To the Ministry of Finance

27 June 2012

UNOFFICIAL ENGLISH TRANSLATION

Recommendation to exclude AngloGold Ashanti Limited from the investment universe of the Government Pension Fund Global

1 Summary

The Council on Ethics recommends the exclusion of the South-African company AngloGold Ashanti Ltd. (AGA) from the Government Pension Fund Global (GPFG) due to an unacceptable risk that the company through its mining activities in Ghana is responsible for severe environmental damage and contributes to serious and systematic human rights violations. The recommendation focuses on the company's mining operations in Ghana (Obuasi and Iduapriem). As of 31 December 2011, the GPGF held shares in the company with a market value of NOK 1,344 million, representing 1.37 per cent of the company's shares.

Both Obuasi and Iduapriem are wholly owned by the company. AngloGold Ashanti was established in 2004 through the merger of AngloGold (AG) and Ashanti Goldfields Company (AGC), and the new company continued AGC's operations at Obuasi and Iduapriem. For more than 100 years, there has been commercial gold mining at Obuasi, affecting large areas. The concession at Obuasi covers more than 470 sq. km, including some 130 villages and around 240,000 inhabitants, a large number of old open pit mines (not in use), old tailings storage facilities (partially in use) and waste rock dumps (not in use), underground mines, as well as other infrastructure and facilities that are still in operation. The company's Iduapriem mine was established in 1991. The mining concession covers an area of 107 sq. km, including six open pit mines with associated waste rock dumps and tailings storage facilities, as well as a processing plant. Within the concession, there are 14 villages with some 5,200 inhabitants. The company's mines in Ghana have received extensive criticism related to two of the criteria in the GPFG's Ethical Guidelines,[1] severe environmental damage and human rights violations.

With regard to environmental damage, the Council on Ethics has concentrated its research on the Obuasi mine. The surveys show that the mine causes extensive and very severe water pollution involving hazardous substances such as arsenic, heavy metals and cyanide. The pollution stems partly from discharge points at the mining facilities and partly from more diffuse runoff from older plants and contaminated areas. Concentrations several times higher than the maximum levels for drinking water defined by the World Health Organization (WHO) and Ghanaian authorities (more than 100 times the maximum value) are regularly measured in the rivers near the mining operation. Such contamination has serious health effects and is very toxic to freshwater life. Ghanaian environmental authorities have repeatedly asked AGA to temporarily suspend the operation and implement measures aimed at reducing the pollution. The mining operation at Obuasi has also led to extensive pollution of river sediment, soil, vegetation and agricultural crops.

The pollution problems and the mining operation in general have a bearing on the human rights situation in the affected areas. Deterioration of the local population's health as a result of the pollution at Obuasi constitutes the main basis for assessing health as a human rights issue. The company's contamination of rivers and soil has reduced the inhabitants' access to clean water, fish and agricultural produce and has caused health problems. Arsenic and heavy metals contamination has serious long-term negative effects on people's health, for instance an increased risk of various types of cancer and damage to the nervous system, especially in vulnerable groups such as children.

The Council on Ethics' research has also shown that a significant proportion of the involuntary resettlements at Obuasi and Iduapriem have previously been carried out in contravention of international standards, but the company now seems to be addressing this issue. On the whole, the pollution and the involuntary resettlement have led to a significant deterioration in the quality of life and livelihoods of a substantial part of the local population.

[1] Cf. Section 2, third subsection, of the Guidelines for the Observation and Exclusion of Companies from the Government Pension Fund Global's Investment Universe (www.etikkradet.no).

In its dialogue with the Council on Ethics, AngloGold Ashanti has been forthcoming and shared large amounts of information. The company recognizes that there is extensive contamination at Obuasi, claiming that this is primarily due to naturally high levels of arsenic in bedrock and soil, combined with more than 100 years of mining activities without adequate attention to the environment, chiefly before the merger of AG and AGC in 2004. AGA stresses that the company since 2004 has invested large resources in the reduction, elimination and prevention of environmental damage. The company also emphasizes that it has plans for extensive studies of the environmental and health conditions at Obuasi in the next three years and that it is working on various measures to handle existing and future pollution.

AGA also acknowledges that the mining operation may have led to the loss of farmland, and that the compensation has been insufficient and/or been paid too late. The company points out that many issues date far back in time and that AGA today offers both compensation and alternative livelihood programmes in order to improve the conditions. In recent years AGA has allocated more resources to improve the situation, and in 2009 and 2010 the company carried out studies to map the social conditions at the mining sites. Based on these studies AGA has created new guidelines and new measures to handle outstanding claims, and the company says it will take steps to address future social and health related challenges.

The Council on Ethics considers the environmental damage from the Obuasi mine to be very serious and extensive. The Council takes as its point of departure that it has long-term consequences for ecosystems and people's health and livelihoods. A number of surveys have measured the concentrations of arsenic and heavy metals in water as being very high by international standards. The increased risk of many kinds of adverse effects is well documented internationally, also for levels far below those measured at Obuasi. The naturally high arsenic content in the bedrock is a contributing factor to the pollution, but areas that are not affected by AGA's activities or plants have much less contamination. The Council also emphasizes that various types of severe pollution of soil, fish and crops have been documented. This is particularly serious in areas with high population concentrations.

Overall, the company's measures have had limited effect on the pollution situation at Obuasi. This underscores the complexity and scale of the problems, and that the effects only become sizeable when several measures are implemented over a long period of time. The Council on Ethics sees it as likely that the very serious contamination will continue for a considerable number of years. Further studies in the coming three years will probably also uncover new issues that will require new measures. In the Council's view, it is reasonable to expect the company to reduce the pollution towards natural background levels for the region.

The Council on Ethics stresses that severe pollution has made the living conditions worse and reduced the access to clean water, fish and agricultural produce. The involuntary resettlement carried out before 2004 and AGA's failure to deal with the serious socioeconomic problems in the wake of the forced relocations have also led to a significant deterioration in the livelihoods of the people of Obuasi and Iduapriem. The Council finds it positive that the company in recent years has carried out studies of social conditions with a view to mapping and improving the conditions. Given that a number of key environmental and health studies have not been initiated, and that the problems are both extensive and complex, the Council finds it likely that it will take a significant amount of time before the affected population will have its livelihood restored.

2 Introduction

In September 2009 the Council on Ethics decided to assess the Fund's investment in the South African gold mining company AngloGold Ashanti Limited (AGA)[2] against the Guidelines for the observation and exclusion of companies from the Government Pension Fund Global's (GPFG) investment universe (Ethical Guidelines).[3] The assessment was initiated after multiple aspects of the company's operations had been criticized locally, nationally and internationally.[4]

As of 31 December 2011 the GPFG held shares in the company worth USD 231 million, representing 1.37 per cent of the company's shares.

Through a stepwise evaluation process, the Council has collected and assessed a large amount of information. In 2009 and 2010, the Council conducted an initial assessment of a number of AGA's gold mining operations in different countries. Based on the obtained information, in June 2010 the Council decided to carry out a detailed survey of the company's operations at Obuasi and Iduapriem in Ghana. Subsequently, the Council contacted the company and initiated a dialogue aimed at obtaining information on the mining operations in Ghana. The Council has had extensive contact with the company in 2010, 2011 and 2012. AGA has provided the Council with information throughout the assessment process. The Council has also been in contact with representatives from the Ghanaian government and other affected stakeholders in Ghana.

2.1 What the Council has considered

The Council on Ethics has assessed whether there is an unacceptable risk that AngloGold Ashanti is responsible for severe environmental damage and/or contributes to serious or systematic human rights violations pursuant to section 2(3)(a and c) of the Ethical Guidelines.

2.1.1 Severe environmental damage

The Council has assessed a number of environmental issues at Obuasi and Iduapriem, where various forms of pollution, damage to protected areas and loss of biodiversity have received criticism. The Council has concentrated its recommendation on a very limited selection of serious problems at Obuasi.

A number of studies show that groundwater and surface water at Obuasi have concentrations of arsenic, cyanide and various heavy metals that exceed the recommended maximum levels considerably. The Council has assessed measurements at different locations collected over a period of more than 10 years. In the recommendation, the Council mainly presents data for concentrations of arsenic in the two rivers of Nyam and Kwabrafo, which appear to be the most affected by the mining operations. Arsenic is a hazardous substance. These pollution problems appear to be typical for the environmental situation at Obuasi and are also among the most serious problems. Measurements from contaminated locations are compared with locations that have not been affected by the mining operations, as these are assumed to be in a relatively natural state, representing background levels

[2] Company Issuer Id is: 107614

[3] http://www.regjeringen.no/en/sub/styrer-rad-utvalg/ethics_council/ethical-guidelines.html?id=425277

[4] AGA has been criticized by local and international NGOs, e.g. through several reports by the Wassa Association of Communities Affected by Mining (WACAM) on environmental issues and human rights. Other reports and materials include ActionAid 2006. Gold Rush – The impact of gold mining on the poor people in Obuasi in Ghana. ActionAid Johannesburg: Amnesty International Ghana (Please refer to example http://www.amnestyghana.org/) or FIAN International http://www.fian.org/news/press-releases/ghana/?searchterm=anglogold

without mining activities.[5] Data are compared to national and international standards for drinking water and process water from mines.

A number of serious issues have been excluded in order to narrow the scope of the recommendation. Some issues have been left out because it has been difficult to obtain acceptable documentation, and others have been omitted because they probably do not constitute a breach of the Ethical Guidelines.

In each recommendation, the Council on Ethics considers what constitutes severe environmental damage, based on an overall assessment of specific projects, operations or activities. The Council gives particular emphasis to whether:

- the damage is significant;
- the damage causes irreversible or long-term adverse effects;
- the damage has considerable negative impact on human life and health;
- the damage is a result of violations of national laws or international standards;
- the company has failed to act in order to prevent the damage;
- the company has implemented adequate measures to rectify the damage;
- it is probable that the company's unacceptable practice will continue.

2.1.1 Serious or systematic human rights violations

With regard to human rights, the Council has considered a number of issues in Obuasi and Iduapriem. Some issues have been omitted due to difficulty in obtaining solid evidence or because the allegations have not been deemed sufficiently credible. In this recommendation the Council has focused on allegations that the company, through involuntary resettlement[6] and severe pollution, is responsible for significantly deteriorating the health and livelihoods of local people at Obuasi and Iduapriem.

In recent years, several initiatives have been introduced reflecting an international agenda of giving companies an increased responsibility for human rights, such as the work of the UN General-Secretary's Special Representative on Business and Human rights, John Ruggie. These initiatives demand companies to ensure that they do not violate the human rights of individuals affected by their operations.[7] This entails that companies must comply with national law, even if it is not enforced by local authorities, and that companies must respect the principles of relevant international instruments in the absence of national law. This requires not only a passive responsibility on the part of companies, but also active measures designed to ensure that they do not violate the fundamental rights of people in the areas in which they operate. The UN Global Compact and the OECD's Guidelines for Multinational Enterprises now base their work relating to business and human rights on the UN's Guiding Principles on Business and Human Rights.[8] The main elements are also incorporated into the

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[5] It cannot be ruled out that also these 'reference areas' further upstream are affected by previous mining activities, for instance large emissions of arsenic to air from the plant at Pompora, which was closed down in 2000 and extended across large areas around Obuasi (see for example Amase, S.K. 1975. Arsenic pollution at Obuasi Goldmine, town and surrounding countryside. *Environmental Health Perspectives* 12: 131–135).

[6] 'Involuntary resettlement' in this recommendation refers to both physical and economic displacement. The International Finance Corporation (IFC) defines economic displacement as '*loss of assets or access to assets that leads to loss of income sources or other means of livelihood*' and physical displacement as '*Relocation or loss of shelter*.' (IFC Performance Standard 5 *Land Acquisition and Involuntary Resettlement*, p. 1).

[7] *The UN's Guiding Principles on Business and Human Rights* (http://www.business-humanrights.org/SpecialRepPortal/Home/Protect-Respect-Remedy-Framework/GuidingPrinciples).

[8] UN Global Compact: http://www.unglobalcompact.org/Issues/human_rights/Tools_and_Guidance_Materials.html

ISO 26000, a new standard for corporate social responsibility adopted by the International Standards Organization, ISO.[9]

The point of departure for these initiatives, as well as for the Council's previous recommendations on human rights, is that companies can contribute to human rights violations, even though states rather than companies are obliged under international human rights conventions.[10] The Council does not evaluate to what extent the state is responsible for any human rights violations. It is sufficient to establish that the company's actions contribute to serious or systematic violations of internationally recognized human rights.[11]

In its assessment of whether AGA contributes to serious or systematic violations of internationally recognized human rights, the Council has considered two main issues, namely the right to health and the practice of forced relocation. These issues have been considered against the UN Covenant on Economic, Social and Cultural Rights' article 12 on the 'right to health'[12] and international standards for involuntary resettlement.[13]

Based on previous recommendations regarding human rights violations, the Council has arrived at a series of factors that will form the basis for the specific assessment of whether there is an unacceptable risk of a company contributing to human rights violations. First, there must be an actual link between the company's operations and the violations in question. The violations must have been committed with a view to serving the company's interests or facilitating its operations, and the violations must either be ongoing or there must be an unacceptable risk that they will occur in the future. Whether the company's operations have caused extensive and long-term negative impacts on those affected, to what extent particularly vulnerable groups have been affected, and what the company has done to improve the conditions will be of significance in the assessment.

2.2 Sources

The Council has obtained and evaluated comprehensive and detailed information and documentation from AGA, researchers, Ghanaian authorities, national and international non-governmental organizations and the media. The company has provided the Council with a significant amount of documentation. In its dialogue with the Council, AGA has been forthcoming and has on several occasions responded in detail to the Council's questions. Overall, there is a considerable degree of consistency between the information and documentation from the various parties. The quality of the available information varies substantially, but with regard to key areas it is considered to be good. Information has also been obtained from affected individuals at Obuasi and Iduapriem. Discussions with employees at AGA have provided additional details and have been useful for the interpretation of the extensive material.

In March 2011, representatives from the Council on Ethics visited a number of locations at the Obuasi and Iduapriem mining operation sites. The Council's representatives had very good access to company employees during the field visit, ranging from the international top management via various middle managers to the operational level at the mine. In addition to meetings with the company, the Council

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[9] http://www.iso.org/iso/home/standards/management-standards/iso26000.htm.

[10] The Council on Ethics' recommendations regarding Wal-Mart, of 15 November 2005, and Monsanto, of 20 November 2006. (www.etikkradet.no).

[11] See section 3.2 in the Council on Ethics' recommendation on Wal-Mart of 15 November 2005 and section 5.1 in its recommendation on Monsanto of 20 November 2006. (www.etikkradet.no).

[12] UN Covenant on Economic, Social and Cultural Rights of 16 December 1966.

[13] The IFC's *Performance Standards* (http://www.ifc.org/ifcext/sustainability.nsf/Content/PerformanceStandards; http://www.ifc.org/performancestandards) and the UN's High Commissioner for Human Rights. *Basic principles and guidelines on development-based evictions and displacement*. A/HRC/4/18(UN).

arranged meetings with authorities, local organizations and local communities without the company being present. Meetings were held at both the mining operations and in Ghana's capital Accra.

3 Background

3.1 About AngloGold Ashanti

AngloGold Ashanti Ltd. was established in 2004 with the merger of AngloGold Ltd. (AG) and Ashanti Goldfields Company Ltd. (AGC). AG was established in 1998 through the consolidation of the gold mining interests of the company Anglo American. The precursor to the company AGC dates back to 1897 and has been a key player in Ghana's gold industry for a long time. In the 1990s AGC owned mines in a number of African countries, including the mining operations at Obuasi and Iduapriem in Ghana. When AG and AGC combined their operations, many executives from AGC were transferred to key positions at AGA's mine in Obuasi.[14] The mining operations at Obuasi and Iduapriem both continued.

Today AngloGold Ashanti is headquartered in Johannesburg, South Africa, and is listed on the stock exchanges of Johannesburg, New York, Ghana, London and Australia.[15] As of 31 December 2011, the overwhelming majority of ordinary shares in the company were owned by investment managers, among whom the largest one held nearly 8.5 per cent. Over time the Ghanaian government has reduced its ownership stake and as of 31 December 2011 owned 1.67 per cent of the shares.[16]

In 2011 the company produced 4.33 million ounces of gold,[17] which makes it the world's third biggest gold mining company in terms of production.[18] The company also produces some silver and uranium as by-products. At the end of 2011 the company had in excess of 61,000 employees, including contractors, and 20 producing mines in ten countries spanning four continents.[19]

3.2 The mining operation at Obuasi

Gold has been mined for hundreds of years in the former colony known as the Gold Coast, now Ghana, which in previous periods has been responsible for the major share of the world's gold production.[20] In recent years Ghana's share of global gold production has been around three per cent, and the country ranks among the ten top producing countries in the world. Gold is Ghana's most important source of export earnings.

Large-scale commercial extraction of gold at Obuasi started at the end of the 19th century. The company Ashanti Goldfields Corporation Limited was a very important economic player in the British colony of the Gold Coast, and later, after 1957, in the independent country of Ghana. Today the gold mining is continued by AGA. At Obuasi, gold mining and important socio-economic structures are exceptionally closely interconnected, both directly and indirectly.

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[14] Mark Curtis. *The Impact of Mining on Poor People in and around Obuasi, Ghana*, 29 June 2005.
[15] AGA. *Annual Financial Statements 2011*, p. P324.
[16] AGA. *Annual Financial Statements 2011*, p. P323
[17] AngloGold Ashanti Annual Financial Statements 2010: P6. 4.52 million ounces (oz.) correspond roughly to 140.6 tons of gold (1 (troy) ounce = 31.1035 grams).
[18] http://www.barrick.com/Company/Profile/default.aspx, http://www.newmont.com/about/company-glance, http://www.anglogoldashanti.co.za/About+our+business/Corporate+Profile.htm
[19] AGA. *Annual Financial Statements 2011*, p. P6.
[20] Hilson, G. 2002. Harvesting mineral riches: 1000 years of gold mining in Ghana. *Resources Policy* 28: 13–26.

Historically speaking, mining at Obuasi has primarily been based on underground operations in several mines. In the 1990s large-scale open pit mines were also in operation at various locations, resulting in many of the problems that AGA still struggles with today. In the past, different plants have been used for processing different types of ore and tailings, including conventional 'carbon-in-leach' (CIL),[21] 'heap leaching'[22] with cyanide, biological oxidation and roasting. These processing methods have caused widespread pollution.

The gold production has decreased sharply since the 1990s. Nevertheless, the production at Obuasi is still significant and will probably continue at least at the same production level as today, i.e., more than 300,000 ounces per year. Obuasi has been, and is, a productive and important mine to AGA.

In 2004, at the time of the merger of AG and AGC, Obuasi was a large mining operation[23] in need of considerable investment that faced economic, technological, environmental and social challenges. The company has made significant investments to improve these areas, including closing down old infrastructure and rehabilitating some affected areas. Much work remains and the full extent of the problems and damage has not been mapped.

The financial results since the merger have been below budget. A comparison between planned and actual production volumes and expenditures in AGA's own annual reports shows that for each year in the period 2005–2010 the production, on average, has been some 11 per cent lower than planned, whereas the expenditures have been approximately 26 per cent higher.[24] Obuasi has been running at a loss every year in the said period, except for 2009. In 2011, Obuasi made a profit.

Still, Obuasi is home to one of the world's largest known gold reserves. Estimated mineral resources[25] are close to 30 million oz.[26] and the ore reserve[27] totals nearly 9 million oz.[28] Obuasi holds approximately 13.4 per cent of AGA's 220 million oz. of mineral resources and about 12.6 per cent of its 71.2 million oz. ore reserve.[29]

Currently the gold production at Obuasi is based on underground mines that operate down to 1,500 m below ground. The ore consists of two main types, one that is made up of quartz veins containing free gold and another one with sulphide minerals such as arsenopyrite, in which the gold is bound so that

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[21] 'Carbon-in-leach' is a method for extracting gold and silver from crushed and finely ground ore, constituting one step in a longer process. The valuable metal is adsorbed onto the carbon, typically in a large tank of finely ground ore mixed with liquid, which is stirred. The gold is isolated during a later stage in the process.

[22] 'Heap leaching' is a method for extracting metals from ore. Crushed ore is placed in a large heap, which is irrigated with a liquid that often contains cyanide if the purpose is to extract gold from the ore. The liquid is collected after having percolated through the heap of ore, as it contains gold that is dissolved from the ore. The liquid is further processed in order to isolate the gold.

[23] In addition to extensive infrastructure in the form of underground mines, Obuasi also had 40 old open pit mines, more than 25 old waste rock disposal sites, in excess of 10 tailings depositions, multiple dams and storage facilities for ore that may be processed later. Most of these facilities are not in use and several are in different stages of rehabilitation.

[24] Based on numbers from AGAs annual reports for this period.

[25] Mineral resource: economically interesting material of a kind, quantity and quality, which makes it probable that it may be extracted profitably. Based on specific geological documentation.

[26] As of 31 December 2010, 29.52 million oz., from AngloGold Ashanti Mineral Resource and Ore Reserve Report 2010: P85.

[27] Ore reserve: the economically viable part of a mineral resource in light of technological, economic, market, environmental, social and legal conditions. Based on detailed and comprehensive studies.

[28] As of 31 December 2010, 8.92 million oz., from AngloGold Ashanti Mineral Resource and Ore Reserve Report 2010: P88.

[29] Figures as of 31 December 2010, from AngloGold Ashanti Mineral Resource and Ore Reserve Report 2010: P4–P5.

the ore requires special treatment. The mine is an important employer, and in 2010 around 4,200 people were employed at Obuasi, in addition to a staff of some 1,500 among contractors.[30]

Until recently, Obuasi had three processing plants: one for sulphide ore and tailings, one for oxide ore, and one for tailings.[31] In 2009, the oxide ore processing plant was closed because of damage to parts of it. The tailings reprocessing plant was permanently closed in October 2010. Today only one plant is operating (South Treatment Plant).

The processing of sulphide ore at the South Treatment Plant (STP) consists of several phases. First, sulphide ore is crushed and finely ground before flotation.[32] The next step is the biological oxidation (BIOX®)[33] of the concentrate from the flotation, and finally the conventional use of cyanide to extract the gold. The process also releases other chemical substances, such as iron, sulphur, and arsenic.

The water from this process contains cyanide, arsenic and heavy metals. AGA treats the water through a combination of 'carbon-in-solution' (CIS) and Actiflo™ to eliminate substances such as arsenic and heavy metals,[34] as well as 'rotating biological contactors'[35] aimed at breaking down the cyanide. These systems became fully operational in June 2009.

The mining operation itself is located in the municipality of Obuasi, where more than 240,000 people live in urban and rural settlements. Within the whole concession area, there are many villages situated in close vicinity to old and more recent mining facilities (see image 1). Until recently, considerable open pit mining was going on, totalling 37 pits. Only a few of these have been rehabilitated. Some open pit mines can be reopened in the future. AGA's objective is to halve the physical area occupied by the mine site and separate the mining operation from the local communities by 2020.[36] In the meantime, however, the area occupied by the mine will be extended through the construction of the Sansu North Tailings Storage Facility, which requires the involuntary resettlement of the Dokyiwa village.[37]

Because of the mining operation, Obuasi has seen some incoming migration in recent years. While 24 per cent of the population has not lived in Obuasi for more than five years, 56 per cent have lived in the area for more than ten years.[38]

The 130 villages within AGA's concession are to varying degrees affected by AGA's mining operation. Twenty-five villages are directly affected by forced relocation. Others are strongly affected

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[30] AngloGold Ashanti Form 20-F 2010: 77.

[31] AngloGold Ashanti. Form 20-F 2010: 76.

[32] Flotation is a method for separating components that have different properties, in this case to separate ore particles with gold from uninteresting parts of the rocks. This process generates a concentrate that contains gold.

[33] BIOX® is a method for treating the concentrate of the sulphide ore through biological oxidation with three types of bacteria (*Thiobacillus ferrooxidans, Thiobacillus thiooxidans, Leptospirillum ferroxidans*). The bacteria break down the sulphide minerals that have bound the gold, thereby making the gold more easily accessible for further processing and increasing the efficiency of gold extraction.

[34] Actiflo is a patented sedimentation process that reduces the content of arsenic, heavy metals and other chemical compounds in the process water, preventing the accumulation of these substances. In this way the water may be recycled during the processing.

[35] Rotating biological contactors (RBCs), also called biodiscs, is a biological treatment process used to reduce or eliminate various kinds of pollution from effluent or process water. These often consist of microorganisms growing on a rotating contactor partially immersed in polluted water where they break down the pollutants. At Obuasi the focus is on cyanide.

[36] AGA's reply to the Council, March 2011.

[37] 1,350 people in this village will be forced to relocate.

[38] AGA's reply to the Council in March 2011

by sound and air pollution (blasting), reduced access to clean water sources and loss of farmland, whereas other villages are not much affected by such factors.

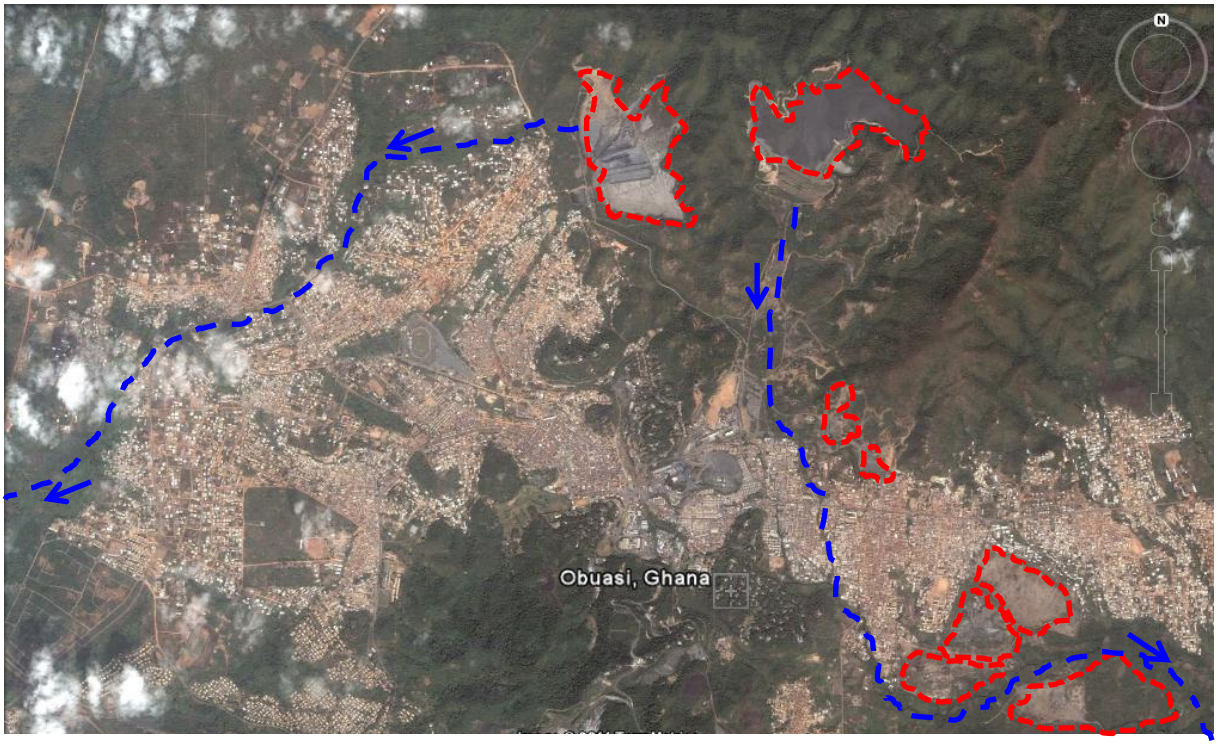

Image 1: Satellite image of part of Obuasi (August 2011) showing the overlap between polluted areas (water, soil and crops) and densely populated areas (lighter areas). Older tailings dumps (currently not in use) are marked with red dotted lines. Highly polluted rivers flowing through populated areas are shown with blue lines, and the blue arrows also show the direction of the river flow. Sansu tailings deposition, currently in use, and surrounding rivers are located west/southwest of this satellite picture. (The image is from Google Earth and has been modified by the Council on Ethics to identify tailings depositions and rivers).

3.3 The mining operation at Iduapriem

AGA's mine at Iduapriem has a 107 sq km concession situated in the Tarkwa region in West Ghana. Informal gold mining has been going on in the area for more than 400 years, but commercial large scale gold mining has only been pursued in the last 20 years. AGA's concession at Iduapriem consists of six open pit mines with ancillary waste rock dumps and tailings depositions. The mine has 721 employees and 1,024 contractors.[39] Within AGA's concession there are 14 rural settlements with approximately 5,200 inhabitants, often concentrated along roads or in the vicinity of mining infrastructure such as waste rock dumps.

[39] The Council on Ethics' notes from the field trip in March 2011.

4 Key issues and the Council on Ethics' findings

4.1 Environmental assessments

As mentioned above, the Council on Ethics has concentrated its environmental assessment on Obuasi and the hazardous substance arsenic in particular. Below is a presentation of AGA's reporting of serious environmental incidents, followed by an assessment of arsenic pollution levels in two rivers at Obuasi (Nyam and Kwabrafo). The Council has compared natural background levels of arsenic with pollution emanating from the Obuasi mine and associated facilities.

4.1.1 Severe environmental incidents

AngloGold Ashanti publishes information on severe environmental incidents at its mines. The definition of 'environmental incident', as well as the format and level of detail in the reports, have varied over time. The introduction of environmental management systems has led to increased awareness and improved registration, resulting in a higher number of registered environmental incidents in the period 2004–2008.[40] Table 1 below is based on the company's reported environmental incidents, corrected for changes in definition over time.

*Table 1 Number of environmental incidents at the Obuasi mine and total number for AGA in the period 2004–2010, as well as Obuasi's percentage of the company's environmental incidents.**

	2004[41]	**2005**[42]	**2006**[43]	**2007**[44]	**2008**[45]	**2009**[46]	**2010**[47]	**2011**[48]
Obuasi	3	3	3	9	8	10	6	14
AGA total	16	25	25	33	55	51	27	27

[40] AngloGold Ashanti. Report to Society 2008: 166.

[41] The number for Obuasi is reported as 3 in two reports (AGA. *Report to Society 2004*, p. E10–E12, and AGA. *Form 20-F 2004*, p. 103), and as 1 in AGA. *Country Report Ghana Obuasi 2004*, p. 8. Total number for AGA (16) is found in e.g. AGA. *Report to Society 2004*, p. E10–E12.

[42] Number for Obuasi (3) is from AGA. *Country Report Ghana Obuasi 2005*, p. 8, and AGA. *Report to Society 2005*, p. EN8. Total number for AGA (25) is from AGA. *Report to Society 2008*, p. 166. Please note that AGA's *Report to Society 2005*, p. EN7, states the total number for AGA as 24.

[43] Number for Obuasi (3) is from: AGA. *Country Report Ghana Obuasi 2006*, p. 19. Total number for AGA (25) is from AGA. *Report to Society 2008*, p. 166.

[44] Number for Obuasi (9) is from AGA. *Report to Society 2007*, pp. 165–168. Please note that AGA's *Country Report Ghana Obuasi 2007*, p. 23, states 8 environment incidents. Total number for AGA (33) is from AGA. *Report to Society 2008*, p. 166. Please note that AGA's *Sustainability Review 2009*, p. P33, and AGA's *Sustainability Report 2011*, p. P48, state 48 and 49 incidents respectively for 2007.

[45] Number for Obuasi (8) is from AGA. *Obuasi Country Report 2008*, p. 38. Total number for AGA (55) is from: AGA. *Report to Society 2008*, p. 166, and AGA. *Sustainability Report 2010*, p. P3. The number 104 is stated in: AGA. *Report to Society 2008*, p. 166. Approx. 88 environmental incidents are referred to in the document *AGA Environmental Incidents for the year ending 31 December 2008*. Please note that AGA's *Sustainability Review 2009*, p. P33, states 160 and 55 environmental incidents for 2008, based respectively on old and new methods for registration of severe incidents.

[46] The number for Obuasi (10) is from AGA's *Reportable environmental incidents during 2009* and AGA's *Sustainability Report: Supplementary information 2010*, p. P72. The total number for AGA (51) is from AGA's *Sustainability Report: Supplementary information 2010*, p. P72, adjusting the 2009 numbers up from 50 incidents as reported in 2009. Please note that AGA's *Sustainability Review 2009*, p. P33, refers to 195 and 50 incidents for 2009, based respectively on old and new methods for registration of severe incidents.

[47] AGA. *Sustainability Report: Supplementary information 2010*, p. P72.

[48] AGA. *Sustainability Report: Supplementary information 2011* (http://www.aga-reports.com/11/sustainability-report/supplementary-information/environment/compliance).

Obuasi (%)	18.8	12.0	12.0	27.3	14.5	19.6	22.2	51.9

** The Council on Ethics has not found systematic information on the number of environmental incidents at Obuasi before 2004.*

Table 1 shows that in the period 2004–2011 a large share of the company's environmental incidents (12–52 per cent) occurred at Obuasi, which is a significantly higher proportion than Obuasi's share of AGA's total production (4–8 per cent).

For the period 2008–2013 the company's objective was to reduce the number of environmental incidents by 60 per cent (from 55 to 22 incidents), and in the long term to eliminate such incidents. Later the goal was updated to 18 incidents in 2015, which is a 30 per cent reduction from the 27 incidents in 2010. The total figure for registered environmental incidents at AGA has been reduced from 55 to 27 (51 per cent) in the period 2008–2011. The number of environmental incidents at Obuasi was reduced from eight to six (25 per cent) in the same period, but increased to 14 incidents in 2011. According to AGA, Obuasi has, for a number of years, been one of the operations with the largest number of repeated environmental incidents.

The number of severe environmental incidents and descriptions of these incidents are indicators of the quality of the environmental management systems and the scope of the environmental problems. This reporting, however, provides only an overall picture of the environmental situation at the mine. A few key results from the Council on Ethics' detailed assessment are presented below.

4.1.2 Arsenic contamination at Obuasi

Briefly about arsenic

The semi-metal arsenic is a naturally occurring element found in small quantities practically everywhere, in soil, water, and air. There are a series of arsenic compounds and these have different properties. Inorganic arsenic compounds, e.g. arsenic trioxide (As_2O_3), are reactive and may have very harmful effects on the body. Organic arsenic compounds, which may be found in high concentrations in fish and shellfish, are less harmful and not very reactive. Inorganic arsenic is easily soluble in water and spreads through surface and groundwater. In natural conditions there is a much higher probability of elevated arsenic concentrations in groundwater than in surface water.

Natural concentrations of arsenic in freshwater vary from near zero (non-traceable) to several milligrams per litre (mg/l) under very special circumstances. Particularly high natural levels are generally found in groundwater where the bedrock has a naturally high content of arsenic minerals. Natural arsenic concentrations are normally below 0.01 mg/l, which also correspond to the WHO and Ghana's maximum level for drinking water, and the concentrations are often below 0.001 mg/l.[49] Globally, arsenic is known as one of the most harmful types of inorganic pollution in drinking water.

High concentrations of arsenic often occur in connection with sulphide minerals, which also contain gold. This is the case at Obuasi. In such areas the natural arsenic content in groundwater may also exceed the WHO maximum level, depending on a number of physical and chemical conditions in the groundwater.[50]

[49] Smedley, P.L. & Kinniburgh, D.G. 2002. A review of the source, behaviour and distribution of arsenic in natural waters. *Applied Geochemistry* 17: 517–568.

[50] Nordstrom, D.K. 2002. Worldwide occurrences of arsenic in ground water. *Science* 296: 2143–2145. Smedley & Kinniburgh 2002.

Effects of arsenic

In high concentrations inorganic arsenic (As_2O_3) is acutely toxic, and it is lethal in very high doses.[51] More relevant for mining pollution are the long-term effects of exposure to lower arsenic concentrations over time. Inorganic arsenic increases the risk of various types of cancer, for example liver, lung, bladder and skin cancer. Many national and international organizations that work with human health and the environment have classified arsenic as carcinogenic.[52] A number of skin afflictions and damage to various parts of the nervous system are also known effects of arsenic. Arsenic is considered to be a very serious health threat. Vulnerable groups such as children are particularly at risk. Inorganic arsenic is very harmful to freshwater organisms.

Even if exposure to arsenic statistically increases the health risk, it is often difficult to prove that individual cases of for example cancer or skin afflictions are caused by arsenic in the drinking water, as there may also be other factors causing cancer or skin problems.

Historical problems

The area around the Obuasi mining operation is known for its naturally high level of arsenic in bedrock and soil, which originates from minerals such as arsenopyrite.[53] Arsenic seeps naturally into the water and soil of the area. Moreover, long-time mining activity has caused large amounts of arsenic to be released, adding to the current pollution. Obuasi ore occasionally contains very large amounts of arsenic.[54] The crushing and grinding of ore, as well as the processing and exposure of ore to air and water, result in sharply increased amounts of arsenic in soil, air and water. For decades there has been information available about very high pollution levels at Obuasi.[55] Small-scale illegal gold mining has also resulted in pollution, e.g. by mercury.

Following the merger of AG and AGC, the company AngloGold Ashanti carried on the mining operation with old infrastructure (e.g. weakened pipelines for transport of tailings, a tailings storage facility without lining to prevent pollution) and a processing plant lacking sufficient treatment of process water. The mine also lacked adequate handling of a positive water balance, which meant that it regularly discharged polluted water into the water systems in the vicinity. The mine at Obuasi had a number of environmental problems that required mapping and clean-up. Previous ore roasting plants designed to increase gold yields spread large amounts of arsenic to Obuasi and the surrounding areas through air pollution.[56] Ghana's Environmental Protection Agency (EPA) has repeatedly called attention to the environmental problems and on some occasions instructed the company to suspend the gold production in order to reduce the pollution and implement adequate measures.[57] The pollution in

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[51] A lethal dose of arsenic is in the order of 1–3 mg/kg body weight or about 100–300 mg for an adult (Olsen, V. & Mørland, J. 2004. Forgiftning med arsen. *Tidsskrift for Den Norske Lægeforening* nr. 21 (124): 2750–3). The US Agency for Toxic Substances and Disease Registry (ATSDR) says that more than 60 mg/l in drinking water may be lethal (ATSDR 2007. *Toxicological profile for arsenic*, p.7).

[52] International Agency for Research on Cancer (IARC), undated. Arsenic in drinking water. *IARC Monographs volume 84*. ATSDR 2007. *Toxicological profile for arsenic*. World Health Organisation (WHO) 2008. *Guidelines for drinking-water quality. Second addendum to third edition. Volume 1 Recommendations*. WHO, Geneva.

[53] Arsenopyrite contains elements such as iron, arsenic and sulphur (FeAsS).

[54] Ahmad & Carboo (2000) found an average of 8.305 mg/kg arsenic in the tailings. (Ahmad, K. & Carboo, D. 2000. Speciation of As (III) and As (V) in some Ghanaian gold tailings by a simple distillation method. *Water, Air and Soil Pollution* 122: 317-326.

[55] Amase, S.K. 1975. Arsenic pollution at Obuasi Goldmine, town, and surrounding countryside. *Environmental Health Perspectives* 12: 131–135; Amonoo-Neizer, E.H., Nyamah, D. & Bakiamoh, S.B. 1996. Mercury and arsenic pollution in soil and biological samples around the mining town of Obuasi, Ghana. *Water, Air, and Soil Pollution* 91: 363–373; Smedley, P.L. 1996. Arsenic in rural groundwater in Ghana. *Journal of African Earth Sciences* 22(4): 459–470; Smedley & Kinniburgh 2002. *Op.cit.*

[56] Amase 1975.

[57] See for example '*Enforcement notice*' from Ghana Environmental Protection Agency (EPA) September 2007.

Obuasi originates partly from discharge points and partly from more diffuse runoff from older installations and polluted areas for which AGA is responsible.

The company acknowledges that the problems have been more complex than initially expected.[58] This is also illustrated by the fact that AGA, in light of a better analysis of the complexity at Obuasi, steeply raised the estimated costs for closures and rehabilitation from USD 28 million in 2006 to USD 51.3 million in 2007.[59] After moderate yearly increases in the period from 2007 to 2010, the cost estimate increased significantly from USD 63.6 million in 2010 to 143.9 million in 2011. Obuasi thus became the AGA mine with the highest estimated rehabilitation costs related to future closures.[60]

4.1.3 Arsenic pollution in the Nyam River

Factors that contribute to current pollution

A naturally high level of arsenic in bedrock and soil contributes to the arsenic pollution of the Nyam River. Previous mining operations and facilities that the company is responsible for are an even greater cause of pollution. Current mining operations and facilities, for instance leakage from the Sansu Tailings Storage Facility in the southern part of the mining site and the periodic discharge of process water, also contribute to elevated pollution levels in the river. The processing plant for sulphide ore at the South Treatment Plant (STP), established in the early 1990s, has generated discharge of contaminated process water into the environment for a long time, especially into the Nyam River during the rainy seasons.[61]

The mine is located in an area of relatively high precipitation (1,600 mm/year).[62] Limited capacity to handle both the rain that enters the tailings storage facility and the water balance in other parts of the mining site has also increased the discharge of polluted water, especially in the rainy seasons that typically occur in March–July and October–November.

The Sansu Tailings Storage Facility receives tailings and water from the STP. The storage facility is built on relatively flat terrain and has high artificial dam walls. An unknown quantity of seepage from the storage facility, which does not have a sealed membrane, has contributed to the contamination of surrounding areas. The pollution has probably been reduced since the seepage through the dam walls of the Sansu TSF increasingly has been collected and pumped back into the storage facility. The way in which the storage facility is filled up by tailings (including process water) and controlled seems to have improved, bringing down leakage and pollution, as well as making the geotechnical stability of the facility better and thus reducing the risk of damage to the dam walls or any rupture or collapse.

Measured values of arsenic over time

For over 10 years, Ashanti Goldfield Company and later AngloGold Ashanti have collected and analysed water samples from the Nyam River several times a month. The company admits that the results in some cases have shown high concentrations of arsenic, exceeding the WHO and Ghana's maximum limit for arsenic in drinking water (0.01 mg/l) as well as the maximum level for discharge

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[58] AngloGold Ashanti Obuasi Country Report 2008: 37.

[59] AngloGold Ashanti Report to Society 2007: 169–170.

[60] AngloGold Ashanti Sustainability Report: Supplementary information 2011 (http://www.aga-reports.com/11/sustainability-report/supplementary-information/mine-lifecycle).

[61] The gold extraction at the STP occurs over several stages and is based on methods such as biological oxidation (BIOX®) and the use of cyanide at a later stage in the processing. Recycling of polluted process water with cyanide will be detrimental to the highly cyanide-sensitive bacteria that oxidize sulphide (BIOX®). Since the STP for a long time lacked a treatment plant for cyanide that could have made considerable recycling of water possible, the facility required continuous supply of new water without cyanide. A significant excess of polluted process water was therefore produced resulting in contaminated discharge. Water treatment has gradually been introduced during recent years, something that has reduced but not eliminated the pollution.

[62] Smedley 1996. *Op.cit.*

water from mines in Ghana (0.1 mg/l)[63]. Researchers and organizations have also collected and analysed data over a longer period of time and confirmed pollution levels far above the maximum limits.[64]

Monitoring stations with natural conditions (unaffected by mining) show significantly lower levels of arsenic in the water than areas affected by mining. However, some locations that seem to be unaffected by mining can still have concentrations of arsenic above the WHO and Ghana's maximum limit. This is assumed to be the result of high arsenic content in bedrock and soil and possibly of previous pollution, e.g. arsenic deposition from past atmospheric pollution.

4.1.4 Arsenic pollution in the Kwabrafo River

Factors that contribute to pollution

A naturally high level of arsenic in bedrock and soil contributes to the arsenic pollution of the Kwabrafo River, but the river is even more affected by infiltration water and surface runoff from the Pompora Treatment Plant (PTP), which formerly received material from the Tailings Treatment Plant (TTP) in the northern part of the mine site. In the 1990s and well into the 2000s, some 10,000 tons of arsenic trioxide was stored at Pompora (PTP) without adequate protection. This added to previous pollution by arsenic, and even if the stockpile of arsenic trioxide is now eliminated, there will be traces of arsenic in soil and river sediments that still contribute to pollution. From time to time there have been discharges of polluted water from the Pompora swamp, which receives water from the Pompora Tailings Treatment Plant, and some episodes of discharge from the pumping stations at Kokoteasua and Boete, where tailings were taken out for retreatment. This has affected the Kwabrafo River. Additionally, there have been arsenic emissions to air from an old roasting plant, which was closed down in 2000. All facilities belong to AGA. AGA has installed water treatment plants that treat some of the water in the area, something that will lead to a reduction in the pollution.

Measurement results for arsenic over time

Several assessments show that the Kwabrafo River has had very high concentrations of arsenic, a fact also acknowledged by the company. As with the Nyam, AGC and later AGA have collected water samples several times a month in the Kwabrafo for more than ten years. The results show levels that are much higher than the WHO and Ghana's maximum limit for drinking water (0.01 mg/l) and Ghana's maximum limit for discharge water from mines (0.1 mg/l). Other studies also show very high levels of arsenic. [65]

Locations unaffected by mining show levels that are significantly lower than values at locations affected by the mining operation. However, some monitoring stations unaffected by mining also show values that exceed the WHO and Ghana's maximum limits, something that is believed to be caused by elevated arsenic content in bedrock and soil, as well as past pollution, such as large air emissions from the roasting of sulphide ore until the year 2000.

The Ghana Environmental Protection Agency (EPA) publishes annual assessments of various environmental and socio-economic factors related to mining, based on the figures reported by the mining companies and the agency's own audits (AKOBEN). Although the EPA does not make specific measurements public, its assessment shows that the pollution levels in Obuasi are higher than

[63] Ghana's maximum level for dissolved arsenic in wastewater is 0.1 mg/l, while the maximum level for total arsenic is 1 mg/l. The International Finance Corporation (IFC) operates with a maximum level of 0.1 mg/l for total arsenic and has not stated maximum values for dissolved arsenic.

[64] See for instance Obiri, S. 2009. *Determination of heavy metals in water bodies in the Tarkwa and Obuasi mining areas*. The Wassa Association of Communities Affected by Mining (WACAM), Tarkwa.

[65] See for instance Obiri 2009. *Op.cit.*

the maximum limits mentioned above. Surveys obtained and reviewed by the Council show measurements more than 100 times the maximum limits in a number of rivers at Obuasi. [66]

4.1.5 Brief discussion of other pollution

In relation to the Nyam and the Kwabrafo Rivers, the Council on Ethics has also gone through extensive series of measurement data for other water quality parameters than arsenic. The analysis has shown that in a number of cases the concentrations of cyanide[67] are higher than Ghana's maximum limit for drinking water (0.01 mg/l). Similar findings have been made in the case of several heavy metals, e.g. cadmium, manganese, lead and copper,[68] all of which can cause severe damage to the environment and people's health.

Criticism has been raised against the contamination of fruit, agricultural crops, and fish in and around Obuasi.[69] A limited number of studies have been conducted, finding varying and sometimes elevated concentrations of for example arsenic in food. Several studies have also shown pollution by heavy metals in soil and sediments at the Obuasi mining site.[70]

4.2 Human rights assessments

Human rights assessments are in the following limited to the right to health, including people's reduced access to clean water, fish and agricultural products, as well as health problems due to pollution from the mines, and also involuntary resettlement that is not performed in accordance with international standards.

4.2.1 Impacts on people's health

Local people living in Obuasi and Iduapriem report a series of health problems that they believe are related to pollution from the mining operations. This includes skin pigment changes, open wounds that do not heal, respiratory health problems and early death. There are few studies of possible and actual health effects caused by mining pollution at Obuasi and Iduapriem. Internationally it is well documented that arsenic increases the risk of health problems.[71]

In 2009, AGA initiated a consultancy study designed to identify the social issues at the mines. The study shows that the company has not dealt with health problems in local communities as it should have done. This applies primarily to health problems related to pollution, especially water pollution. In

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[66] http://www.epaghanaakoben.org/rating/listmines2.

[67] The measurements have included three types of cyanide: free cyanide, WAD cyanide and total cyanide. The Council on Ethics has focused on free cyanide since this is the most harmful form of cyanide in water.

[68] See for example Obiri 2009. *Op.cit.*; Obiri, S., Dodoo, D.K., Armah, F.A., Essumang, D.K. & Cobbina, S.J. 2010. Evaluation of lead and mercury neurotoxic health risk by resident children in the Obuasi municipality, Ghana. *Environmental Toxicology and Pharmacology* 29: 209–212; Akabzaa, T.M., Banoeng-Yakubo, B.K. & Seyire, J.S. Not dated. *Impact of Mining Activities on Water Resources in the Vicinity of the Obuasi mine*; Tay & Momade, not dated. *Trace Metal Contamination in Water from Abandoned Mining and Non-Mining areas in the Northern Parts of the Ashanti Gold Belt, Ghana*.

[69] See for example: Amonoo-Neizer, E.H. & Amekor, E.M.K. 1993. Determination of Total Arsenic in Environmental Samples from Kumasi and Obuasi, Ghana. *Environmental Health Perspectives* 101(1): 46–49; Kumi-Boateng, B. 2007. *Assessing the spatial distribution of arsenic concentration from goldmine for environmental management at Obuasi, Ghana*. M.Sc. thesis, International Institute for Geo-information Science and Earth Observation, Enschede.

[70] See for example Antwi-Agyei, P., Hogarh, J.N. & Foli, G. 2009. Trace elements contamination of soils around gold mine tailings dams at Obuasi, Ghana. *African Journal of Environmental Science and Technology* 3(11): 353-359.

Obuasi, the company's work on health issues has mainly focused on malaria. Malaria has been a huge challenge in the area for a long time. Until 2010, around 4/5 of AGA's 'Community Relations' budget was earmarked for malaria. The malaria programme also includes the population of Iduapriem. At Iduapriem, there has been no follow-up or monitoring of health-related issues, and health investments per capita in Iduapriem are significantly lower than in Obuasi.

4.2.2 Limited access to clean water, fish and agricultural products

There is a general perception among locals that AGA through its mining activities has caused contamination of water and soil, resulting in quantitatively and qualitatively inferior crops. This understanding is especially prevalent in settlements linked to the rivers Jimi, Akrofuom and Wamase in Obuasi. Villages near AGA's tailings disposal sites claim that the soil is destroyed by cyanide spills and contaminated water. According to locals, this has affected them significantly, as agriculture is the main activity in the area.

AGA has informed all the villages in Obuasi and Iduapriem that the water from streams, rivers or ponds must not be used because of severe pollution. Local fish reportedly contain high levels of heavy metals. To prevent the locals from fishing in ponds of contaminated process water, AGA has put up signs near several ponds, but access is not physically blocked.

All settlements are supposed to have access to wells provided by the company or local authorities, but these often fall into disrepair over time. Consequently, a number of villages use water from polluted rivers.

According to the UN Committee on Economic, Cultural and Social Rights, the right to clean water[72] is a necessary part of the recognized human right to health, which is enshrined in, among others, the UN Covenant on Economic, Social and Cultural Rights, Article 12. In its internal human rights policy, AGA has recognized the right to clean water for affected locals.[73] This is in line with, for example, the statements of the UN High Commissioner for Human Rights that companies' pollution of water, soil and air may violate local people's right to health under article 12 of the UN Covenant on Economic, Social and Cultural Rights.[74]

4.2.3 Involuntary resettlement of the local population at Obuasi and Iduapriem in the 1990s 2000s

After Ghana's Economic Recovery Programme (ERP) was initiated in 1983, sweeping reforms were implemented in the mining sector.[75] A new Mining Act was introduced in 1986[76], with two additions on tax (*Additional Profit Tax Law*) and royalties (*Minerals and Royalties Regulations*). The acts included generous tax incentives for foreign investors, and the reforms led to a substantial increase in investor interest in the country's gold mining sector. Once the gold mining concessions were granted to foreign mining companies during the following years, large areas, including forest reserves and settlements, were sequestered in favour of the mining companies and to the detriment of the original

[72] UN Committee on Economic, Cultural and Social Rights, General Comments No. 15 (http://www.righttowater.info/progress-so-far/general-comments-2/).

[73] AGA's reply to the Council, January 2012.

[74] Office of the United Nations High Commissioner for Human Rights (OHCHR) and WHO *The Right to Health* fact sheet no. 31, p. 30 (http://www.ohchr.org/Documents/Publications/Factsheet31.pdf); Norad *Retten til helse* (http://www.norad.no/no/tema/menneskerettigheter/retten-til-helse).

[75] International Monetary Fund: '*Ghana—Enhanced Structural Adjustment Facility Economic and Financial Policy Framework Paper, 1998–2000*'; http://www.imf.org/external/np/pfp/ghana/ghana0.htm

[76] This regulation was replaced by the *Minerals and Mining Act* in 2006.

users of the land.[77] In the 1990s and early 2000s, AGC, AGA's predecessor, brought about extensive physical and economic displacement[78] of the local population to allow for land intensive open pit mining at Obuasi and Iduapriem.

In the period 1990–2001, Ghanaian Australian Goldfields Ltd. (GAG) and AGC carried out the involuntary relocation of eight settlements within the area that today makes up AGA's concession at Iduapriem. The involuntary resettlements affected more than 2,000 people, who were subjected to physical and economic displacement. The process was characterized by various conflicts, such as disagreement over compensation rates for housing construction,[79] farmland and crops, differences of opinion on where the settlements should be moved to, as well as reduced access to clean water sources. The underlying reason for the conflicts was chiefly linked to compensation practices that often resulted in farmers being offered cash compensation for their agricultural land. This was in accordance with the national legislation at the time,[80] but for indigent communities primarily engaged in subsistence agriculture, and who were only able to make a living as farmers, in reality it led to the deterioration or permanent loss of livelihood. The percentage of poor people in the local population is higher than the average for Ghana, as more than 70 per cent of the households in the concession area earn less than USD 584 a year, i.e. USD 127 below the national average.[81] The villagers accused the company of deliberately protracting the negotiations about compensation to force the most economically vulnerable to accept low compensation rates.[82] A study conducted by the University of Ghana in 1999 points out that GAG and AGC were the mining companies in the Tarkwa region that had the worst relationship with the population, despite the fact that other companies in the area had carried out much larger involuntary resettlement schemes.[83]

In connection with opencast operations in Obuasi, AGC performed a significant number of forced economic displacements of the local population.[84] At Obuasi, villages like Nhyieso, Sanso, Anyinam and Dokyiwa are situated in the vicinity of mining facilities and have been deprived of considerable farmland. The involuntary resettlements from the 1970s and 1980s resulted in allegations of pending compensation for expropriated farmland,[85] whereas the resettlement processes from the 1990s were characterized by insufficient compensation for lost harvests and land, lost farming opportunities due to

[77] Thomas M. Akabzaa, 2000: 'Boom and dislocation, the environmental and social impacts of mining in the Wassa West District of Ghana', p. 74.

[78] See footnote 6 for the definition of physical and economic involuntary displacement.

[79] In the 1990s, it was common practice to use the value-for-value principle when companies erected new housing for the dislocated persons. Since the new constructions were of a considerably better quality than the original dwellings, the number of rooms per house was significantly reduced, so that the value of the old and the new house corresponded. This led to a number of challenges for large families, who ended up lacking space and did not have permission to add more rooms.

[80] The Ghanaian Minerals and Mining Act requires companies to compensate landowners and residents ('occupiers') for activities causing damage on land, buildings, livestock, crops or trees. If the owner/resident is deprived of other rights of use, these should also be compensated. The law further states that the amount of compensation shall be determined by the parties concerned, i.e. the company and the villagers.

[81] AGA's reply to the Council in March 2011.

[82] Akabzaa, T.M. 2000. *Boom and dislocation, the environmental and social impacts of mining in the Wassa West District of Ghana*. p. 84. The Council's interviews with the local population of Teberebie in March 2011.

[83] Akabzaa, T.M. 2000. *Op.cit.*, p. 92.

[84] In addition, two involuntary resettlements have been carried out (AGA's reply to the Council in January 2012).

[85] In this recommendation, compensation is to be understood as payment in cash or kind (land) for values or resources acquired or affected by a project at the time the value is to be compensated.

pollution, in addition to inadequate alternative livelihoods programmes (ALG programmes).[86] In total, 25 villages at Obuasi are affected by the involuntary resettlements.[87]

A consultancy survey initiated by AGA in 2009 shows that 26 villages in Obuasi have outstanding claims related to previous and ongoing involuntary resettlements. At Iduapriem it was established that 21 villages have similar claims. The majority of the claims refer to insufficient information and consultation prior to the involuntary resettlement, loss of land and livelihoods without adequate compensation, including inadequate compensation for crops. At local and national levels in Ghana, five lawsuits are currently underway against AGA.[88]

In recent years, government agencies, non-governmental organizations and independent experts[89] have established that the involuntary resettlement processes at Obuasi and Iduapriem to a great extent were carried out in contravention of the World Bank/IFC standards for involuntary resettlement that existed at the time. Today these standards state that companies should improve, or at least restore, the livelihoods of the displaced.[90] The IFC guidelines assume that lost land generally shall be compensated for with equivalent land and not cash. The guidelines also define a more detailed framework for compensation depending on how badly affected the displaced are. The Office of the United Nations High Commissioner for Human Rights (OHCHR) expresses the same principle in its guidelines for 'development based resettlement':[91]

> 'Cash compensation should under no circumstances replace real compensation in the form of land and common property resources. Where land has been taken, the evicted should be compensated with land commensurate in quality, size and value, or better.'[92]

A comprehensive human rights study of the mining sector in Ghana performed by the Ghanaian Commission on Human Rights and Administrative Justice (CHRAJ) in 2008 shows that, according to national regulations and the World Bank/IFC standards, AGA has paid the local population inadequate compensation in connection with the involuntary resettlements.[93]

4.2.4 AGA's relationship with local communities

In 2004, when AGA continued mining in Obuasi and Iduapriem, the company's Community Relations Department (CR Department) was responsible for informing and consulting local communities, initiating social investment projects,[94] providing alternative livelihoods, conducting forced relocations and paying compensation to the affected settlements. The department's objective was the company's vision:'The communities and societies in which we operate will be better off for AngloGold Ashanti having been there'. Until 2010, the IFC standards, especially 'Performance Standard' 1 and 5 were the applied norms. At that time, the department had inadequate internal systems and processes, and lacked the resources to work systematically. In fact, this led to the CR department's initiation of extensive ad hoc reparative measures to address acute socioeconomic needs.

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[86] AGA's reply to the Council in March 2011 and interviews in Obuasi in March 2011 during the Council's field visit.
[87] AGA's reply to the Council in January 2012.
[88] AGA's reply to the Council in March 2011.
[89] Commission on Human Rights and Administrative Justice (CHRAJ) 2008. *The State of Human Rights in Mining Communities in Ghana*. Reports from WACAM and AGA's reply to the Council in March 2011.
[90] The IFC's *Performance Standard* 1 and 5.
[91] United Nations Office of the High Commissioner for Human Rights (OHCHR). *Development based resettlements* (http://www.ohchr.org/EN/Issues/Housing/Pages/ForcedEvictions.aspx).
[92] Basic principles and guidelines on development based evictions and displacement. A/HRC/4/18(UN) Chapter 6 (A): Compensation (http://www2.ohchr.org/english/issues/housing/docs/guidelines_en.pdf).
[93] CHRAJ 2008. *The State of Human Rights in the Mining Communities in Ghana*, p. 18.
[94] Education projects, leisure projects, infrastructure etc.

In 2003, 173 farmers in the village of Teberebie, at Iduapriem, were promised replacement farmland in return for the expansion of a waste rock dump (as an illustration, see figure 2 below). A total of 248 fields of 849,660 sq. m were expropriated to allow for the expansions of the deposit site.[95] AGA compensated the farmers in the form of cash payments for lost crops, but AGA did not fulfil the requirement in the 'Resettlement Action Plan' from 2003 about compensation in new farmland.[96] The 173 farmers who have not received replacement farmland claim to have been deprived of their livelihood since they neither have the qualifications to make a living from other occupations nor are able to acquire new land in the area.

In 2011, AGA decided to identify individuals with outstanding claims against the company in Teberebie, and in February 2012 AGA promised to give farmland to the aggrieved parties, nine years after the forced relocation.

Image 2: Taken from the waste rock dump located next to the village of Teberebie (March 2011). The red arrows show deposit sites that now cover former agricultural land, and the blue arrows show the settlements in the village, March 2011.

Since 2005, AGA has paid more than NOK 10 million in cash compensation for seized farmland in Obuasi and Iduapriem.[97] To the Council's knowledge, AGA has not offered the population new farmland, except for the ongoing involuntary displacements from the Dokyiwa village in Obuasi and the Ajopa village in Iduapriem.

Former World Bank funded projects involving involuntary resettlement show that restoring the livelihoods of the displaced are among the greatest challenges of involuntary resettlement processes.[98] Since 2005, AGA has launched various ALG projects at Iduapriem, including projects run by a non-governmental organization (OICI).[99] The results of these projects have been mixed and have included vegetable cultivation, corn growing, bread and soap production, palm oil extraction, meat production and mushroom growing. In 2010, 396 persons were employed through the projects. In Obuasi, there have been ALG programmes in textile production, aquaculture and pig farming.

Until 2011, AGA did not have a comprehensive plan or separate budget for ALG programmes in Obuasi and Iduapriem. The funds allocated to such projects were being taken ad hoc from the company's total budget and not from a fund, which the company was required to establish under the

[95] The company's reply to the Council, December 2010.
[96] The company's reply to the Council, December 2010.
[97] The company's reply to the Council in December 2010
[98] World Bank 2004. *Involuntary resettlement sourcebook. Planning and implementation in development projects*. World Bank, Washington, D.C.
[99] Opportunities Industrialization Centres International (http://www.oici.org/).

concession contract signed with the Ghanaian authorities in 2004.[100] In 2011, AGA has planned a series of new ALG programmes to be implemented over a three-year period.

In their examination report, the Ghanaian Commission on Human Rights (CHRAJ) argued that AGA has offered 'unacceptable alternatives' for the lost livelihood of residents.[101]

4.2.5 Local people's opinion of AGA today

The CHRAJ's 2008 study of human rights in the mining industry in Ghana compared the local population's contentment in the concession areas of different companies. The study found that people living within AGA's mining concessions were the least satisfied.[102] However, local people's relationship with AGA has improved over the past two years, mainly because of increased information sharing and consultation.[103] Since 2009, when AGA commissioned comprehensive studies of social conditions in the communities, the company's CR department has changed internal guidelines and systems. Today, local communities report that they are being heard by the company, but they question AGA's actual implementation of improvement measures. According to a survey carried out in 2010 at Obuasi and Iduapriem, only 30 per cent of the local population was of the opinion that 'the communities and societies in which we (AGA) operate will be better off for AngloGold Ashanti having been there'.[104] More than 40 per cent thought they would have been better off without AGA. The majority thought that AGA only to a small extent had responded to the local population's requests.

5 Information from the company

5.1 International initiative and cooperation

AngloGold Ashanti takes part in a number of voluntary initiatives and cooperation efforts for corporate responsibility in general and responsible mining in particular, both on a national and international level. These include the International Council on Mining and Metals (ICMM), the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold, the Voluntary Principles on Security and Human Rights, and the UN Global Compact. In addition, the company has adopted several standards that define environmental management systems, recommended maximum limits for different types of pollution, standards for involuntary resettlement etc.

5.2 AGA's environmental systems and standards

The Council has limited information regarding environmental systems and standards before the merger of AG and AGC. Annual reports from AGC in the period 2000–2004 contain limited information about social conditions and even less about the environment. The Annual Report for 1999 states: 'Environmental audits were undertaken at all mines and there were no significant out-of-compliance

[100] AGA's reply to the Council in December 2010.
[101] CHRAJ 2008. *Op.cit.*
[102] CHRAJ, 2008:*Op.cit*
[103] Talks between the Secretariat and the local population, March 2011.
[104] The survey was based on individual and group interviews in selected villages at Obuasi and Iduapriem in 2009 (AGA's reply to the Council in March 2011).

reports relating to the environment within the Group'.[105] Well-known problems caused by long-term mining at Obuasi, including large-scale quarries in the 1990s, are not mentioned.

Since 2004, the company's environmental reporting has improved significantly. AGA has implemented and improved a number of environmental systems and standards. As a minimum, the company is seeking to comply with the laws, regulations and license terms in the countries where it operates.

5.2.1 AGA's own standards

The company has an integrated environmental and local community policy that is brief and general.[106] In 2009 the company developed standards for its own operations in areas such as water, air quality and chemicals. The Council finds these standards comprehensive; they include many important issues and are fairly detailed.[107] The standard for water includes responsibilities, regulations, surface water and groundwater, water balance models, water quality and quantity, risk assessments, monitoring programmes etc. When it comes to maximum limits for discharges, the standard refers to international agreements, national regulations, environmental permits for mines and other binding commitments.

The company has identified five focus areas relating to the environment: water, energy and greenhouse gas emissions, land, hazardous materials and air quality.[108] The company clearly acknowledges that water is one of the main issues in its mining operations.

Based on AGA's environmental plan for Obuasi, the Ghanaian Environmental Protection Agency (EPA) issued the Obuasi mine a three year *Environmental Certificate* in March 2011. The license includes several requirements, such as requirements for water purification and management of tailings and other waste. The company has developed plans to meet the requirements.

5.2.2 ISO 14001 standard for environmental management systems

Like AGA's other mining operations, Obuasi has an environmental management system certified to the ISO14001 standard.[109] The certification is voluntary and is carried out by an independent third party. Obuasi was certified in December 2006,[110] and the certification was extended after a review in December 2009,[111] being valid until 2012.

5.2.3 The cyanide management code

AngloGold Ashanti was involved in developing the international cyanide management code for the gold mining industry,[112] being among the first companies to sign it in November 2005.[113] This voluntary code requires that an independent third party conducts an audit of the mining operations documenting that these are in compliance with the international code in order ensure that public health and the environment are protected against the damage cyanide may inflict. In 2006 AGA had planned

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[105] AGC. *Annual Report 1999*, p. 14. A similar formulation may be found in AGC. *Annual Report 2000*, p. 14.
[106] 'Integrated environment and community policy', June 2009 (http://www.anglogold.com/NR/rdonlyres/B9E007AA-848C-46B8-A904-815E82207D68/0/EnvironmentalandCommunityPolicy.pdf).
[107] 'Community and Environment Management Standards' June/ July 2009 (http://www.anglogold.com/NR/rdonlyres/81011574-92AB-47EA-99B9-2F6CAF7CF010/0/CommunityandEnvironmentManagementStandards.pdf).
[108] AngloGold Ashanti Sustainability Report 2010, p. 46.
[109] AngloGold Ashanti Report to Society 2007, p. 159.
[110] AngloGold Ashanti Report to Society 2006, p.144.
[111] AngloGold Ashanti Annual Financial Statements 2009, p.77.
[112] 'International Cyanide Management Code For The Manufacture, Transport and Use of Cyanide In the Production of Gold' (http://www.cyanidecode.org/).
[113] AngloGold Ashanti Report to Society 2006, p. 86.

that Obuasi would be subject to an audit by the end of 2008.[114] In 2008, the date for certification was altered to 2010.[115] Obuasi was among the operations that in 2009 withdrew temporarily from the certification process pending changes in the physical infrastructure necessary to transport, receive and handle cyanide in accordance with the code.[116] Funds have been allocated for this purpose, and a detailed planning process is underway. In 2011, 16 of the company's mining operations have been certified.[117] In 2011, Obuasi was reportedly scheduled to be certified in 2012.

The gold mining operation at Obuasi is dependent on cyanide to isolate gold from other ore components. The use of cyanide at Obuasi decreased from 2006 (4,924 tons)[118] to 2010 (3,562 tons),[119] but increased in 2011 (3,888 tons) despite a 24 per cent reduction in processed ore volume.[120]

5.3 AGA's systems and standards regarding social conditions

The Council has limited information about guidelines and systems concerning the handling of local communities before 2004. According to AGA's annual reports from 2004 onwards, the company's standards for involuntary resettlement are based on IFC standards.[121] Furthermore, the company states that the involuntary displacement issues are the biggest challenge for its CR department. In 2007, when AGA joined the 'Voluntary Principles on Security and Human Rights', it also initiated an internal human rights policy. Following consultancy studies that mapped the social conditions around the mines in 2009 and 2010, the company developed further guidelines on social conditions, processes and reporting systems, including 'Stakeholder Engagement Action Plans and Integrated Development Action Plans'. In 2011, new communication lines were established between different departments handling aspects pertaining to local people. AGA is also recruiting new personnel to its CR department.[122]

5.3.1 AGA's own standards

In addition to its integrated and short environmental and local community policy from 2009, the company adopted supplementary standards for working with communities, 'AGA Management Standards', in 2010. These standards are guiding the work of the CR department and will be implemented in the course of 2012 and 2013.[123] The standards provide detailed information on communication with various parties in the local community, socio-economic development, land use, involuntary resettlement, and handling of complaints. AGA's aim is to respond to all complaints within 48 hours, and all complaints are to be recorded.[124]

AGA's policy is to adhere to the IFC standards. In this context, Performance Standard (PS) 1 'Assessment and Management of Environmental and Social Risks and Impacts' and PS 5 'Land Acquisition and Involuntary Resettlement' are particularly relevant. PS 1 provides general requirements for corporate operations concerning social and environmental issues (see Text box 1),

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[114] AngloGold Ashanti Report to Society 2006,: p. 92.
[115] AngloGold Ashanti Obuasi Country Report 2008, P40. AngloGold Ashanti Report to Society 2008, P172.
[116] AngloGold Ashanti Sustainability Review 2009, p. 41.
[117] AngloGold Ashanti Sustainability Report 2011, p. 7.
[118] AGA. *Report to Society 2007*, p. 173.
[119] AGA. *Sustainability Report Supplement 2010*, p. 75.
[120] AGA. *Sustainability Report 2011. Supplementary information* (http://www.aga-reports.com/11/sustainability-report/supplementary-information/environment/materials-waste).
[121] IFC Performance Standard 1 and 5.
[122] AGA's reply to the Council in January 2012.
[123] AGA's reply to the Council in January 2012
[124] AGA's reply to the Council in December 2010.

whereas PS 5 describes minimum requirements that companies must fulfil in cases of involuntary resettlement (see Text box 2).

Text box 1 Performance Standard 1, Objectives:[125]

- *To identify and evaluate environmental and social risks and impacts of the project.*
- *To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment.*
- *To promote improved environmental and social performance of clients through the effective use of management systems.*
- *To ensure that grievances from Affected Communities and external communications from other stakeholders are responded to and managed appropriately.*
- *To promote and provide means for adequate engagement with Affected Communities throughout the project cycle on issues that could potentially affect them and to ensure that relevant environmental and social information is disclosed and disseminated.*

Text box 2 Performance Standard 5, Objectives:[126]

- *To avoid, and when avoidance is not possible, minimize displacement by exploring alternative project designs.*
- *To avoid forced eviction.*
- *To anticipate and avoid, or where avoidance is not possible, minimize adverse social and economic impacts from land acquisition or restrictions on land use by (i) providing compensation for loss of assets at replacement cost and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected.*
- *To improve, or restore, the livelihoods and standards of living of displaced persons.*
- *To improve living conditions among physically displaced persons through the provision of adequate housing with security of tenure at resettlement sites.*

5.4 The Council's contact with AGA

The Council on Ethics has had extensive contact with AGA in 2010, 2011 and 2012. The company emphasizes the historical and institutional context in which its mines in Ghana operate, corporate strategies for handling the repercussions of the mines, progress in various areas since 2004, and the measures the company has committed itself to implementing.

With regard to the environment, AngloGold Ashanti acknowledges that there is extensive contamination by, among others, arsenic at Obuasi. The company claims that the contamination primarily is a result of naturally high levels of arsenic in bedrock and soil, combined with more than

[125] IFC *Performance Standard 1*, from IFC's revised standards, effective from 1 January 2012. The substance of the standards before and after revision is the same.
[126] IFC *Performance Standard 5*, 1 January 2012.

100 years of mining activities without adequate attention to the environment, chiefly before 2004. AGA stresses that the company has invested more than USD 800 million in its Ghanaian operations in order to change old infrastructure, upgrade mining methods and remedy both social and environmental problems in accordance with corporate values. This has included significant changes in operational strategies aimed at increasing productivity and results and at addressing environmental and social problems.

The company points out that it will invest in further measures to deal with existing pollution and to reduce and eliminate pollution from future mining (including the construction of a new tailings disposal unit and the installation of new treatment plants). The company is also working on the introduction of additional standards, both their own and international ones. The company is hiring more people at the local, national and international level to handle the challenges in an integrated fashion. Among the measures implemented by the company are for example the handling of 10,000 tons of arsenic (As_2O_3, arsenic trioxide), the closure of the Pompora ore roasting plant, and tailings retreatment at various deposit sites. The company has also installed treatment plants to remove cyanide and other types of contamination from the process water, and has thus increased the recycling of water in the processing. Clean water from the surrounding areas near the Pompora tailings storage facility has been cut off and led away to prevent this water from entering the storage facility and be contaminated before flowing into the water system downstream.

In its replies to the Council, AGA has acknowledged that the company's operations may have led to loss of farmland, and that the compensation has been based on inadequate compensation rates and/or has been paid too late. The company points out that many of the issues date far back in time and that AGA today has increased its consultations with the local population. Compensation will be paid to households with outstanding claims against the company,[127] and compensation is being offered in the form of farmland. ALG programmes are also being implemented, and wells are being built to provide clean water. The company has paid compensation for some types of damage, for instance loss of crops, flooding, and silt deposition in local rivers. Based on the consultancy studies commissioned by AGA in 2009 and 2010, the company is planning social measures that will be implemented at Obuasi and Iduapriem over the next three years. The company has allocated more resources to improve the situation in the local community and is planning to pay USD 4.8 million by the end of 2013 to individuals with outstanding claims relating to involuntary resettlement. The sums will be paid through the state-run Land Valuation Board.[128] In 2011 AGA initiated a dialogue with important local organizations in an attempt to solve the deep social conflicts in the local community, and in 2012 AGA will initiate studies, in cooperation with consultants and the Ghanaian Ministry of Health, aimed at mapping environmental and health risks at Obuasi and Iduapriem. The company has announced that in the future it may be necessary to carry out further involuntary resettlement owing to the safety of the population and/or health risks.

The company admits that the process of bringing the operations up to the desired level is slow, and slower than it had planned, but stresses that it is a goal-oriented process, to which the company is committed and in which it is investing. The company's goal is to be among the best in the world as far as environmental and social sustainability is concerned. AngloGold Ashanti will draw on experiences from other major company turnarounds and spend considerable resources on turning around the operations at Obuasi and Iduapriem, making them economically, environmentally and socially sustainable. For the next three years, the company is planning extensive studies of the environmental and health conditions in order to identify problems and define further actions. These studies will be carried out by independent experts, be based on scientific methods and involve affected interests.

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[127] As of January 2012, 42% of the outstanding claims at Obuasi and 66% of the claims at Iduapriem had been settled (AGA's reply to the Council in January 2012).

[128] The local population of Obuasi has previously accused the Land Valuation Board of taking bribes to pay compensation (AGA's reply to the Council in January 2012).

When serious problems requiring an immediate response are identified, the company will take continuous measures before the studies have been concluded. The company says it is willing to make the necessary resources available, and considers the risk of future environmental damage and human rights violations smaller than what the Council on Ethics does.

6 The Council on Ethics' assessment

In accordance with the Ethical Guidelines, Section 2, the Council on Ethics has assessed whether AGA is responsible for severe environmental damage and/or contributes to serious or systematic human rights violations through its mining operation in Ghana.

6.1 Severe environmental damage

The Council on Ethics sees the environmental damage from the Obuasi mine as very serious and believes that the damage has long-term consequences for both the ecosystems and people's health and livelihoods. The arsenic concentrations measured at Obuasi are very high by international standards and far exceed Ghanaian regulations and international guidelines. A number of surveys consistently show very high readings, often more than a hundred times the maximum values.

The increased risk of a number of serious adverse effects is well documented internationally for arsenic values that are much lower than the levels measured at Obuasi (e.g. different types of cancer, damage to the nervous system, skin afflictions). Several surveys also show severe water pollution from heavy metals and cyanide, far above national and international maximum values. The adverse health effects caused by pollution have so far been little studied at Obuasi, but the Council on Ethics takes as its point of departure that international studies show such pollution to have harmful effects, especially on vulnerable groups such as children.

A naturally high level of arsenic in the bedrock is a contributing factor to the current widespread contamination. Still, areas that are not affected by the company's activities or facilities, and that can be said to represent approximate natural levels of background pollution, have much lower contamination levels. There is a big difference between the naturally high background concentrations of arsenic and the exceedingly high arsenic concentrations caused by the mining operations, facilities and areas for which AGA is responsible. It is particularly unfortunate that the severe pollution of water, soil, fish and crops occurs in areas with high population concentrations.

Overall, the pollution levels that existed when the merged company continued the operations in 2004 have changed little despite the measures taken by the company so far, and which have had local effect in smaller areas. This does not mean that the steps taken have been in vain, but that Obuasi is exceptionally problematic and that the effects of the initiatives only become sizeable when even more measures are carried out over a long period of time. The Council finds that the company repeatedly has underestimated and misjudged the scope and complexity of the problems and what is necessary to address these. The company is open about the problematically high levels of pollution, recognizing that the complexity of the operation is greater than expected, both technically and environmentally, and that the company has not come as far as it wished in addressing the environmental problems. The company is planning further studies and measures in the coming years. Taking effective steps to dramatically reduce the pollution is challenging in a situation where there is both old and new pollution at many facilities and locations, as well as technological solutions and facilities that are not adapted to current environmental standards. The Council on Ethics considers it very likely that the extremely severe pollution will continue for a considerable number of years due to the large scope and complexity of the problems.

Moreover, the extent of the problems has not been sufficiently identified. Further studies over the next three years will most likely uncover new issues that the Council has not yet assessed, for instance severe pollution at other tailings storage facilities that are currently not in use. The Council finds it probable that following these studies further studies and measures will be necessary for several years. The severe pollution is expected to continue in this period. The Council believes that it is reasonable to expect the company to reduce the pollution towards the natural background level for the region.

6.2 Serious or systematic human rights violations

In this case, the environmental damage also represents human rights problems. The Council on Ethics finds that AGA and its predecessor AGC have acted in a way that implies contribution to serious and systematic violations of internationally recognized human rights, making particular reference to the UN Covenant on Economic, Social and Cultural Rights, Article 12, on the 'right to health'. The mining operation affects people in the vicinity through both pollution and forced relocation, which lead to the deterioration or loss of both livelihood and health.

Inside AGA's concession at Obuasi and Iduapriem there are 130 and 14 villages respectively and more than half of the population lives by subsistence farming. Both those who have ceded land to AGA at Obuasi and Iduapriem and those who are affected by the company's operations through pollution have had their livelihoods deteriorated. The severe pollution has reduced the population's access to clean water, fish and agricultural produce. The health situation is adversely affected. Today, clean food and clean water must to a great extent be bought, something that is challenging to a population of limited means. It will take a long time to reduce the pollution so that the natural resources can be explored safely by the inhabitants of all affected areas.

In the last 20 years ever larger areas of farmland have been taken over by the mines, and the farmers who cultivated these areas have generally received compensation that does not meet the standards of the World Bank/IFC. The Council attaches importance to the fact that through this compensation practice thousands of people have lost or had their livelihoods severely deteriorated. This is particularly serious because it has affected a population already subject to poverty, especially at Iduapriem. In the Council's view, the company has created a most uncertain future for a population who was very vulnerable from the outset.

At the time of the continuation of the mining operation in 2004, the company lacked an overview of how its activities affected the population in terms of health and otherwise. The company implemented ad hoc measures that addressed certain acute socio-economic needs, but did not follow a strategic plan based on surveys and consultations with the population. The Council takes at its point of departure that this is the reason why the conditions for the population have not improved despite various initiatives such as alternative livelihood programmes.

In the past two years, the company has allocated more resources to improve the conditions and carried out mapping studies as a basis for implementing further measures. The Council regards these as appropriate initiatives both to get a better overview of the situation and to reduce the risk that the company's operations will cause similar problems in the future.

The Council sees it as positive that the company now seems to comply with IFC standards in connection with involuntary resettlement. To the Council on Ethics, it seems as if AGA places greater emphasis on following procedures that safeguard human rights now than before. AGA also has concrete plans for correcting previous inadequate compensation, and if this is carried out according to the plan, outstanding compensation claims will be settled by the end of 2013. Thus, in the view of the Council on Ethics, the greatest future risk now in the area of human rights seems primarily to be linked to the extensive pollution problems. These problems are both widespread and complex, and a number of new environmental and health studies have not been conducted yet. It is also expected that

new health issues will be uncovered in future studies. The Council therefore finds it likely that it will take a considerable amount of time before the affected population has its livelihood restored.

7 Recommendation

The Council recommends the exclusion of AngloGold Ashanti Ltd from the investment universe of the Government Pension Fund Global due to an unacceptable risk that the company's operations may cause severe environmental damage and contribute to serious or systematic human rights violations.

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Ola Mestad Chair of the Council	Dag Olav Hessen	Ylva Lindberg	Gro Nystuen	Bente Rathe
(Sign.)	(Sign.)	(Sign.)	(Sign.)	(Sign.)