

# CONFERENCE REPORT



**Particulate Matter (PM) and Black Carbon Emissions  
Inventory  
Tema Port  
PROJECT TASK FORCE INCEPTION WORKSHOP**

**Date: WEDNESDAY 31 AUGUST 2016**

**Venue: ROYAL NICK INTERNATIONAL HOTEL, TEMA. GHANA**

## **ABBREVIATIONS**

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|       |                                      |
|-------|--------------------------------------|
| ALCO  | Abidjan Lagos Corridor Organization  |
| BC    | Black Carbon                         |
| CCAC  | Climate and Clean Air Coalition      |
| EPA   | Environmental Protection Agency      |
| GHS   | Ghana Health Service                 |
| GPHA  | Ghana Ports and Harbors Authority    |
| OGV   | Ocean Going Vessel                   |
| PM    | Particulate Matter                   |
| SDGs  | Sustainable Development Goals        |
| UNEP  | United Nations Environmental Program |
| VALCO | Volta Aluminum Company               |

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## **1.0 Background**

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Research posits that emissions of greenhouse gases contribute significantly to climate change. Ports are a significant source of global air pollution around coastal areas, exposing people to serious health and environmental impacts. Emissions from operations at ports are mostly from diesel/carbon-based fuel powered engines especially in ocean going vessels (OGV), trucks, locomotives.

Also, the use of diesel engines in ports produces emissions of significant amounts of particulate matter (PM), considerably contributing to regional air pollution. Black carbon (BC), a short-lived climate pollutant, is the second most important human emission after carbon dioxide in terms of its climate forcing.

These emissions have been known to have an important impact on human health and wellbeing; In an effort to understand the nature of the activities of these pollutants in the Tema port area, UNEP signed an agreement with ALCO in 2016, to conduct a project/study named Climate and Clean Air Coalition (CCAC) to Reduce Short-lived Climate Pollutants at TEMA Port.

## **1.1 Workshop Objectives**

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The workshop was organized as an inception meeting with ALCO, port authorities, the working group and the consultant with the view to set up of a working group of expert and stakeholders to oversee the development of a Draft Action Plan to reduce PM/BC emissions from Port of Tema

## **1.2 Participation**

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In all there were 22 participants. These were drawn from a cross section of institutions including ALCO, VALCO, EPA, The Ghana Health Service and Sunon Asogli Power Plant. A full list of attendees can be found in the appendix of this document.

### **1.3 Structure**

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The conference involved the giving of presentations from various invited experts to provide a multi angle background for the work to be undertaken.

Subsequently two groups were formed from which focus group discussions are to take place eventually.

## **2.0 Addresses and Presentations**

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### **2.1 Welcome Address**

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The ALCO Environmental Specialist began proceedings by welcoming the gathering to the occasion. He then thanked the funders of the project he further expressed his gratitude too to all stakeholders present and encouraged them to continue the good work and collaboration being put into this project in order to make it a success. He finally wished the gathering a good conference.

After the ALCO Environmental Specialist, the executive director of the EPA who was also present gave a brief statement. He acknowledged the presence of distinguished colleagues present and also of ALCO, thanking them for taking an interest in the project and making resources available for the project. He reminded the gathering of the importance of air quality, remarking that air cannot be filtered before use, underlying its importance and this the importance of the project. he further commented on the enormous air pollution sources in the port environment and acknowledged their adverse short-term health effects and long term climate change effects. In light of this he stressed the importance of the project, further aligning it to the achievement of the country's recently signed on Sustainable Development Goals (SDGs). He further iterated that the EPA was important for the project and vice versa as it was part of the institutions original constitutional mandate and affirmed his organization's commitment to participating in the project.

## 2.2 Presentations

Presentations were given by various speakers which were aimed at contextualizing the issues surrounding the theme from different professional angles. The consultant also gave a presentation which was aimed at providing a context as to the methodology of the study to be conducted at the Tema Harbor.

| PRESENTER             | ORGANIZATION       | TITLE  |
|-----------------------|--------------------|--|
| Jules Venance Kouassi | ALCO               | PM/BC Baseline Emission Inventory Study at Tema Port in Ghana                                |
| Dr Edith Clarke       | GHS                | Health Impacts of Port Emissions   |
| Lambert Faabeluon     | EPA                | Overview of Air Quality Monitoring & Guidelines: Policy & Legislation, Programs and Projects |
| Mr Philip Acquah      | Project Consultant | Opportunities and Challenges of Port Emissions Reduction Actions - Discussion                |

Find attached in the appendices full presentations delivered at the conference.

## 2.3 Comments and Responses from Presentations

| Comment/Suggestion   | Response   |
|--|--|
| One participant enquired about the contribution of the emergency power barge to emissions  | The consultant mentioned that the study would take into cognizance the boundaries of the port and the companies that operate within that boundary.                         |
| It was mentioned that it would be appropriate to do another analysis between November and February as the change in wind direction changes the scenario as compared to the rest of the year in terms especially of the emissions blowing from the rest of the Tema industrial area | The consultant mentioned that the EPA would carry that out as part of a wider project and that the influence of such a study was important in the dynamics of the analysis |
| On bus rapid transport system, it was requested that more light be thrown on the implementation timeline as it has a lot of emission reduction potential   | Mr Faabeluon commented that a suggestion was made that a proposal for shuttles be provided from the entrance to the inner part of the port was not                         |

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|  | <p>supported by CEOs of companies operating in the port; this may have to be revisited.</p> <p>He further commented that he was unfortunately not privy to information regarding the BRT project and that his responsibility lied with the monitoring of emissions along the west Africa corridor which was on-going</p> |
| <p>it was also suggested that the EPAs air quality monitoring be publicized to serve as an early warning system for people living in such areas and to give an alert as to which groups of people were polluting the environment</p>                 | -  |
| <p>In terms of the issue of minimizing burning of waste there was currently a project which was currently being implemented with the objectives of reduction of unintentional costs and also to phase down the use of mercury containing devices</p> | -  |
| <p>It was also enquired if there a way the services sector is polluting the environment</p>  | <p>It was an area that had to be researched deeper but there was a possibility of particulate matter pollution from folded up industries, and even from carbon footprint of patrons of hotels, etc. further a project called green passport would do this more efficiently.</p>  |
| <p>It was mentioned that as a means to reduce emissions from trucks and public transportation vehicles, rail system could be further developed to reduce the activity of trucks</p>  | -  |
| <p>It was also suggested that the health linkages from emissions in all sectors should be identified and linked</p>  | <p>Ghana already has a health impact assessment baseline and as was mentioned by Dr Clarke this data should be incorporated into the design of the program right from inception</p>  |

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| <p><b>On the recommendation of carrying out health assessment, it was asked how this can be achieved based on the short lifespan of the project.</b></p>   | <p>To this it was suggested that National service personnel to be admitted by industry could be used for the purpose of the study; baseline data could be taken from the period of their admission to after a three-month period</p> <p>Dr Clarke also added that her recommendation was more tuned towards the longer term project spanning 5 to 10 years</p> <p>The consultant also added that one of the recommendations that could come up after the study was a real-time monitoring of health impacts even after the project; thus would lead to more data for analysis</p> |
| <p><b>Moving forward there should be a link between academia such that pertinent research questions from industry would be relayed to academia for research; furthermore, proposals are being put forward for a research fund to be setup for such purposes.</b></p>                           | <p>Mr Poaman also added that the suggestion was a laudable one and should be advocated strongly and extended to other economic sectors such as agric, etc.</p>  |
| <p><b>An enquiry was made as to how the objective of reducing travel distance of vessels to improve fuel efficiency was going to be achieved as numerous factors account for this, these include the type of vessel the type of cargo, cargo held by existing vessels in beddings etc.</b></p> | <p>In response the consultant answered that by logging in similar vessels at specified locations over say a year, it is possible to identify the traffic incoming of different types of cargo and assign specific beddings to each type of cargo. When this is done it is then possible to track the average distance travelled to the</p>  |

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