

NEWSLETTER

BREATHE ACCRA PROJECT

(DATA COMPONENT)

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MESSAGE FROM PROJECT LEAD

I am excited to share the first quarterly newsletter of the Breathe Accra Project (Data Component) which highlights our progress and achievements in the first quarter of 2023. This project funded by Clean Air Fund and to be implemented over a two-year period has a vision to accelerate air quality improvements in Accra to protect public health and help inspire greater action on air pollution in other African cities. The project seeks to (1) ensure openly accessible hyperlocal air quality data in the Greater Accra Metropolitan Area (GAMA), and (2) foster local capacity for monitoring and managing air quality, and mounting surveillance for air pollution-related diseases in GAMA. The project is being implemented in Accra Metropolitan Area (AMA) which encompasses three sub-metropolitan areas, and 12 municipal areas in GAMA with the deployment of about 80 low cost sensors (Clarity node and Airnote) in these beneficiary districts. We have developed a web application (<http://breatheaccra.org/>) to host all the sensors to be deployed and the air quality data to be collected as well as all activities of the project including our community engagements. We entreat you to constantly visit the website to stay up to date with our ongoing activities. We appreciate your partnership on the project and look forward to your continued support to help us achieve our vision.



Prof. Kofi Amegah

CAPACITY BUILDING WORKSHOP ON AIR QUALITY MONITORING

This workshop was held from 22nd to 24th February, 2023 at the Crystal Palm Hotels in Tesano, Accra to build the capacity of municipal environmental health officers (MEHOs) on air quality monitoring. Mr. Emmanuel Appoh, a former director of environmental quality at Ghana EPA, facilitated the workshop on day 1 and covered the following topics: history and legislative framework of regulatory monitoring in Ghana; role of Metropolitan, Municipal and District Assemblies (MMDAs) in AQ monitoring in Accra; mandates of MEHOs; and air pollution levels and trends in Accra and the major sources. Prof. Kofi Amegah facilitated the workshop on day 2 and covered the following topics: sources and health impacts of air pollution; populations vulnerable to air pollution and mitigation measures; importance of AQ monitoring and regulatory instrumentation; low-cost sensors and their relevance for AQ monitoring, and AQ data analysis, visualization and usage. Mr. Desmond Appiah, the country lead for Clean Air Fund, also spoke on funding for AQ monitoring and air pollution interventions in MMDAs on day 1 and also support mechanisms for MMDAs for AQ monitoring. The training workshop was attended by the sub-metropolitan environmental health officers from Ablekuma South, Okaikoi South and Ashiedu Keteke sub-metros of AMA, and MEHOs from Ayawaso North, Ablekuma North, Adentan, La Dadekotopon, Ayawaso East,

Ablekuma Central, La-Nkwatanang-Madina, Ayawaso West, Korle Klottey, Okaikoi North, Ablekuma West and Ayawaso Central Municipal Assemblies.

In addition, personnel from Ghana Environmental Protection Agency (EPA), a representative from the Regional Coordinating Council (RCC) and members of the press were also in attendance. In total, 32 participants comprising 8 females and 24 males participated in the workshop.

The third day of the workshop was a field trip to the monitoring installations of the Ghana Urban Air Quality project (GHAir) which anchors the Breathe Accra project, and Ghana EPA. The field trip offered the participants the opportunity to see a number of low-cost sensors (Clarity Node, Modulair, PurpleAir, Airnote, IQAir and RAMPS) as well as reference grade monitors (Teledyne T640 and TEOM) in operation. The GHAir Project monitoring sites visited was the Kwame Nkrumah Interchange and Accra City Hall sites in the Korle Klottey Municipal Assembly and AMA, respectively. The Ghana EPA site visited was the University of Ghana Department of Physics site. At this site, the participants were also taken through the operations of a NOx and Ozone reference monitor.

The workshop concluded with the project lead outlining comprehensively the roles of MEHOs under the project and included;

- Ensure functionality of air quality monitoring devices in the municipality
- Download data from the web application (<https://www.breatheaccra.org/>) monthly, analyze and present results in assembly meetings.
- Write quarterly air quality monitoring reports and submit them to project lead via email.
- Identify air pollution hotspots (at least five within three months)
- Implement interventions to control air pollution at the identified hotspots and periodically (every 3 months) evaluate them for effectiveness.
- Produce an evaluation report and submit it to project lead via email.
- Create awareness about air pollution in communities by leveraging existing opportunities (at least every quarter)
- Develop plans for implementing Ghana EPA Air Quality Management Plan
- Develop a yearly budget for air pollution control activities and seeks its incorporation into the assembly budget.



Project Lead giving a lecture at the workshop



A section of the participants at the workshop



Mr. Desmond Appiah, Country Lead for Clean Air Fund, giving a lecture at the workshop

Overall, the workshop was a success providing participants with a comprehensive understanding of air quality monitoring and hands-on training in the use of low-cost sensors to monitor air quality.

Project Lead taking participants through operations of a TEOM at the GHAir project monitoring site at Kwame Nkrumah Interchange



LOW-COST SENSOR DEPLOYMENT

The project has taken custody of 15 Clarity nodes and 30 Airnotes to be deployed in the beneficiary districts. 8 Clarity nodes have so far been deployed in the following municipal areas; Ablekuma North, Ayawaso West, La Dadekotopon, Ayawaso East, Korle Klottey, La-Nkwantanang-Madina and Okaikoi North. All the Clarity nodes have been deployed in a central area of the districts.

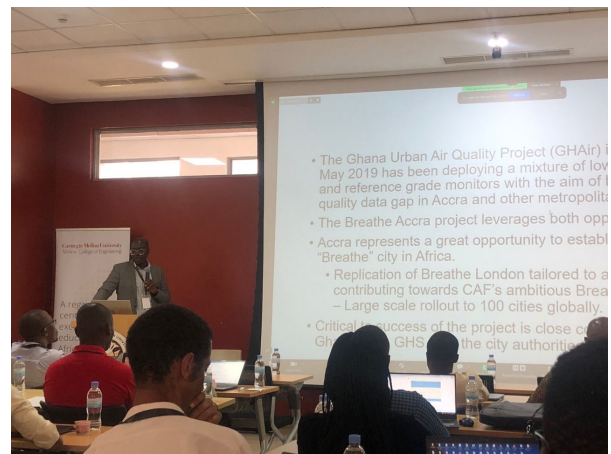
Five airnote sensors will be deployed in each of the beneficiary districts in the following locations: cluster of school, hospital, market center, residential area and lorry station/taxi rank.

Project Lead installing a Clarity Node at Madina Zongo Junction within the La-Nkwantanang-Madina Municipal Assembly.



PUBLICITY ACTIVITIES AND RESOURCES

The project lead attended the CAMS-Net/AfriqAir Conference at the Carnegie Mellon University Africa Campus in Kigali, Rwanda from 7th to 10th March 2023 to outline the vision and activities of the project. The conference was attended by about 100 participants from over 10 African countries, Middle East, Europe and North America. A number of participants also joined the conference online. The conference provided a good opportunity to publicize the project to the Africa air quality community including policy decision makers. The GHAir project twitter handle (@GhanaAQ) will be used to disseminate activities and information under the Breathe Accra project and we encourage our partners and network to follow us via this twitter handle.



Project Lead giving a lecture at the CAMS-Net/AfriqAir Conference at the Carnegie Mellon University Africa Campus in Kigali, Rwanda