

**OECD GUIDELINES AND CORPORATE SOCIAL RESPONSIBILITY:
AN EXPLORATORY STUDY OF THE MINING SECTOR IN GHANA**

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CHAPTER ONE

INTRODUCTION

1.1 Background

The end of the cold war gave hope to many people in the world that the world was going to engage in development that would ensure economic growth, protect the rights of people to clean environment and bring equity and fairness to many deprived people. Many multinational companies had since expanded their operations particularly to developing countries with minimum controls from the host countries due to the weak regulatory systems of these host countries.

The process of globalisation which began some time ago, has engendered the expansion of many business concerns from their traditional home bases into regions and countries where the investment climate is conducive for industries to thrive. A feature of this process has been the increasing number of cross-border production networks in which a few companies are playing major roles. The expansion of business globally goes along with it, Foreign Direct Investments (FDIs) which developing countries often want to attract into their economy for economic development.

Ghana, like several other developing countries, has reviewed its laws in the past two decades to create conditions that attract multinational enterprises (MNEs) with their FDI into the national economy. The mining industry has received the largest chunk of FDIs, taking up fifty five percent (55%) of FDIs coming into the country (OECD, 2002). However, these inflows of MNEs has attracted a lot of criticism with some writers arguing that there has been a “race to the bottom” in environmental standards (OECD, 2002); and its attendant social conflicts and human rights abuses (Tanufour, 2004). The contribution of mining to GDP on the other hand has been estimated to be 1.5% (Awudi, 2002).

Globalisation and the attraction of FDIs into the mining sector associated with “The race to the bottom” have some consequences to the nations of investment destination. Annan, 1999 notes: “globalisation is a fact of life; However, I believe we have underestimated its fragility. The problem is this. The spread of markets outpaces the ability of societies and their political systems to adjust to them, let alone to guide the course they take. History teaches us that such an imbalance between the economic, social and political realms can never be sustained for very long”. Forty-six countries representing 14 percent of the world total population mainly from developing countries have governments that are unwilling or unable to carry out their responsibilities in terms of regulating standards for investment and ensuring adequate protection for the rights of their people in respect of sustained economic activities, protection against human rights violations and protection of the environment. The failure of governments in this respect had led to broader failures in political, economic and civic institutions and an emergence of conflicts that had resulted in more human rights violations for local community people and investment that cannot be sustained.

Communities, Civil Society Organisations (CSOs) and Non-Governmental Organisations (NGOs) have therefore been calling for socially responsibility behaviour from corporate entities as a means of ensuring sustainable development in the areas that they work. Corporate Social Responsibility demands that companies advance not only economically but also environmentally and socially responsible (Aaron, 2005). “Business decisions can profoundly affect the dignity and rights of individuals and communities. It is not a question of asking business to fulfil the role of government, but of asking business to promote human rights in its own competence” (Robinson, 1998).

The Organisation for Economic Corporation and Development (OECD) developed guidelines to regulate the operations of MNE’s which emanate from members countries and those operating in OECD member countries. The

guidelines are one part of the OECD Declaration on International Investment and Multinational Enterprises, a broad political commitment adopted by OECD governments in 1976 and revised in 2000.

In the preface to the 2000 revised version of the guidelines, the guidelines are to provide voluntary principles and standards for responsible business conduct consistent with applicable law to strengthen the basis of mutual confidence between enterprises and the societies in which they operate.

1.2 Problem statement

OECD adhering countries have worked with the revised OECD guidelines for five years. Section II subsections 1 & 2 of the revised OECD guidelines for MNEs read: In this regard, enterprises should:

1. Contribute to economic, social and environmental progress with a view to achieving sustainable development
2. Respect human rights of those affected by their activities consistent with the host governments international obligations and commitments.

When Ghana began the ERP/SAP in 1983, only five mining companies operated in the country. In the 1990s, mining companies mainly from OECD adhering countries opened up thirteen major new surface mining operations in the country. In addition, the government granted more than two hundred mining leases resulting in mining companies holding 30% of the country's lands surface area in mining concessions (Vital Statistics, 1998). Currently, there have also been permits granted for both mining and exploration in protected forest areas (Anglogold Ashanti, 2005).

Kneen (2003) notes that “most of the Wassa West district is under mining concession, including people's farms and villages, as well as forest reserves. We saw a lot of abuses of power, people suffering environmental contamination, having their farms destroyed or being pushed off their land for compensation amounts that are laughable or are forced to accept inadequate resettlement

packages”. There are about eight ridges that GGL and GAG share and are mining some of, which are Repe, Akontase East and Akontase West. Water heads and habitat of wildlife have been destroyed and the increasing protests and community resistance against the effects of surface mining met with increasing militarisation leading to human rights abuses.

There have been series of conflicts between local residents and mining companies and security agencies over non-negotiated mass lay offs, pollution of drinking water sources and resettlements (Daily Graphic, 15/12/1999:16; Miningwatch, 1999).

The Abekoase cyanide spillage of 2001 necessitated the commissioning of a cyanide investigation committee¹ and the committee gave an indication of the seriousness of pollution of community water bodies. The report indicated that from 1989 to 2001, Ghana reported eight cyanide spillages from the activities of mining companies spilling cyanide into eight rivers and the environment. There had been other cyanide spillages after these and within three months, two companies owned by Golden Star Resources, a Canadian company spilled cyanide into two Rivers. There is the problem of Chemical pollution of ground water through cyanide seepages from heap leach facilities and tailings impoundments.

However, the then managing director of Goldfields Ghana Limited, a mining company in the district, has been quoted as saying “cyanide is not as bad as people make it seem, its just because it was used in the gas chambers some years ago so it sounds really bad in the ear. These villagers dump their excreta into the river, and that should be the problem for them because this is the water they drink; there is so much faecal coliforms in the river and that for me is the problem not the cyanide in the water” (Anane, 2001).

¹ (Cyanide Investigative Committee report 2002)

The disparities in the perceptions of the effects of mining activities between the mining companies on the one side, who are the main causes of some environmental effects and relocations of livelihoods, and the communities affected by the mining activities seemed to suggest that the implementation of the guidelines was facing difficulties and that was what the study sought to determine.

1.3 Objectives

The general objective of the study was to investigate the extent to which the OECD guidelines for MNE's had been implemented in mining operations in Ghana.

Specifically, the study attempted to determine the extent to which mining MNEs had implemented the guidelines to:

1. Safeguard the integrity of the natural environment,
2. Protect Human Rights of communities in which they worked.

The study also attempted to:

3. Understand the extent of change that communities' livelihood systems had undergone.
4. Make recommendations to various actors in community development, government and businesses to help the implementations of the OECD guidelines in the country.

1.4 Research questions

As part of the study the research questions that were investigated are:

1. Are MNE's assets to the natural environment?
2. Do the MNE's respect the human rights of people in the communities in which they work?
3. To what extent have communities affected by mining had their livelihood systems changed?

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

Based on the assumption that mining contributed to the industrialisation of developed countries like United States, Canada, and Australia in the 19th and early 20th centuries, the World Bank and IMF promoted mining as a necessary means of achieving economic growth and poverty reduction objectives of mineral-endowed countries of the south . The exploration and exploitation of mineral wealth in the early 1980s became the panacea for rapid and easy way of development for many countries endowed with the resource. To fulfil this dream, many minerals-endowed countries of the south increased their dependence on the extractive sector (Ross, 2001).

There was the belief by many of these developing countries that mineral exploitation had a direct link with poverty reduction by improving the performance framework of the mineral sector. In part, the framework relied on the importance of commercial-scale mining operating with FDIs as a source of foreign exchange and fiscal receipts for governments (IFC, 2003). The countries worked at attracting FDIs by policy and law reviews that made it attractive for multinational mining companies to operate in their countries with support from International Financial Institutions. According to a World Bank report (2002), the Bank's support to projects in the Mining Sector helped in the achievement of the following:

- a thorough assessment of the institutional arrangements of Ghanaian mining which established a clear blueprint of a forward looking institutional structure for Ghanaian mining
- a thorough assessment of the Ghanaian legal framework for mining which was discussed by stakeholders and resulted in a draft new mining law , and draft mining , fiscal and environmental regulations .

- the completion of aerial geophysical work for the attraction of investors to Ghana

There is also the belief that the commercial mineral sector in many developing countries would have the trickle-down effect by providing jobs to local people. The International Monetary Fund (IMF, 2003) routed this in the belief, that small-scale mining provides employment for about thirteen million workers and their families worldwide particularly in some developing countries.

2.2 Benefit Sharing and Mining Investment

Mineral extraction is important in the economy of Ghana. Ghana is the second largest gold producer in Africa after South Africa, the third largest African producer of aluminium metal and manganese ore, and a significant producer of bauxite and diamond. In addition, Ghana produces a number of industrial minerals, which include kaolin, limestone, salt, sand and gravel, and silica sand on a small scale (Barning, 1997; Sweeting and Clack, 2000). Ghana attracts around 7% of all FDI into Africa and this goes into the mineral sector (UNCTAD, 2005)

The PNDCL 153 of 1986 paved the way for Ghana institutionalised the model of development based on mineral extraction after the government of the Provisional National Defence Council (PNDC) launched a neo-liberal Economic Recovery Programme (ERP) in 1983. The law, which led to massive FDI inflows into the extractive sector and a gold boom attracted foreign investing companies from Australia, Canada, Ireland, South Africa, the United Kingdom and the United States most of which are OECD member countries. The generous provisions for investor in the minerals and mining law of Ghana that helped to attract investors include the following

- Capital allowance of 75% in the year of investment and thereafter 50% on a declining balance basis
- Investment allowance of 5% in year of investment
- Exemption from import duties on plant, machinery and equipment imported exclusively and specifically for mining,
- Capitalisation of approved exploration expenditure
- Losses not exceeding the capital allowance may be carried forward
- Possibility of deferment of payments for stamp, registration duties as well as payment of royalties
- Mining companies may retain a portion of foreign exchange as high as 90% and a minimum of 55% earnings in external accounts to meet qualifying foreign payments.

After the review of the minerals and mining law, mineral exploitation became the largest foreign exchange earnings by contributing 40% of total annual foreign exchange earnings (Mate 2002). The mining sector provides employment to 5% of the country's labour force and accounts for more than 12% of the total revenue collected by the Internal Revenue Service of Ghana. Additional mining benefits to the country include mineral royalty payments and state equity participation, which is 10% free, carried equity interest (Goldfields, 2005).

Although there were benefits associated with the restructuring of the extractive sector, mining communities and the country experienced some of the negative impacts that accompanied mining investments. According to Mining Watch Canada, (2001) the Structural Adjustment Programme (SAP) of the World Bank/IMF from 1986 promoted the massive privatisation of the mining sector, accompanied by generous incentives and greater profits, but environmental regulations have been minimised. With the provision of such incentives to the extractive sector, the quantum of foreign exchange earnings held in offshore accounts by the foreign mining companies in Ghana average 71.5% thus diffusing

the net benefits from mining to the national economy in real terms. The government of Ghana put the contribution of Gold mining to GDP around 2 % (Ghana – Vision 2020). The incentives for the mining sector under the SAP/ERP have intensified the competition between agriculture and surface mining for land (Asad, 2003; Akabzaa, 2000, and Project Underground 2000) as multinational companies acquired large tracts of land for the extractive industry. In terms of real benefits to the country, the receipts from mineral sales outside the country have been around 5% of total sales over the past fifteen years. A calculation based on 2003 government figures of totals mineral value of mineral export as against incomes revenues derived from mineral taxes shows that Ghana earned only 5% of total value of export (UNCTAD 2005)

2.3 Mineral Investment and the Environment

Many question the dependency on the extractive sector as a major option for development, because of its incompatibility with sustained environmental management. For them, dependence of extractive sector as a means of development without developing the needed linkages for value added only depletes the world of its natural capital. Daley (1996) equated modern concept of development based on international models to the destruction of the natural economy and human's domination of nature leading to environmental destruction. Schumacher (1973) described economic development that targets the extraction of natural resource as diminution of capital to cater for incomes of nations, which erode the natural capital base of the world that brings no development. He continues to argue,

Scientific or technological solutions that poison the environment or degrade the social structure and human beings have no benefit, no matter how brilliantly conceived or its superficial attraction.

Gold mining experiences in Ghana was based on underground mining and the nation was caught up in the current mining boom with weak capacity that could

not march up to the challenges of increased surface mining activities and heap leach method of gold extraction. As the mining laws provided generous incentives to the mining companies, the cost of investment was borne by the country. Fui Tsikata (1997) stated:

An Environmental Protection Agency has been established in December 1994 (by Act 490) with powers to promulgate and enforce standards. Neither precise standards nor detailed regulation have as yet been enacted, though impact assessments are now required and guidelines for mineral operations have been formulate.

Sarpong (2002) described the gaps in the minerals and mining law that allows environmental destruction as follows:

As regards standards, to be enforced, however, there are gaps in the Ghanaian environmental legal regime. There is no legislation regulating the discharge of wastes into water, riverine systems or the marine

Emerging from the weak laws and regulatory framework for mining in terms of environmental protection, mining companies have externalised the cost of degradation from mining to the Ghanaian community. According to Asad (2003), Ghanaians, and in fact many have suffered not just from general economic hardship but also directly from the loss of farmland and the environmental contamination brought about by these same mining activities. The Wassai West District, which contains half of Ghana's large mines, shows the enormous social and environmental impact of the gold boom. Mining here displaced 30,000 people during 1990-98, contaminated rivers, streams, destroyed farms, and forestlands. Two-thirds of the land in Tarkwa has been sold off to multinationals with minimal compensation to local owners (Asad, *ibid*)

Currently, the Ghanaian government is set to allow mining in its remaining forest preserves and mining companies are moving into protected areas including the Subri River Forest Reserve, a globally Significant Bio-diversity area, which is

also the largest forest Reserve in the country and a critical watershed between major rivers such as the Bonga and Pra. Some forest reserves that face the danger of violation are the Supuma Shelterbelt, Opon Mansi, Tano Suraw, Cape Three Points' reserve and Suraw Extension in the Western region. Others are the Ajenjua Bepo and the Atewa Range forest reserve near Kibi in the Eastern region (Anane, 2003; Offei-Ansah, 2003; FIAN, 2003; National Coalition of Civil Society Groups against Mining in Forest Reserves, 2003).

2.4 Mining investments and Human Rights

The United Nations General Assembly Declaration on Development recognises the fundamental right, which states:

The right to development is an inalienable human right by virtue of which every human person and all peoples are entitled to participate in and contribute to and enjoy economic, social, cultural and political development in which all human rights and fundamental freedoms can be fully realised”

The right to development is re-enforced by the African Charter on Human and peoples Rights (Article 22) that all peoples have the right to their economic, social, and cultural development with regard to their freedom and identity.

In mining investments, the aggregate effect of the problems of surface mining is the violation of the rights of the communities to development. WACAM (2001) identified the following problems associated with surface mining:

- Police and mine security brutalities in the mining communities
- forced evictions
- Inadequate compensations
- problems of mine resettlements
- reduction in number of rooms
- Destruction of cultural sites
- Unemployment

- Pollution of air and water bodies resulting in poor health status of residents in mining communities especially children and pregnant women
- Land degradation
- Displacement of communities and its impact on education of children

In a response to the human rights violations in mining communities, the Commission for Human Rights and Administrative Justice (CHRAJ, 2001) had this to say:

In all, what the investigation team saw and learnt at the few communities inspected was very disturbing. There was evidence of gross human rights violation and insensitivity to human dignity and well-being

2.5 Mining And Community Livelihoods

The violations of community rights have direct bearing on their livelihood. Mining investments in rural communities has resulted in the development of new relations and integrations that had not fully improved community livelihood. The new forms of integration into the world market, and consequently new relations between private companies, local states, and local communities produced a set of new social and economic relations reflecting international criteria of productivity, profitability, and competitiveness (Campbell, 1999). One of the profound impacts of surface mining is the loss of access to community land resources.

The problems associated with mineral exploration and community livelihood has exacerbated because the main gold belt coincides with the major logging and cropping zones. Farmers whose land has been taken over have usually been given cash compensation for their crops and the loss of their livelihood, instead of similar land and the means to continue farming. In Ghana where agricultural population is around 60% of the population, the Wassa West district that had seen

the operations of eight multinational companies in the 1990s had a reduction of the population of farmers to 48% (WWDA Report, 2002). Mining is also not a large employer since most mines are capital-intensive surface operations. In 1996, such issues prompted community protests in the major mining area of Tarkwa (Mate, 2002)

According to GAGL (2003), land use within the Iduapriem and Teberebie concession areas is a mix of active mining land, land set aside for future mining activities and land utilised by local people for subsistence agriculture. Of the total concession area of about 6000 hectares, 1800 hectares representing 30% is active mining area; 4200 hectares non-active mining area, which is available for agriculture and other land uses, also contains forest reserves thus further shrinking the land available for local agriculture.

A research by IFC and GAG (2004) showed that presently farmers on the concession of GAG realise low yields because they are not able to finance the cost of land preparation and inputs indicating lower incomes from farming. With the loss of agricultural lands to mining, surface mining is suppressing agricultural activities to pave way for increased mining activities. Economic activities of communities are largely land-based and they depend on the forest for livelihood and major economic hardships results from the shift in focus from agricultural activities to mining.

2.6 Corporate Social Responsibility

The term Corporate Social Responsibility (CSR) has been defined severally by different writers. Bowd et al (2003) identifies three schools of thought regarding CSR.

The first is the Bowen school of thought. Bowen's school of thought advocated that CSR was industry's obligation to pursue those policies, to make those

decisions, or to follow those lines of actions that are desirable in terms of objectives and values of society (Bowen, 1953).

The second school of thought is the Friedman School. This school posits that corporate officials' only social responsibility is no other than to make as much money as possible for their stockholders (Friedman, 1962).

“The Business for Social Responsibility version of ‘corporate social responsibility’ is intended to help labour unions, environmental activists and other extreme social activist groups implement their social and political agendas,” Milloy (2005). “Businesses are society’s wealth generation machine, not an engine for social engineering.” Ed Hudgins (2005). Ed Hudgins (2005) continues that the idea that business “owes” society something in the first place is a misnomer.

According to Hudgins (2005), business is the exchange of goods and services through mutual consent. Profits are the manifestation of wealth created through exchanges, he said. So if all bills are paid, business owes nothing. Everyone profits through supply and demand in a free-market society. What corporate social responsibility does, he said, is actually punish those who are successful at creating wealth and society.

Profits, according to Hogberg (2005), are the “only sincere and accurate reflection of how a corporation meets the needs of society.”

“Making a profit has all sorts of responsible outcomes—creating jobs, creating products and services that enhance our well-being, creating investment opportunities which create more wealth and more jobs and so on,” he said.

(<http://www.humaneventsonline.com/article.php?id=10145>)

The Commission of European Communities School (2002) is the third and most recent school of thought and is emerging in the current literature on CSR and provides a moderating view of the two previous schools and it states that CSR strategically used with stakeholders at all levels can generate, ideally, a measurable increase in profit or achievement of organisational objectives. This study adopted the EC’s position on Corporate Social Responsibility as any action taken by a company with the interests of all stakeholders considered and respected.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The study proposed to determine the extent to which a company originating from an OECD member country in a non-OECD member country had implemented the OECD guidelines. The study was designed to review the state of implementation of the guidelines in mining operations in the sampled district to produce recommendation that will help limit conflicts between mines, mining communities and NGOs.

3.2 Area of study

The study area was the Wassa West District of the Western Region of Ghana. This district was chosen because it is a habitat to a significant proportion of the country's vanishing tropical rainforests and it has the highest concentration of mines in a single district in Africa (Akabzaa, 2000). Most of these mines operate surface mining. The district has a population of about 232,699 (Ghana, 2002) and covers an areas of 2354km² (Akabzaa, 2000). The government of Ghana has given out two-thirds of the land in Wassa West to multinationals with minimal compensation to local owners (Asad, 2003). The interplay between increasing human population and the high proportion of lands given for mining or mining concessions resulted in resource reallocation and relocation of livelihoods and of some communities and the environmental effects of mining and waste disposal. This situation presented a model opportunity for implementation of the guidelines to engender peaceful coexistence and to ensure that development activities do not degrade the environment.

3.3 Sampling technique

The Bogoso Gold ltd, a Canadian owned mining company operating in the Prestea and Bogoso area was purposively selected for the study.

Surveys were conducted for samples from randomly selected households within the catchment area of the mining company. The next sampling entailed key informant interviews. Key informants included officials of the district Assembly, Elected Assembly Members of the area, forestry department, some chiefs, opinion leaders, non-governmental organisations, identifiable women's groups and observation of the mining operation. Despite several attempts to get the mines to respond to the researcher, they did not avail themselves of the opportunity of giving the research their views.

Focus group discussions were organised for some selected communities. The selection criterion was as follows;

1. communities not directly affected by mining,
2. communities directly affected by mining, and
3. Communities that had been resettled.

3.4 Data collection methods

Documents, annual reports and other relevant literature related to the OECD guidelines, the mining operations of the selected company were reviewed, and their content analysed.

Questionnaires were developed and administered to literate survey samples to solicit their responses to questions regarding specific conceptual themes regarding human rights, community livelihood rights, mining and sustainable development. The illiterate respondents had the questionnaires administered to them in interviews.

Interview schedules were developed and administered to the key informants to solicit their knowledge. Interview guides were also used to guide the focus group discussions.

Observation of some effects of the mining process and reclamation efforts and of facilities and infrastructure put in place by mining companies to prevent pollution of the natural environment were done.

3.5 Data Analysis

Most of the data collected were qualitative and therefore, were not subjected to rigorous statistical analysis. Responses from interviews and Focus Group Discussions were transcribed and discussed to draw out the information in them. The quantitative data from the questionnaires were coded and frequencies obtained from the data.

CHAPTER FOUR

BOGOSO GOLD LIMITED

4.1 Introduction

This section is a document published by Golden Star Resources, the majority shareholder in BGL, at http://www.gsr.com/Bogoso_Prestea.htm and is edited for this report.

4.2 Ownership

Golden Star owns a 90% interest in Bogoso Gold Limited (“BGL”) which owns (i) the 145 km² Bogoso concessions (ii) the surface mining rights (to a depth of 200 meters) of the adjoining 129 km² Prestea property, (iii) a joint venture interest in the Prestea underground mine, and (iv) a number of contiguous properties west and north of the Bogoso property known respectively as Akropong and Dunkwa. In total BGL’s properties, cover a strike length of approximately 85km on the Ashanti gold trend. The remaining 10% interest in BGL is owned by the Government of Ghana.

4.3 Location

The Bogoso/Prestea gold mine is located in south-west Ghana approximately 200 kilometres west of the capital, Accra, and is accessible by sealed road.

4.4 Historical Mining Operations at Bogoso/Prestea

In total, some 11 million ounces have been mined to date from the Bogoso and Prestea properties. Mining has been conducted at Prestea since 1873, primarily as an underground operation, with more than nine million ounces of gold recorded by the Ghana Chamber of Mines as having being produced during its more than 125-year history.

From 1873 to 1965, the current Prestea concession comprised a number of different licenses operated by independent mining companies, which, in 1965, were amalgamated by the post-independence government. Production declined due to lack of sustained investment, and the mine operated at a loss. In 1985, the Government of Ghana secured a World Bank loan to rehabilitate the mines, but after three years of continued losses, the decision was taken to privatize the mines.

In 1994, JCI Limited won the privatization bid for participation in the Prestea mining operation. JCI made improvements to the productivities and efficiencies of the underground operation and carried out exploration programs and feasibility studies on the near surface resources amenable to open pit mining. However, owing to the declining gold price and continued financial losses, JCI closed down the Prestea underground mine in September 1998 and commenced a process to sell their rights in the project. The closure of the underground mine was opposed by the Prestea workforce who consequently formed Prestea Gold Resources ("PGR"), which was granted a permit by the Government of Ghana to run the mine in December 1998.

In June 2001, the Government of Ghana granted two separate leases for the Prestea concession. One lease, over the surface rights down to a depth of 200m below general ground elevation (an elevation of approximately 150m below sea level) was granted to BGL, and the second, for the underground mine below this level, was granted to PGR. In March 2002, BGL reached an agreement with PGR to form a joint venture, to be managed by BGL, for the assessment and future operations of the Prestea underground mine.

Gold was first commercially mined at Bogoso in the early 20th century. In 1935, high-grade oxide ore was mined from a series of open pits and from limited

underground operation on the concession. Until its closure in 1955, this operation produced over 900,000 ounces of gold at an average recovered grade of 3.73 g/t.

Billiton International Metals BV took control of the Bogoso concession in the late 1980's, and completed the construction of mining and processing facilities in 1991. The plant was designed to process oxide ores by using conventional CIL technology at a design capacity of 1.36 million tonnes per year and to process sulphide ores by using flotation, fluid bed roasting and CIL technology at a design capacity of 0.9 million tonnes per year. Billiton encountered serious operational and mechanical difficulties with the fluid bed roaster and closed the flotation circuit and roaster in early 1994.

Following closure of the roaster, Billiton, by then owned by Gencor, focused the Bogoso operations on oxide ore until it sold its interest in the mine to the mine's project lenders, who subsequently sold the majority interest in the mine to Golden Star in 1999.

Gold production from the current processing plant at Bogoso is in excess of 1.4 million ounces as of the end of 2003. The majority of this material has been from the Bogoso mining lease, bringing the total historic production for the area to 2.4 million ounces.

4.5 Mineral Reserves

The Mineral Reserves at Bogoso/Prestea contained within open pits designed at \$325 per ounce, as at December 31, 2003, including material contained in stockpiles, total 27.3 million tonnes at an average grade of 3.29 g/t, representing 2,890,000 ounces of contained gold. This represents an 18% increase in the Mineral Reserves reported by Golden Star as at December 31, 2002. The increase in Mineral Reserves is primarily the result of additional drilling, the further analysis of existing data, and an increase in gold price. (Note: an 18% increase in tonnes, but a 30% increase in contained gold)

The identified qualified person responsible for the preparation of the statement of Mineral Reserves is Mr. David Alexander, an employee of Golden Star, employed at the Bogoso/Prestea gold mine as Chief Mining Engineer. Mr. Alexander is a qualified mining engineer and Chartered Engineer and is a member of the UK Institute of Materials, Mining and Metallurgy.

4.6 Mineral Resources

As at December 31, 2003, the Measured and Indicated Mineral Resources at Bogoso/Prestea, which are reported exclusive of the Mineral Reserves, total 26.7 million tonnes at an average grade of 2.50 g Au/t, representing 2.1 million ounces of gold. This represents a 13% increase in the Mineral Resource ounces reported by Golden Star as at December 31, 2002. The increase in Mineral Resources is primarily the result of additional infill and exploration drilling. An Inferred Resource of 27.3 million tonnes with an average grade of 2.40 g Au/t has also been estimated.

The identified qualified person responsible for the preparation of the statement of Mineral Resources is Mr. S. Mitchel Wasel an employee of Golden Star, who following the acquisition of the Bogoso gold mine in 1999 was appointed Exploration Manager for the Company. Mr. Wasel is a qualified geologist with 15 years of experience in gold and base metal exploration and is a Member of the Australasian Institute of Mining and Metallurgy.

4.7 Mining and Processing Operations

Mining operations at Bogoso/Prestea have since inception been carried out on an 'owner operator' basis, one of the only such operations in Ghana for a long time. The current fleet comprises two 110 tonne hydraulic excavators, loading into fifteen 50 tonne capacity haul trucks. Presently, mining is currently being carried out at the Plant North pit at Prestea, and all ore is hauled by a third party contractor the 15km to the Bogoso plant site. Much of this mining fleet was initially acquired at the start of operations in 1991, and plans are underway to

replace this fleet with newer larger capacity units. It is expected that this will be achieved during 2004.

Processing of the Prestea ores has to date been carried out by conventional Carbon in Leach (CIL) methods, while incorporating a gravity separation circuit to recover free gold from the CIL stream. During the first part of 2004, the flotation section from the previous sulphide roasting operation was renovated and expanded, and this will be used to further improve recoveries from the lower level ores from the Prestea pits. This re-commissioned flotation section will form an integral part of the Bio-oxidation plant planned for 2005.

4.8 Bogoso/Prestea Regional Development Strategy

Since the acquisition of BGL in 1999, Golden Star has adopted a positive, forward looking approach to investment in the area, and during the extended downturn in the gold industry; we were able to acquire significant landholdings along this southern portion of the Ashanti Trend.

It is our intention to gain advantage from the consolidation and expansion of these properties, and to maximize the associated benefits of shared synergies and economies of scale. It is our intention that the Bogoso/Prestea region will be developed into a significant gold producing complex in Ghana. To progress this aim, we are continuing to develop our in-house experience and expertise, particularly in the fields of processing, construction and project management.

The first phase of our expansion program includes the construction of second 1,500,000 tonne per annum Carbon In Leach processing plant (the “Bondaye Plant”) at a cost of approximately \$17.2 million, scheduled to produce between 100,000 and 140,000 ounces per annum. The project commenced in November 2003, and subject to permitting is expected to be completed in the third quarter of 2005. The Bondaye Plant will be well located to treat material from the relatively new mineralized zones that we are currently drilling in the southern extremity of

the Prestea concession. Once in operation, we expect to upgrade the Bondaye Plant over time to incorporate a flotation circuit and ultimately a Bio-oxidation (BIOX®) circuit to allow it to process deeper sulphide materials from these deposits.

The second phase of development comprises the conversion of the Bogoso Plant to a bio-oxidation processing facility capable of treating the refractory sulphide ores located on the Bogoso concession. Contracts for the detailed engineering design and for the environmental impact assessment have been tendered and work will commence in the second half of the year. Construction is scheduled to commence in early 2005 and will be completed by the end 2005. We estimate the BIOX® capital at the Bogoso Plant to be approximately \$25 million. Gold recoveries from the BIOX® plant will be between 82% and 88% and process plant operating cost is expected to be \$10.45/t.

The additional process capacity provided by the Bondaye Plant enables us to double the mining rate at Bogoso/Prestea. Coupled with the fact that our existing owner operated mining fleet is nearing the end of its economic life and is not optimally sized for the larger, deeper sulphide pits, a decision has been made to upgrade the haulage fleet from 50 tonne capacity trucks to 95 tonne trucks, along with a commensurate increase in the size of loading equipment. The estimated capital costs of the upgrade of the existing mining fleet in 2004 and expansion of the mining fleet in 2005 are \$12 million and \$15.5 million, respectively.

4.9 Environment and Safety

Golden Star is committed to best industry practices and applying the principles of sustainable development wherever we operate. BGL is in substantial compliance with the environmental requirements imposed by Ghanaian laws and guidelines and applicable guidelines and standards published by the World Bank. BGL completed significant work during 1999 to identify the outstanding reclamation liability and to prepare a rehabilitation work plan. Significant work has been

performed during the past four and a half years to advance this plan and to reduce the outstanding reclamation liability.

As at December 31, 2003, BGL had 214 hectares of rehabilitated land at various stages under active management. Additional land, which is under care and maintenance only, will be integrated into the rehabilitation work plan as part of the proposed Sulphides Project. BGL has \$3.1 million of restricted funds set aside for environmental reclamation of the Bogoso Mine. Reclamation work has continued through into 2004, with work continuing on the progressive rehabilitation of the site.

BGL's safety record is very good with lost time accident frequency rates being as good as or better than those achieved in the mining industry in the major developed countries.

BGL maintains a close working relationship with the local community, regulators and other stakeholders that have been fostered since the beginning of the project. By actively engaging all communities in our areas of operation, BGL ensures open communications are maintained, so we can develop and operate for the benefit of everyone. BGL has recently initiated the development an Alternative Livelihood department responsible for various agricultural and aquaculture initiatives being followed, to generate some sustainable industries in the area that will be sustainable post mining in the area. This has provided a springboard for integration of community and government issues into our operations.

CHAPTER FIVE

BGL's MINING OPERATIONS AND THE ENVIRONMENT

5.1 Introduction

The environment is understood as comprising the whole set of natural or biophysical and man-made or socio-cultural systems, in which man and other organisms live, work and interact (Ocran, 1999). The environment is human life's supporting system from which food, air and shelter are derived to sustain human life. Humans interact with the physical and man-made environment and this interaction creates a complex, finely balanced set of structures and processes, which evolve over the history of a people. These structures and processes help humans to survive and maintain healthy lives (Tenkorang, 2002).

5.2 Demographic characteristics of Respondents

One hundred and thirty four (134) respondents were randomly selected from seven towns within the catchments area of BGL to constitute the samples. Table 1 below shows the representation of respondents according to towns.

Table 1: Respondents towns of residence

Town	Frequency	Percentage
Dumasi	15	11.2
Himang	21	15.7
Prestea	30	22.4
Bogoso	27	20.1
Kojokrom	14	10.4
Ankobra	14	10.4
Bondaye	13	9.7
Total	134	100

Source: Fieldwork, 2005.

The difference in size according to town is a reflection of the differences in the populations of the towns. One hundred and thirty four people constituted

the samples with 50.7% males and 40% females. Sixty five percent of the samples were heads of their households.

The highest educational attainment of respondents ranged from no schooling to tertiary education. Of the educational attainment categories, people with either junior secondary school or middle school attainment constituted the majority group, i.e. 53% of the sampled population. Table 2 illustrates the educational attainment data.

Table 2: Educational Attainment

Educational Level	Frequency	%
Primary	13	9.7
JSS/Middle	71	53.0
SSS/O Level	17	12.7
Trainingcollege/A level	7	5.2
University/Poly	5	3.7
No schooling	21	15.7
Total	134	100

Source: Fieldwork, 2005.

The highest educational attainment of primary school or below of 25.4% within the area is poorer than the national rate of 18.6% (Ghana, 2002).

5.3 Mining and the natural environment.

5.3.1 Water quality.

From Table 3, 88.8% of the samples felt that the advent of mining in the area had affected the quality of water that they drank.

Table 3: Has the operation of the mine affected the water that you drink?

	Frequency	%
Yes	119	88.8
No	14	10.4
Don't know	1	0.7
Total	134	100

Source: Fieldwork, 2005.

There were several reasons assigned for the responses in Table 3 and these are shown in table 4.

Table 4: Reasons for poor quality of water.

	Frequency	Percentage
No running water	13	9.7
Water polluted	91	67.9
Spring filled sand	14	10.4
River water polluted	2	1.4
We fall sick when we drink from water	1	0.7
Not Applicable	13	9.7
Total	134	100

Source: Fieldwork, 2005.

Issues discussed here include the break in transmission of pipe borne water; respondents intimated that the excavations done by the mining company had resulted in irregular supply of water to them.

They also said this had also affected the quality of the water; and in some instances, the flow of the water had ceased.

Another issue that respondents regularly cited was the pollution of drinking water sources by the mining operation. The sources of pollution given included cyanide spillages into some streams; mine discharging their

wastewater into the streams, tailings dam over flowing into the river and washing of gold by galamsey operators in the areas.

In Prestea, respondents alleged that the company had filled up with sand the spring that used to be a source of water for some households.

Another issue was that the fumes generated by the mining machinery and chemicals and the dirt generated from the blasting and excavations had polluted rainwater so much that they cannot harvest it again.

5.3.2 Soil fertility

Seventy eight percent of the samples stated that the mining operation had affected the fertility of the soil and respondents explained that effect. Table 5 depicts the reasons assigned for the impact of mining on soil fertility.

Table 5: Soil fertility

	Frequency	Percentage
Lands no more yielding	57	42.5
Deforestation due to mining	1	0.7
Top soil removed	15	11.2
Chemical contamination	4	3.0
Farmland taken over by	25	18.7
Not applicable	32	23.9
Total	134	100

Source: Fieldwork, 2005.

Forty two percent of the samples said that the land was no more yielding because of the activities that were going on in the area. They said that the mining had degraded the soil so much that it was affecting its fertility.

Another factor mentioned was that the mining company had taken over the land (18.7%) and therefore it was not even available to them to farm.

Top soil removal or land filled with waste by the mining company was also mentioned by some respondents (11.2%) as being responsible for the decrease in fertility of the soil.

Three percent of the samples also said that chemical contamination of the land had also affected its fertility. They said that the chemicals had found their way into such food crops as cassava and these results in diarrhoea when they eat the food.

5.3.3 Air pollution

From Table 6, 87.3% of the samples agreed that the mining operation had affected the quality of air that they breathed.

Table 6: Has the operations affected the air you breathe?

	Frequency	Percentage
Yes	117	87.3
No	10	7.5
Don't know	7	5.2
Total	134	100

Source: Fieldwork, 2005.

The explanations given for responding that the mining operations had actually affected the quality of air in the area are as shown in Table 7.

Table 7: Explanations given for effect of mining on air quality.

	Frequency	%
We get cold (nasal congestion) often now	27	20.1
Dust and chemicals in the air	91	67.9
Air pollution does not allow us to harvest rainwater	1	0.7
Not applicable	15	11.2
Total	134	100

Source: Fieldwork, 2005.

Predominantly, (67.9%) respondents explained that they see and feel the dust and chemicals in the air and this makes it difficult for them to breath. They said that sometimes, blasting produced dust and poisonous smoke. Others also explained that smoke form the heavy equipment used in mining pollute the air.

Respondents gave another explanation that the prevalence of respiratory tract infections had increased. Twenty percent of respondents explained that catarrhs, cold, coughs, sneezing etc. were on the ascendancy and it was due to the pollution of the air by the mining operations.

5.3.4 Noise Pollution

When respondents were asked about their ability to have rest or sleep vis-à-vis the mining operation, 73.1% of them said that the operation had in one way or the other affected their ability to sleep. Table 8 illustrates explanations given for the disturbances in sleep encountered by the respondents.

Table 8: Factors responsible for sleep disturbances.

	Frequency	Percentages
Noise/ vibration from blast disturbs sleep	49	50.0
Noise from their machines /drills	40	40.8
We cough at night and cannot sleep well	5	5.1
Cracked walls make me afraid to sleep	2	2.1
Increased mosquitoes	2	2.1
Total	98	100

Source: Fieldwork, 2005.

The major source of disturbance to sleep was noise and or vibrations from blasts in the open pits, especially when it is done in the night. Fifty percent of the respondents who said the operations disturbed their sleep cited this as the disturbance.

Noise from the machinery and the drills used by the mines also accounted for 40.1% of the disturbances cited.

Another issue disturbing sleep is the increased prevalence of coughs due to dusts and fumes generated from the mines. Four percent of the respondents said that coughing at night constituted a major source of disturbance for sleep.

5.3.5. Mining related diseases

Eighty five percent of the respondents observed that the mining operations had resulted in increased occurrence of mining related diseases in the area and Table 9 catalogues the types of diseases given.

Table 9: Mining related diseases cited.

Diseases	Frequency	Percentages
Respiratory Tract Infections (TB, cough, cold, etc)	129	48.3
Malnutrition	3	1.1
Diarrhoea	20	7.5
Malaria	36	13.5
Insomnia	15	5.6
Eye infections	7	2.6
Skin irritations	17	6.4
Headaches	37	13.9
Cancer	3	1.1
Total	267	100

Source: Fieldwork, 2005.

Note: N is greater than 134, because of multiple responses.

Respiratory tract infections constituted the highest occurrences of diseases in the sample area attributed to mining, 48.3%. These included coughs, catarrh, T. B., chest pains, asthma, flu, and pneumonia. The respondents attributed these diseases to the increase in dust, chemicals and smoke in the air.

Respondent cited the prevalence of malaria as a major worry to them. Thirteen point five percent of the responses cited malaria because of the mining operation. Respondents explained that excavations and blocking of streams resulted in the collection of water, which also resulted in increased breeding of mosquitoes. The researchers personally observed that discarded vehicle tyres from the mines were used in one instance, as a barrier to block access to an unused mine road had collected water and would surely aid the breeding of mosquitoes.

Headaches also constituted 13.9% of the responses given for the prevalence of diseases. Some of the headaches could be attributed to cold resulting from dust inhalation, others due to inadequate sleep due to disturbances by the blasting, and heavy equipment. Other diseases cited included diarrhoea, eye infections, etc.

5.3.6 Cyanide Spillage

Twenty four percent of the respondents had reported of a cyanide spillage occurring in their environment and of this number, Table 10 depicts how it manifested that there was a spillage.

Table 10: How did you know of the spillage?

Source of Determination	Frequency	Percentage
It killed a lot of fishes in the river	13	39.4
Tailings dam overflowing	7	21.2
Water giving us diarrhoea	3	9.1
Spillage affecting the water	3	9.1
Heard but don't really understand	4	12.1
we were told not to drink the water	2	6.1
Heard it on air	1	3.0
Total	33	100

Thirty nine percent of these respondents said that many fishes died in the stream when the spillage occurred. 21.2 % of these respondents also said that the tailings dam burst, releasing the toxic cyanide into their stream. 9.1% of these respondents also said they had diarrhoea after drinking the contaminated water.

When it was enquired from some respondents who had informed them of the spillage, 27.3 of them said the company informed them while 69.7 said the company had not informed them. Table 11 shows the responses.

Table 11: Did the company inform you of the spillage?

	Frequency	Percentage
Yes	9	27.3
No	23	69.7
Don't know	1	3.0
Total	33	100

Source: Fieldwork, 2005.

Of the 23 respondents who were not informed by the company of the spillage, Table 12 shows how they determined that there was a spillage.

Table 12: How did you determine there was a spillage?

Response	Frequency	Percentage
The community found out	11	47.8
When people had diarrhoea, we realised it	5	21.7
A lot of dead fish in the river	3	13.1
Elders informed us	2	8.7
Medical doctor informed us	2	8.7
Total	23	100

Source: Fieldwork, 2005.

11 respondents said that the community just found out or that a community member realised it and informed them while 5 people said that the onset of the diarrhoea in people who had drunk the water made them realise it. 3 people also said that the large number of dead fishes in the river showed them that there was a spillage into the river.

The number of days that it took the company to inform people whose water source had been contaminated in the spillage ranged between 1 and 7 days, with a mean number of 4 days.

Twelve of the respondents, who had heard of or knew about the spillage, said nothing was done about the situation. Of the 21 respondents who said something was done about the situation, Table 13 shows their responses.

Table 13: Measures taken about the cyanide spillage.

Measures taken	Frequency	Percentage
Nothing was done	12	36.4
Watchman provided to prevent fetching	3	9.1
Gong gong beaten to inform people	4	12.1
The mines provided us with water	4	12.1
They repaired the broken pipe	2	6.1
The mine took care of the sick	3	9.1
The mines remedied the situation	2	6.1
We drained our water source	1	3.0
They promised compensation but nothing done	2	6.1
Total	33	100

Source: Fieldwork, 2005.

Some of the respondents said that the mine had provided them with water but they stopped after a short while. Some also said they were provided with another standpipe.

Others who said the company had them informed using the gong-gong while other respondents said that the company, to make sure people did not fetch water from the contaminated stream provided a security guard. Some respondents also said the mining company sent the people who had to be hospitalised for drinking the contaminated water either to Takoradi or Accra for free medical treatment.

5.4 Mining and Human Rights

5.4.1 Mining operations and mortality of community members

Any incidence involving the communities and the mining concerns that had resulted in any mortality were enquired about. 8.2% (11) of the respondents said that an incidence like that had ever occurred in the area. Table 14 gives the circumstances under which the mortalities occurred.

Table 14: Circumstances leading to mortality

Circumstances	Frequency	%
We demonstrated and people were shot	8	72.7
One of the mine security dogs attacked some one.	1	9.1
The mines security beat two people up	1	9.1
Some young men attacking the DCE were shot	1	9.1
Total	11	100

Source: Fieldwork, 2005.

A combined team of military and police shot at community members demonstrating against the mining operations in the area and 73 % of these respondents reported this inhumane treatment of community members. The problem of inhumane treatment and torture by security services or officers working on behalf of mining companies have come up several times in the immediate past and an attempt was made to determine such incidents, if they had ever occurred in the sampled area. Table 15 below shows the response.

Table 15: Instances of torture or inhumane treatment

Has there been an instance when someone has been inhumanely punished or tortured?	Frequency	%
Yes	71	53.0
No	56	41.8
Don't Know	7	5.2
Total	134	100

Source: Fieldwork, 2005.

Details of the inhumane punishment that some community members had suffered because of the mining operations are also presented in Table 16.

Table 16: Details of inhumane punishments or torture.

	Frequency	%
We demonstrated against the mines and the military shot at us	46	64.8
The company security brutalises people they catch in their pit	12	16.9
When we go for galamsey, they use live bullets on us.	5	7.0
The military have been brought to keep peace and they sometimes brutalise us	8	11.3
Total	71	100

Source: Fieldwork, 2005.

46 (64.8%) respondents reported the action of the military by shooting at the demonstrators with live bullets as an act of inhumane punishment.

12 (16.9%) respondents also said that the company's security brutalises people they arrest in their pit before they hand them over to the police. Some added that sometimes the security sets dogs on you when you approach their pit.

The presence of the military especially in Prestea and its environs has been alleged to result in some people being brutalised by the military. The use of live bullets to scare galamsey operators in the bush is also another issue that came out of the research process. Some respondents said the company security use live bullets to scare them from the bush and when they finally arrest the operators, they usually beat them and sometimes they detained them.

Thirty two percent of the respondents had ever reported the action of the mining company or an official acting on behalf of the company to the court or the District Assembly or the police but had perceived that they had been discriminated against. Details of such discrimination are presented in Table 17.

Table 17: Details of discrimination encountered with the Courts, Police or District Assembly.

Situation	Frequency	%
Reported to the DCE and DA but nothing done	14	32.6
We reported to the police but nothing done	10	23.3
Some have gone to the Minister of mines but nothing done	7	16.2
Other reasons.	12	27.9
Total	43	100

Source: Fieldwork, 2005.

14 of the 43 respondents said they had reported the conduct of the mine to the District Chief Executive and the District Assembly but nothing had been done about the situation.

10 people also said they had reported to the police but the situation had prevailed while 7 said the mines had been reported to the Minister of mines but nothing had come out of it.

Other reasons were also adduced. Some of them include reporting to the MP but nothing done about the situation or that nobody listens to their plight.

Arbitrary arrest of individual for disagreeing with the mining company or an official acting on behalf of the mine had been an issue that had come up when there were interactions with people generally in the area. 26.1 % of the respondents said some members of the community had been arbitrary arrested. Table 18 depicts the situations described.

Table 18: Circumstances of arbitrary arrest.

	Frequency	Percentage
The soldiers sometimes after beating you lock you up at the police cell	5	3.7
The police sometimes arrest people and lock them up for some time	3	2.2
Galamsey operators are sometimes arrested and locked up by the mine	12	9.0
When one approaches their pit	5	3.7
Someone on his way to the farm was arrested by the mine for trespassing	2	1.5
People arrested for masterminding or taking part in the demonstration	9	6.7
Not Applicable	98	73.1
Total	134	100

Source: Fieldwork, 2005.

Issues of arbitrary arrest usually occurred around three major areas: issues concerning abuse of authority by the police or the military; accessibility to natural resources and freedom of expression and all these constitute human rights infringements of the community members.

5.4.2 Resettlement/ Relocation

13.4 percent (18) of the respondents had had to relocate their residence because of the mining operations. Of this group, 11 were resettled by the mining company at a town called Kojokrom. 10 of the 11 people resettled said they resettled against their will. Table 19 is a compilation of the reasons why the people resettled.

Table 19: Reasons for Resettling/Relocating residence

Reason	Frequency	%
We were forced to move to this place	5	45.4
We were promised to be resettled properly with all facilities	2	18.2
We had a lot on our farm but here, we have no farm	1	9.1
We were put in a vehicle at night and brought here	2	18.2
I was staying with my parents	1	9.1
	11	100

Source: Fieldwork, 2005.

From Table 19, 45.5% of the resettled people at Kojokrom who took part in the study said that they were forced to move from the old to the new place without the entire necessary infrastructure in place. Other respondents said they were put in vehicles in the night and brought to the new place and their old places destroyed.

Seventy-three percent of the resettled respondents said they received compensation for the resettlement. Of the respondents who were compensated, 50% said the company built a small house for them. The other 50% said the company had built a house for them.

No compensated respondents were satisfied with the compensation given them. In Table 20, reasons given for the dissatisfaction are given.

Table 20: Reasons for Dissatisfaction with Compensation

Reason	Frequency	Percentage
There are no lights, ceiling or paint on the house	3	37.5
There is no work to do in the new area	1	12.5
They did not employ us as promised	1	12.5
The rooms are not spacious	3	37.5
Total	8	100

Source: Fieldwork, 2005.

Thirty-seven percent of the respondents dissatisfied with the compensation said they room had no lights, ceiling or paints on the house and therefore they were not satisfied with them. Another 37.5% of them also said the rooms were not spacious.

Other issues raised included the company not employing them like they promised them before the resettlement.

5.4.3 Free Expression

Sixty one percent of the respondent said they could freely express their opinion concerning the mining operations in the area. Thirty-five percent of the respondent said they could not express themselves freely concerning the mining operations in the area. The reasons for not being able to express one's self in the sampled area were determined and are as shown in Table 21.

Table 21: Factors responsible for curtailed self-expression

Reason	Frequency	Percentage
The mine will not do anything about your complaints	14	29.8
The military will intimidate you	10	21.3
We are afraid of the company	5	10.6
It is only the noble or elders that can talk	4	8.5
Mine hardly comes to the community for discussions	2	4.3
Even the president is aware of the situation here so why should we talk	1	2.1
Other reasons	4	8.5
Non-response	7	14.9
Total	47	100

Source: Fieldwork, 2005.

Thirty percent of the respondent who said they could not express themselves freely intimated that the mine does not do anything about the situation they complain about so they stopped complaining.

A further 21% of these respondents were afraid of intimidation by the military if one's opinion expressed was critical of the mining operations. Ten percent of the respondent who cannot express themselves freely said it was because they were afraid of the mining company.

It is note worthy that 14.9% of the respondents decided not to explain why they could not express their opinion about the mining operations freely. 2% of the responses explained that the President was aware of the situation in the area and therefore there was not the need for any expression of opinion. 8% believed that their leaders and the elite or the noble in the society have the right self expression, not for ordinary citizens.

5.4.4 Request for Information on Environment

One important aspect of environmental management and planning is how to generate the information on which such management and planning should be based. Access to information is critical and although there is an important role for the technical expert in identifying environmental issues and approaches, these must not usurp the role of communities. The need is to work with communities to enhance their role in collecting, collating and analyzing complex bodies of information (Tenkorang et al, 2002). The need for information and access is that poor information on the environment leads to poor decision making by all stakeholders and powerful groups in society to, further undermine the vulnerable in society (Haughton, 1999: 51-62).

31.6% of the respondents agreed that they had the right to go to the mining company to request information about the mine's operations that affected the environment. 60.9% of the respondents said they had no right to go to request

information on the environment from the mining company. 5% of the respondents did not know if they had or did not have that right.

Of the 42 respondents who agreed that, they had the right to go to the mining company to request information; Table 22 gives details of the reasons adduced.

Table 22: Reasons for right to request information from the Mine.

Reason	Frequency	%
Since I feel the impact, I can go and demand an explanation	13	40
Our elders go, but nothing good comes out of it	9	21.4
Elders of the community have been doing it	6	14.3
Sometimes they respond to our grievances	5	11.9
They have an office where you can request info.	3	7.2
Because the company has refused to honour its promise	2	4.8
Because we realize we were fooled	1	2.4
But they don't take us serious they say we know nothing about water	1	2.4
I am only going to request info, not to attack them		
Because they resettled people here, whenever something happens, we can go there for information.	1	2.4
Total	42	100

Source: Fieldwork, 2005.

Forty percent of respondents who can request information from the mining company said they can do that because the effect of the operations affect them directly and therefore they have the right to go to the company to demand an explanation on occasion.

Twenty one percent of this category of respondents said the elders normally go to the company but nothing good comes out of it while 14.3% of the respondents

who can freely request information from the company said that the elders of the community have been expressing sentiments for the community.

Twelve percent of the respondents were encouraged to request for information from the company because the company sometimes responded to their grievances. Another 7.2% of this category of respondents said the company has an office responsible for giving out information requested.

The respondents who felt they did not have the right to go to the company and request information making up 60% of the total population of respondents explained why they could not request for information on the effects of the company's operation on the environment. This information is depicted in Table 23.

Table 23: Reasons for non-request of environmental information.

Reason	Frequency	Percentage
The elders are the only people given the chance	20	24.6
We are not allowed to enter their compound	18	22.2
They company will not honour your request	13	16.1
You will be beaten by the military or arrested and charged for theft	18	22.2
Unless you report to an official	3	3.7
I do not hail from here	3	3.7
I am too young to do that	2	2.5
Non-response	4	5.0
Total	81	100

Source: Fieldwork, 2005.

From Table 23, 20 of the 81 respondents who said they had no right to request information from the mining company explained that only the elders of the people are given the chance to go to the company for such information.

A further 18 of the 81 respondents said they are not allowed to enter the compound of the mining company to even request the information. Another 18 of the 91 respondents were not able to request for the information because they felt that either the military would beat one up if one attempts to go to the compound to request the information or that one may be arrested and charged for theft. Others also said that one could not access the mining company's compound because there were many soldiers around.

Thirteen respondents felt that the company would not honour that request so it was not even worth making it at all.

5.4.5 Access to Natural Resources

Accessibility to various forms of natural resources by community members often times determines the survivability of a lot of these people and accessibility to some resources were determined in the area.

Accessibility to farmland for farming since the advent of the mine was determined from the respondents and 58.6% of the respondents said the advent of the mine has limited their access to lands for farming.

43.6% of the respondents had limited access to the forest for hunting while 38.3% of the respondents had limited access to the forests for wood products, especially firewood. 32.3% of the respondents had their access to the forest for non-timber forest products like mushrooms, cane, herbs, snails etc. limited. 44.4% of the respondents said their access to the rivers for fishing has been limited. Various factors were given as being responsible for the limitation and they have been summarised in Table 24.

Table 24: Factor responsible for limited access to natural resources.

Reason	Frequency	Percentage
Depletion of fish stock in rivers due to poisoning	28	23.9
No land for farming	63	53.8
Forests have been depleted	6	5.1
Farmlands polluted with chemicals	12	10.3
We do not own the lands	3	2.6
Because we are resettled, we have no land	3	2.6
The land has been graded for mining	2	1.7
Total	117	100

Source: Fieldwork, 2005.

From Table 26, 53.8% of the responses given for factors responsible for the limitation in access to the natural resources were that there was no land for farming. The Wassa West district is predominantly rural and most rural folk engage mostly in agricultural activities. This high level of limited access to lands for farming will have negatives consequences for households in the sampled area.

Twenty three percent of the responses showed that mining activities had depleted fish stock in rivers because of chemical poisoning of the rivers in the area. Other reasons given, included either pollution of the farmlands with chemicals, which has made the land infertile, or the produce of the land dangerous for human consumption.

Thirty nine percent of the respondents said the limitation in access to the preceding natural resources had led to a change in their jobs and changes in occupation have implications for the sustenance of the family. Changes in the ability of families to sustain them were determined and Table 25 illustrates the changes.

Table 25: Changes in families' ability to sustain them.

	Frequency	%
Improved	1	1.9
Same	1	1.9
Worsened	28	52.8
Much worsened	23	43.4
Total	53	100

Source: Fieldwork, 2005.

Ninety five percent of the respondents who had to change their jobs said their ability to sustain their families had either worsened or much worsened. Respondents assigned details of reasons ascribed to for changes in families' ability to sustain their lives in Table 26.

Table 26: Details of factors responsible for change in ability

	Frequency	Percentage
Farming has collapsed	22	41.5
Low patronage of business	13	24.5
We are not allowed to do galamsey	13	24.5
People still patronize my good	1	1.9
Prevalence of diseases	1	1.9
Non-response	3	5.6
Total	53	100

Source: Fieldwork, 2005.

Forty one percent of respondents who had to change their jobs said their ability to sustain their families worsened because farming had collapsed. They said either they did not have access to available land or that the lands are not as productive as they used to be. This had resulted in scarcity of foodstuffs and that had made

prices of food rise. They now had to deal with decreased income coupled with increased prices of foodstuff.

Twenty four percent of the respondents said because galamsey activities had been banned in most of the lands, they are either unemployed or underemployed and this makes it difficult for them to come by money and this has resulted in another. 24.5% of these respondents saying that because people had left the area because of lack of employment, business had virtually collapsed.

5.4.6 Conflicts

One area where mining activities has generated so much conflict and tension is in the areas of accessibility to land for mining and other purposes by the local people. According to the respondents, because of the operations of the large-scale mining firm they are having conflicts in terms of access to lands for mining. About 64.2 % (86) of the people interviewed indicated that there was conflict concerning access to lands for mining. The remaining respondents – 23.1% (31) intimated that access to lands for mining was not a bother whereas the remaining 11.9% could not tell whether there was conflict in respect of access to lands for mining.

In another dimension, land for farming activities by the local people has virtually been lost to the mining company. According to the local people, mining activities have deprived them of their land for farming activities and for that matter their livelihoods. 41.8% of the respondents claimed that mining has deprived them of their lands for farming, 52.2% (70) were of the view that mining had not affected their farming activities, while 6.0% could not tell. Farming is a major activity for the people in these mining communities, yet because of the operations of the mining companies, a sizeable number of the local folks are in serious conflict with the Bogoso Gold Limited. They intimated that, mining companies sometimes destroy their farms without adequate compensation paid to them.

The most unfortunate aspect of the problem is that mining companies enter and destroy their farms before compensation becomes an issue for discussion between the farmers and the company. Sometimes, security staff of the company molests the farmers who resist and venture to go to their farms

These notwithstanding there are other areas of accessibility were fraught with less conflict. There were; access to forest for hunting, access to forest for firewood and access to forest for Non-Timber Forest Products (NTFP). In all these instances, the access rating to these facilities by the local people were above 69% thus in relative terms there is not much conflict as compared to access to land for mining and farming. This is understandable in that the former does interfere with the operation of the activities of the mining company unlike activities like hunting, searching for firewood and other non-timber forest products.

The nature of the conflict, which the operation of the mining companies has generated, is between not only the companies and the individual members of the community but also the entire community, interest groups, and other social groups. The conflict is more pervasive between the BGL and the galamsey operators. There are small-scale miners who operate with licences but they do not have mining concessions thus they sometimes stray into the concessions of the BGL. They feel that they have a natural right to earn a living because they are natives and that the foreigners, in this case BGL, must cater for their concerns.

The BGL on the other hand sees the galamsey operators as illegal. It therefore uses all means including deploying military personnel to their concession to arrest the galamsey operators. Sometimes this is done with high handedness leading to maiming of the people. Without galamsey, most of the people will be unemployed.

Because these galamsey operators are from the communities, they see themselves as the rightful owners of the land giving as concession to BGL and the whole

community throw their weight behind the victims as company meting out inhuman treatment to the galamsey operators. This has been a major source of conflict between the communities and the company.

In addition, families that lost lands to pave the way for mining investments encroach on other community members on other people’s lands and this is another source of conflict in the communities.

5.4.7 Standard of living

When respondents were asked to state if the mining operation had had any impact on their standard of living, 85.1% of them said it had generally worsened their standard of living. Table 27 depicts the responses.

Table 27: Has mining improved or worsened your standard of living.

Response	Frequency	Percentage
Much improved	4	3.0
Improved	9	6.7
Same	7	5.2
Worsened	48	35.8
Much worsened	66	49.3
Total	134	100

Source: Fieldwork, 2005.

The explanations given by respondents for changes in their standard of living are as illustrated in Table 28.

Table 28: Reasons for change in standard of living

	Frequency	%
No jobs now	37	27.7
No access to farmland	27	20.1
Galamsey activities banned	14	10.4
Food shortage, resulting in high prices	8	6.0
No money to spend	19	14.2
Increased patronage of my business	7	5.2
Increased disease	14	10.4
No change	4	3.1
Not Applicable	4	3.1
Total	134	100

Source: Fieldwork, 2005.

Another reason assigned was the limited access to farmlands. 20.1 % of the respondents said either that the mining had taken over their farmland or that they have to go through the concession of the mines to get to their farms and this posed a threat to them as the mines security sometimes arrested people going to the farm for trespassing.

5.4.8 Communities' Access to information on Human Rights

Regarding human rights issues, respondents were asked whether they knew of their rights in situations where gold mining activities affected their livelihoods. This question was posed to solicit respondents' knowledge about human rights. The study results indicate that most of the people did not know their basic human rights. About 58.6% of the respondents said they did not know their basic human rights while 39.8% said they knew their rights. They were further asked to enumerate the rights that they had in situations where mining affected their livelihoods. The details of the rights they enumerated are presented below. These were however multiple responses

Table 29: Basic Human rights of the people

Rights	Frequency
Compensation	35
Quality water	7
Protect the environment	3
Employment	5
Free expression concerning mining	18
Decent life	3
Resist unlawful arrest	2
Own property	1
Self protection	1
Demonstrate	4
Not to be intimidated	1
Quality air	2
Stop mining from operating	1
Resettled properly	2
Total	85

Source: Fieldwork, 2005.

From the above table it is evident that the right to compensation is the right that most of the respondents knew. The reason for the high awareness of the right to compensation is that most of their farmlands had been taken over by the gold mining companies without adequate compensation. Followed by the compensation right is the right of free expression concerning mining. Other rights that respondents enumerated, from Table 29, are the right to quality water, clean air, and employment among others.

However, out of the 53% of the total who knew of their rights, thirteen of them had never demanded any of their rights. The rest said some of the rights they

listed had been demanded. Among the rights that the respondents demanded are presented below. These were multiple responses.

Table 30: Rights demanded by respondents

Rights	Frequency
None	13
Compensation	17
Quality water	4
Protect the environment	2
Employment	3
Free expression concerning mining	5
Decent life	2
Resettled properly	1
Quality air	2
Total	49

Source: Fieldwork, 2005.

The table above indicates that the right to adequate compensation is what is often demanded by the respondents. Other rights normally demanded are the rights to quality water, decent life, quality air, employment among others. It could be seen that these rights directly affected the livelihood of the individual. However, respondents have demanded these rights, most often, directly from the management of the gold mining companies. This has often resulted in bloody confrontations between the people and the law enforcement agencies. Others have demanded their rights by writing letters to the Ministry responsible for mining and environment through the district assembly. The details are presented below.

Table 31: Where rights are demanded

Response	Frequency
Management of the mines	24
District Assembly	4
Government	2
Assemblyman	2
Total	32

Source: Fieldwork, 2005.

5.5 Mining and Community Livelihoods

5.5.1 Productivity level

The ultimate goal of most productive activity is the realisation of high productivity levels. Yet in the mining communities, some factors have been militating against the achievement of high productivity levels. Indeed most of the respondents, that is 81.3% (109) were of the view that productivity levels have dropped in the mining communities because of the operations of the mining companies. About 9% of the people indicated that the productivity levels have not decreased. The changes in the levels of productivity were attributed to a number of factors. Notable among the issues which were given was chemical pollution. 26.9% (36) of the respondents were of the view that due to the use of chemicals like cyanide, the lard and other water bodies have been seriously polluted thereby reducing their potentials to support productive venture. Also 46.4 %(22) attributed the reduction in productivity to changes in climatic conditions namely, low rainfall. All these they believe have come about because of the operations of the mining companies in the area.

Others, about 15.7 %(21), were of the opinion that the fertility of the land has reduced considerably because of chemical pollution caused by the mining

company. Some other reasons offered were, that mining activities have decreased their access to land for farming and they were not able to practice shifting cultivation and in some cases, they do not have land at all, especially in the resettled community. These according to the respondents are but just a few of the reasons why their productivity levels have declined.

5.5.2 Transportation

Every economic activity people, communities, and business activities engage in one way or the other is supposed to make life better for the stakeholders. In the same vein, mining (activities), companies are not only supposed to extract the gain and then leave the communities in their area of operation worse than they were. They are supposed to put measures in place would make life in the communities in which they operate much better than they met them.

Areas such as transportation, shelter, affordable energy, improved access to water and sanitation, access to information, are just but a few of the areas where improvement is much welcome. In line with the above, the respondents were asked to react to the state of the transportation system in their communities. 21.9% (28) respondents were of the opinion that the transportation system had improved than what used to exist before the mining company started their operations. On the contrary, 44.8% (60) said the transportation system had worsened. 26.9% said it was the same, nothing had changed and one (1) person said it had much worsened

5.5.3 Specific Item Usage

Usage of income generated by the household was determined, the perceived percentage consumption by households and the disposal of the remainder were enquired about. The actual income was not determined because it poses problems and the study wanted to avoid those problems (GLSS, 2000).

Seventy three percent of employed respondents used their income for housekeeping, while other items included investments, savings and putting up a house.

The percentage of household monies that were consumed by the household was determined and it ranged from 0 – 100%, with a mean of 73.1% and a standard deviation of 27.56%. The frequency distribution is shown in Table 32.

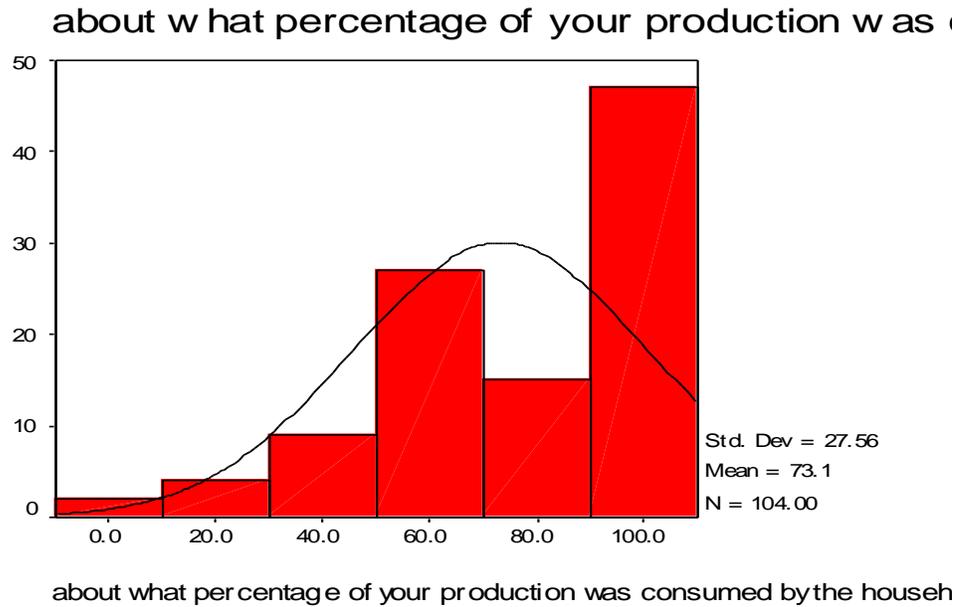
Table 32: Frequency distribution of percentage consumption

Percentage of consumption	Frequency	Percentage
0.00	1	1
8.00	1	1
10.00	2	1.9
20.0	2	1.9
30.0	6	5.8
40.0	3	2.9
50.0	17	16.3
60.0	6	5.8
66.0	4	3.8
70.0	3	2.9
75.0	2	1.9
80.0	10	9.6
90.0	9	8.7
95.0	1	1.0
100.00	37	35.6
Total	104	100

Source: Fieldwork, 2005.

Figure 1 is a histogram of the frequency distribution with its normal curve superimposed on it.

Figure 1: Percentage consumption of income by household



Usage of the income left after household consumption was determined and Table 33 shows how this was put to use.

Table 33: Usage of excess income.

Usage	Frequency	Percentage
Saved	46	68.7
Buying books	3	4.5
Utility bills	4	6.0
Reinvestments	11	16.4
Medical expenses	1	1.4
Building	2	3.0
Total	67	100

Source: Fieldwork, 2005.

Sixty nine percent of the 104 respondents who earned income said they saved the excess income. 16.4% of them reinvested the excess income in their businesses.

5.5.4 Access to Financial Institutions

Access to financial institutions for savings and credit is very important for local level development and these were determined in the sample area.

Thirty five percent of the respondents had access to appropriate financial institutions for savings while access to financial institutions for credit was 17.2%. There was not much social differentiation in access to these financial institutions and only 12.7% of the respondents said there was any social differentiation in accessing these institutions. Of the 17 respondents who saw any social differentiation in access to the institutions, 8 said income earners have access, 6 said high income earners and 3 said customers of the institutions have access.

Social differentiation regarding accessibility to some natural resources that enhances community livelihood was also determined for the respondents.

64.2% of the respondents said accessibility to the lands for galamsey activities is open to all. Open access to the lands for farming was said by 39.6% of the respondents while owners of the land constituted 20.1% of groups with access to the lands for farming. This is underlined by the fact that in most rural Ghana, the predominant occupation is agriculture and related activities, and that stands at 49.2% (Ghana, 2002) and therefore increased participation in all activities concerning accessibility to lands for farming is usual. Accessibility to the forests stood at 79.1% while accessibility to the forests for firewood stood at 83.6%. In accessing the forests for non-timber forest products, open access was 79.9%.

5.5.5 Access to adequate water and sanitation

Respondents were asked to comment on the adequacy of water and the state of sanitation in the communities. Almost all the respondents said adequacy of water and the state of sanitation had much worsened because of the surface gold mining in the area. Some of the explanations given were that the sources of water (streams, springs and rivers) have been destroyed, and to help ensure adequate water supply, the mining company had mounted water tanks at vantage points in the communities. The company filled these water tanks with water everyday. Some of the respondents said they had to queue for hours to get a bucket of water. The details of the responses about the adequacy of water and sanitation are presented below.

Table 34: The state of adequate water and sanitation

Response	Frequency	Percentage
Improved	7	5.3
Same	3	2.3
Worsened	56	42.1
Much worsened	65	48.9
No response	2	1.6
Total	133	100

Source: Fieldwork, 2005.

5.5.6. Access to affordable energy

Perception about the state of affordable energy differed significantly. While about 43.2% of the respondents said their access to affordable energy have worsened due to surface mining in the area, about 14.4% also said their access to this resources has improved. About 28% were also indifferent about their access to affordable energy. The details of the responses are presented below.

Table 35: community Access to Affordable Energy

Response	Frequency	Percentage
Much Improved	1	0.8
Improves	19	14.4
Same	37	28.0
Worsened	57	43.2
Much worsened	17	12.9
No response	1	.8
Total	132	100

Source: Fieldwork, 2005.

5.5.7. Access to Information (Newspapers, TV, Radio, telephones)

This question was posed to solicit respondents' perception about their access to information since access to information influences livelihoods. It became evident from the results that the advent of surface mining in the communities has not significantly limited the access to information of the residents. Less than 28% of the respondents saw their access to information worsened after the introduction of surface mining in their communities. About 31.6% said the advent of the surface mining company has improved their access to information while 35.3% said mining has had no impact on their access to information. The rest of the responses regarding access to information are as presented in the table below.

Table 36: Community Access to Information

Response	Frequency	Relative Percentage
Much Improved	7	5.3
Improved	42	31.6
Same	47	35.3
Worsened	29	21.8
Much worsened	7	5.3
No response	1	.8
Total	133	100

Source: Fieldwork, 2005.

5.5.8 Other Issues of Concern

Respondents were asked to raise other relevant issues concerning gold mining, the environment and their livelihoods. Respondents raised various issues; some of them are presented below:

- Surface gold mining causes flooding
- Those affected by gold mining activities should be compensated
- Surface mining causes a lot of harm and should be abolished.
- Surface gold mining should be done some distance from human settlements
- Resettled people should be compensated adequately and satisfactorily
- People close to the mine should be resettled
- Mining, though beneficial, should be done with care
- Surface gold mining causes health hazards in the community
- Galamsey should not be banned
- Social amenities should be provided
- They should change from surface to underground mining
- Blasting causes cracks to buildings, they should stop

- Natives should be employed in the mines
- Water supplied by the mining company to the communities should be treated.
- Surface mining destroys farms and farmlands
- EPA should live up to their task
- Blasting should be done during the day to enable residents have a good night sleep.
- The rights of the people should be respected.

CHAPTER SIX

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

The study sought to determine the extent to which the BGL had implemented the OECD Guidelines for Multinational Enterprises in their operations in the Wassa West district of Ghana. The specific reference variables for the review were:

- 6.0.1 Safeguarding the integrity of the natural environment,
- 6.0.2 Respect for the Human Rights of local people,
- 6.0.3 The extent to which community livelihoods had been influenced by the mining operation.

6.2 Summary of Findings

Findings of the analysis include:

- The high environmental costs have been borne by communities, with the increases in mining related diseases and pollution of both land and rivers.
- A community that has lived in the area for generations has been resettled and left without access to land, good quality water, adequate infrastructure and the employment that the mining company promised them.
- Dialogue with communities within the area has not been encouraged and deepened and this does not enhance the welfare of community members.
- Environmental pollution has led to negative effects on health and to economic decline among farmers in the area and to a general worsening of standard of living for the people.

6.3 Recommendations

- The company should engage better in consultation with local communities, so as to be able to achieve consensus on lines of action and to achieve peace in the catchment area.

- Where mining has harmed communities, the victims should be compensated adequately so that they can also secure a livelihood for themselves and their families.
- The resettled people should adequately resettled with facilities and opportunities for employment created for them.
- companies should support improved regulation at national and international levels
- The government of Ghana should introduce national regulation strengthening the involvement of local communities in decisions about mining in their area and this should be enforced at all times.
- to ensure that companies satisfactorily comply with these provisions, the EPA should be empowered to play its monitoring role effectively and independently and be made accountable.

6.4 Conclusions

The aim of the OECD Guidelines is to:

‘ensure that the operations of these enterprises are in harmony with government policies, to strengthen the basis of mutual confidence between enterprises and the societies in which they operate, to help improve the foreign investment climate and to enhance the contribution to sustainable development made by the multinational enterprise’ (OECD, 2000).

The operation of the mines has poorly managed the promotion of environmentally sound practices. This has been evidenced by the cyanide spillages into water bodies in their area of operation and the disregard for the implementation of Environmental Action Plans required by law and encouraged by the Guidelines and which resulted in the close down of the Prestea pit by the Environmental Protection Agency in September, 2005 (Daily Graphic, 29-09-2005).

The Guidelines under section V states that *Enterprises should, within the framework of laws, regulations and administrative practices in the countries in which they operate, and in consideration of **relevant international agreements**,*

*principles, objectives, and standards, take due account of the need to protect the environment, **public health and safety**, and generally to conduct their activities in a manner contributing to the wider goal of sustainable development (OECD, 2000).*

Article 25 clause 1 of the Universal Declaration of human rights which Ghana is a signatory states:

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

Article 9 of the same document also states:

No one shall be subjected to arbitrary arrest, detention or exile.

Adequate standard of living and accessibility to lands for farming for the mostly farmers in the district are but a few of the human rights that the citizenry of the Wassa west district should have. However, standards of living and accessibility to land and the fertility of the lands have generally been worsening in the district and this state of affairs has been attributed to the surface mining operations. This notwithstanding, the company has not made adequate effort to reverse the trend for the people.

The instances of arbitrary arrests, brutalities and detention by the military with the support of the mining company and the mining security are in contravention of Article 9 of the Universal declaration of Human Rights.

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