

IAF EARTH OBSERVATION SYMPOSIUM (B1)  
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LEVERAGING EARTH OBSERVATION CAPABILITIES TO PROMOTE GOOD AIR QUALITY IN  
AFRICA

**Abstract**

The continent of Africa suffers from the issue of Pollution and lives of people are mostly affected. The cause of pollution includes forest fires, power plants, electronics scraps burning, illegal mining, dumping sites, dust storm etc. Health Effects Institute (HEI) reported that the State of Air Quality and Health Impacts in Africa, provides a comprehensive analysis of major air pollution sources and related health impacts in the continent of more than 1.2 billion people and it is the second most leading risk factor for death across the continent. Studies shows that there is a close link between exposure to fine particles and premature death from heart and lungs disease. In this paper, we present analysis of air pollution measurement we conducted in two locations from two regions in Ghana using air quality monitoring drone and a portable air quality device. The first location is a place in the Greater Accra region called Agboghloshie situated next to the Korle Lagoon. Some of the human activities that take place there includes a market center, bus station, dumping site and e-waste (electronics scrap), burning of electrical wireless to recover copper. The second location is the main dumping site in the Eastern Regional Capital (Koforidua). This location is closer to a university, a newly constructed hospital and habitat of people. The pollutants measured include PM2.5, PM10, CO2, ozone, SO2 and NOx . The results shows that PM2.5 value which has a direct impact on human heart and lungs was extremely high for the two locations. The standard short-term value of PM2.5 is 35 g/m<sup>3</sup> of air. The first location had a maximum point value of 801g/m<sup>3</sup> and the second location obtained a maximum point value of 1140 g/m<sup>3</sup>. These shows that activities in the two areas have a direct relationship on the quality of life of the people.