HATOF Foundation

Innovative community Investments

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Outline

Brief About HATOF

Energy use in Ghana

Community interventions

About HATOF

National NGO promoting biodiversity conservation, integrated coastal zone management, climate change mitigation and adaptation, sustainable land management and technology based solutions to problems facing local communities in rural areas of Ghana.

Vision

To build a cadre of enthusiastic and energetic young men and women actively involved in environmental management, advocacy and dialogue at all levels of governance with a bid to creating a better world for the current and future generations through local and global actions

Mission

- Develop the skills of individuals and communities to effectively conserve, restore and utilize the natural resources available in the communities for sustainable livelihoods in Ghana and beyond.
- Strengthen democracy, good governance and development by helping local populations find information needed to fight for environmental justice in their communities

Cont'd

- Registered 2001

Currently in partnership with

- Regional Institute for Population Studies, University of Ghana since 2013
- Institute of Statistical, Social and Economic Research, University of Ghana, 2015

Focus

- Research
- Policy Advocacy
- Capacity Building
- Sustainable Livelihood support

Energy use in Ghana

- Ghana's energy mix is comparatively simple but not without challenges
- Ghana's reliance on biomass/charcoal (39.8%), 2014
- Gas and crude (petroleum products, 46.6%
- Electricity (13.6%) to meet its total energy needs of its populations and industry.

Biomass/charcoal

Wood fuel and charcoal is a major source of domestics fuels for more than 80% households in Ghana-thus over **1.3million households**

Patronage in charcoal is expected to increase from 30% in 2015 to 35% in 2016

Contributes to **2.19%** rate of deforestation

INNOVATIVE COMMUNITY INTERVENTIONS

T H E C O M I N G R E V O L U T I O N FOR INSTITUTIONS AND BUSINESS ENTERPRISES

Inefficient and **dangerous**

Assessment of Indoor Air Pollution (IAP) of a Senior High Schools Selected for Introduction of Clean Institutional Stoves in Ghana.

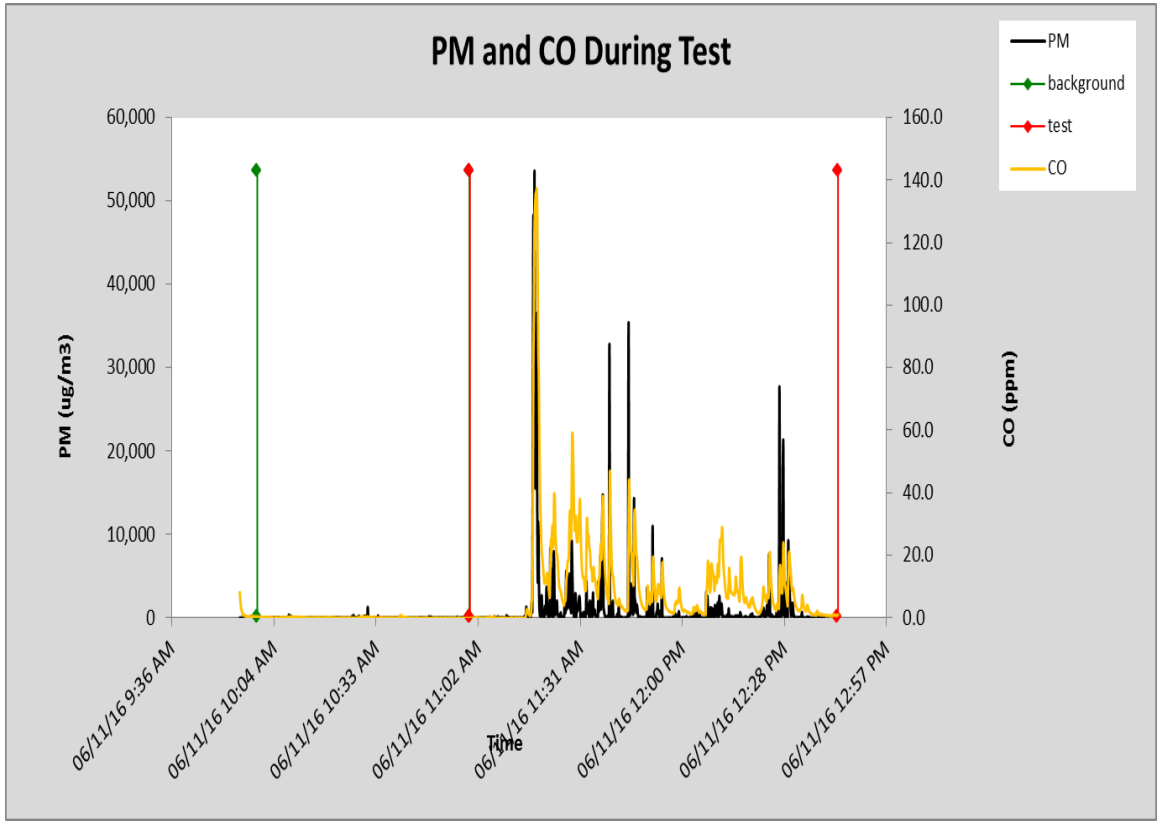


Fig. 1. Particulate matter and Carbon Monoxide measurement during in the day

Background

As part of the Global Environmental Facility Institutional cookstove Promotion (GEF), indoor air pollution (IAP)and promotion of Clean Institutional Cookstoves (CIC) were conducted to ascertain the baseline situation and installation of stoves. Below are the summary of assessment of IAP in the schools, ten in all and some implemented CIC stoves.

Results and discussions and Conclusion

All the Schools could not meet the WHO indoor air quality guidelines for fine particulate matter ($PM_{2.5}$) (annual average interim target (IT)-1 of 35 µg/m^3) (1) and CO (24-hr average of 7 mg/m^3) 2) using an earlier version of the single-zone model described in Review 3.

From the results, the average PM is **1,395 ug/m3, and CO concentration is 11.9 ppm**

Interestingly the highest concentration of PM and CO of **53,573 ug/m3 and 137.3ppm** respectively is the period when the cooks are found close to pot, attending to the fire and food being cooked

The low concentration period is when emission are low, the fire is well lit and hot gases giving off less emission

The new incinerator using an efficient rocket stove with almost no emissions, will convert plastic to fuel as well a burn papers

However the new stove prevents that from happening, using 75% less firewood and producing 97% less smoke. (saves 1,425.571 tons, co2). The cooks can work on the new efficient stoves without little or no emissions from the beginning to the end.

We started with institutions

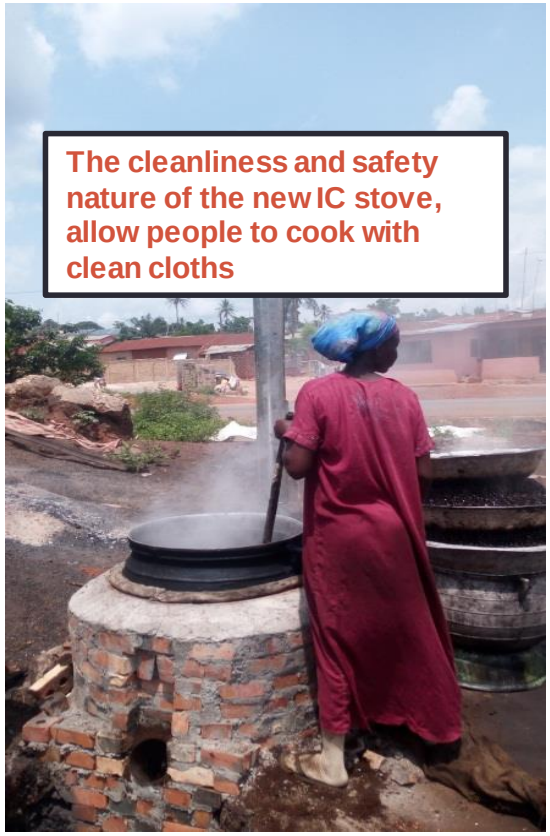
The segment clearly most affected by the woes of old inefficient cooking methods are institutions hence the reason we have started **with institutional clean cook stoves**

Videos to clean Cookstoves in Ghana

- https://www.youtube.com/watch?v=NuBDPITpXoY
- https://www.youtube.com/watch?v=ykWDXq1UG9I
- https://www.youtube.com/watch?v=F1kgB6zbfpk
- https://www.youtube.com/watch?v=GW3OSCsGhBs
- https://www.youtube.com/watch?v=Po7YK7_gW3M

The IC stove in the foreground is safer than the traditional open fire one in the background

The old smoky Stove. The users cannot work with nice clothing



The cleanliness and safety nature of the new IC stove, allow people to cook with clean cloths

The Safety nature of ICs from injuries to kids.

Teacher Training Students experiencing the use of improve cookstove during an Educational Seminar.

The old style/system of Cooking in Senior High School. Look how dangerous firewood is sticking out

75% less firewood and 97% less smoke.

Completed Institutional Cookstoves. Look at the neatness as against the traditional in the same

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GHANA INSTITUTE OF ENVIRONMENT

LAW-MAKING AND DIPLOMACY

THANK YOU

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