

## Indoor air quality in slum areas is a huge problem – but what is the solution?

# IN BRIEF

**Researchers on the CUSSH project investigated the issue of household air pollution in Nairobi slums and the potential effectiveness of policies to reduce exposure and the consequent health impacts.**

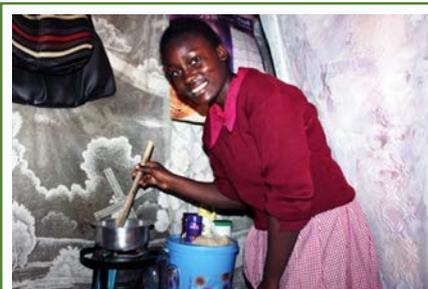
Using a collaborative approach between researchers, policy-makers, the local community and NGO's, researchers considered different strategies to tackle household air pollution. They were able to recommend some policies, but also highlighted some potential barriers that would need to be addressed for these policies to be successful. They also showed which groups needed to be involved and the actions they needed to take to bring around significant positive change.

### Methods:

- Two different slum sites were assessed: one downstream of the city waste area with many long-term residents the other in the industrial area of the city with a younger more educated population.
- A range of individuals from different perspectives attended a workshop to identify the key variables concerning indoor air quality.
- Two models were then developed looking at future developments involving clean stoves, clean lighting, electricity provision, health impact assessments and pollution monitoring.

### Key Results:

- A baseline scenario assuming 'business as usual' suggests a slow reduction in air pollution levels for only about 10 more years, after which improvements are likely to stop.
- The greatest reduction in indoor air pollution was seen in the model that combined: fuel and stove prices, health impact assessments and monitoring of indoor pollution levels, outdoor air and ventilation
- Making money available for monitoring and health impact assessment studies gives the best results in the long term.



*58% of Nairobi's population live in informal settlements in extremely poor conditions. Most households use kerosene, charcoal and wood for cooking. These fuels generate high levels of harmful air pollution into the indoor environment, a major health risk, esp. for women and children.*



**A combination of approaches to improving indoor air quality is required for the greatest impact**

# IMPLICATIONS

**In order to achieve significant reductions in indoor air pollution in slums, a combination of measures must be implemented together.**

Supporting local manufacturers and providing subsidies for cleaner fuels will encourage the public to change methods of lighting and cooking especially when combined with an improved electricity supply. By also incorporating health impact assessments and monitoring of indoor air quality, this will increase public awareness of the issues and potential harm to health. Finally, reducing outdoor air pollution levels and ventilation in homes will reduce the average life years lost to pollution.

## NGO's:

- Raise awareness of the issues of indoor air pollution and its health effects
- Encourage a move to cleaner fuels and provide support to local communities
- Support local and national policy makers to enforce plans and hold them to account to bring about change

## Parastatals:

- Support policy makers in implementing a range of effective measures
- Provide cleaner fuel sources, equipment

## Local and National Policy Makers:

- Raise awareness both within the organization and the general public regarding potential health impacts
- Invest in monitoring equipment and health impact assessments to quantify the actual scale of the issues involved
- Improve electricity provision
- Provide subsidies for cleaner fuels
- Enforce policies, have accountability to ensure the best results

*Faster growth in clean stoves needs money, and one way to increase awareness and bring in additional funds is to invest in health impact assessment (HIA) and air pollution monitoring.*

