Global Health Research Unit

Clean modern energy for all

Benefiting health, society, environment and climate in sub-Saharan Africa to achieve the 2030 Sustainable Development Goals

Information Sheet on the NIHR CLEAN-Air(Africa) Global Health Research Unit

2.4 billion people rely on polluting solid fuels and kerosene for household energy

Health
- Household air pollution kills 3.2 million people each year (237,000 children under 5 years). 32% ischaemic heart disease, 23% stroke, 21% lower respiratory infection, 19% Chronic obstructive pulmonary disease, 6% lung cancer.
- 86 million healthy life years lost each year.
- Evidence that disease burden is greater (low birth weight, tuberculosis, cataracts, nasopharyngeal and laryngeal cancers).

Deforestation/ climate
- Firewood and charcoal for cooking and heating responsible for 40% of global wood harvest.
- Cooking with solid fuels and biomass responsible for almost one third of total black carbon emissions and up to 8% of total anthropogenic climate impacts.

Gender impacts
- Women and children, typically responsible for household chores including cooking and collecting firewood, bear the greatest health burden from use of polluting fuels.
- Women spend more than 40 hours per month collecting fuel (time poverty). Reliance on solid fuels has detrimental impacts on women's mental health and wellbeing.

CLEAN-Air(Africa)

The NIHR CLEAN-Air(Africa) Global Health Research Unit will accelerate the understanding of air pollution related disease burden through a unique set of studies that will:
1. strengthen national health systems for community health prevention of HAP related disease and,
2. provide evidence-based recommendations for population transition to clean household and institutional energy.

CLEAN-Air(Africa)'s Aims

Aim 1: To facilitate transition for vulnerable communities and public institutions to clean cooking for positive health, climate and gender

Aim 2: To evaluate and quantify chronic and hidden health burdens from polluting fuel use that can be addressed through clean cooking

Aim 3: To advocate for disease prevention from reductions in air pollution through health systems strengthening

Aim 4: To develop a sub-Saharan African Air Pollution Centre of Excellence (training and air quality monitoring)

Aim 5: Maximising impact through community and stakeholder engagement

Why focus on Sub-Saharan Africa?

More than 900 million people (85% of the region) rely on polluting fuels in Sub-Saharan Africa (SSA)- the highest dependence worldwide.

683,984 deaths each year (8.9% of total mortality) in SSA, more than deaths from malaria and HIV/AIDS.

38 million healthy life years lost each year (7.5% of total burden of disease).

50% of forest degradation in SSA from gathering wood for cooking and charcoal production.

CLEAN-Air(Africa) Partnership

CLEAN-Air(Africa) is a partnership of experts from academic, research and clinical institutions from the UK, Cameroon, Kenya, Tanzania, Rwanda and Uganda.

By partnering with governmental stakeholders in our focus countries, including ministries of energy and health, we provide an evidence-base for policies to scale adoption of clean cooking fuels to help achieve SDG7.

Partners
Cameroon	Doula General Hospital
Kenya	Kenya Medical Research Institute
	Moi University
Rwanda	Rwanda Biomedical Centre
Tanzania	University of Dar Es Salaam
Uganda	Makerere Lung Institute
UK	University of Liverpool

Jointly directed by:

UNIVERSITY OF LIVERPOOL

KENYA MEDICAL RESEARCH INSTITUTE — KEMRI
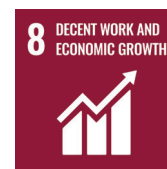
CLEAN-Air(Africa) and the SDGs

The work of CLEAN-Air(Africa) is closely aligned with the 2030 Agenda for Sustainable Development Goals (SDGs), contributing to:

5 GENDER EQUALITY

7 AFFORDABLE AND CLEAN ENERGY

3 GOOD HEALTH AND WELL-BEING

8 DECENT WORK AND ECONOMIC GROWTH

13 CLIMATE ACTION

SDG7: "Clean, Modern, Reliable Energy for All" 2030 not on track
Unless rapid action is taken, the world will fall short of the universal access target for clean cooking by almost 30%, achieving 72% of the population in 2030.

CLEAN-Air(Africa) Impact

The Unit builds on research capacity and health systems strengthening initiated under the NIHR CLEAN-Air(Africa) Global Health Research Group in Cameroon, Kenya and Ghana. The Group was launched in 2018 and has achieved significant impact since this time in three key areas to address the global public health burden from reliance on polluting solid fuels and kerosene for household energy:

Exposure to air pollution
Using state of the art monitoring equipment to quantify health impacts from exposure to air pollution.

Transition to clean cooking
Identifying and addressing barriers to cooking with clean fuels. Informing clean energy policy in sub-Saharan Africa.

Strengthening health systems
Training clinical and community health workforces in primary and secondary prevention of household air pollution.

Read the impact case studies **here**.

For more information visit:
www.cleanairafrica.com

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