

RFIQ 26-1: STUDIES OF AIR POLLUTION AND HEALTH EFFECTS IN EAST AFRICA

INTRODUCTION

This Request for Statements of Information and Qualification (RFIQ) 26-1 seeks to identify promising air pollution and health studies conducted by qualified research teams in East Africa. The East African region comprises eight countries: Burundi, the Democratic Republic of the Congo, Ethiopia, Kenya, Rwanda, South Sudan, Tanzania, and Uganda.

The Health Effects Institute (HEI) intends to fund 2-3 studies, conditional on the quality of potential research projects, the potential impact of anticipated findings, and availability of funds. The objective of this RFIQ is to assess the scope and feasibility of such studies and the qualifications and research experience of potential teams as an initial step in the funding process. Interested potential applicants should inform HEI of potential ideas for research, the composition and qualifications of their research team, and the availability of relevant and accessible air pollution and health data using the Statement of Information and Qualification, described below.

The due date for submission of the Statement is April 30, 2026.

BACKGROUND AND RATIONALE

For much of Africa's population, air pollution imposes a heavy and growing burden on health. In 2023 alone, long-term exposure to air pollution, including ambient (outdoor) and household air pollution, in the African Union resulted in an estimated 1.2 million premature deaths (935,400 – 1.4) and 54 million healthy years of life lost (43 – 69) (HEI 2025a). Exposure to air pollution is associated with a wide range of health effects in humans, including childhood pneumonia and other respiratory infections, chronic respiratory diseases such as asthma, chronic obstructive pulmonary disease (COPD), cardiovascular diseases, lung cancer, and stroke (WHO 2021). In addition, social and economic impacts are broad, including loss of productivity, missed school days, medical and caregiving costs, and reduced quality of life (Fisher et al. 2021, Atuyambe et al., 2024).

In the East Africa region, air pollution is the second leading risk factor for deaths, responsible for an estimated 330,000 deaths in 2023 (HEI 2025a). A major source of this burden is from household solid fuel use, contributing 20 – 25% of the fine particle or PM_{2.5} pollution (McDuffie et al. 2021). The current literature on the health effects of air pollution for the region is limited but largely in line with global evidence (HEI 2025b). Recent programs, including the Eastern Africa GEOHealth Hub, Clean Air Catalyst, Clean-Air Africa, ASAP-East Africa and CAMS-NET, have exemplified collaborative research and demonstrated growing capacity within the region to lead and conduct high-quality studies on air pollution and health.

As countries expand air quality management efforts, there is strong demand for evidence on the beneficial impacts on health and well-being and on the consequences of pollution control. For effective clean air action, existing and new studies should seek to fill this knowledge gap by identifying key sources of pollution, patterns of exposure, and actions that can reduce exposure, therefore leading to public health benefits. Addressing these needs will require bridging the critical funding gap to support the design and conduct of new epidemiological studies.

TOPICS OF INTEREST

Studies considered responsive to this RFIQ can address one or more of the following aspects of air pollution and health:

- Characterization of population or individual exposure to air pollution in indoor and outdoor environments at different spatial and temporal scales.
- Exposure to air pollution from specific sources of importance in East African cities, such as vehicular emissions and domestic fuel burning, and incidence of disease or other short-term outcomes. Biomass fuel burning is also of interest, given that it contributes to exposures both indoors and outdoors.
- Use of existing health and surveillance data to link exposure to air pollution with adverse health outcomes, including cardiovascular disease, respiratory diseases such as chronic obstructive pulmonary disease (COPD), stroke, cancer, diabetes, maternal health outcomes and child health outcomes (e.g., birth weight, child growth and development, and cognitive development).
- Assess the impacts of clean air actions (e.g., household energy policies, cleaner fuels and vehicle standards) at national or sub national levels on air quality, including any population health benefits, to determine the effectiveness and outcomes of policy decisions.

KEY CONSIDERATIONS

Improved exposure assessment techniques increase the power of studies to find associations between exposure to air pollution and adverse health outcomes. However, epidemiological research on the effects of exposure to air pollution can be difficult and expensive to conduct. A potentially cost-efficient approach is to add air pollution exposure assessments to existing studies of populations for which high-quality health data have been or are being collected. Complementing this with multi-country analyses increases the scope of the study.

Pollutants of interest include PM_{2.5}, NO₂, and ozone. There are no preferences with respect to specific health outcomes of interest. A strong statistical analytic plan that demonstrates the ability of the proposed study to address the research questions will be required in later stages.

Given budget constraints and practical considerations, HEI does not expect that any applications will meet all the objectives but will aim to fund complementary studies that address the breadth and depth of the objectives. Applicants need to show that the proposed work submitted to the RFIQ can be clearly distinguished from the ongoing work funded by other institutions.

STUDY DURATION AND BUDGET

It is expected that the period of performance of studies, including report writing, will not exceed 2.5 years, with most studies lasting between 1–2 years. Applicants can propose primary data collection or analyses based on readily available secondary air quality or health data. HEI will also consider proposals for analysis of subsets of data in established cohorts or examination of air pollution episodes or evaluation of regulatory action implemented over multiple years. Multi-country applications are particularly welcome.

HEI encourages interested applicants to describe projects of varying lengths and budgets, with total budgets between USD 50,000–75,000 for each funded study.

ABOUT HEI

For more than 45 years, the Health Effects Institute (HEI) has delivered independent science on how pollution affects public health. HEI unites government, industry, and scientists to inform and evaluate health-protective policies, technologies, and interventions. Backed by a unique public-private funding model that safeguards independence, HEI provides the science needed to shape solutions worldwide. Learn more at www.healtheffects.org.

HEI's Global Initiatives program is engaged in projects around the world, applying science to better understand the health impacts of air pollution. Working closely with local and regional partners, we are informing policy action globally, from broad strategies to local, targeted initiatives, and strengthening scientific capacity to complement ongoing in-country activities.

REFERENCES

- Atuyambe LM, Arku RE, Naidoo N, Kapwata T, Asante KP, Cissé G, et al. 2024a. The health impacts of air pollution in the context of changing climate in Africa: A narrative review with recommendations for action. *Ann Glob Health* 90:76; <https://doi.org/10.5334/aogh.4527>.
- Fisher S, Bellinger DC, Cropper ML, Kumar P, Binagwaho A, Koudoukoupo JB, et al. 2021. Air pollution and development in Africa: Impacts on health, the economy, and human capital. *Lancet Planet Health* 5:e681–e688; [https://doi.org/10.1016/S2542-5196\(21\)00201-1](https://doi.org/10.1016/S2542-5196(21)00201-1).
- Health Effects Institute. 2025a. *State of Global Air 2025: A Report on Air Pollution and Its Role in the World's Leading Causes of Death*. Boston, MA: Health Effects Institute.
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- McDuffie E, Martin R, Yin H, Brauer M. 2021. *Global Burden of Disease from Major Air Pollution Sources (GBD MAPS): A Global Approach*. Research Report 210. Boston, MA: Health Effects Institute.
- World Health Organization (WHO). 2021. *WHO Global Air Quality Guidelines. Particulate Matter (PM_{2.5} and PM₁₀), Ozone, Nitrogen Dioxide, Sulfur Dioxide and Carbon Monoxide*. Geneva: WHO. License: CC BY-NC-SA 3.0 IGO. Available: <https://www.who.int/publications/i/item/9789240034228/>.

APPLICATION PROCESS

Statements of qualification, including descriptions of the available data and study design, must be submitted using guidance provided in this document. Details regarding HEI's Artificial Intelligence (AI) policy are available on the [website](#).

In issuing this RFIQ, HEI is soliciting Statements of Information and Qualification from scientists interested in conducting the research described above. In the submitted statements, HEI is specifically seeking information relative to availability of, and access to, data needed to conduct proposed studies or plans for data collection, including

- air quality data or exposure estimates (based on monitoring or modelling) for major air pollutants proposed for analysis, including information on spatiotemporal resolution of the data;
- where relevant, availability of, and access to, health data on relevant measures of mortality or morbidity, including the key confounders; and
- qualifications of the scientist designated as principal investigator (PI) and other members of the designated team relative to scientific ability and expertise in conducting studies of this nature.

Please note that HEI requires that all submissions be led by investigators with primary institutional affiliation in East Africa.

Also, please note that at this point, HEI is not requesting detailed research proposals; responses to this RFIQ should not exceed 5 pages, and the required font size is **11 point with 1-inch margins, single-spaced on letter paper (A4 size)**. The statement should be converted to PDF format before submitting.

Applicants are requested to provide a description of the proposed study (or studies) indicating the study design. Each application should clearly list the name(s) of the PI(s) or Co-PI(s) and include specific fields of expertise among anticipated collaborators, and a brief description of how their expertise would contribute to designing and conducting the study, analyzing the data, and interpreting study findings. Detailed budget pages are not required at this time.

The Statement of Qualifications should include, at a minimum:

- A project title and proposed timeline, the name(s) of the PI(s) or Co-PI(s), an abstract of 300–500 words, and the estimated budget.
- A summary statement of the objective of the proposal
- Datasets available for use or novel data to be generated, including type of data, data collection period, and any associated QA/QC information
- A listing of the investigators, their expertise, and projects completed by the research team, if any. Note that it is not necessary for the teams to have worked together previously.
- Policy relevance and impact, as applicable

It should also address the following questions:

- What additional knowledge or insights do you expect to generate? What is the overall significance of the project in the East African or global context for which funding is being sought?
- Are we (funder) being asked to fund a particular component of a larger project?
- Is the project a pilot study or seed project leading to a larger one? Or is it a one-off project, complete in itself?
- Are the data currently publicly available? If not, will data be made publicly available upon completion of the project?



EVALUATION PROCESS

Statements of qualification will be reviewed by members of the [Global Initiatives Oversight Committee](#) to determine relevance and suitability and will be ranked based on scientific merit and responsiveness. A limited number of applicants will then be invited to submit full applications. The number and type of studies ultimately recommended for funding will be contingent on merit as well as programmatic review and the availability of funds.

SUBMISSION AND DUE DATE

Please submit your applications for RFIQ 26-1 via email (globalinitiatives@healtheffects.org; subject line: PI last name RFIQ 26-1 Statement) no later than **April, 30, 2026, 11:59 PM EAT**. HEI will acknowledge receipt of the application. Final applications will be due in August 2026.

Questions regarding the application should be directed to Victor Nthusi (vnthusi@healtheffects.org) and Dr. Pallavi Pant (ppant@healtheffects.org).

Conflicts of Interest

HEI's procedures for conflicts of interest are similar to the guidelines set forth by the US National Institutes of Health. Members of HEI's sponsor community are excluded from participating in research solicitation development, applying for support, application review, and funding decisions.

HEI invites external reviewers (or in the case of a major research solicitation, Review Panel members) who are unlikely to have a conflict of interest with the proposal(s) they are asked to review. A conflict occurs when the reviewer is named on the application in a major professional role; the reviewer (or close family member) would receive a direct financial benefit if the application is funded; the PI or others on the application with a major role are from the reviewer's institution or institutional component (e.g., department); during the past 3 years the reviewer has been a collaborator or has had other professional relationships (e.g., served as a mentor) with any person on the application who has a major role; the application includes a letter of support or reference letter from the reviewer; or the reviewer is identified as having an advisory role for the project under review. In addition, HEI staff screen external reviewers for potential conflicts of interest with other applicants who have submitted a proposal under the same solicitations. All Panel members complete a confidential conflict of interest form and are asked to recuse themselves if there is any actual or perceived conflict of interest. Details regarding HEI's conflict of interest policies are available on the [website](#).

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