



## **EXECUTIVE SUMMARY: ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM (ESMS)**

### **Introduction**

The vision of the Ghana Airports Company Limited (GACL) is to position Ghana as the preferred aviation hub and leader in Airport business in West Africa; with the mission to provide world-class airport facilities and services for the benefit of all stakeholders.

The Kotoka International Airport (KIA), and three domestic airports at Kumasi, Tamale and Sunyani operate under GACL. Although some of these airports have been rehabilitated or expanded, traffic throughput far exceeds the design capacity of the airports, which stifles potential growth in the sector. GACL is therefore undertaking a Capital Investment Program (CIP) aimed at building new airport infrastructure in order to increase the capacity of the airports. The CIP derives from the Ghana National Airport System Plan (NASP), developed with the aim of supporting Government policy for an integrated and strategic approach to planning and developing air transport infrastructure services in Ghana.

The preparation of this Environmental and Social Management System (ESMS) is to assist GACL in meeting the internationally-accepted environmental and social management requirements in conducting all operations at the airports. This ESMS principally:

- Is in line with the AfDB's Integrated Safeguard System's (ISS) operational safeguards, and Ghana's EIA Procedures and Environmental Assessment Regulations;
- Defines the Action Plan towards GACL's ISO 14001 certification;
- Demonstrates the management commitment, organizational capacity, resources and expertise requirement and availability to implement the ESMS; and
- Will be disclosed to the public on GACL's website, etc.

### **Environmental and Social Policy and Management Commitment**

GACL has an existing Environmental Management System (EMS) which also reflects GACL's policy commitment to responsible stewardship of the environment. The new ESMS to be implemented provides the following additional features:

- Clearly defined social issues (in addition to environmental ones) of the current and future operations of the airports;
- Prioritized ranking of environment and social issues to guide implementation;
- A sustainability policy that captures also the social commitments including:



- Initiatives to minimize Climate Change causal effects and Carbon footprint; and
  - Social/public and occupational health and safety management areas.
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- Create more avenues (print, electronic, internet and other media) for receiving and addressing environmental and social complaints as well as stakeholder engagements related to operations and other activities at the airports;
  - An action plan with budget for ESMS implementation; and
  - Capacity building programmes to facilitate ESMS implementation and external reporting.

The Sustainability Policy of GACL (in the ESMS) covers environmental and social commitments and safety concerns of all operations of the airports. The ESMS reverberates the policy overview, direction and commitments of GACL management and staff to handle the issues, as well as of stakeholder organizations, strategized to achieve the set goals of the policy. In pursuance of the policy objectives of sustainable operations at the airports in the country, and in complying with all relevant national and international regulations and mandatory standards, GACL is committed to ensuring and addressing the following areas:

- High level management accountability;
- Building capacity for GACL to implement the ESMS;
- Training and awareness for stakeholders and clients;
- Climate Change causal activities and carbon footprint;
- Social/public and occupational health and safety;
- Disclosure of the sustainability policy;
- External reporting and compliance;
- Action plan implementation and reporting; and
- Annual review of the sustainability policy.

### **Description of Operations**

GACL is undertaking the CIP aimed at rehabilitation and increasing the capacity of the airports to handle increasing passenger throughput. GACL operates about eight regular departments, and also other specialized units. Activities of two of these departments, Airports Operations Department (AOD) and Facilities Management Department, have major environmental and social impacts. Some of the operations of the airports include:

- Facilitation services (counter services and check-in to boarding);
- Aircraft parking, fuelling, rescue and firefighting and emergency services;
- Procurement and storage of –
  - Chemicals for use at the Sewage Treatment Plant;
  - Refrigerant for Air-conditioning; and



- Lubricants for running parts.
- Maintenance of Sewage Treatment Plant, lifts/escalators, baggage handling system, fresh water pumping stations; etc.

Other important operational activities carried out and services rendered by key organizations and companies that support the effective running of the airports also generate environmental and social impacts.

### **Baseline Information and Potential Environmental and Social Risks**

The four airports are situated in 3 metropolises (Accra, Kumasi and Tamale) and 1 municipality (Sunyani). Due to the highly cosmopolitan and built-up nature of these 4 host communities; the biological profiles and conservation concerns of these areas are significantly low, except for some appreciable presence of avifauna. The absence of major wetlands or designated Ramsar sites close to the airports therefore eliminates any significant impacts of airport operations from migratory birds. However, a significant bat population thrives on mahogany trees around the 37 Military Hospital, some 1km away from KIA.

The Accra Metropolis is currently supplied by 2 major water sources, namely Weija Waterworks and Kpong Waterworks and has a sewerage system (laid about four decades ago) that covers only 15% of the metropolis and which currently is in a state of disrepair. The Kpone Engineered Landfill; about 30km from KIA treats most of Accra's waste. The Kumasi metropolis is made up of 103 communities, making it the most populous district in the country, with a population of 2,035,064 (2010 PHC). The supply of water to the Kumasi Metropolis and surrounding communities is from two surface water treatment plants: Owabi and Barekese head-works located 10km and 16km respectively from Kumasi. There is a well-engineered sanitary landfill in use at Dompouse.

Sunyani Municipality has a population estimated to be 123,224 with an annual growth rate of 3.8 % (2010 PHC). Potable water coverage stands at 47 % in the urban areas and 33.5 % in the rural areas. The current solid waste collection system consists of communal drop-off and transfer sites situated in locations throughout the urban area where residents can bring their garbage. The Tamale Metropolis is located in the central part of the Northern Region and is about 180m above sea level with some few isolated hills. Solid waste is managed through communal container system, door-to-door collection services; street litter bins systems and evacuation of heaps. The capacity of the Tamale Water Supply System is 4.3 million gallons per day while the daily demand is 12 million gallons. Coverage in terms of numbers is about 450,000 people.

Execution of future airport expansion and upgrade subprojects under the National Airports Systems Plan (NASP) will provide various benefits to Ghanaians and the economy generally. Impacts will be felt in job



creation opportunities, enhancement of economic, business and tourism activities; infrastructural developments; and social inclusion and accessibility improvement.

### **Environmental and Social Risk Management**

The key department for the management of environmental and social risk would be the Airport Operation Department (AOD) which has oversight responsibilities over the Safety and Environment Section (SES) of GACL. The AOD would implement the requirements of the ESM and action plan with support from senior management of GACL (i.e. Board of Directors and Managing Director). Other key stakeholders that would be key to the implementation of the ESMS would include relevant Metropolitan, Municipal and District Assemblies (MMDAs); Ghana Civil Aviation Authority (GCAA); and Environmental Protection Agency (EPA). E&S risk management is focused on the following:

- Waste segregation, handling and disposal;
- Noise and vibration management;
- Management of emissions;
- Energy conservation management;
- Management of vehicular traffic;
- Management of water conserving measures;
- Fire prevention and public and occupational health and safety risk management;
- Wildlife hazard management; and
- Flood risk management.

### **Project Screening**

The screening arrangement evaluates the risk level of various environmental and social aspects of the operations of GACL based on clearly defined ranking criteria which include:

- Level of risk of environmental and social impact;
- Past incidents;
- Actual or potential nuisance;
- Spatial scale of impacts;
- Time-scale of impacts;
- Future activities;
- Legislative requirements; and
- Information availability.

Additionally, screening for sub-projects makes provision for meeting climate change adaptation/mitigation in the areas of efficient use of water resources, reduction in emissions from airport infrastructure and energy use as well as providing effective flood prevention and control plans.



### **Environmental and Social Assessment**

The environmental and social risk assessment covered the following key areas of impact, based on the screening and ranking criteria:

- Potential impacts of handling and disposal of wastes generated: results from activities of airlines, ground handlers, clinic (hazardous waste), retail and catering, cleaning services and other airport stakeholders and could result in sanitation-related diseases;
- Noise and vibration impacts: linked to engine runs, take-off and landing of aircrafts; use of generator sets; alarms, etc and could result in hearing impairment for airside staff;
- Emissions and carbon footprint: relates to aircrafts, ground handling, airport infrastructure use and airport road traffic resulting in release of CO<sub>2</sub>, nitrogen oxides, carbon monoxide, etc and could have adverse impacts on climate change;
- Energy use: relates to activities such as airfield lighting and related aviation activities; terminal buildings and offices, clinic, car parks, street lighting and equipment powering that have climate change implications;
- Vehicular traffic congestion and carbon footprint: relates to availability of car parking spaces resulting in increase vehicular traffic and congestion and has adverse impacts on climate change;
- Wastage of water: linked to leakages on main distribution lines, in washroom pipes and kitchens/pantries, dysfunctional flush system on toilets and taps, and landscaping;
- Potential fire and safety risks: from tank farms with bulk storage of aviation and other fuels; fueling areas, cooking activities; faulty electrical wiring and appliances and could result in damage to property;
- Wildlife hazards: relates to number of birds near airports, types of birds and their height of flight, number of aircraft landings and take-offs and has safety consequences for passengers;and
- Potential flood and inundation risk: from rehabilitation works, lack of or inadequate drains and could affect property and lives.

### **ESMS Implementation Action Plan**

The Action Plan presents key mitigation measures addressing relevant environmental and social impacts resulting from operations at the airports. The plan is to implement over a period of two (2) years i.e. from June 2015 to June 2017. The key action areas include:

- Waste segregation and management: streamline collection (to facilitate recycling and reuse) and weigh and record all waste types by December 2016;
- Air emissions and carbon foot print: incorporate measures to reduce emissions and initiate monitoring to establish baseline and track emission levels by June 2016;
- Monitoring of noise levels for selected areas around and within the airports by June 2016;



- Energy use: 10% reduction in energy consumption in the next two years through use of energy efficient appliances and introduction of solar energy use by June 2017;
- Water use: avoid water wastage, ensure efficient tap and flush system and alternative sources of water to reduce the use of potable water for landscaping (50% reduction by June 2016);
- Fire and safety: test fire prevention and control measures at the airport, keep all personnel abreast with procedures in dealing with emergencies, and conduct simulation drills by May 2017;
- Occupational health and safety: maintain adequate stock of all necessary PPE for all relevant personnel at all sections of operation;
- Stakeholder engagement: Improve public interaction on environmental and social-related grievances, issues or suggestions by June 2016;
- International certification: subscribe to international standards for environmental best practices (ISO 14001) by June 2017;
- Preparation of Environmental and Social Management Plans (ESMPs): prepare ESMPs to address site-specific environmental, social and safety issues resulting from operations by June 2017;
- Wildlife hazard control: strike per movement not to exceed 0.25 strikes per 1000 movement within the specified period
- Capacity building: conduct refresher training and capacity building programmes (December 2016) aimed at keeping personnel up-to-date on the current Environmental and Social best practices.

### **Monitoring and Supervision Measures**

Monitoring and supervision roles would be at two levels covering internal and external roles. The Safety and Environment Section (SES) of GACL will be in charge of all internal monitoring and supervision activities, while the EPA and GCAA will conduct required external compliance monitoring. Monitoring will be conducted for all aspects and phases of operations of the airports and during rehabilitation works, and will focus on the following:

- Monitoring of waste handling measures; covering inspection of bins, weighing of waste, evacuation of sewage tanks and monitoring of effluents from STP;
- Noise and vibration monitoring measures; covering audits for noise abatement reports, inspection of PPE use, review of medical records, etc;
- Monitoring for emissions and carbon footprint; covering audits, installation of samplers at key points, checklists for test runs, etc;
- Monitoring of energy efficiency measures; relating to use of LED lights, renewable energy use, energy procurement policy, etc;
- Monitoring of traffic situation; focusing on directional signage; patronage of mass transport, records of traffic and car park use, etc;
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- Monitoring of water conserving measures; covering checks for leakages on supply lines, dysfunctional flush systems, rain water harvesting system, etc;
- Monitoring of fire prevention and safety measures; PPE use, use of First Aid Kits, inspection of state of water hydrants, permits from NPA and EPA;
- Wildlife hazard control: monitoring of human centered activities that serve as attractants to wildlife
- Monitoring for flood and inundation; covering drainage system audits, de-silting and review of flood management system.

### **ESMS Implementation Capacity**

The setup for the management of environmental, social and safety issues comprise the following (full membership of the various groups:

- Safety and Environmental Steering Committee;
- Safety and Environmental Management Coordination Group;
- Departmental Safety and Environmental Action Group (DSAG); and
- Stakeholder Safety and Environmental Committee.

The Steering Committee, chaired by the Managing Director of GACL is the highest body for decision making on environmental, social and safety issues. The Coordination Group headed by the Safety and Environment Manager reports to the Steering Committee and comprises Safety and Environment Coordinators from all the departments of GACL. The DSAG comprises experienced specialists from the departments in handling on-the-job safety-related issues and is charged with assisting the Safety and Environment Manager. The Stakeholder Safety and Environment Committee collaborates with the other committees in the discharge of their environmental social and safety obligations.

Implementation of the ESMS would be reported to relevant stakeholders such as national regulators (EPA and GCAA) and lenders through the submission of Annual Environmental Reports (AERs) and ESMPs. Summaries of these reports would also be made available on the GACL website.

### ***Community Engagement***

The Corporate Communications Unit of GACL is in charge of implementing public engagement management plan which entails:

- Engagement of neighboring land users through community consultations and feedback;
- Provision of contact numbers, website complaint portals and complaints desk to receive and address complaints from the public; and
- Extensive publicity of these open avenues in the print and electronic media



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### **Conclusion**

GACL's operations have some important economic opportunities and adverse environmental and social impacts in the area of air emissions, waste handling and disposal and public and occupational health and safety. These impacts would also arise in future rehabilitation works under the CIP.

The ESMS identified the key environmental and social impacts associated with the current operations and future development activities of GACL and have provided ranking criteria to help in the prioritization, implementation and mitigation measures. Provision is also made for monitoring and continuous improvement of the management system. An action plan indicating key actions, timelines, assigned roles and budgetary requirements have been provided to facilitate implementation of the ESMS, and towards the attainment of ISO 14001 certification.

Above all the ESMS highlights the policy overview and direction of GACL as well as management commitments to achieving the set goals of the policy; which among others will enhance its corporate image and also demonstrate good international practice and leadership in sustainability in the aviation industry.