



Goldfields Ghana Limited, Tarkwa Mines and Community Infrastructure Development in the Tarkwa Nsuaem Municipality of Ghana

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Abstract. Mining activities are recognizable and visibly seen in the nature and scope of its activities in Africa. Even though there is growing concern of the negative dimensions of mining activities on the environment and even socio-cultural conditions of mining communities, mining projects can have major socio-economic impacts. With varying perspectives on the real impact of mining companies, development of mining communities remains a critical issue. The mining companies have always responded to these assertions with a catalogue of social development programmes and interventions for supporting community growth and development through their Corporate Social Responsibilities.

This Paper therefore studies the community infrastructure development of mining companies with regards to Goldfields Ghana Limited, Tarkwa Mines in Ghana. It also highlights the benefits, prospects and challenges encountered in the course of providing these community infrastructures. Data for the Study was obtained from both primary and secondary sources. Purposive and simple random sampling techniques were used in the selection of the target population. The Study proposes measures to inform policy formulation in determining the development dynamics of mining companies and their contribution to community infrastructure development within their catchment communities.

Keywords: Goldfields Ghana Limited, Community Infrastructure Development, Corporate Social Responsibility, Tarkwa Mines, Ghana

1. Introduction

Mining activities represent an important part of the fiscal income and a substantial part of foreign currency earnings of mining countries in both the developed and the developing world. Mining, considered as one of the oldest industries, is a primary sector industry of economies involved in mineral extraction. According to the World Bank (2002), there are several countries around the world involved in some sort of mining operation (mining companies and individual miners digging minerals and metals out of the ground). These countries are considered as mining countries in terms of contribution to export earnings, Foreign Direct Investment (FDI) and support to industrialization and agriculture. For such countries, the small-scale mining of precious minerals has made a significant impact on the socio-economic lives of people and communities involved directly or indirectly in the Sector (Hilson, 2002).

The Organization of Economic Cooperation and Development (OECD, 2002) indicates that 'development of the mining industry in Africa resulted largely through a form of FDI...' According to Danielson and Lagos (2001) positive impacts of mining can occur in terms of increased employment, better health care, improved infrastructure and schooling through community infrastructure support. Amidst the damaging environmental 'footprints' of the mining sector, the World Bank (1992) argues that it continues to remain the backbone of mining countries such as South Africa, Botswana, Zambia and Guinea.

The mining sector in Ghana is also currently a major backbone of the Ghanaian economy. It contributes about 12 percent of government revenue, 7 percent of Ghana's total corporate earnings and 41 percent of total export earnings (Aryee and Aboagye, 2008). It also accounts for 5 percent of Gross Domestic Product (GDP) and 40 to 37 percent of total exports (Firman, 2008). Ghana's mining sector is one of the few in Africa projected to increase substantially over the next two decades especially with the discovery and drilling of Oil and gas. However, there have been significant attacks on the Sector from Civil Society Groups on its contribution to community development and environmental sustainability. Critics have consistently raised alarming systems of 'unending' destructive environmental

effects that perpetuate the poverty situations of mining communities instead of providing routes out of poverty. Typical mining towns in Ghana are far from affluent, an aberration of what communities endowed with mineral resources, are or should look like. The towns are very much unlike other gold mining towns such as Johannesburg in South Africa, Noranda City in Ontario, Canada, Reno in the USA or Perth in Australia, where the scars of mining are sealed by the beauty and riches of these cities, built out of mining. This is an indication of the fact the real evidence of mining's role in the community development process remains a questionable issue.

On the contrary, the International Council on Mining and Metals (International Council on Mining and Metals, 2010) argues that the mining sector has been the main driving force for the transformation of mining communities in countries such as Botswana from the poorest to the most prosperous and peaceful through socio-economic infrastructure development. In Ghana, Goldfields Ghana established a foundation in 2002 and derives Corporate Social Responsibility (CSR) funding from its production and profitability situation which is based on a yearly contribution of US\$ 1.00 of every ounce produced plus 0.5 percent of pre-tax profits. This represents over US\$ 1 million a year for financing social investment projects. AngloGold Ashanti has also been instrumental in the fight against malaria through its Obuasi Malaria Control Programme (Anaman, 2008). The main issue is how this wealth has been turned into social assets for the mining communities and the sustainability measures to ensure that the benefits are far reaching. What is there to show for these funds and whether mining really support community infrastructure development remain a critical issue in the mining and development discussions in Ghana.

With varying perspectives on the real impact of mining companies, development of mining communities remains a critical issue. The mining companies have always responded to these assertions with a catalogue of social development programmes and their interventions for supporting community growth and development. It is within the purview of this that the Study seeks to assess the role of mining companies in community infrastructure development in Ghana.

2. Scope

The geographical scope of the Study covers all the primary stakeholder communities or catchment communities of the Goldfields Ghana Limited, Tarkwa Mines (GGL, TM) in the Tarkwa Nsuaem Municipality in the Western Region of Ghana. The communities are under consideration as the activities of GGL, TM directly affects them in one way or the other. The Municipality is one of the 19 administrative districts in the Western Region of Ghana. It is located between Latitude 400'N and 500 40'N and Longitudes 10 45' W and 20 10'W. It shares boundaries with Prestea Huni-Valley District to the north, Nzema East District to the West, Ahanta West District to the South and Mporor Wassa East District to the East. The Municipality has a total land area of 978.26 sq. km.

The natural environment of the Municipality which was once serene is now different due to the activities of miners. The mining activities of both the mining companies and illegal miners have degraded the natural environment and destroyed the ecosystem. The open cast method being used now has had a devastating effect on the environment as illustrated in Table 1.

Table 1: Activities of Mining Companies in the Municipality

Company	Location	Total Concession Size (km ²)	Total Disturbed Area (km ²)	Total Rehabilitated Area (km ²)	% Rehabilitated
Goldfields (Gh) Ltd (GFGL)	Tarkwa	209	19.91	4.04	20.3
AngloGold Ashanti Iduapriem Ltd (AAIL)	Iduapriem	110	16.56	1.8	10.8
Ghana Manganese Company (GMS)	Nsuta	172	4.9	0.06	12
Total Area		807.8	59.09	10.71	

Source: Field Survey, March, 2012

3. Methodology

The Study adopted a case study approach as it offers the opportunity for in-depth study of the case. Data for the Study was obtained from both secondary and primary sources. Secondary data was obtained from existing literature sources such as published articles, reports and publications of the Ghana Minerals Commission, the World Bank, Ghana Chamber of Mines, the International Council on Mining and Metals, the United Nation Development Programme (UNDP), the United Nations Environmental Programme (UNEP) among others. Primary data was garnered from the GGL, TM, the Minerals Commission and the people within the catchment communities of the Mines.

Data collection instruments involved semi-structured questionnaires and interview guides. Observation techniques were also employed especially on the sustainability measures and the condition of infrastructure facilities. The Study employed both purposive and random sampling techniques. Purposive sampling techniques were used for the institutions and agencies within the mining sector as well as community organizations. Random sampling techniques were used to obtain information from the people on the benefits derived from the community infrastructure projects. Data collected from the field was quantitatively and qualitatively analyzed. Quantitative methods adopted the use of tables, frequencies and other statistical measures. Inferences were drawn from the statistical measures and qualitative deductions made.

4. Company-Community Relations in Mining

Over the years, the recognition of the necessity of a functional relationship between mining companies and communities have not just been theoretical but as part of a broader development framework of sustaining communities and their environment. In fact, globally and domestically, it has been understood that the politics of mining are increasingly being played at the local community level (Veiga et al., 2001). Companies and communities and their relations do not emerge in an optional situation, the very dynamics of gold mining imply a relational dimension of

interaction or otherwise, be it functional or non functional. It is not something they could wish for but rather actively embrace. Undertaking mining operations suggest that international and transnational corporations must interact with communities or indigenous people who have emotional and historical links to their land (Garvin et al., 2009).

However, scholarly literature often cites the mining company and community relationship as a strained one. The relations are often seen as 'conflictual encounters' (Kemp et al., 2010) and range across economic, geographic and cultural contexts (Barton, 2005; Bebbington et al., 2008; Garvin et al., 2009; Jenkins, 2004, Whiteman and Mamen, 2002). Though traditionally, mining exploitation has been presented as an impetus to economic growth, the consequences on catchment communities has been alarming. Often, the blame has been laid on the industry perceived as indifferent to sustaining communities and addressing the enormous negative impact of their operations. This view is well presented in the media, civil society and international organizations such as the World Bank. One must appreciate as well, the tensions are not one sided and that the expectations from communities and their perceptions play a key role in the tension within the industry-community relations. Mining is viewed undoubtedly as a dangerous activity with acute effects on the social and environmental context within which it operates. As the global environment has become very visible especially within the sphere of mining activities, residents are demanding recognition of their rights, entitlements and their livelihood. There are indeed tensions, conflicts and/or disputes on the risks, impacts and distribution of benefits.

The tensions simply stated, results from an individualistic pursuance of self interest which according to Ochieng Odhiambo (2000) leads to 'contradicting, compromising, or even defeating the interest of the other. The divergent of goals and interests, perceptions and outcomes basically widens the 'cleavages' within the relationship context thereby creating tensions and associated conflicts. Irrespective of this tensions and seeming conflicts, providing community infrastructure apparently is a

way companies demonstrate their efforts toward easing tensions and creating social assests and development opportunities for mining communities.

5. Corporate Social Responsibility (CSR)

CSR has emerged not simply as a development tool but also an approach by industry in dealing with its marred relationship with communities within their catchment areas. It is a corporate development approach that has widely gained prominence, both theoretically and developmentally, in the discussion of mining and community relations is Corporate Social Responsibility (CSR) approach to community development. Actually, Kemp et al., (2010) indicate that mining companies are under increasing pressure from several parties, including local communities, civil society groups, shareholders, government agencies and other social responsible actors to address company-community conflict through a better and more sustainable development framework.

Though the concept of CSR is not new, it vanished of the tables of managers and the corporate sector in the 1980s (Hockert and Morsing, 2008). The forces of globalization and increased public awareness have forced the concept back to the rooms of the corporate sector in recent years. The view has been presented recently that firms ability to hold on to the power invested in them by society and the need to retain 'license to operate' depends significantly on its CSR strategy. Hockert and Morsing (2008) in their extensive review of CSR in the business sector, link the concept to different levels of organizational management and their corresponding views. They reveal the following levels and the associated managerial tactics

- Individual level-CSR as moral choice of managers
- Organisation level-CSR as stakeholder management
- Global level-CSR as sustainable development

Even though all these levels and the accompanying managerial issues are of relevance to the mining sector, the conception of sustainable development in CSR has been predominant in mining company strategy. Perhaps, this could be traced back to the classic work of the Brundtland Commission (1987) which redefined our

conception of development and systematically outlined the relationship between poverty, environmental degradation and economic development. These issues also happen to be intricate elements within the mining-community interface.

Moon (2004) point out that CSR is a difficult concept to define. In his view CSR coincides with other concepts as 'corporate citizenship, sustainable business, environmental responsibility, the triple bottom line; social and environmental accountability; business ethics and corporate accountability'. The Australian Treasury, in a joint report define the concept as 'a company's management of the economic, social and environmental impacts of its activities. Thus, it is a company's response, be it voluntary or otherwise to deal with the consequences of its operational activities. The European Commission (2001) in its Green paper on the framework for CSR also defines it as 'a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis. The voluntary aspect of CSR definitions has been highly questioned by radical political economists. In their view, such a definition lacks a clear understanding of the political economy of the corporate sector and the power imbalances between and within (Broomill, 2007). In their view, CSR represent a sort of tokenism, a deliberative approach were companies attempt to deflect attention from their activities that are socially and economically destructive. They further argue for a more responsive concept of 'corporate accountability' which stresses a mandate not a voluntary option for companies. CSR therefore may tend to arise from 'ethical' or 'economic' reasons (Windsor, 2006) or may be punitive sanctions for non-compliance (Bondy et al., 2004).

In relation to the mining industry, CSR is 'about balancing the diverse demands of communities and the imperative to protect the environment with the ever present need to make a profit'. Stated differently, CSR is an approach by which companies can model their attitudes, strategies, relationships with stakeholders (investors, employees or most importantly local communities) within a much agreed and acceptable concept (Jenkins, 2004). In whichever sense it viewed, it is agreeable

that CSR is a strategic approach adopted by companies to be socially, economically and environmentally responsible towards the impact of their activities. One can therefore say, it is about 'social legitimacy', corporate moral consciousness, societal license and a business strategy of giving back to society as a way to rationalize the continuance of core activities.

It is worthy to mention that recently, CSR has been criticized as focusing on reputation, with limited connection with business and thus difficult to justify on long term basis. Emanating from the Harvard Business School, a new concept of '*shared value*' is much appreciated. Shared value is seen as a 'superseding concept' that guides the investment of companies in their communities. The concept can be defined as 'policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions of the community within which it operates' (Porter and Kramer, 2011). It focuses on the connections between social and economic progress. The concept has been particularly appealing because of its offer of making the corporate sector competitive and communities healthy. In its simplest conception, shared value links competitive advantage with the most relevant social issues and thus, making firms productive and socially responsible at the same time. In a remarkable statement, Porter and Kramer (2011) argue that 'not all profits are equal. Profits involving a social purpose....one that creates a positive cycle of company-community prosperity'. In spite of suggested evidence of its success in the water and waste sector, its essence in the mining sector is yet to be seen. What must however be acknowledged is that in both CSR and SV, adhering to laws and business ethical standards and reducing harm from corporate activities are assumed (Ibid).

6. Mining in Ghana

Mining in Ghana has a legal and institutional framework within which it operate to ensure optimal and effective exploitation of minerals for national development. The mining industry in Ghana is also within a certain structure which ensures successful operations of the mining sector.

6.1 Structure of the Mining Industry in Ghana

According to Blankson 2004, there are nine (9) large-scale mining companies producing gold, diamonds, bauxite and manganese currently in Ghana. There are also over 200 registered small scale mining groups and 90 mine support service companies. Ghana's mining sector is dominated and controlled by foreign companies with the government of Ghana having not more than 10 percent ownership in most cases. A total of 212 mining companies have been awarded mining leases and exploration rights as at the start of 2008 (Minerals Commission, 2008). Sixteen (16) percent of these mining companies have been given mining leases by the Minerals Commission. Twenty-four (24) percent of this number is foreign controlled mining exploration companies, whilst the Ghanaian controlled mining companies, which constitute 60 percent of all mining activities, are mostly involved in small-scale mining and are spread across the length and breadth of the country (The Institution of Statistical, Social and Economic Research, 1998)

6.2 Legislative Framework for Mining in Ghana

The legislative framework for mining in Ghana is laid in the Minerals and Mining Law of 1986 (PNDCL 153) as amended by the Minerals and Mining (Amendment) Act of 1994 (Act 475) and the minerals and mining bill of 2005 (Law No. 703). The law is however silent on the corporate social responsibility of the mining companies towards the communities in which they operate. In fact, there is no national policy framework that guides the implementation of community infrastructure development in Ghana. Mining Companies are therefore not bound by law to implement community infrastructure development activities in the Country. In other words, community infrastructure developments are undertaken more in response to moral convictions rather than legal obligations. (Boon and Ababio, 2009)

6.3 Institutional Framework for Mining in Ghana

In ensuring the smooth and successful operation of mining companies in Ghana, various institutions are kept in place to ensure maximum exploitation of the country's mineral resources. These institutions are:

1. The Ministry of Mines and Energy;
2. The Minerals Commission;
3. The Geological Survey Department;
4. The Chamber of Mines;
5. The Mines Department;
6. The Environmental Protection Agency;
7. Lands Commission;
8. Land Valuation Board and
9. The Forestry Commission

The Ministry of Mines and Energy is responsible for all aspects of the minerals sector in the Ghanaian economy and is the grantor of mineral exploration and mining licenses and leases. Also, the Minerals Commission has the responsibility for recommending mineral policy, promoting mineral development, advising government on mineral matters and serving as a liaison between the government and the industry. The Ghana Geological Survey Department conducts geological studies and prepares geological maps for government while the Mines Department is responsible for safety in the mines. The Ghana Chamber of Mines is a private association of operating mines. It seeks to promote mining interests and communicates and exchanges information on mining matters with government and other public and private bodies. It also engages in discussion of proposals for legislative bodies and also negotiates miners' compensation and benefits with the National Union of Mine workers.

The Lands Commission maintains legal records of exploration licenses and mining leases and participates in the examination of new license applications. The Commission also seeks to initiate policies relating to stool and state lands. The Valuation Board provides rates for valuation of property affected by mining operations. The Environmental Protection Agency tries to strike a balance between the demands of the rapid economic growth and the need to protect the country's natural resources and protect the health and welfare of the people, ensuring

environmentally sound resource extraction. It conducts and promotes studies, investigations, surveys, research and analysis relating to the improvement of the country's environment and to maintain sound ecological system. The Forestry Commission is responsible for the management of the country's forest. The Commission works hand-in-hand with the Minerals Commission on the granting of exploration licenses and mining leases to ensure a balance between mineral extraction and sustainable forest resources. This collaboration became particularly necessary when the Chamber of Mines started lobbying for mining concessions within forest reserves.

7. Community's Expectations from Mining Explorations

Mining activities carry with it high development expectations borne by communities within which such operations occur. The situation is driven by several factors such the pre-mining socio economic impoverishment of the towns and communities (i.e. their poor state before mining), lack of development response from government authorities which has fueled them to look to foreign investors as alternative development agencies and vague promises from companies before the commencement of operations. Mining communities expectations are mainly centered around three main areas of governance, social-economic advancement and interestingly socio-cultural respect.

On socio-economic development, communities expect the mining companies to be 'development agents' who support their development objectives in terms of the provision of social services and accessibility to basic services. These includes the provision of potable water, basic education, sanitation facilities among others. In fact, the core of their expectations are that the gold resources 'belongs' to the community and hence any use of it should bring development and social improvement to them and their territorial space. It is worthy note that these expectations are not groundless; access to information, social media, civil society and recent moves toward business transparency has widened the available information to communities and also shaped their expectations as well. In view of

this expectations, mining companies are not rarely presented as unsatisfactory, 'talk much, do little group' and opportunistic entities.

The communities do not actually foresee the mining companies as a mere business or industrial entities, they envision them as quasi governmental bodies responsible for the development of their communities. Again, they expect respect for their social cultural values they have long held. Industrial large scale mining is inherently accompanied by significant changes in the social cultural dimensions of societies especially those of rural nature. Culturally, the people historically were very connected to their land, certain places seen as sacred and religiously observed as so. Social ties are strong, activities are quite indigenous and the local politics is traditional and embedded in a strong hierarchy and gendered relations. But mining companies, expatriates, auxiliary mining services and industries and the corresponding immigrant workers (of different socio-demographic characteristics) defy these cultural dimensions and significantly alter the way they have been conceived. These changes, in the shorter run represent a threat to the local rural communities and they therefore demand 'respect' from big firms toward their local culture. Moreover, in terms of a relational dimension, they demand respect from the company in terms of their views, involvement and issues they bring to the table of negotiation. They argue that often foreign companies label them as 'no-nothings' and illiterate group whose views are not so significant to the development process. Commenting from previous experiences, they assert the value of their knowledge based on connections to their territory and the invaluable cultural capital and understanding as critical to the operations of mining companies. These they strongly expect large scale mining companies to respect and integrate into their operational strategies.

8. Mining Companies' Expectations

The starting point for the mining companies has many times been a sharp criticism of community groups' expectations. Obviously as it may seem, companies argue that local expectations are too often unrealistic, unreasonable and imaginary. Company's

expectations normally allude to Corporate Social Responsibility (CSR) borne projects, community development strategies and basic services provided. Alluding to several physical and social infrastructure projects developed such as basic schools, water facilities and sanitation, mining companies indicate that these projects considerably affected the socio-economic wellbeing of local inhabitants and they expect far reaching impact on the local development progress and advancement in the middle to the long term. Pointing to their physical infrastructure projects, the mining company's point out they are not 'development agents' as projected by the communities but profit-oriented bodies with a constrained budget. Hence, they see their efforts are 'grandeur' initiatives worthy of commendation against the misconception of communities on role in the community development process. The mining companies therefore do not necessarily embrace everything the local communities present but rather respond to the more reasonable issues of positive implication to development of other areas.

9. Goldfields Ghana Limited's Contribution to Community Infrastructural Development

9.1 Profile of Goldfields Ghana Limited

Goldfields Ghana Limited (GGL) is presently the largest gold producer in Ghana, with annual production in excess of 900,000 ounces from its operating mines at Damang and Tarkwa. GGL engages about 4000 Ghanaians in direct employment. Goldfields is considered to be one of the first global mining conglomerates in the world (Mustapha, 2007). Its association with Ghana, however, dates back to the early 1990s when it acquired the right to operate the existing underground mine at Tarkwa, following agreement with the government in 1993. At the time of the agreement between Government of Ghana and Goldfields, the remaining existing underground mines were described as worthless by other mining firms and consequently wrote it off. Goldfields spent over US\$160.00 million to transform a mine whose lifespan has been estimated to be less than three (3) years (ibid).

In an effort to enhance efficiency at the existing mines in Tarkwa, Goldfields made its first additional acquisition when the Company, bought a portion of the Teberbie mine situated south of the existing open pit operations in the year 2000. Two (2) years later, the Company acquired the Abooso Goldfields' Damang mine which was also the second largest producer of gold in Ghana.

For the Company to be dependent on its affairs, Goldfields decided to undertake its own mining and therefore took over from African Mining Service, a renowned mining contractor who previously handled the actual mining operations for Goldfields. The transition was smooth and very orderly. In addition to the introduction of owner-mining system, the Company has successfully commissioned the largest single-stage SAG mill in the world with the construction of Carbon-In-Leach processing plant at Tarkwa. GGL since its existence in Ghana has its vision to be a global leader in sustainable gold mining through the Company's five (5) year development programme of Sustainable Community Empowerment and Economic Development Programme (SEED).

9.2 Legal Framework of Goldfields Ghana Limited

Goldfields Ghana Limited, Tarkwa Mines is governed by the Mineral and Mining Laws of 1986 (PNDCL 153) as amended by the Minerals and Mining (Amendment) Act of 1994 (Act 475) and the Mineral and Mining Bill of 2005 (Law No. 703). In addition, there are standards with respect to legal environmental requirements that are relevant to the Company's operations in Ghana. These legal requirements are in the form of Acts (e.g. Mineral Commission Act 1993 (Acts 450), Regulations (e.g. Mining and Explosive Regulations 1970 (LI 666), Ordinances (e.g. Mining Health Ordinance (CAP 150) and Decrees.

The Survey analysis revealed that GGL, TM is not mandated by law or any Act or Decree to provide community infrastructural in their area of operation. This corroborates Boon and Ababio's (2009) assertion that mining companies are not bound by law to implement Community Infrastructure Development (CID) and SCR activities. These activities are therefore undertaken by mining companies in mere response to moral convictions rather than legal obligations.

9.2 Contribution of GGL to Community Infrastructure Development (CID)

9.2.1 Adoption of Community Infrastructure Development by Goldfields Ghana Limited

Goldfields Ghana Limited adopted the idea of CID in 2002 when the Company launched the Goldfields Trust Fund which was later changed to Goldfields Ghana Foundation in 2004. The main objective of Goldfields Ghana Foundation is to ensure the development of the Company's eight primary stakeholder communities and Awudua, the traditional Capital. The Foundation is funded by the Company through its policy of US\$1.00 for every ounce of gold sold and 0.5 percent of pre-tax profits. Some contractors of the mines also contribute either in cash or in kind to the foundation's activities.

Goldfields Ghana Limited has high values in contributing towards CID in its catchment communities. These core values are propagated through its SEED programme. SEED ensures sustainable and integrated community development that focuses on economic growth, wealth creation, quality of life improvement and empowerment through education, capacity building and infrastructure development.

9.2.2 Processes involved in Selecting Projects for Implementation

In an attempt to better the lives of communities within its catchment communities, GGL, TM has implemented various projects and programmes in its catchment communities. The selection of these developmental projects and programmes is done through various processes. The leaders of the various communities, the Municipal Assembly and the Area Councils are made to prioritize their development issues at various fora with the community members. This is supported by a committee set up by the Community Affairs Department of GGL, TM which has the mandate for the overall management of relations with communities in terms of infrastructure development

After the projects selection and fund allocation, the Community Affairs Department of GGL, ensures the procurement of various contractors, tools and equipments for the commencement of work. Traditional authorities always contribute through the

provision of land to ensure the implementation of the project. The Company, after the procurement of contractors and equipments liaises with its monitoring and evaluation team to ensure that projects are being implemented as planned and resources allocated are being put to the best use in the quest to achieve its vision of Sustainable Community Empowerment and Economic Development Programme (SEED).

9.2.3 Sources of Funding

The Company finances its CID through its policy of US\$1.00 for every ounce of gold sold and 0.5 percent of pre-tax profits. Some contractors of the mines also contribute either in cash or in kind to the foundation's activities. One major challenge however is the unwillingness of development partners to support the Company to continue to better the lives of the people within its catchment communities. This is as a result of the perception by its development partners that the Company is benefiting and gaining more than necessary for its operations and should be better placed to finance its projects and programmes.

9.2.4 Contribution of Goldfields Ghana Limited, Tarkwa Mines to Community Infrastructure Development

The contribution of GGL, TM to CID within the Tarkwa Nsuaem Municipality cannot be overlooked. GGL, TM focuses mostly on educational, health, water and sanitation, recreational and transportation infrastructure. This validates the assertion by the Calderon and Serven (2006) and Weber-Fahr et al., (2001) that large mining operations can be found to invest substantially in local economic development by providing training, social services and public goods such as clean water, transport, energy and other infrastructure. Solomon (1998) adds that the participation of the mining industry in the provision of social services (e.g. schools and health infrastructures) relieves a portion of the government budgets for social services to be invested in economic projects. Table 2 and Plates 1 - 3 summarize some of GGL, TM's contributions to CID with reference to specific catchment communities.

Table 2: Contributions to Community Infrastructural Development

Sector	Location	Project/ Infrastructure/Activities	Status of Projects
Educational	New Atuabo Samahu Tarkwa Brahabobom Pepesa Akoon Huniso	- Construction of Schools - Construction of Teachers Quarters - Construction of libraries - Construction of ICT centres	Completed
Health	Tarkwa New Atuabo Samahu Akoon	- Construction of Clinics - Construction of a maternity ward	Completed
Water and Sanitation	New Atuabo Samahu Brahabobom Pepesa Akoon Huniso Abekoase	- Construction of toilet facilities such as Kumasi Ventilated Improved Pits (KVIPs), water closets, VIPs - Provision of Refuse Disposal Facilities - Construction of Hand-Dug Wells - Construction of Small Town Water Supply System	Completed
Transportation	New Atuabo Tarkwa	- Construction of all access roads within New Atuabo Community - Filling of potholes on major roads between Tarkwa and Bogoso	Completed On-going
Energy	New Atuabo	- Provision of electric transformers	Completed
Recreational	New Atuabo Akoon Samahu	- Construction of club house at Akoon - Construction of Community Centers	Completed

Source: Field Survey, March, 2012

Plate 1: A New Classroom Block at New Atuabo



Source: Field Survey, March, 2012

Plate 2: Maternity Block at Tarkwa



Source: Field Survey, 2012

Plate 3: Small Town Water Supply System



Source: Field Survey, 2012

The primary stakeholder communities or catchment communities of GGL, TM have benefited massively from the infrastructure provided by the Company. The total socio-economic and cultural development of the catchment communities and the Municipality as a whole has been improved immensely by the Company. Table 3 shows the benefits that have been accrued from these infrastructures provided by GGL, TM.

Table 3: Benefits of these Community Infrastructures Provided

Sector	Benefits
Education	<ul style="list-style-type: none"> - All catchment communities are benefitting from a modern school constructed - Pupils of New Atuabo and Tarkwa are benefitting from modern library and ICT centres
Health	58207 people within Tarkwa, New Atuabo, Akoon and Samahu benefited from the construction of a health facility.
Water and Sanitation	<ul style="list-style-type: none"> - About 20321 benefited from the various public toilets facilities constructed. - Two communities (Akoon and Samahu) benefited from the provision of modern skip containers. - Mechanized boreholes provided served more than 20321 people in communities mainly rural. - 7478 residents within the New Atuabo communities benefited from the design and installation of filters in boreholes to remove manganese and iron deposits.
Energy	Entire residents of the New Atuabo locality are benefitting from electricity due to the transformer provided by the company.
Transportation	<ul style="list-style-type: none"> - Construction of all access routes within the New Atuabo locality had reduced dust pollution experienced in the community. - Filling of potholes on major roads between Tarkwa and Bogoso.
Recreational	<ul style="list-style-type: none"> - Three (3) communities (Akoon, Samahu, and New Atuabo) are benefitting from modern community centres. - The people of Akoon are also enjoying the club house provided by GGL. - The people of Tarkwa are also benefitting from the modern sport station constructed by GGL, Tarkwa mines.

Source: Field Survey, March 2012

The health projects or infrastructure has potentials of improving the health status of the people within its catchment communities. These health infrastructures have contributed towards the reduction of infant mortality within the communities and the Municipality as a whole. The provision of these health facilities has also released pressure and congestion on the existing health facilities within the

Municipality especially the government hospital at the Municipal Capital, Tarkwa. The provision of these health infrastructures coupled with the quality health services provided within these facilities contributes towards the achievement of Millennium Development Goals (MDGs) **4** - to reduce child mortality, **5** - to improve maternal health and **6** - to combat HIV/ AIDS, malaria and other diseases. It will also contribute towards the achievement of the government's health policy as enshrined in the Ghana Shared Growth and Development Agenda (GSGDA).

With the issue of satisfaction of the usage of the health facilities, 95 percent of the households interviewed expressed their maximum satisfaction as the facilities are equipped with modern technology for quality health care delivery and adequate human resource capacity in terms of qualified doctors and nurses, specialized midwives, as well as the best of professional health care givers. Nevertheless, the 5 percent who attributed their dissatisfaction was due to the behavior of some of the health workers and sometimes personal difference between patients and the health workers. They were again dissatisfied due to the regular shortage of medicine in the clinics.

Also, the educational infrastructure provided by GGL, TM to its catchment or primary stakeholder communities has improved the knowledge acquisition and basic literacy of the people in the beneficiary communities. This will in the long run contribute towards the growth and development of their communities and the country as a whole as they will be better placed in a position to communicate government policies and ideologies in the right direction and also be able socially and economically empowered. With the construction of these educational infrastructures and the quality of supporting facilities, the standard of education in the communities will be greatly improved.

Infrastructures such as the construction of classroom blocks, provision of libraries and Information, Communication and Technology (ICT) centres will also contribute towards the achievement of MDG **2** - To achieve universal primary education and

also the realization of government policies such as the elimination of schools under trees and other international policies as pertain to education and technology.

Eighty (80) percent of respondents expressed great satisfaction with the health facilities provided by the Company. The survey analysis revealed that the people's satisfaction with the health facilities was due to their locations within the communities. This makes it easy for every child of school going age to benefit without any extra charges as the Company provides the children with free stationeries in addition to the free uniforms provided by the government. The communities commended the Company for their good work and expressed the need for the Company to provide the schools and/or communities with modern libraries and computer laboratories. Again, respondents expressed the need for the Company to provide more scholarships to brilliant but needy students within these communities.

In addition, GGL, TM's, contribution to CID in the form of water and sanitation projects has the prospect of ensuring potable water supply and the improvement in sanitation issues in its primary stakeholder communities. The numerous water projects undertaken in its catchment communities contribute towards the prevention of water-borne diseases in the communities and the Municipality at large. Also, the various model of toilets facilities constructed and the provision of skip containers provided by GGL, TM serves as potential machinery in improving the solid and liquid waste management issues within the beneficiary communities and the Municipality at large. Such water and sanitation facilities within the communities have greatly improved the environmental conditions of the people and contribute towards the elimination of diseases and insanitary activities within the communities. The elimination of these insanitary practices such as improper waste disposal and improper ways of defecating in the community helps prevent diseases and improve on the health status of the people as cholera and other diseases have greatly reduced. These contribute toward the progress of achieving of MDGs **6** and **7**

- to combat HIV/AIDS, Malaria and other diseases and to ensure environmental sustainability respectively.

In as much as the beneficiary communities are enjoying quality water supply and good sanitation management, 10 percent of respondents expressed dissatisfaction with the sanitation and toilet facilities. Their dissatisfaction with the toilet facilities was about the poor management/maintenance and the irregular emptying of the manholes which is the responsibility of the community's Water and Sanitation (WATSAN) committees and the unit committees. Again, 10 percent of respondents were indifferent about their level of satisfaction. These are people with their private toilets and therefore do not make use of the public toilets provided by GGL, TM. The 80 percent who expressed profound satisfaction argued that most of the people within these communities resort to the free range system of defecating which was a threat to their health and the environment.

Furthermore, the Company's contribution to infrastructures such as energy, transportation and recreational projects is worth acknowledging in its catchment communities. The provision of electric transformers under energy infrastructures aids in the economic activities of people and thereby contributing towards the achievement of MDG 1 and the economic growth of the beneficiary communities and the Municipality as community members have access to electricity to carry out their regular commercial activities. The two (2) communities (New Atuabo and Akoon) benefiting from the energy infrastructure (electric transformers) provided by the Company expressed satisfaction with the infrastructure provision. They however pleaded for more electric transformers so as to reduce the pressure on the existing transformers to help reduce the frequent power outages.

Under transportation infrastructure, the Company contributes in the form of construction of access roads and the upgrading of some roads within the communities. The provision of these infrastructures increases physical accessibility and opens up the Municipality for growth and development. The recreational

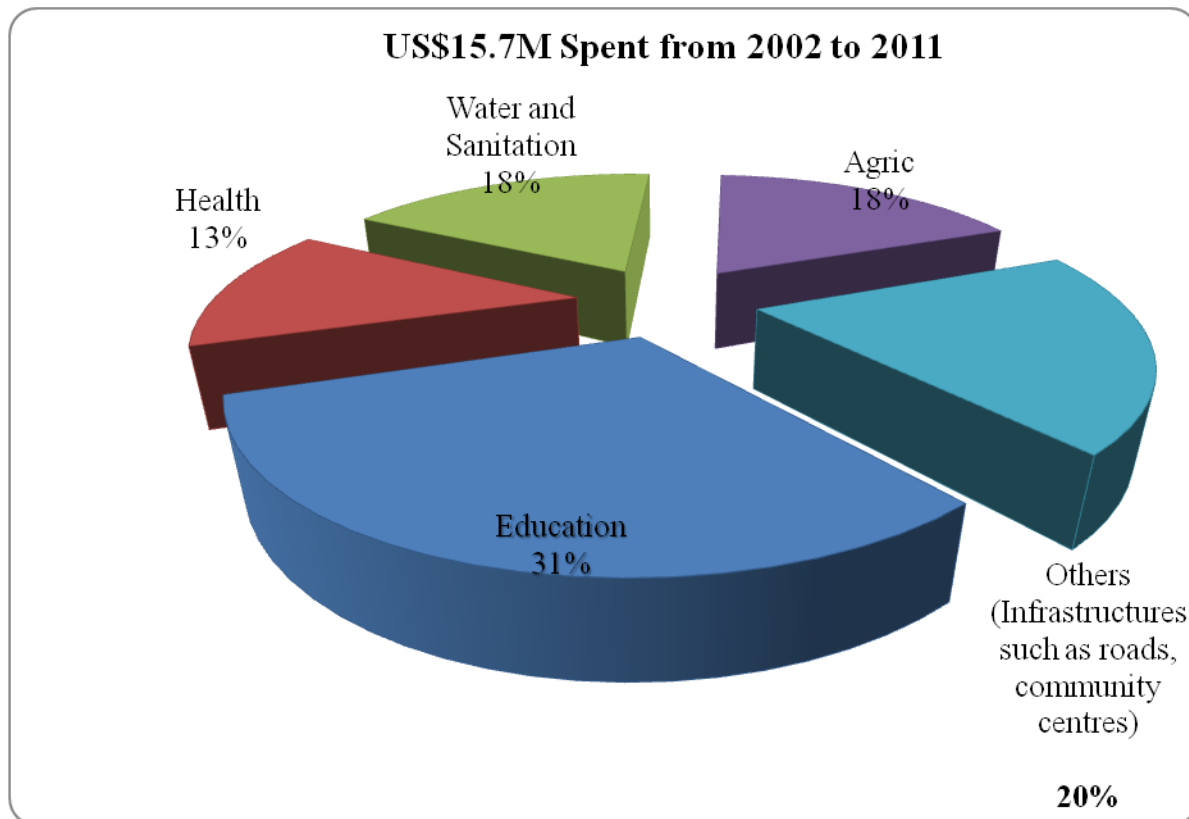
infrastructures provided by the Company improve the social capital of the people as they serve as grounds for important social events within these communities. Again, most people within New Atuabo and Akoon use these facilities for relaxation.

10. Future Development Agenda on Community Infrastructure development

Boon and Ababio (2009) asserts that the critics of mining industry have called on the government of Ghana to hold mining companies accountable instead of being an accomplice in an act that exploits the Country's mineral resources and creates death traps for the people instead of liberating them from hunger, illiteracy, vulnerability and other social problems. GGL, TM on the contrary does well in the course of its operation to liberate the communities in which they operate by investing in important sectors such as education, health, water and sanitation, recreation and transportation.

The Community Affairs Department of GGL, TM has outlined the following as its future development agenda for the growth and development of its catchment or primary stakeholder communities. The Company always seeks to have positive impacts on the people as well as their cultures. GGL, TM therefore intends to continuously respect the values and cultures of the people in which their activities affect in the course of their operation. In addition, GGL, TM seeks to ensure continuity of community involvement in all its development projects and programmes by allowing the communities to chart their own development agenda with the support of the Community Affairs Department. Furthermore, the Company has approved US\$4.3million to be spent on infrastructural development of its catchment communities in 2013. This is by far bigger than initial amount of US\$1 million spent every year on social investment project, a component of CID. Figure 1 shows the projects funded by GGL, TM between 2002 to 2011.

Figure 1: Expenditure on Projects from 2002 to 2011



Source: Field Survey, March, 2012

11. Challenges to Community Infrastructure Development

Despite the numerous benefits GGL, TM offers to its primary, catchment or stakeholder communities, the Company is not devoid of challenges alluded to by UNECA (2011) which posits that there are challenges facing mining companies' effort to support local infrastructure development. These challenges can be identified in three (3) areas: management, construction and tax system. GGL, TM is experiencing instability within the tax system and especially the new tax system introduced into the Country. The tax regime is eroding profits and thereby making the Company reluctant to continue its CID.

Management issues are largely concerned with the utilization and usability of infrastructure facilities. Most often, local competencies for managing local infrastructure facilities are not adequate or unavailable. This is evident in situations where the Company hands over completed projects to the local

communities for their management. These infrastructures are sometimes poorly managed by the beneficiary communities and as such breakdown, deterioration and loss of infrastructure. The constructional challenges have to do with the funding for projects. GGL, TM finances its own infrastructure projects without any support from the central government. Support from its development partners is also very weak. This situation most often than not constrains the ability of the Company to implement infrastructure projects the financial status of the company declines in terms of profitability and high tax regimes.

12. Sustainability Measure

Sustainability measures with regard to projects are very important issues that cannot be ignored. The ability of the project to stand their estimated life span and meet the needs of the future depends to a large extent on sustainability measures adopted. The survey analysis revealed that GGL, TM takes the sustainability of its community projects at heart. Even though these projects are handed over to the Municipal Assembly and the community after completion, the Company still sees to the sustainability of these infrastructures through the following ways.

The Company, in an effort to ensure the sustainability of its educational projects regularly supplies the schools and the pupils with learning aids such as books, pens, pencils, school bags, chalks, markers. The Company again gives the teachers placed at catchment schools incentives in the form of additional allowances. These are efforts aimed at creating sound and conducive environment for teaching and learning. Also, the Company ensures regular renovation in the forms of repainting the facilities and doing recurrent constructional activities of these facilities from the Company's foundation' funds. In the health sector, the Company frequently supplies clinics and health centres with medical equipment and drugs to ensure regular functioning of these facilities. The Company also uses funds from the foundation to ensure regular maintenance by repairing broken down structure and sometimes constructional renovation even though the facilities are handed to the Municipal Assembly after their construction.

The people of New Atuabo particularly commended GGL, TM for its maximum efforts at ensuring the sustainability of the water and sanitation facilities

constructed within the communities. The Company regularly (twice every month) takes samples of water from the constructed water facilities to test their quality and potability or otherwise. GGL, TM again trains WATSAN committee members within these communities and provides them with necessary tools and equipments to repair broken down water and sanitation facilities. The WATSAN committees finance the maintenance of the facilities from the proceeds collected from the use of the water and sanitation facilities. The transformers are managed and sustained by the Electricity Company of Ghana (ECG) with the support of the GGL, TM.

13. Recommendations for Policy Action

13.1 Legal Policy Formulation on Community Infrastructural Development

The mining sector's legal or regulatory and policy framework should be redesigned to make community infrastructural development mandatory for all mining companies in Ghana. This should be spearheaded by the government of Ghana and the Chamber of mines. Monitoring measures should be put in place to ensure strict compliance to such directives. This will make mining companies be bound by law to carry out infrastructure development in their catchment or primary stakeholder communities and not just voluntary work as alluded to by the head of the Community Affairs Department of GGL, TM.

13.2 Rural Development Initiatives

Mining companies and their activities are mostly within remote/rural/deprived communities where policies on rural development are much needed for their development. Policies that focused on rural development should be formulated by the government and enforced by all stakeholders such as district assemblies and the Ghana chamber of Mines to ensure that mining companies within these remote and deprived communities have a greater role to play in the achievement of this initiative. The mining companies can be seen as potentials within these communities to foster development by investing in them and developing their infrastructural base to bring about economic development even after the closure of the mines thereby preventing what is popularly called 'Ghost Towns' after the closure of these mines.

13.3 Public-Private Partnership

The success of community infrastructure development by mining companies is dependent on the extent of partnership and collaboration with local development agencies like the district assemblies and how projects are integrated into District Medium Term Development Plans. Even though district assemblies are aware of all infrastructure projects undertaken by mining companies within their area of jurisdiction, there is the need for government to establish proper partnership between local assemblies and the mining companies. Modalities should be put in place to ensure conformity to such established partnerships to create the enabling environment for community infrastructure development projects to thrive.

13.4 Comprehensive Community Infrastructure Development Plan

Mining companies should be encouraged to develop a comprehensive community infrastructure development plan within specific timeframes to define blueprints for transforming catchment communities. This plan should outline the broad infrastructure goal of the companies, their objectives and strategies towards the achievement of their stated objectives and goals. Such plans should be in conformity with District Medium Term Development Plan. The capacity of district assemblies should then be built to monitor the progress of work done by mining companies through the release of the companies' annual progress report towards the progress of the overall plan. This could be a favorable foundation for define the development vision of communities and offer a road map for the social development progress from impoverishment.

13.5 Monitoring Framework

The process of continuously and routinely collecting, recording, reporting and analyzing information on the performance of all aspects of a process is also a very important issue to be considered. Mining companies should be made to develop a monitoring framework alongside the Comprehensive Community Infrastructure Development Plan. This will clearly define the roles to be played by each stakeholder, check the effectiveness and efficiency of projects implementation according to the Comprehensive Community Infrastructure Development Plan. This framework will also keep track of performance to identify the strengths and shortcomings thereby able to detect and minimize the risk of failure.

Table 4: Summary of Recommendations for Policy Action

Policy Theme	Rationale	Stakeholders
Legal Policy Formulation on Community Infrastructural Development	<ul style="list-style-type: none"> - To provide a framework for mining companies to contribute towards CID - Serves as a monitoring tool to be used to enforce strict policy measures for effective implementation of CID 	<p>Mineral Commission</p> <p>Ghana Chamber of Mines</p>
Public- Private Partnership	<ul style="list-style-type: none"> - To promote collaborative efforts towards effective policies and actions for the mineral sector - To equitably improve the livelihood of the catchment communities 	<p>Mining companies</p> <p>Ghana Chamber of Mines</p>
Rural Development Initiatives	<ul style="list-style-type: none"> - To invest in other sectors of the economy and developing the infrastructural base of their catchment communities - Development of sustainable Alternative Livelihood programmes to prevent 'Ghost Towns' after the closure of the mines 	<p>Mining Companies</p> <p>District Assembly</p> <p>Ghana Chamber of Mines</p>
Comprehensive Community Infrastructure Development Plan	<ul style="list-style-type: none"> - To outline the broad infrastructure goal, objectives and strategies of the companies towards the achievement of these objectives and the goal 	<p>Mining Companies</p> <p>District Assembly</p>
Monitoring Framework	<ul style="list-style-type: none"> - To develop a monitoring framework alongside the Comprehensive CID Plan - To check the effectiveness and efficiency of projects implementation - To keep track of performance to identify the strengths and shortcomings thereby able to detect and minimize the risk of failure. 	<p>Mining Companies</p> <p>District Assembly</p> <p>Mineral Commission</p>

Source: Author's Construct, March, 2012

14. Conclusion

There have been significant attacks on the mining sector from various groups on its contribution to community development and environmental sustainability in Ghana. Critics have consistently raised alarming systems of 'unending' destructive environmental effects that perpetuate the poverty situations of mining communities instead of providing routes out of poverty. This is an indication of the fact that mining companies in Ghana are far from promoting community infrastructure development. With varying perspectives on the real impact of mining companies, development of mining communities remains a critical issue. The mining companies have always responded to these assertions with a catalogue of social development programmes and their interventions for supporting community growth and development.

Community infrastructure development is necessary to bring about the needed development in mining catchment communities thereby contributing towards the achievement of the various community development strategies formulated over the years by the government and policy planners. The contribution of GGL, TM cannot be overlooked but worth acknowledging. This is evident from its contribution to various infrastructural developments to its catchment communities and the Tarkwa Nsuaem Municipality as a whole. In order for GGL, TM to see this form of gesture as a legal requirement than a moral conviction, there is the need for government and other stakeholders such as the district assemblies and other institutions within the mining industry to contribute towards the formulation of a legal policy framework to back community infrastructure development in Ghana.

References

- [1] Anaman, J.K., (2008) *The evolution of the Ghana Chamber of Mines, 80 years of mining in Ghana, 1928-2008*. Accra.
- [2] Aryee, B. and Aboagye, Y., (2008) *Mining and sustainable development in Ghana*. Developing messages for the UN Conference on Sustainable Development. New York.
- [3] Barton, B., (2005) *A global/local approach to conflict resolution in the resources sector: The Case of the Tintaya Dialogue Table*, unpublished Master of Arts in Law and Diplomacy Thesis. Tufts University, Boston, MA.
- [4] Bebbington, A., L. Hinojosa, D. H. Bebbington, M. L. M.L. Burneo and Warnars, X., (2008) Contention and ambiguity: mining and the possibilities of development, *Development and Change* 39(6), 887–914.
- [5] Blankson, K. A., (2004) *Social and economic implications of mining induced resettlements: the case of Wassa West District in Ghana*. Accra.
- [6] Bondy, K., Matten, D. and Moon, J. (2004) 'The Adoption of Voluntary Codes of Conduct in MNCs: A Three-country Comparative Study', *Business and Society Review*, 109, 4, 449-477.
- [7] Boon, E.K. and Ababio F., (2009): Corporate Social Responsibility in Ghana: Lessons from the mining sector
- [8] Broomill. R., (2007) *Corporate social responsibility: Key issues and debates*. Dastun Paper Series, No. 1/2007
- [9] Calderon, C. and Serven, L., (2006) *Infrastructure and economic development in SSA*. Working Paper, WP S4712. The World Bank: Washington.
- [10] Danielson, L. and Lagos, G. (2001) *The Role of the minerals sector in the transition to sustainable development*. IIED: London.
- [11] European Commission (2001) *Promoting a European framework for corporate social responsibility*. Green paper, Luxembourg: Office for Official Publications of the European Commission.
- [12] Firman, C., (2008) *Africa: Focus of the 21st Century*. Global Capital Magazine
- [13] Garvin, T., T. K. McGee, K. E. Smoyer-Tomic and E. A. Aubynn (2009) Community-company relations in gold mining in Ghana, *Journal of Environmental Management*, 90, pp. 571–586.
- [14] Hilson, G., (2002) Harvesting mineral riches: 1000 years of gold mining in Ghana. *Resources Policy* 28 (1–2), 13–26. Toronto.
- [15] Hockert, K. and Morsing, M., (2008) *A literature review on corporate social responsibility in the innovation process*. Copenhagen School of Business: Copenhagen.
- [16] International Council on Mining and Metals (2010), *Mining and Economic Development in Sustainable Development Framework*. www.icmm.org accessed on 12th May, 2011.

- [17] Jenkins, H., (2004) *Corporate social responsibility and the mining industry: Conflicts and constructs*. *Corporate Social Responsibility and Environmental Management* 11, pp. 23–34.
- [18] Kemp D., J.R. Owen, N. Gotzmann, and C.J.Bond (2010) *Just relations and company–community conflict in mining*, *Journal of Business Ethics*, 101, pp. 93–109.
- [19] Weber-Fahr, M. J., Strongman, R. Kunanayagam, G. McMahon, and C. Sheldon (2001) *Mining and poverty reduction*. World Bank Draft Paper for comments, Washington.
- [20] Mineral Commission (2008) *Mining Weekly*, Volume 6(31), pp. 8-14.
- [21] Moon, J., (2004). 'Government as a driver of corporate social responsibility'. University of Nottingham, International Centre for Corporate Social Responsibility, Research paper Series. No. 20.
- [22] Mustapha S., (2007), the story of mining giant, Goldfields Ghana
- [23] Ochieng Odhiambo, M. (2000) *Oxfam Karamoja conflicts study: A Report*. Oxfam: Kampala.
- [24] OECD (2002). OECD Global Forum On International Investment Conference on Foreign Direct Investment and the Environment Lessons to be Learned from the Mining Sector, OECD, Paris.
- [25] Porter and Kramer (2011) *Creating Shared Value: How to reinvent capitalism and unleash a wave of innovation and growth*. Harvard Business Review, HBR.org.
- [26] Solomon, M., (1998), Minerals-driven sustainable development, *African Mining*, 3 (6), pp.
- [27] The Institution of Statistical, Social and Economic Research (1998) The state of the Ghanaian Economy, ISSER, University of Ghana, Legon, June (p.67-68)
- [28] UNECA (2011) *The role of the state in economic transformation. Economic report on Africa*. Addis Ababa
- [29] Veiga, Scoble and McAllister (2001) *Mining with communities. Natural Resources Forum*, 25 (2001), pp. 191-202.
- [30] Whiteman, G. and K. Mamen (2002) Examining justice and conflict between mining companies and indigenous peoples: Cerro Colorado and the Ngabe-Bugle in Panama, *Journal of Business and Management* 8(3), pp. 293–329.
- [31] Windsor, D. (2006) 'Corporate Social Responsibility: Three Key Approaches', *Journal of Management Studies*, 43, 1, 93-114.
- [32] World Bank (1992), Strategy for Africa Mining. World Bank Technical Paper No. 181. Africa Technical Department, Washington.
- [33] World Bank (2002) Treasure or Trouble: Mining in Developing Countries. Mining Department. Washington.