

## THE CONTRIBUTION OF ARTISANAL AND SMALL-SCALE MINING TO LOCAL COMMUNITY DEVELOPMENT

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### ABSTRACT

Artisanal and small-scale mining (ASM) has been practiced in Ghana for many years, and contributes significantly toward socioeconomic development of communities where it occurs. In this paper, the contributions made by five different ASM operators drawn from three small-scale mining districts in Ghana are highlighted. Field visits were made to ASM sites and interviews were conducted with mine owners, supervisors, manual workers, contractors, and other indirect employees of ASM. The findings show significant employment to local population, and many social interventions such as rural electrification, provision of drinking water, construction of classroom blocks, provision of scholarships, and medical supports in the impoverished communities where the mining is practiced. It is concluded that ASM is an indispensable economic and social venture that requires technical and financial support from government, stakeholders and financial institutions to improve operations and ensure sustainability in the industry to derive maximum benefits.

**KEYWORDS:** artisanal and small-scale mining, socioeconomic benefits, community development, poverty alleviation, social intervention

### 1 INTRODUCTION

Artisanal and small-scale mining (ASM) in Ghana has traditionally involved the use of rudimentary tools such as pickaxes, shovels, spades, chisels and hammers by unskilled personnel with little or no education to excavate gold or gold bearing rocks and diamond from the earth. In recent times however, the operations have involved the utilization of heavy earthmoving machinery (backhoe excavators, dozers, trucks etc.), and processing facilities (mechanized washing plants), making the activities less labor intensive and increasing the scale of operations with increasing socioeconomic potential. ASM is recognized as a significant contributor to the development and economic growth of countries where it occurs. According to the World Bank, ASM occurs in approximately 80 countries worldwide, providing income to estimated 100 million artisanal miners and their dependents. The World Bank further indicates that ASM accounts for 80% of global sapphire, 20% of gold and up to 20% of diamond. Artisanal and small-scale mining provides income and supports the livelihoods of many individuals within the

communities it occurs. The socioeconomic contributions of ASM are highlighted by many researchers in the literature (Kitula, 2006; Hilson, 2001; Dreschler, 2001; Bryceson and Jønsson, 2010; Chakravorty, 2001; Mwaipopo, 2004).

The Government of Ghana, having recognized the significance of ASM, promulgated the Small-Scale Gold Mining Law, PNDC Law 218 of 1989 to revive the sector and facilitate supervision. Subsequently, the Minerals Commission of Ghana, which is responsible for assisting the Minister of Lands and Natural Resources with small-scale licensing procedures and monitoring of operations, established seven small-scale mining district support centers (see Figure 1) to provide technical extension services to the miners and improve supervision to minimize associated environmental and safety hazards. Currently, there are nine small-scale mining district centers in Ghana.

However, twenty-six years after legalizing the operations, the sector faces significant environmental and social challenges that have received extensive coverage in the literature (Aryee et al., 2003; Babut et al., 2003; Hilson, 2002; Bozongo et al., 2003; Hilson and Yakovleva, 2007; Serfor-Armah et al., 2005; Kwaansa-Ansah, 2010; Hilson, 2010). The attention given to the environmental effects of ASM has overshadowed the very few scholarly work that have dealt with socioeconomic benefits of the activities in the country (Amankwah et al., 2015; Labonne, 1996; Tschakert, 2009; Hilson, 2006; Yakovleva, 2007). These authors to some extent, describe the direct and or indirect benefits of ASM in terms of income earned by individuals who engage in ASM. For example, Amankwah et al. (2015) and Yakovleva (2007) highlight the economic significance of ASM to women participants at ASM sites in the Central and Eastern regions of Ghana. The socioeconomic aspects of their work discuss the reasons why the women engage in ASM and the incomes they earn from such activities.

According to Ntibrey (2015), ASM accounted for 34.3% (1.49 million ounces) of Ghana's gold production in 2014, in addition to being the sole producer of diamond since 2008. The sector is estimated to give direct jobs to about one million individuals and indirect jobs to many people. This paper reports the socioeconomic benefits of ASM operations to host communities. The paper highlights employment potential of ASM and social intervention projects such as construction of classroom blocks, provision of scholarships to needy students, borehole water and rural electrification by ASM operators in the Tarkwa-Nsuaem Municipality, Amansie West and Atwima Mponua Districts of Ghana.

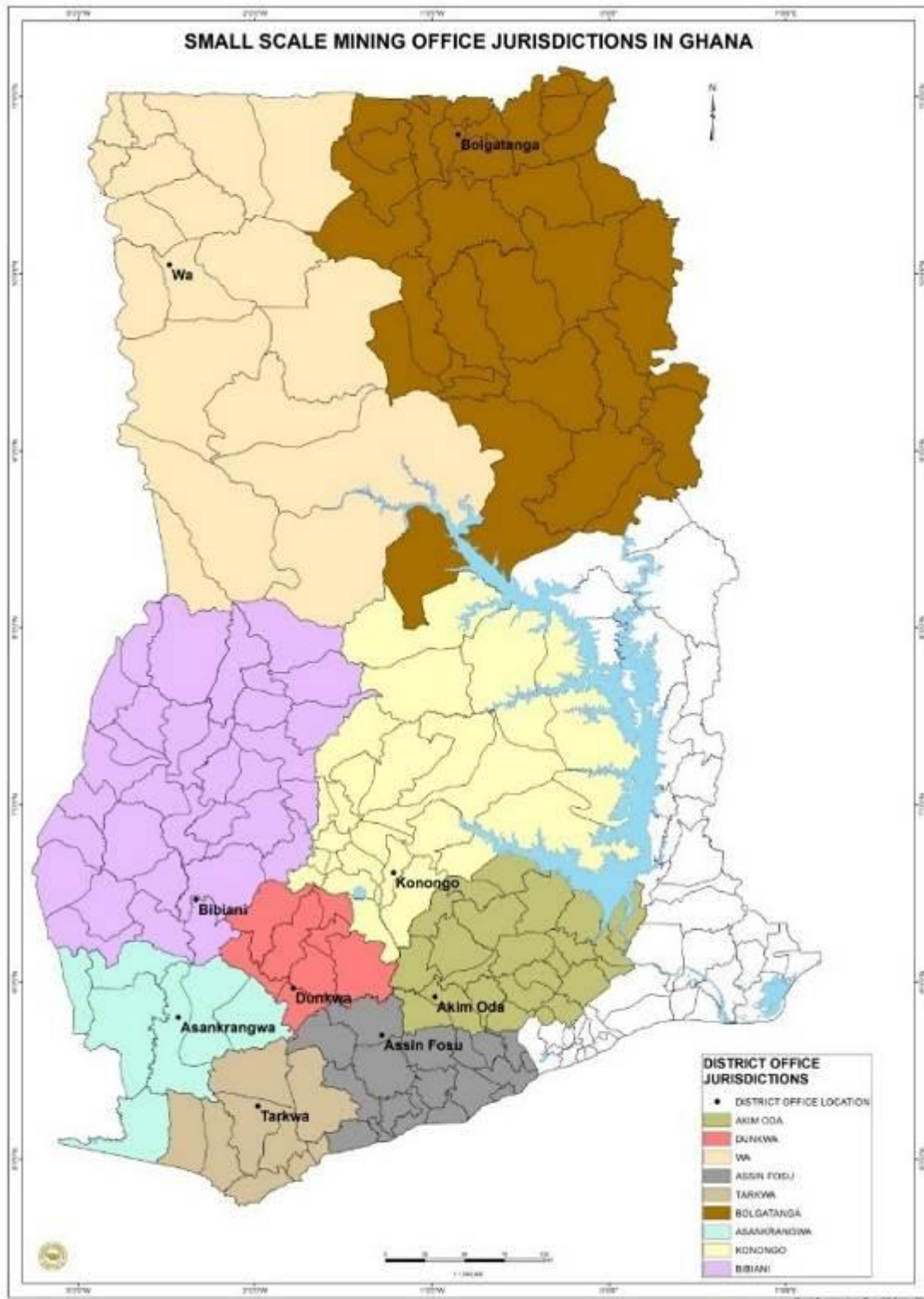


Figure 1: ASM Districts in Ghana (Source: Ntibery, 2015)

## 2 METHODS

In this paper, interviews were conducted with ASM operators, staff of Minerals Commission, community leaders and inhabitants of communities where the diggers operate. Semi-structured interviews were carried out with mine owners, mine workers, and indirect employees within the study area. Field notebook, a camera and a tape recorder were used to record the interviews, obtain photographs and voice recordings of interviewees' responses with their approval. Visits were also made to some of the project sites where the social interventions were carried out to obtain photographs as evidence. Taking cue from Yakovleva (2007), the narratives of interviewees' responses are reported verbatim in the paper for illustration and to highlight the socioeconomic contributions of ASM to the communities. Relevant media reports pertaining to the subject were also sourced for illustration.

The ASM companies studied include: Johnson Mining Company, Dakete Company Limited, Mohammed & Co. Company and Stejoan Mining Group within the Tarkwa Mining District and E K Agyeman Mining Group in the Bibiani and Dunkwa Mining Districts. In all, about 100 people including miners, site supervisors, contractors, traders, and food vendors were interviewed.

## 3 RESULTS

Together, the companies provide employment to over 1,500 indigenes and non-indigenes of host communities (see Table 1). These individuals are mostly people who depend on ASM for their survival due to lack of alternative employment opportunities. The employees, mostly serving as loading boys, equipment operators, drillers, supervisors, load carriers, panners, washers, etc., typically have average family size of five, and provide financial needs of their families with income earned from ASM.

The income of the mine workers ranges from GHS 500 (US\$ 130) to GHS 1,000 (US\$ 261), with those in supervisory positions earning about GHS 2,000 (US\$ 522). The daily wages earned by these ASM employees are significantly higher (over 150%) than the minimum statutory daily wage of GHS 8.00 in Ghana. The workers are able to care for themselves, provide the needs of their households, pay rent, bills, children's school fees, and support their extended families with their income. The following is the story of Ebenezer Yawson, ASM support operator:

Ebenezer Yawson is 60 years and operates as crusher cone moulder. He is married with seven children who are in high school and tertiary education with two of them engaged in vocations. He joined the ASM sector 17 years ago as an artisan, moulding equipment (e.g. crusher cone). He had previously worked with Goldfields Tarkwa, a multinational company for 20 years until he was laid off. Unable to support himself and his family with his pension income, he joined the ASM sector where he currently earns an average of GHS 500 (US\$ 130) every two weeks as income. Through work in ASM, he is able to pay for his children's school fees, provide for the needs of the nuclear and extended families. According to Ebenezer, the ASM sector is good and he is willing to train more people to venture into such business.

Many others share similar socioeconomic benefits of ASM. Kwame Atakeli, a mill operator tells the benefits he derives from ASM:

"I started work in November, 2015 as a mill operator and I take home about GHS 500 (US\$ 130) per month... previously I could not support my son and her mother but now... I am able to meet my basic needs – buy food, pay utility bills and provide for my son in school... so I will say it is okay. I also hope to save enough money to continue my education to the tertiary level".

Kofi Asante, a 35-year old driller is not ready to cease working in ASM. Unable to raise enough income as a mechanic to care for his aged mother and six siblings, Kofi followed an experienced driller around ASM sites in the Western Region of Ghana, and learnt how to drill in less than a year. Currently, he earns between GHS 1,000 and GHS 2,000 every month and is able to care for his mother and keep his siblings in school. According to Kofi, "ASM is a life-saver", and will continue to work in ASM for as long as he has strength. Kofi's story is not different from Yaw, a

28-year old shoveler who derives his only income from ASM to support his five siblings and aged parents.

Table 1: Employment

Mine	Employee Size
Johnson Mining Company Limited	208
Dakete Company Limited	165
Mohammed & Co. Company	35
Stejoan Mining Group	103
E K Agyeman Mining Group	800 to 1000

Similarly, indirect employees including women sellers, transport providers, cooks, hardware and spare part dealers, etc. derive some benefits from ASM. Of significant mention include women sellers who sell food or clothing to the miners (see Figure 2 and 3). Averagely, the sellers earn GHS 200 (US\$ 53) per week, and indicate that selling at ASM sites is more lucrative than selling elsewhere. Some of the women recount how they utilize proceeds from their sales to fund their wards’ education. Women who were left to languish in poverty or depended on their husbands to survive are empowered both socially and economically due to ASM, because they are now able to provide for themselves, support their husbands, care for their children, help some extended family members and even assist community members when the need arises. Magritte Agyevi recounts the benefits she derives from ASM:



Figure 2: Women Sellers at ASM Sites: (A) Water Seller (B) Rice Seller



Figure 3: “Fufu” Seller at ASM Site

“My name is Magritte Agyevi, a food seller. I am 26 years of age and married with three children. I started selling rice to small-scale miners about 3 months ago. I do not have a kiosk, so I go around the sites with the rice. I make about GHS 60 (US\$ 16) profit per week. This has eased my dependency on my husband. I can support myself with some basic necessities and contribute toward the upkeep of my children as well”.

More telling is the story of Comfort Arthur, a food seller who shoulders household responsibilities and is the bread-winner of the family, following the death of her husband.

Comfort Arthur is 48 years of age and a mother of six children. Following the passing of her husband about 16 years ago, she resorted to selling food (e.g. “banku”, rice porridge, and pastries) at Johnson Mining Company. She has operated for almost 10 years, and uses her income to care for her children and pay for their education. The eldest child recently completed polytechnic education and is gainfully employed. The second child is in the final year of university education in Ghana, while the third and fourth children have also completed senior high schools. The fifth and sixth children are in junior high and primary schools respectively. She indicates that sales to the miners have improved her living condition and made her self-dependent.

Further, ASM operators provide social interventions in local communities where it is practiced. These interventions include provision of scholarships to needy students, provision of classroom blocks, borehole water and extension of rural electrification among many others. Table 2 summarizes some of the projects carried out by ASM operators to support development of local community.

Table 2: Some Projects undertaken by the ASM Operators

<b>Company</b>	<b>Description</b>	<b>Location</b>
Johnson Mining Services	500 bags of cement to support construction works in the Tamsu, Efuanta and Teberebe community	Tarkwa
Dakete Mining Company	Day-Care Center to provide educational support for nursing mothers on site (Figure 4)	Tarkwa
	Donations to community functions	Tarkwa
	Educational support to students	Tarkwa
	100 bags of cement to support construction works in the Efuanta community	Takwa
Stevejuan Small Scale Mine	Health insurance registration for workers to access the national health insurance	Tarkwa
E K Agyeman Mining Group	Construction of 5-unit classroom block with office and store to replace old dilapidated structure (Figure 5A)	Mpotoum, Amansie West District
	Construction of classroom block (Figure 5B)	Atuntuma, Atwima Mponua District
	Construction of borehole to provide water to the community (Figure 6A)	Mpotoum, Amansie West District
	Extension of electricity to deprived community (Figure 6B)	Amadaa Village, Bibiani District

E K Agyemang Mining Group has undertaken notable socioeconomic interventions. The ASM operator has gained public recognition and won several awards for tremendous efforts and commitments toward development of host communities. The company's contributions were recognized by the Ashanti King in 2013 at the 3rd Ashanti Business Leaders Excellence Awards for contributing toward the economic development of the Ashanti Region (The Chronicle, 2013). The award scheme (Ashanti Business Excellence Award and Ashanti Financial Excellence Awards) instituted by the Ashanti King, aim at motivating businesses within the region that promote entrepreneurial leadership and socioeconomic development of the region and the country at large.



Figure 4: Day-care Centre at Dakete Company Limited

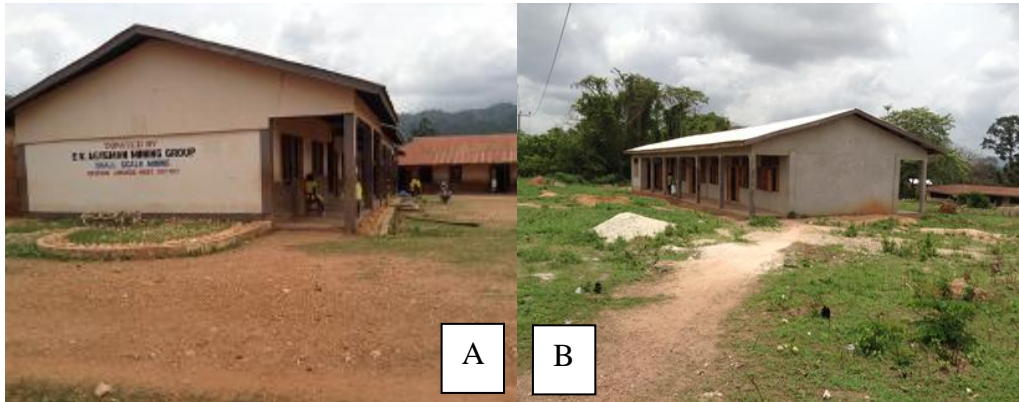


Figure 5: Educational Projects: (A) School Building at Mpatoum in the Amansie West District (B) School Building at Atuntuma in the Atwima Mponua District



Figures 6: Social Intervention Projects: (A) Borehole Project at Mpatoum in the Amansie West District (B) Electrification Project at Amadaa Village in the Bibiani District

#### 4 DISCUSSION

It is demonstrated in this study that ASM in Ghana contributes significantly to local communities where it occurs. It provides income to many people and social interventions to many deprived communities. The provision of electricity, borehole water, classroom blocks and medical care to people and impoverished communities has the potential to improve standards of living in local community. Hence, ASM is a driver for socioeconomic improvement in host communities. Indeed, as reported by other authors (Dinye & Erdiaw-Kwasie, 2012; Mwaipopo et al., 2004; Shen & Gunson, 2006; Dreschler, 2001), ASM has the potential to alleviate poverty in rural communities, curb rural-urban migration, reduce crimes and social vices and empower women economically. The findings in this study are consistent with what is reported by these authors, and are reminiscent of other localities where ASM occurs. ASM is therefore an indispensable economic and social activity in communities where it occurs and the country at large.

However, the numerous interventions have not come without challenges, including lack of financial support and inadequate technical assistance from financial institutions and stakeholders. Access to credit facilities has been a major issue to ASM operators in Ghana. Since, financial assistance is lacking, ASM operators are unable to hire required technical staff and purchase tools to improve operations and increase revenue. One mine owner retorted:

“You cannot borrow money from banks for this kind of business. So I normally reinvest profits, seek funds from external investors or invest personal savings in order to keep running the business. Even when the banks agree to support, the interest rates are exorbitant, making it difficult for business, given the inherent risk and uncertainty”.

Provision of financial and technical support, including logistics support to ASM operators by government and stakeholders can significantly improve their operations and enhance socioeconomic benefits.

## 5 CONCLUSION

This paper reports the socioeconomic contributions of artisanal and small-scale mining in Ghana. Field visits and interviews were conducted to obtain relevant information including worker demographics, incomes, benefits of ASM, and social interventions among several others. The findings show that ASM is a significant contributor to local community development. It provides jobs to many people who depend on it for their survival. Additionally, the miners and indirect employees recognize ASM as a pillar for poverty alleviation and their only livelihood to support their families. Furthermore, social interventions including, extension of rural electrification, provision of drinking water, construction of classroom blocks and provision of scholarships to needy students, and payment for medical care by ASM operators can significantly improve standard of living in impoverished local communities. Provision of technical, logistic and financial support by government, stakeholders and financial institutions could help improve the ASM sector.

## 6 ACKNOWLEDGMENTS

The authors are very thankful to the management and workers of Johnson Mining Company, Dakete Company Limited, Mohammed & Co. Company, Stejoan Mining Group, and E. K. Agyeman Mining Group for providing the necessary information and data for this work. Much appreciation goes to the Tarkwa Division of the Minerals Commission, especially Mr B. K. Ntibrey whose insights were very useful.

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