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Accra, Ghana

Mainstreaming health and climate into urban planning

Case study developed in partnership with the Accra Metropolitan Assembly

5.5 million Accra population size (Greater Accra region)	**10.4 times** the WHO air quality guideline of 5 µg/m^3 (39 µg/m^3 annual average $PM_{2.5}$ concentrations)	**$2,175** National GDP per capita PPP	**14 MtCO2e** National greenhouse gas emissions per capita

Sources of emissions

Transport

Cooking with Solid Fuels

Open Waste Burning

Transportation is the leading source of emissions in Accra

Overview

Accra, Ghana's capital and commercial center is home to 5.5 million people with a daily influx of 2.5 million commuters. One of the fastest growing cities in Africa, Accra has emerged as a leader in the region in tackling air pollution and climate change together. The city has implemented several innovative programs to center health in all aspects of urban planning that affect air quality.

One such program is the Urban Health Initiative, which has transformed urban planning by engaging the health sector on the full range of benefits of health-driven clean air policies. Launched in 2016 in collaboration with WHO, the initiative in Accra aims to be a blueprint for other cities in low- and middle-income countries. Under

the initiative, the city achieved multisectoral health-sector engagement through a six-step process which began with assessment of air pollution levels and then mapping of all the policies and stakeholders that affect the city's air quality. See Figure 1.

For Accra, household energy, transport, solid waste, and land use emerged as the most relevant sectors. The next step was to build capacity across all of these sectors to engage stakeholders and highlight the critical links between air pollution and health. Sector-wise assessments were conducted to quantify the health impacts of existing policies as well as projected health gains under alternative policy scenarios. These scenarios were then used to inform city-level action plans and road maps toward Accra's clean air and climate mitigation goals.

Figure 1. Components of WHO's Urban Health Initiative Model[1]

For example, an evaluation of household energy use in Accra found that shifting to clean fuels such as liquified petroleum gas (LPG), biogas and electricity could avert as many as 1,900 deaths in the city each year. Similarly, an analysis of the transport sector revealed that the economic benefits of improved transport interventions that can save nearly 40,000 lives by 2050 are more than twice the initial cost of intervention, making it highly cost effective. Modeling of alternate scenarios in the waste sector indicated that while expanding recycling and composting options would reduce greenhouse gas emissions, ending waste burning is critical to maximize emission reductions.

Photo Above: A woman uses solid fuels to fry fish. Cooking with solid fuels like wood and charcoal is a source of air pollution emissions in Accra. Photo by Abraham Mwaura, WHO.

These multi-sectoral analyses were then complemented with communication campaigns to widely share the results with community leaders, health professionals, media professionals and other relevant stakeholders. The analyses also revealed gaps in capacity within the health sector that the initiative then proceeded to fill; training opportunities were offered to several groups including health care workers, media professionals, and workers in the solid waste sector. Regular press conferences were held throughout to update citizens on the initiative's progress. Finally, progress in both air pollution and health outcomes are being monitored with a policy-tracking framework.

In 2018, Accra became the first African city to join BreatheLife—a global communication campaign to seek commitments from cities to meet WHO air quality guidelines. As part of this campaign, the city government reached out to the worst hit communities to reduce waste burning and promote development of green spaces. Communication materials were adapted to tell a compelling story of air pollution to specific audiences including community health workers, civic leaders, nongovernmental organizations, community groups, people at increased risk of air pollution-related illness, and the media. Community health workers were engaged throughout the city to promote health messages and advise parents on the dangers of household smoke. The city also launched a “stop waste burning” campaign, using a WhatsApp-based system to identify, report and shut down illegal waste burning sites.

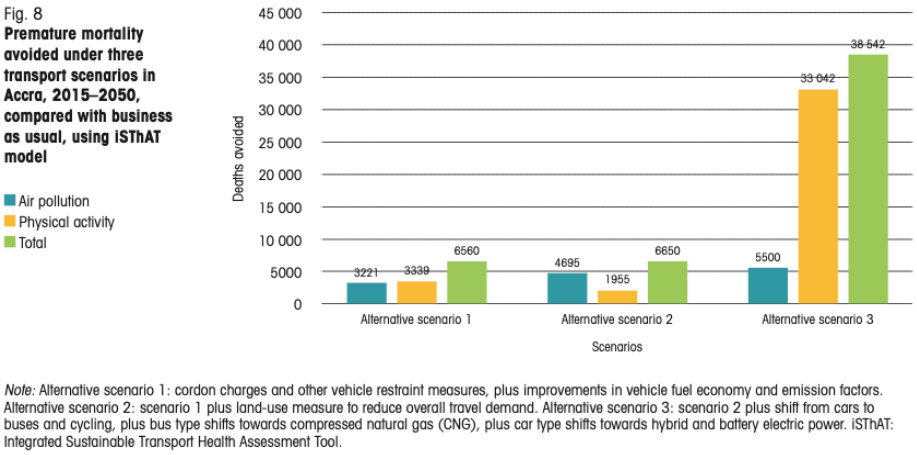

Figure 2 - Premature mortality avoided under alternative transport scenarios in Accra, 2015-2030 [1]

"Practicable actions for Accra’s reduction of carbon emissions have strong implications for our efforts to improve the quality of air in the city. Again, seeing a strong resolution to implementing our inclusive climate actions across waste, transport and household energy would mean more than half of the job done. Yet, the impact will not be felt if we do not commit to investing financial resources to help our circular transition into green technologies and jobs in a just way.”

Hon. Elizabeth Naa Kwatsoe Tawiah Sackey

Mayor of Accra, Chief Executive, Accra Metropolitan Assembly

Impact

Several policy recommendations from the Urban Health Initiative project have been incorporated into Accra's local strategy, including the Air Quality Management Plan, the Accra Resilience Strategy and the city's 2020 Climate Action Plan**.** One of the policy outcomes from the household energy analysis is the Gas Cylinder Recirculation Program to encourage more households to adopt LPG gas in Accra. **Accra has also pledged to cut carbon emissions to zero by 2050**.

Accra set up a health data center to assess various determinants of health and especially to disaggregate health data at the municipal level. This will allow for more effective assessment of health impacts going forward. Seven media houses have made long-term commitments to amplify air pollution, climate change and health stories from Accra and abroad. A University of Ghana media tracking study found increasing coverage of air pollution issues drawing more public attention from 2016 and 2021[1]. As a result of the communication campaign, one community worked with the Ghana EPA to shut down a chronic industrial polluter.

Accra has emerged as a national and global leader in addressing air pollution and climate change mitigation and its efforts have been recognized by C40 as one of the world's seven best climate projects in 2019 for its work to better integrate informal waste collectors into Accra's waste management system. The model has shown how engaging with the health sector can unlock real climate and economic benefits for cities via health-informed policies. Now, representatives of cities in Ghana and elsewhere in Africa are looking to replicate Accra's model.

These innovative actions have also driven national change. In 2018, Ghana published a national action plan to mitigate short-lived climate pollutants, which identifies measures that both improve air quality and help to mitigate climate change. In 2020, it became the first country in the world to include air pollution, in the form of black carbon, in its National Greenhouse Gas Inventory submitted to the United Nations Framework Convention on Climate Change. Last year, in collaboration with WHO, Ghana piloted a program to train health professionals as advocates for clean air policies.

[1] Agyei-Mensah, Samuel, Elvis Kyere-Gyeabour, Abraham Mwaura, and Pierpaolo Mudu. "Between Policy and Risk Communication: Coverage of Air Pollution in Ghanaian Newspapers." International Journal of Environmental Research and Public Health 19, no. 20 (2022): 13246.Harvard. Link: https://www.mdpi.com/1660-4601/19/20/13246

"Air pollution is a major health problem, particularly in cities, but so are other noncommunicable diseases that stem from sedentary lifestyles. There are solutions available now that yield potential multiple benefits for human health. Ensuring that these are given due consideration involves giving the health sector the tools and capacity to quantify all co-benefits in ways that are meaningful to policy and personal decision-making processes."

Dr Owen Kaluwa

World Health Organization Ghana country representative

Health Highlights

- Accra has transformed its urban planning by including health in sectors that are traditionally not health-related but have a substantial impact on health and air quality, for example, transportation, household energy, waste management and land use.
- For each of these sectors, the city mapped the health and economic co-benefits of climate friendly policies. For example, it was estimated that shifting to clean fuels like liquified petroleum gas (LPG), biogas and electricity could avert as many as 1,900 deaths per year. Similarly, an analysis of the transport sector revealed that the economic benefits of improved transport interventions that can save nearly 40,000 lives by 2050 are more than twice the initial cost of intervention, making it highly cost-effective.
- Several of these health-focused and climate friendly policy recommendations are now incorporated into Accra's local strategy, including the Air Quality Management Plan, the Accra Resilience Strategy and the city's 2020 Climate Action Plan**.**
- The city has also set up a health data center to assess various determinants of health and especially to disaggregate health data at the municipal level. This will allow for more effective assessment of health impacts going forward.

Lessons Learned

- Centering health impact assessments within traditionally non-health sectors (e.g., transportation and city planning) can unlock powerful insights for health and climate co-benefits.
- Identifying an array of health benefits for simple intersectional interventions will help garner more political and financial support. For example, infrastructure improvements with social inclusivity goals for pedestrians (like crosswalks) not only have immediate health gains (lower injuries) but also have long-term climate gains, as universal changes like these improve walkability and may prevent future carbon emissions.
- Analysis alone is not enough: Widespread communication of results is what drives momentum to adopt the most effective solutions. Accra incorporated strong social media campaigns with television, radio and print media to effectively communicate climate and air pollution impacts.
- Aligning institutional goals in the achievement of workflow synergies across sectors facilitates both downstream and upstream transfer of critical data and institutional resource needs in a self-sustaining way.

Strategic Partners

The city would like to acknowledge the following partners in supporting its clean air and climate journey:

- WHO (https://www.who.int/countries/gha)
- BreatheLife (https://breathelife2030.org/breathelifecity/accra-ghana/)