INFO BRIEF

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The Catalytic Role of E-cooking Hubs in Kenya: Towards Accelerating Clean Cooking Energy Access and Climate Action

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Loughborough University

ESMAP Energy Sector Management Assistance Program

UKaid from the British people

ACTS African Centre for Technology Studies Knowledge for Better Livelihoods

ARIN AFRICA RESEARCH & IMPACT NETWORK

BACKGROUND

For global climate and development goals to be realized, people have to change the way they cook. Access to clean cooking technologies has to be extended to different regions given their potential to mitigate the effects of climate change. While the impacts of climate change are evident throughout the world, cooking is one area that is often not given much attention despite it being a major contributor to forest degradation, emission of greenhouse gases (GHGs), and preventable diseases in women and children. Cooking is a major part of life and thus the need to promote the use of clean and alternative fuel options like cooking with electricity. When adopted on a large scale, clean cooking technologies such as e-cooking can effectively help reduce the emission of GHGs, conserve the environment, and improve the quality of air as well as the health of individuals and in the process contribute towards climate action.

Kenya is among the few countries in Africa that are expected to achieve universal access to electricity by 2030. It has diverse and stable sources of renewable energy such as wind, solar, and geothermal, something that helps explain why the proportion of renewables in the national grid by 2019 was 90%. Nevertheless, few households and institutions use electricity for cooking despite the remarkable progress with electrification in the country. Access to affordable and clean sources of cooking still remains to be a major challenge in the country where the use of biomass fuel for cooking persists and thus the need to actively invest in and scale up clean cooking solutions. Worth pointing out, however, is that there is no single approach that can effectively address the biomass problem in the country, something that calls for a combination of strategies. A set of options meant to target people from diverse sociocultural settings is likely to yield good results. Kenya for example, through the Ministry of Energy, is in the process of developing a national e-cooking strategy that is anticipated to facilitate the adoption of e-cooking technology in the country. Besides, the rapid progress in electrification presents a good opportunity where e-cooking can be tapped into as a clean cooking solution.

Moreover, The African Centre for Technology Studies (ACTS) and its partners launched regional e-cooking hubs in the counties of Nakuru, Kitui, Makueni, and Kisumu. The hubs were launched in an attempt to address the problems revolving around clean cooking and to promote the transfer of technology to different parts of the country. Electric cooking was promoted by the launch of E-cooking hubs in the mentioned regions to create awareness and stimulate demand for e-cooking. The E-cooking hubs are expected to be centers of excellence where the clean cooking agenda will be advocated for by trained local champions. The hubs are also to act as centers where the flexibility of different financial models will be tested, which will strategically help promote the development of relevant policies at the local and national levels. Most importantly, they will play a critical role in research and impact exploration where data on electric cooking and its impact can be documented.

The hubs will be supported by ARIN through the Modern Energy Cooking Services program (MECS) in partnership with the relevant County Governments, the e-cooking Hub Hosts, the Clean Cooking Association of Kenya, the Kenya Power and Lighting Company, Gamos East Africa, and suppliers

Figure 1: E-cooking demonstrations at RIAT, Kisumu

in the e-cooking sector. Besides, local champions were identified from each region who are to spearhead the clean cooking agenda and carry out awareness programs regularly to mirror the weekly KPLC's Pika na Power demonstrations program.

OBJECTIVES OF THE WEBINAR

The objectives of the 4th monthly dialogue which was scheduled for the 27th of October 2022 was for the hub hosts to share:-

- What they have been doing regarding ecooking, highlighting the opportunities and success stories from the hubs.
- Initial thoughts on the concept note on the ecooking hub sustainability - Hub challenge fund.
- Cross-learning opportunities or proposals.

KEY MESSAGES

67% of Kitui residents, an equivalent of 262,942 households, as per the 2019 census mainly relied on the use of traditional three-stone cook stoves for their cooking needs. So far, CARITAS Kitui has helped 40 families acquire EPCs through its collaboration with ACTS. As such, the hubs have been instrumental in promoting clean energy solutions and continuous learning on the factors affecting their adoption.

Partnerships are crucial if the energy sector is to be strengthened and relevant information communicated to the end users. Given that most people are still rigid and are not willing to embrace clean cooking options like e-cooking, capacity building through consumer awareness campaigns will work to trigger a change of behaviour which will enhance the uptake of the various clean cooking technologies.

The introduction of EPCs at Wote Technical Training Institute (WTTI) has been a game changer in the way things are done in the institution's hospitality department. The hospitality department has a population of around 600 students vis-à-vis a school population of 3,000 students.

Figure 2: E-cooking Demonstrations at WOTE, Makueni

As such, adopting e-cooking in institutionscan increase the student population in hospitality-related courses, lessen costs related to the consumption of electricity in training as well as reduce the expenses that would have been incurred in building more training labs.

Apart from being a clean, reliable, and faster method of cooking, the use of EPCs has also reduced the cost incurred in fuel. Initially, the department would use 135 kg of LPG every week to cook. This was supplemented by 100kg of charcoal every week in addition to the normal electricity bills. However, the EPC brought a shift in the way training was done to the extent that it was mainstreamed into practical lessons. Thanks to the intervention and introduction of EPCs into the hospitality department, the usage of LPG every week was reduced to 60kg while the use of charcoal was abandoned since what used to be cooked using charcoal stoves was replaced by the EPC, which cooks more effectively and faster.

Ramogi Institute of Applied Technology (RIAT) is concerned about how technology can be used to solve humanity's problems. The e-cooking hub being housed within the institution will serve to help dispel thy myths that revolve around cooking with electricity as being expensive through facts.

E-cooking demonstration by student champions increases the acceptability and ease of use of EPCs. This is because it becomes easier to buy the e-cooking idea if it is being championed by their fellow students. The students also act as ambassadors of change since they propagate the information at their disposal back to their parents and custodians.

WAYFORWARD

Dissemination of EPCs remains to be a challenge due to their high prices. There is, therefore, the need to have enough supply of modern cooking solutions as well as price interventions through subsidies to make the technologies more affordable to many people. Worth pointing out is that one of the fundamental components of e-cooking is inclusivity. This implies that all the pertinent actors in the sector are supposed to reach out to different groups of people with the e-cooking gospel, which is the central thought process behind the e-cooking hubs.

Failure to do that will serve to reinforce the historic inequalities concerning access to clean energy. The hubs are thus opportunities through which those at the grassroots level who struggle to make a living can be reached. By devolving e-cooking, the majority of people who rely on polluting fuels will be saved from premature deaths and associated illnesses.

Figure 3: Food sampling session

MECS
Modern Energy Cooking Services

About MECS

Modern Energy Cooking Services (MECS) is a five-year Programme funded by UK aid which aims to spark a revolution through rapidly accelerating the transition from biomass to clean cooking on a global scale. By integrating modern energy cooking services into energy planning, MECS hopes to leverage investment in renewable energy (particularly in electricity access, both grid and off-grid) to address the clean cooking challenge. Modern energy cooking is tier 5 clean cooking, and therefore MECS also supports new innovations in other relevant cooking fuels such as biogas, LPG and ethanol. The intended outcome is a market-ready range of innovations (technology and business models) which lead to improved choices of affordable, reliable and sustainable modern energy cooking services for consumers. We seek to have the MECS principles adopted in the SDG 7.1 global tracking framework and hope that participating countries will incorporate modern energy cooking services in energy policies and planning.

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