Environmental and Social (E&S) Risk Management Sector-Specific Guidance

Manufacturing

Preamble to All Sector Specific Guidance

While the guidance notes to the Principles provide high-level, all-sector guidance on the purpose and implementation of (and additional resources for) each Principle, some sectors represent higher environmental and social risk and require greater scrutiny. Therefore, we have provided sector-specific guidance notes, to assist with the implementation of the Principles in these high-risk sectors. These notes draw upon the IFC Environmental, Health and Safety Industry Sector Guidelines and the EBRD Subsectoral Environmental and Social Guidelines and have been adapted to reflect the Ghana-specific context.

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Manufacturing in Ghana

Manufacturing in Ghana

Manufacturing is an important component in Ghana's economy. The manufacturing sector in Ghana accounted for 26% of Ghana's Gross Domestic Product (GDP) and 27% of employment of Ghana in 2016[1]. Some of the manufacturing subsectors in Ghana include agro-processing, cement, breweries, mineral ore processing and textiles. Other industries include fast moving consumer goods (FMCG), apparel, chemicals, pharmaceuticals and the processing of wood and metal products. The manufacturing sector provides products and services to the Ghanaian economy and the West African sub-region.

The manufacturing sector of Ghana, although once in decline, is undergoing a revitalization. This is being initiated by the new Government, with the purpose to increase investments in Ghana, create jobs and ensure a sound business environment in Ghana.

The Ministry of Trade & Industry (MoTI) and the Ghana Investment Promotion Centre are the lead policy advisors to Government on trade, industrial and private sector development.

Regulation of manufacturing in Ghana

Key legislation relating to manufacturing industries in Ghana includes:

- Companies Act, 1963 (Act 179),
- Labour Act, 2003 (Act 651) to protect employee interests
- Trees and Timber (Amendment) Act, 1994 (Act 493)
- Ghana Investment Promotion Centre Act 2013 (Act 865)
- Minerals Act 1993 (Act 450),
- Free Zone Act, 1995 (Act 503) (which regulates the management, production and exportation of goods and services from Ghana)

The Ministry of Trade and Industry continues to enhance industrialisation, attract foreign direct investments and create jobs.

One major policy measure being employed for the achievement of accelerated and sustainable growth is the Ghana Trade and Investment Gateway Programme (GHATIG), which seeks to promote foreign direct investment and to establish Ghana as a major manufacturing, value adding, financial and commercial centre in West Africa.

Laws applicable to business operations in Ghana are based on a framework of legislation pertaining to business activity copyrights, patents, trademarks, disputes and labour relations.

Transforming manufacturing in Ghana

The Government of Ghana has identified the need for a radical transformation of the manufacturing sector to boost economic growth and reduce the trade deficit of Ghana. The manufacturing sector has been in decline over the last couple of years[2]. Some factors that have negatively affected the sector include:

- High cost of capital;
- Very limited access to medium and long term financing;
- High cost of electricity;
- Unreliable power supply;
- Unreliable land tenure and corresponding limited access to land for industrial activity; and
- Weak logistic and infrastructure support for industry development

Promoting cleaner production – The Akoben Programme

To promote sound environmental compliance in the mining and manufacturing sectors in Ghana, the Environmental Protection Agency developed a performance rating initiative as part of its mandate to enforce the National Environmental Policy. Under the Akoben Programme, the environmental performance manufacturing operations are assessed under a five rating scheme. The ratings are disclosed to the public and media annually. The main objective is to hold companies accountable on their commitments to protect the environment[3].

1 http://www.statsghana.gov.gh/docfiles/GDP/GDP2017/April/Annual_2016_GDP_April%202017_Edition.pdf

2 https://www.pwc.com/gh/en/assets/pdf/budget-highlights-2017.pdf

3 http://www.epa.gov.gh/epa/projects/akoben

Summary of Key E&S Issues

ESG Risk category key

- Environment – Affects the natural environment
- Health and safety – Affects the health and safety of employees
- Labour – Affects workplace conditions and treatment of employees
- Community – Affects the health and safety, livlihoods and environment of the community and wider public

Note:

Key risk ordering based on significance of the potential financial impact to the company in question.

Key risks	Manufacturing
Occupational health and safety	
Labour rights	
Hazardous materials	
Air emissions	
Waste management	
Energy consumption	
Community engagement	
Fire and explosion	
Water management and waste water	
Transportation	
Noise and vibration	
Product labelling	

Potential Costs Associated with Key E&S Issues

Potential costs *to banks' clients* associated with key E&S issues

Fines from regulatory authorities, or third party claims for fatalities and injuries to employees or local communities due to accidents or exposure to toxins.

Fines from regulatory authorities or third party claims for clean-up/ remediation costs associated with environmental impacts.

Fines from regulatory authorities or third party claims for impacts to natural capital resource.

Reputational damage leading to protests and increased operational costs.

Potential capital expenditure required to meet environmental and labour conditions attached to operating licenses.

Potential costs *to banks' credit portfolios* associated with key E&S issues

Any of the above costs to clients could cause a client's operations to be suspended

This may impede the client's cash flow, potentially leading to credit default

This may lead to a potentially significant loss in revenue for lending banks

In order to protect themselves, banks should consider including, in loan documentation, environmental and social Conditions Precedent, Warranties, Covenants and Events of Default.
Please see the Guidance Note associated with Principle 1 for further details.

Analysis of Key E&S Issues

Occupational health and safety

Given the wide scope of activities within the manufacturing sector, there is a broad array of occupational health and safety hazards that pose a heightened risk to workers, especially with regards to dermal and respiratory health.

These risks include:

- **Chemical exposure/ hazards:** Aluminium smelting can use a variety of different chemicals including different types of acids. The textiles sector can also produce Volatile Organic Compounds (VOC) in processes like fabric cleaning, and use chromium, a serious allergenic, during the dyeing of textiles. VOCs can be highly toxic depending on the specific compound, with some being carcinogenic. The cement industry can also use chromium in the production of cement. The pharmaceutical sector uses many types of chemicals in production activities, including toxic compounds. Chemicals are also used for preparatory activities such as cleaning in the agro-processing industry.
- **Physical hazards:** Bodily injury can result from being exposed to heat, ergonomic stress through the operation of machinery, moving equipment (including moving machinery in the textile industry or conveyers in the agro-processing industry) and the general workplace if work is conducted at height, in confined spaces or in slippery conditions.
- **Radiation:** Workers can be exposed to radiation if radioactive materials are used in different equipment or processes. Particulate monitors in smelting can emit radiation, as do X-ray machines sometimes used in cement mixing and in the textiles industry for monitoring purposes. Radiological hazards are also present in the pharmaceutical industry and in the medical equipment manufacturing sector for sterilisation purposes.
- **Heat:** The use of steam and heated fluids can lead to workers being exposed to extreme heat in the textiles industry. The use of kilns in the cement industry is also a source of heat exposure. Factories that deal with metal often require working in hot conditions - this can include foundries that make metal castings, steel mills and other metal smelting.
- **Pathogenic and biological hazards:** Workers may handle and manage pathogens in the pharmaceutical sector. Exposure to biological and microbiological risks is potentially prevalent in the agro and food-processing industry due to contact with food and beverages. These pose a risk to human health - workers can be exposed to disease and bacterial infection.

Risk Management

Client companies should implement the following risk management practices:

- Ensure that an appropriate health and safety management system is in place, ideally independently certified to a recognised standard such as OHSAS18001 or ISO45001.
- Provide personnel with appropriate personal protective equipment (PPE) and/or respiratory protective equipment (RPE) to include training on its use and maintenance. Ensure use of the PPE provided, at all times.
- Use shifts and the rotation of workers across tasks to minimise chemical exposure, as well as reduce the time exposed to extremely hot or cold working conditions.
- Ensure that only trained and approved personnel use hazardous materials in their working.
- Monitor areas where these is the risk of chemical exposure and provide ventilation in these areas.
- Where possible, replace potentially dangerous pathogenic and biological materials with those that are not dangerous. Where this is not possible, work processes should be designed to minimise the release of these agents, keeping the number of employees likely to be exposed to a minimum.
- Operate any facilities which could cause exposure to radiation in accordance with recognized international safety guidelines including acceptable effective dose limits.
- Ensure that personal hygiene is maintained through a combination of education and sanitation measures.
- Ensure that storage facilities are locked and accessible only to trained and approved personnel.
- Incident tracking and reporting

Labour Rights

Ghana has ratified all 8 of the International Labour Organisation (ILO) Fundamental Conventions. Moreover, labour regulation in Ghana stems from the Labour Act 2003. The Act consolidated all laws relating to labour, employers, trade unions and industrial relations, as well as establishing a National Labour Commission.

Manufacturing can be a labour intensive industry depending on the subsector. This may lead to a large number of casual or short term workers in the manufacturing sector. Many of these workers may be migrants who tend to be particularly vulnerable to exploitation. Hiring of casual and short term workers may be direct but can also happen through labour agents or contractors. Use of labour agents or contractors can create a risk of labour rights violations if the agencies are not following labour best practices.

The Labour Act, 2003 regulates employment and labour issues in Ghana. It covers a broad array of topics such as employee security, sick leave, domestic and compensation, works and wages in Ghana.

Risk Management

Client companies should implement the following risk management practices:

- Examine manufacturing sites for the signs of modern slavery listed above.
- Ensure that conditions for all workers meet the latest ILO requirements on working hours, pay, and overtime.
- Ensure that any contracted labour supply agencies adhere to all the latest ILO prohibitions on child labour.
- Ensure compliance with the Labour Act, 2003 including areas regarding:
    - Protection of employment
    - General conditions of employment
- Provide a code of conduct in a language accessible by migrant workers and sub-contractors.

1 https://www.globalslaveryindex.org/country/ghana/

Hazardous Materials

This section deals with the potential environmental and community impacts of hazardous materials. There is potential for the release into the environment of hazardous materials across the various manufacturing industries that operate in Ghana. Please see the Occupational Health and Safety section above for details on worker safety and hazardous materials. Some of the hazardous materials used in manufacturing include, but are not limited to:

- Chemicals and chemical reagents used in smelting.
- Gases released during the smelting process such as carbon monoxide.
- Chemicals used in processes like dyeing, or for their flame retardant and preservation properties in the textile industry.
- Spent chemicals from processing in the pharmaceutical industry.
- Disposed refrigerating units can be a source of chlorofluorocarbons which contribute to ozone depletion.
- These materials can pose occupational hazards to workers. Moreover, if they are leaked into soils, surface or groundwater they may pose danger to the environment and members of the public.

Risk Management

Client companies should implement the following risk management practices:

- Conduct hazard assessments in line with widely accepted international standards and methodologies such as the Hazardous Operations Analysis (HAZOP). Aspects of these assessments should include hazard identification, handling procedures and basic emergency procedures.
- Inspect any materials that have the potential to contain asbestos and take measures to prevent airborne particles.
- Ensure that a record of all hazardous materials is maintained on site - such as a Material Safety Data Sheet (MSDS) for each hazardous substance used on site.
- Ensure that there is adequate provision for the containment of hazardous materials, including secondary containment to prevent the release of these materials to the environment.
- Practice material substitution where possible, replacing hazardous materials with materials that are not hazardous.
- Treat hazardous waste before it is disposed- for instance sterilise pharmaceutical waste.
- Monitor the production of hazardous waste, ensuring that it is not mixed with non-hazardous waste.
- Ensure that reputable vendors are used to dispose hazardous waste.

Air Emissions

Different manufacturing processes across different industries can release several different types of air emissions. These can pose a hazard to workers, the public and the environment. Common air emissions include:

- **Volatile Organic Compounds (VOCs)** – one of the main contributors to smog and can lead to health problems in humans and wildlife. These are produced during various processes in the pharmaceutical industry, and through organic solvents used in the textile industry and the burning of fuels in cement production and metal smelting.
- **Particulate Matter (PM)** – can be created by the crushing and handling of matter in cement production and smelting respectively, as well as through various processes such as drying in the food processing industry.
- **Odours** – food processing can cause odours through storing solid waste and through heating. This is also the case in the pharmaceutical industry, where organic matter may be fermented.
- **Exhaust gases** – process heating requirements can lead to exhaust gases being emitted.

The Environmental Protection Agency Act 1994 and *Ghana Environmental Assessment Regulation 1999* require that activities likely to have an impact on the environment (including waste, emissions and other pollutants) must apply for an environmental permit to operate[1].

Risk Management

Client companies should implement the following risk management practices:

- Ensure that facilities are equipped with reliable air emissions detection systems.
- Ensure that plans are in place to minimize personnel exposure to any toxic air emissions.
- Ensure that storage equipment has been designed and is maintained to minimise any toxic air emissions.
- Where odours are emitted, consider the location of sites and facilities with respect to neighbours.
- Consider the use of air filtration systems to reduce particulate matter in emissions.
- Reduce outdoor emissions through the use of fabric filters.
- In aluminium production, use fume capture to mitigate fluoride emissions and avoid using anodes that release tar and polycyclic aromatic hydrocarbons.
- Ensure that the terms of any issued permit are complied with.

1 http://www.epa.gov.gh/epa/regulations/permits-large-scale/

Waste Management

Processes across the manufacturing sector may produce a variety of hazardous and non-hazardous wastes that may pose a risk to the environment and community health – including, but not limited to:

- Organic waste.
- Spent solvents, reactants and waste chemicals.
- Cuttings of fabrics, threads and trimmings.
- Spent pigments used for dyeing and inks used for printing.
- By-products from pyro metallurgical processes such as unused cryolite in aluminium smelting.
- Rocks and chemical-containing kiln dust.
- Fine metal particulates.
- The packaging used for manufactured products is often a source of waste as it is thrown out after purchase.

There are also some specific waste products from the aluminium production process:

- Spent cathodes – These contain carbon as well as other types of material used for insulation.
- Red mud – Predominately iron oxide, which is a common product of aluminium production.

Risk Management

Client companies should implement the following risk management practices:

- Develop a Waste Management Plan which is predicated on the "reduce, reuse, recycle" principle.
- Ensure any non-hazardous waste is collected for recycling or disposed of at an approved sanitary landfill.
- Ensure any hazardous wastes are handled by specialised licensed providers (see Hazardous Materials section for further details).
- Ensure that organic materials are processed quickly.
- Use refrigeration and cooling systems during storage and transportation of organic materials.
- Use different materials if they minimise waste production.
- Spent cathodes can be re-used, for instance as a fuel source (aluminium production).
- Use filtration methods and dry stacking to control red mud (aluminium production).
- Carry out a strategic review of packaging including how it can be minimised, while ensuring product integrity and protection, and the packaging material used - for instance whether the packing is bio-degradable.

Energy Consumption

Several processes across the manufacturing sector can be energy intensive. This can represent a cost to the business. Moreover, if non-renewable sources of electricity are used, there can be a substantive environmental impact. These include the release of air pollutants, such as sulphur dioxide, and greenhouse gases, which contribute to climate change.

Processes that require heat can be energy intensive. This is the case in the textile industry, where heat intensive processes may be used in dyeing operations as an example. In cement production, kilns can be a source of energy consumption, especially depending on the type of kiln employed.

In the agro and food-processing industries refrigeration is an essential part of the overall process as it keeps food fresh. It also represents one of the largest consumers of energy in these industries.

Ghana operates an Energy Standards and Labelling Programme to meet the minimum efficiency and performance standards approved by the Ghana Standards Board that ensure that only appliances that meet the minimum energy efficiency standards are allowed in the country. This is in accordance with the Energy Efficiency Standards and Labelling Regulation 2005 (LI 1815).

Risk Management

Client companies should implement the following risk management practices:

- Measure and monitor energy consumption, setting performance targets to understand which areas are consuming heavily and thus require action to reduce energy use.
- Undertake a systematic analysis and evaluation of the potential for energy efficiency improvements, with a particular focus on the demand side.
- Ensure that there is sufficient insulation to minimise heat loss, and recover heat to make heat intensive processes more efficient. This applies to refrigeration rooms in the food processing industry.
- Use cold dyeing for cotton, rayon and fabric blends to reduce heat use and therefore conserve energy in the textile industry.
- Use the most energy efficient kilns available in the cement industry.

Community Engagement

The Manufacturing sector can bring both positive and negative impacts to nearby communities. While potentially a source of employment and income, manufacturing activities can also cause harm, nuisance and inconvenience.

For example, chemicals, toxic substances, dust and air emissions from manufacturing activities may pollute the surrounding air and water, which may lead to adverse health effects for nearby populations. Manufacturing plants can also create noise that may be a nuisance to nearby residential populations. Furthermore, manufacturing often requires the transport of both raw materials and finished products to and from the manufacturing facilities. This can cause large amounts of traffic which may cause a nuisance and lead to a higher risk of vehicle accidents than would have otherwise existed.

Risk Management

Client companies should implement the following risk management practices:

- Attempt to minimise disruption to neighbouring communities during operations.
- Build public trust through public engagement with community stakeholders.
- Ensure implementation of a grievance system in order to address community complaints.
- Develop a system to warn local communities if they are at risk of exposure to harmful chemicals or toxic substances.
- Develop an evacuation plan for the local community in the event that it becomes threatened by harmful chemicals or toxic substances.

Fire and Explosion

Fire and explosions pose a risk of injury or fatality. They may arise during the handling of solvents and chemical reactions in the pharmaceutical industry. The handling of hot liquid metal in the smelting industry may also lead to fire and explosions. Dust across the sector can also be highly explosive, especially if it is suspended in air. An example of this is flour, used in the food processing industry. Flour is particularly ignitable as it is predominately made up of starch which can catch fire easily.

The Ghana National Fire Service Act, 1997 (Act 537) provided the regulation for the management of undesirable fire and explosion in the sector. This is guided by the Fire Precaution (Premises) Regulations 2003, LI 1724 which makes it obligatory for certain premises to have fire certificates to meet fire safety standards.

Risk Management

Client companies should implement the following risk management practices:

- Ensure that appropriate emergency procedures are in place in the event of an accident. This includes establishing suitable communications with the appropriate local emergency authorities.
- Ensure chemical reactions at risk of fire and explosion have been controlled through process safety engineering and control.
- Incident and accident reporting
- Ensure that potentially combustible materials and liquids are separated from other products that could lead to ignition.
- Provide water run-off lagoons that can be used in the event of a fire. Water used in fire-fighting can become contaminated, but will run off into these lagoons, thus avoiding the potential contamination of local water courses.

Water Management and Waste Water

Water is used in several different wet operations in manufacturing. These can include cooling, cleaning, and finishing operations. Wastewater can also be created by storm water runoff.

Wastewater can have a high biological oxygen demand and chemical oxygen demand, as well as contain organic waste, solvents and other sediment. This means that, if mixed with local water courses, the oxygen available in the water could decrease, thus killing fish and other aquatic organisms and vegetation.

Given the wide scope of potential contamination, wastewater treatment will need to be specific to the manufacturing process in question.

Ghana's Environmental Sanitation Policy (revised 2010) mandates the metropolitan, municipal and district assemblies (MMDAs) the responsibility of "ensuring the availability of facilities for handling and disposal of domestic, commercial and industrial wastewaters.

The management of water resource is regulated by the Water Resources Commission under the Act of Parliament (Act 522 of 1996).

The *EPA Act 1994* (Act 490) and *the Environmental Assessment Regulation 1999* require that activities likely to have an impact on the environment (including waste, discharges and other pollutants) must apply for an environmental permit to operate[1]. The EPA has strict quality guidelines for the discharge of waste water into natural water bodies. This guidelines must be followed by all entities.

Risk Management

Client companies should implement the following risk management practices:

- Implement policies aimed at reducing fresh water use including:
  - Rainwater harvesting.
  - Finding secondary uses for waste water, such as cleaning.
  - Installing and maintaining adequate leakage control systems.
- Compare water targets with actual performance, to identify areas in which there is excessive water use.
- Practice the pre-treatment of wastewater, by installing adequate waste water treatment systems.
- Use condensation and separation processes to recover used solids.
- Substitute wet operations with dry operations where possible, such as magnetic separation for the cleaning of raw materials.
- Install equipment to accurately record the concentrations of contaminant in wastewater prior to discharge. Ensure that this equipment is regularly inspected.
- Ensure that the terms of any issued permit are complied with.

1 http://www.epa.gov.gh/epa/regulations/permits-large-scale/

Transportation

Manufacturing activities can typically bring traffic to areas of operation. This is because materials are transported to the manufacturing site and finished products plus waste products are transported away. In particular, heavy goods vehicles may be used to transport machinery and large quantities of raw materials, products or wastes..

Risk Management

Client companies should implement the following risk management practices:

- Ensure that only licenced and well trained employees are involved in the use of heavy goods vehicles and the transport of dangerous goods.
- Consider traffic management approaches including identifying potential risks, implementing speed restrictions and avoiding times when roads are likely to be busiest.
- Ensure that all vehicles are equipped with appropriate safety measures in order to decrease the likelihood and/or intensity of catastrophic impacts in the event of an accident.
- Install GPS monitoring equipment to monitor the behaviour of drivers with respect to safe driving. Reward good performance and penalise poor performance.
- Fleet control management for loading and offloading.
- Consider different modes of transport where possible (e.g. rail, which will not contribute to road congestion and is more environmentally friendly).

Noise and Vibration

Manufacturing activities can generate high levels of noise and vibration. This may be because of the mechanical equipment employed, transport used, and any supporting utility functions such as system ventilation and energy use. This is potentially a public nuisance, especially if activity takes place during the evening or night.

Heightened noise and vibration can affect nearby exposed local communities and members of the public, workers and local wildlife.

The EPA has set guidelines for the Noise and must be assessed as part of the Environmental Assessment Regulation (1999) during the development of an Environmental Impact Assessment.

Risk Management

Client companies should implement the following risk management practices:

- Provide workers with protective hearing equipment to minimise their exposure to heightened levels of noise (and ensure the use thereof).
- Monitor noise levels to establish ambient and operational levels, to help manage them.
- Consult with local communities to ensure that noises that represent the greatest disturbance are carried out at times which minimise disruption.
- When selecting equipment to use, consider operational levels as part of the procurement decision.
- Install silencing or muffling equipment on machinery where possible.

Product Labelling

General labelling rules for food, drugs and other goods stem from the Ghana Standards Authority[1]. It states the rules surrounding what information must be marked on a product if it is to be sold. Failure to conform with these rules mean that products may not enter the market place.

Risk Management

Client companies should implement the following risk management practices:

- Ensure that product labelling standards are adhered to, including all relevant information including but not limited to:
    - The name of the product.
    - List of ingredients.
    - Date of manufacture and expiry date.
    - If any special storage conditions are required.
    - The name and address of the producer.

1 http://extwprlegs1.fao.org/docs/pdf/gha17279.pdf

Key E&S Opportunities

There are also a variety of opportunities for the manufacturing sector clients to deliver positive E&S impacts which can benefit their financial bottom lines and engender good will.

In turn, these benefits to the manufacturing sector clients can also lead to benefits to banks in the form of:

- **Increased revenue and profitability from working with clients that have strong, sustainable financial positions;**
- **Increased business opportunities for work with new clients that arise as a result of working in strong sustainable, affluent communities; and**
- **Improved reputation from working with clients who effectively manage E&S issues.**

In order to benefit from these opportunities, banks must first encourage their manufacturing sector clients to pursue the opportunities specific to their sector, which are detailed below.

Opportunities that may improve a client's profitability include but are not necessarily limited to:

- Effectively monitoring operations will help track performance and identify opportunities for increased resource efficiency. These opportunities may include upgrading older machinery or retrofitting equipment to improve energy, water and resource efficiency.
- Reducing dependence on expensive or hazardous materials by exploring alternative, cost-effective and more sustainable materials, where possible.
- Developing innovative new sustainable products that generate additional and potentially more sustainable revenue streams.
- Implementing requisite health and safety and wellbeing practices to reduce the likelihood of accidents and help make the workforce more productive. In some cases, decreased accidents may also lead to lower insurance premiums

Opportunities that may strengthen communities and lead to improved reputation:

- Investing in local community small business start-ups that are working to design innovative and/or environmental friendly products. If commercially successful, these start-ups may be incorporated into a company's business operations at a later date.
- Introducing biodegradable packaging and advertising on packaging that it is biodegradable.
- Advertising to consumers products for which inputs have been sustainably sourced.
- Supporting community investments that align with corporate goals and strategies. This may include investments in building the skills of community youth through training or may include providing basic infrastructure such as roads, waste disposal systems and water if a plant is built in an area lacking these.
- Ensuring products are safe and do not cause any harm to the community or the environment.
- Where possible, using rail or shipping instead of road vehicles and thereby reducing road traffic, congestion and air emissions.

Due Diligence Questions for Clients

- Do you have non-zero accident targets for workers?
- Do you offer health and safety training to workers?
- Do you have emergency response procedures in place in the case of any accidents?
- Have you conducted hazard assessments in line with international standards and methodologies such as the Hazardous Operations Analysis (HAZOP)?
- Do you have a board member dedicated to addressing E&S issues?
- Does your company have any links between E&S performance and executive compensation?
- Do you have a code of conduct?
- Do you have a biosafety framework in place (for pharmaceutical companies)?
- Do you have an energy efficiency policy or programme?
- Have you had an environmental impact assessment, if so how did you perform, if not then why not?
- Have you had any recent product recalls?
- Do you have any instances of permit non-compliance?
- Are you aligned with the Voluntary Principles for Security and Human Rights?
- Are you compliance with Ghana's *Labour Act, 2003*?
- Have you had any local community opposition?
- Do you have a system in place to respond to community grievances?
- Have you incurred any environmentally or socially related fines in the last 5 years?
- Do you have recognized certifications of your operating system e.g. ISO 14001 (environmental management) and/or OHSAS 18001/ISO 45001 (health and safety management)?

Key Performance Indicators

- Number of incidents
- Number of injuries
- Number of fatalities
- Number of near misses
- Cases of local community opposition and complaints
- Release of hazardous waste
- Tonnes of waste to landfill
- Number of fires and explosions
- Cases of employee opposition.
- Number of permit non-compliances
- Energy consumed
- Percent of energy consumed from renewable resources
- Number of human rights incidents
- Release of sulphur oxides (SOx), nitrogen oxides (NOx) and volatile organic compounds (VOCs)
- Water consumption
- Wastewater discharge
- Number of product recalls
- Number of incidents of release of genetically modified organisms

Sources for Additional Information

For further reading banks may find resources from the following organisations useful:

- IFC Environmental, Health and Safety Industry Sector Guidelines (http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/EHS-Guidelines/)
- EBRD Sub-sectoral Environmental and Social Guidelines (http://www.ebrd.com/who-we-are/our-values/environmental-emanual-toolkit.html)
- Ghana Environmental Protection Agency (EPA) (http://www.epa.gov.gh/epa/)
- Ministry of Trade and Industry (http://www.moti.gov.gh/)
- Ghana Investment Promotion Centre (http://www.gipcghana.com/invest-in-ghana.html)
- Ghana Free Zone Board (http://www.gfzb.gov.gh/)
- Private Enterprise Federation (http://www.pef.org.gh/index.php/en/)
- Association of Ghana Industries (http://www.agighana.org/)
- Akoben report (http://www.infomine.com/library/publications/docs/sekyi2011.pdf)
- Sustainable Manufacturing toolkit (http://www.oecd.org/innovation/green/toolkit/48704993.pdf)
- Ministry of Finance Budget Statement and Economic Policy