

# NATURE'S BLANKET AND GOD'S HERITAGE IN DIS(X)TRESS: WHO'S THE DELIVERER?

## ABSTRACT

The 499 inaugural lecture of the University of Ibadan titled Nature's Blanket and God's Heritage in Dis(X)tress: Who's the deliverer is the 12<sup>th</sup> from the Faculty of Public Health and the 1<sup>st</sup> from the Department of Environmental Health Sciences. Environmental Health is a way of life, a profession and a diverse public health discipline that is linked to many disciplines. It is strategic to key global initiatives including the sustainable development goals, agenda 63 of the African Union, one health and the Global Health security. The atmospheric medium or air is Nature's blanket-like or envelope-like covering made up of 6 concentric layers. Over the years increasing human activities have polluted both the outdoor and indoor air leading to severe consequences on the environment, climate and health. Our contribution to atmospheric science spanned the outdoor and indoor environment.

In our studies on outdoor air pollution from industries such as chemical fertilizer, refinery and petrochemicals from the Niger Delta Area, we observed that air quality parameters viz Particulate matter (PM) gaseous substances and toxic micro inorganics and micro-organics exceeded by different magnitude(X) the stipulated guideline limits thus causing dis(X)tress to the atmospheric space. The effect of this pollution on populations using different markers of exposure recorded levels of decline in lung function among exposed population. In our studies on combustion sources, the diesel exhaust particulates recorded the highest PM levels and elicited more toxicological damage on the micronucleus profile of exposed lung cells invitro. Our studies on indoor air showed higher levels of PM<sub>10</sub> and PM<sub>2.5</sub> than the guideline limits by different magnitudes of stress(X). We observed varying burden of bacteria and fungi counts with organisms such as *S. pneumoniae*, *Aspergillus* and *Candida* spp. as the dominant bioaerosols in homes, schools, hospital and farm settings contributing to indoor air related illnesses.

God's heritage are our children and they are the most dis(X)tressed and vulnerable to air pollution according to WHO with over 2 million deaths recorded annually. The impact of air pollution on children can affect pregnancy-related outcomes such as premature birth, low birth weight, intrauterine growth retardation, cognitive dysfunction, decreased intelligence quotient, respiratory outcomes, school absenteeism and birth defects. Nonetheless, we have instituted some remedial measure including tail pipe reduction of air pollution from generators, production of biofuels, tree planting, environmental education and environmental monitoring. Albeit these efforts it is grossly inadequate hence the need for a deliverer.

Children if well trained and nurtured will serve as the "deliverer" providing a critical mass of people, leaders and experts to propagate the ideals of Environmental health and particularly air quality management. The training must begin from home and mothers have a key role to play. It is imperative that government must ensure that environmental health is integrated into the school curriculum at all levels. The University of Ibadan and hence government must appropriate adequate resources to air quality management in terms of training, equipment, monitoring and enforcement regime in order to save our atmospheric ecosystem from further dis(X)tress.

**Keywords:** Atmospheric pollution, Dis(X)tress levels, health effects, Children, Remedies