 89–99.
- White, A., 2005. *Fade, integrate or transform? The future of CSR*. In: Burchell, Jon (Ed.), *The Corporate Social Responsibility Reader*. Routledge, London & New York, pp. 267–276.
- Whitmore, A., 2006. The superiors new clothes: sustainable mining. *J. Clean. Prod.* 14 (3), 309–314.
- Willard B., 2012. *The new sustainability advantage: seven business case benefits of a triple bottom line*. New Society Publishers.
- Yankson, P.W.K., 2010. Gold Mining and corporate social responsibility in the Wassa West District, Ghana. *Dev. Pract.* 20 (3), 354–366.
- Young, J., Septoff, A., 2002. Digging for change: towards a responsible minerals future. An NGO and community perspective. Mineral Policy Centre.