Cooking Should Not Kill– *Why there is urgent need to tackle deadly Indoor Pollution!*

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For as long as I could recall, my mother had always used firewood to cook the family meals. It was the only choice of domestic energy we had ever known. For as long as I could remember, she diligently ensured that there was sufficient firewood in the kitchen to keep the fires burning. She inhaled and endured the smoke. Then one day in 2012 she fell sick. At the hospital, she was diagnosed with cancer. Doctors inquired as to whether she was a smoker after they discovered that her lungs were literally charred with smoke. But my mother had never smoked a cigarette in her life. It turned out, that the cause of her cancer was due to years of inhaling kitchen smoke in order to put a cooked meal on our table.

This is one of many cases of women dying of indoor pollution related illnesses in Uganda. According to the United Nations Industrial Development Organization (UNIDO) (Baseline Report of Clean Cooking Fuels in the East African Community (2015), 19,700 people die each year as a result of indoor pollution. The International Renewable Energy Agency (IRENA) (2016) puts the number of people whose health is affected by indoor pollution in the East African Community to 138 million, resulting in 60,000 premature death. At the global level, exposure to household air pollution kills nearly 4 million people every year (Global Alliance for Clean Cooking, 2016). The Pollution silent killer is finding fertile ground in countries like Uganda where everyday millions of mothers and children are exposed to death while using polluting biomass fuels, including: fuelwood, and charcoal on rudimental stoves.

While the discovery about my mam's cancer was devastating, on top of the pain, the tragedy provided a motivation for me to explore ways in which millions of women and girls could be saved from the risks. It eventually led me to think: Cooking should not kill! As a result, I founded a social enterprise called Adapt Plus Ltd (ADAPT+) – an arm of Nature Palace Foundation (NPF), which is a member of Renewable Energy CSO (RECSO) Network with a purpose of promoting clean energy solutions. The innovations briefly profiled below are a result of this effort.

The ADAPT+ Ethanol Stove

Ethanol has been termed as the 'fuel for the future' in rural and peri-urban Africa because it is clean and can sustainably be produced as a renewable energy. The main source in Uganda is from molasses – a by-product of the sugar-making process

The major limitation currently with ethanol adoption in Uganda has been highly priced imported stoves which are also scarce and not customized to local conditions. The ADAPT+ Ethanol Stove that is customized to the local conditions and is affordable to the wider population, being less than half the price of an imported stove.

The ADAPT+ Ethanol stove has been mainly embraced by the urban and peri-urban households where they use it mainly in an energy mix arrangement in addition to other fuels. Some people like Mrs. Ruth Kiwanuka of Joint Energy and Environment Projects (JEEP) have seen ethanol as a pathway to clean cooking and have switched from solid biomass fuels.

Nyota Multi-fuel Stove

The Nyota stove addresses the problem of pollution from biomass fuels like wood and charcoal. According to the Ministry of Energy and mineral development (MEMD, 2014 these are contributing about 94% of all energy consumed, while using polluting, inefficient, and dangerous cooking practices that have led to death of million people every year. The stove is designed to make optimum and safer use of multiple biomass fuels including firewood, wood charcoal, briquettes, maize cobs, grass, twigs and many others, to give users freedom to use the available biomass fuels. The Nyota stove has been mainly so far promoted in Refugee settlements which are some of the most energy-insecure areas.

Recommendations:

i) *Homes should avoid using charcoal/briquette stoves in poorly ventilated/squeezed spaces where people are staying at the same time to reduce the risk of carbon monoxide poisoning;*
ii) *Households Heads should consider Investing in Clean Cooking stoves and fuels. There is a net gain for households that avoid pollution-related illness and death by investing in clean-cooking stoves and fuels;*
iii) *Government through the Ministry of Energy and Mineral Development should consider supporting more home-grown solutions that control indoor pollution.*