

Webinar Series: Accelerating Global eCooking

EnDev in partnership with GeCCo



in partnership with



powerhive
NK-31-06 Electric Pressure Cooker

Multifunctional:

- Rice
- Porridge
- Soup
- Fish
- Chicken
- Meat
- Cake
- Beans

Functions / Specifications

- Keep Warm
- Preset (Delay Timer)
programmable up to 24-hours delay
- 6 liter Capacity
- Heating and Pressure Time Indicator
- Overheat Protection and Safety Lock
- Inner Pot coated and non-sticking
- AC 220-240V, 1000W

Electric Pressure Cooker NK-31-06

CE, RoHS, Energy Star, and other certification logos are visible at the bottom of the box.

EnDev's Webinar Series in partnership with GeCCo: Accelerating Global eCooking

- **Innovative eCooking:** Sharing EnDev's Perspectives
- Developing **Value Chains** for eCooking in collaboration with the Private Sector
- **Innovative financial instruments** to kick-starting markets for eCooking, facilitating Market Entrance and Growth
- Creating an **Enabling Environment** to scale eCooking – e.g. via national policies, eCooking strategies and roadmaps
- Safeguarding **Energy-Efficiency and Quality** via Testing and Labelling of Appliances

Find more:

- [eCooking webinar series “Accelerating Global eCooking”](#)
- [GeCCo – Electric cooking: from niche technology to mainstream living](#)
- [GeCA – Global eCooking Accelerator – EnDev](#)



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Accelerating Global eCooking

Innovative eCooking: Sharing EnDev's Perspectives



in partnership with



Agenda

- 10:00 – 10:05 Opening remarks by Alex Haack
- 10:05 – 10:15 Presentation Uganda – Supporting market development of Electric Pressure Cookers in rural Uganda
- 10:15 – 10:25 Presentation Nepal – Digital innovations for e-cooking market development
- 10:25 – 10:35 Presentation Kenya – Piloting Electric Pressure Cookers in Kakuma & Kalobeyei
- 10:35 – 10:45 Presentation Bangladesh – Bangladesh Energy Access to Modernization (BEAM) Fund
- 10:45 – 11:00 Q&A
- 11:00 – 11:20 Position Statements Panel
- 11:20 – 11:55 Multistakeholder panel discussion
- 11:55 – 12:00 Closing



in partnership with



28 November 2023
Victoria Butegwa, HoC: Cooking Energy
Solomon Atepo, Junior Energy Advisor, Cooking
Energy Component, EnDev Uganda

EnDev Innovation Window: E-cooking Pilot by EnDev Uganda



Agenda

1. Background

2. Outcomes

- Baseline Assessment
- Supply Chain Support
- Enabling Environment Support

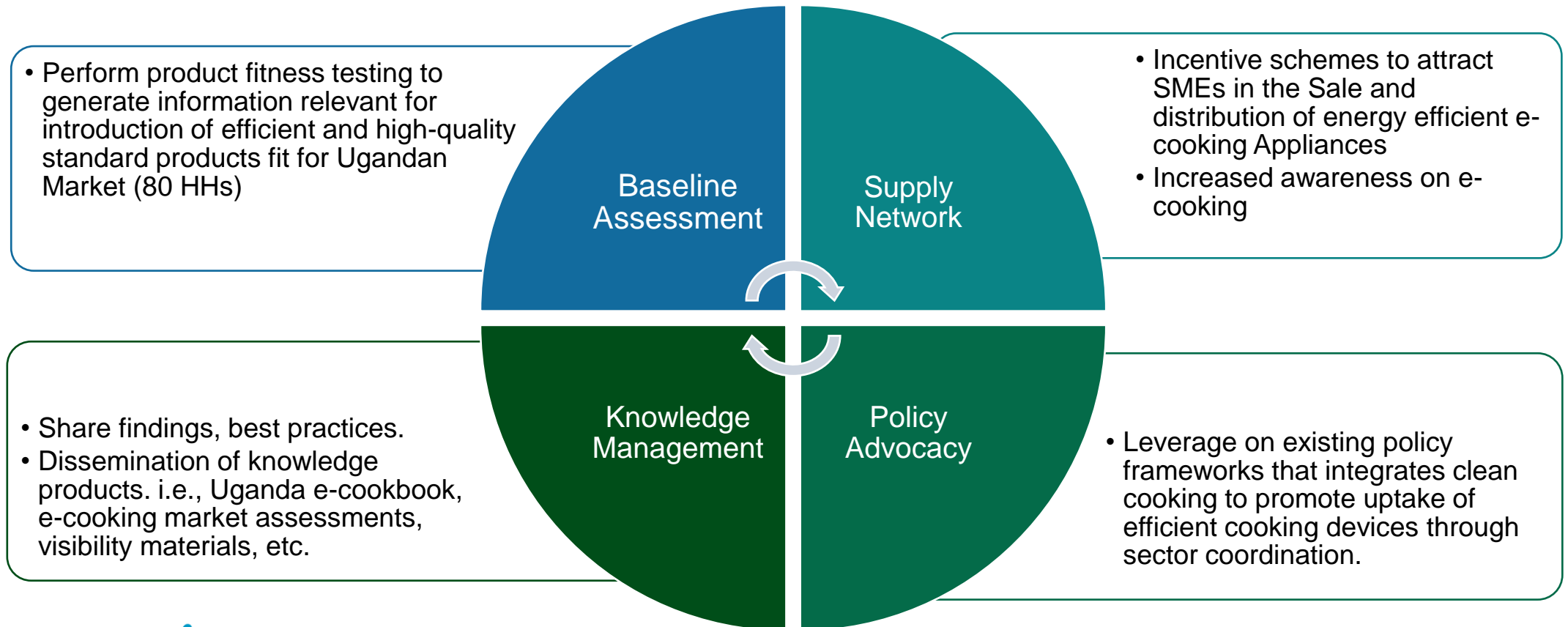
3. Key Learnings and Recommendations

4. Discussions



Overview of the e-cooking Pilot

Objective: Expanding market intelligence on e-cooking in Uganda, establish and strengthen supply networks to facilitate access to at least 400 EPCs for household use, and improve e-cooking framework conditions (MECS as strategic implementing partner).



2.0. Outcomes



Overview of Pilot Outcomes

Strategic Partnerships

Opportunities created for multi stakeholder strategic cooperation, e.g., MECS, CLASP (HTCC)

Economics

Baseline study confirms cooking with electricity presents a cost-effective alternative energy source when compared with other options

Job Creation

3 SME Partners supported to employ key staff across the supply-demand chain, to facilitate energy-related economic development and investments
(Over 40 jobs created)



Market Intelligence

Expanded e-cooking market insights, awareness and identify upscale potential, and policy advocacy around e-cooking

Regional Scope

Insights on usage and willingness-to-pay across 3 regions in Uganda

Health Impact

Reduction in harmful effects of indoor air pollution from use of inefficient biomass cooking stoves **(739 EPCS sold, 3695 people reached)**

“Energy-efficient modern cooking technologies like the EPC are not only compatible but also represent the most efficient(both financial and energy) option”

Source: CREEC – MECS Study on Feasibility of Cooking on Electric Cooking Devices (2020)

Outcomes of the Baseline Assessment



The study based its comparison on the efficiency and effectiveness on EPCs vs. charcoal for cooking.



Households cooked more during the EPC diaries as compared to the charcoal diaries.



63% drop in the amount of charcoal used in the second leg of the cooking diaries.



There was no significant change in the type of food prepared during the two legs. The EPC is suited to cooking at least 80% of the food commonly cooked in the 4 regions.



Energy and time saving of up to 54% when cooking EPC.



100% of the participating HH willing to purchase EPC.

Enabling Environment



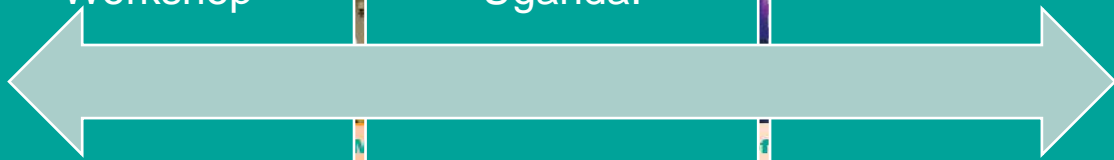
60 Stakeholders including SMEs, Development Partners, Government MDAs Attended the e-Cooking Stakeholders Workshop



E-Cookbook Launched and the e-Cooking strategy under development to support the development of electric cooking in Uganda.



Different Knowledge products developed and used to inform market awareness, and other strategies.



e-Cooking Pilot by EnDev Uganda

Expanding market intelligence on e-cooking in Uganda to establish and strengthen the supply network to facilitate access to at least 400 Electric Pressure Cookers (EPCs) for household use

Enabling Environment

- Government of Uganda to develop an eCooking strategy in order to increase uptake of modern clean cooking technologies from 15% to 50% by 2025.
- E-cooking and other energy efficient and higher tier cooking technologies are now high government priorities.

Market Development

- EnDev Uganda launched an eCooking Baseline Assessment Study in 3 regions of Uganda to assess usage and consumption via smart metering (on-grid)
- Supply Chain partnerships to be competitively tendered in Sept. 2022 to set up distribution network and infrastructure for the penetration of new markets to increase EPC Supply and Demand.

Learning and Innovation

- EnDev Uganda with key strategic partners supported the dissemination of Research and Knowledge products including Uganda eCooking Market Assessment and Uganda eCookBook during the eCooking stakeholders' consultation workshop.
- Overall awareness on the topic was raised through the publication of an article promoting upscaling of eCooking in the nationwide newspaper.



Uganda Energy Access Market Development Overview of e-Cooking (as of 06/22)

The E-cooking market is still largely in the pre-commercial and pioneering phase across key demand and supply indicators. However, the Government of Uganda has placed high priority on promoting clean cooking and adoption of energy efficient clean cooking technologies.

3.0. Key Learning and Recommendations

Key Lessons and Recommendations

Market Intelligence

- **Research and Development** provides insights for growing the local e-cooking appliance market, and the development of testing protocols and standards
- **SME Incentives** targeting Clean Cooking and local distributor companies has facilitated the development of e-Cooking in Uganda.
- **Knowledge sharing** through contributing to e-cooking CoP more awareness has encourage evidence-based advocacy for development of policy frameworks.

Strategic Partnerships

- **Collaborations to leverage best practices**, promote experience sharing, and evidence-based advocacy for promoting e-cooking/Clean cooking e.g., SSN-Benin, CCF 2022, 2023 e-cooking webinars, EnDev HQ E-cooking Task Force, [GeCCo](#) launch, etc.
- **Increased energy financing for e-cooking/higher tier cooking** showcasing a growing interest from different stakeholders to promote and support e-cooking/higher tier cooking initiatives e.g., World Bank EASP, HTCC (RVO funded), EU, etc.

Framework Conditions

- **Strong framework for developing strategic investment** through the upcoming **e-cooking strategy**, and implementation plans for the development of the e-cooking Market in Uganda.
- **Government incentives and policies that integrate electrification with clean cooking** provides opportunities for the growth of the e-cooking market in Uganda e.g., Umeme – MECS Project, WB EASP project
- **Access to Finance:** Equity Bank offering reduced loan interest rates to UNACC SME members; EASP Project with MEMD and UECCC, etc.

Recommendations



Market Development: Support the SMEs with findings from the baseline assessment to inform marketing and awareness approaches



MDA and Stakeholder Engagement: Joint input into the final baseline report, synergies with MEMD-MECS e-cooking baseline study, circulate E-cookbook, collaborate on HTC scale up efforts, cooperation with CCA and others



Upscale Potential Approach: Align on any further market assessments needed based on on-going pilot lessons, cooperation with e-cooking/higher tier cooking projects

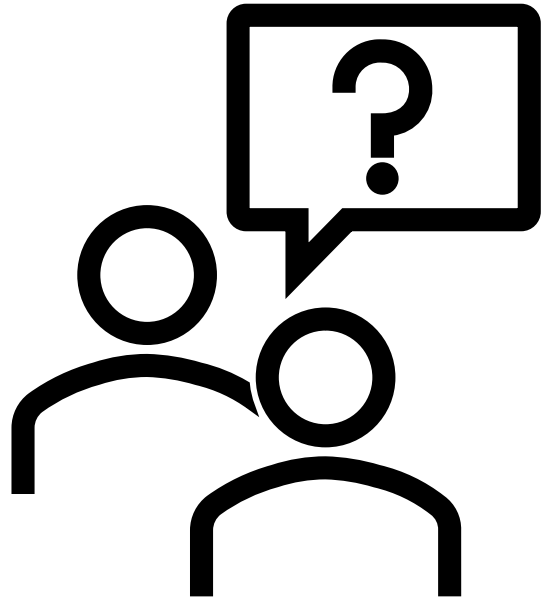


Learning and Innovation Agenda: Contribute to Higher Tier Cooking Community of Practice, new HTCC project launching in 2023 (TBC), Develop knowledge products and exchange sessions



Discussion + Question and Answer Session

- Overall Feedback/ Other open points



Thank you for
your attention!

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Digital Innovations for eCooking Market Development in Nepal implemented by Practical Action

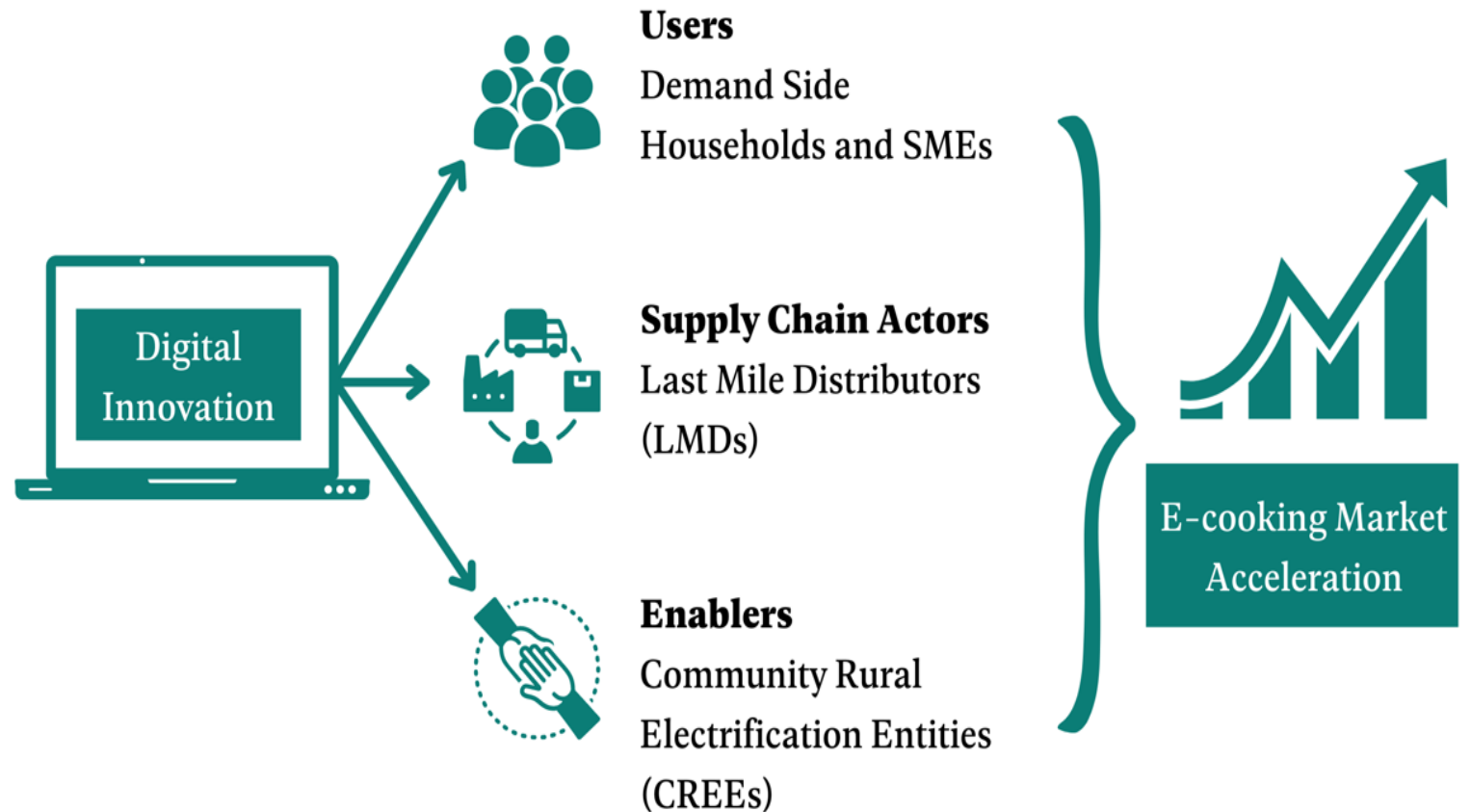
*"Innovative eCooking: Sharing
EnDev's Perspectives" of
EnDev's eCooking Webinar
Series Accelerating Global
eCooking*

28 November 2023



Background

- Data
- & Digitalization

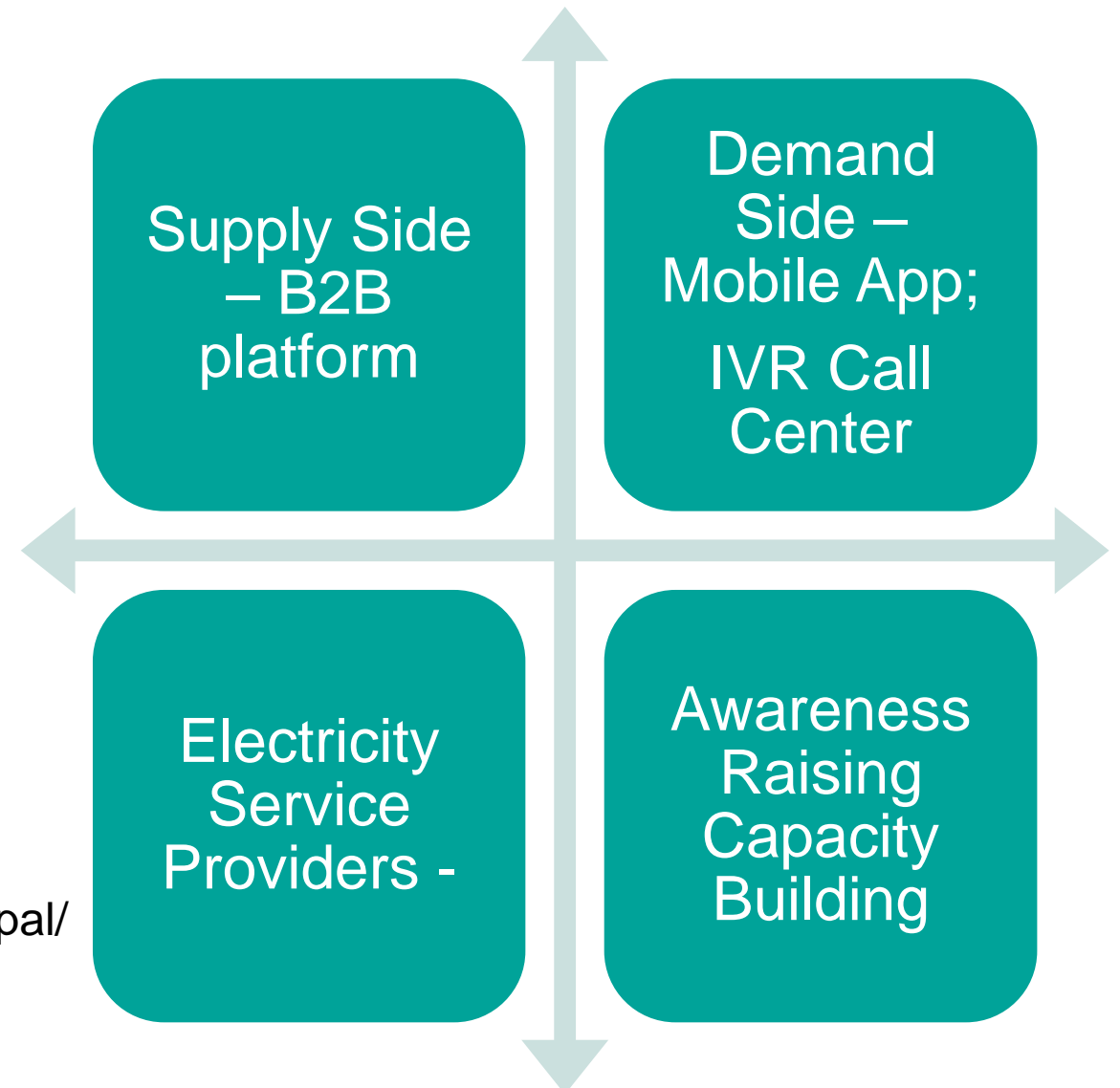


To address the slow eCooking market growth

Methods



Visit the site for more info about the project:
<https://practicalaction.org/our-work/projects/e-cooking-nepal/>



Outcomes

Mobile learning app



Bijuli Chulo

Bijuli Chulo is a mobile application designed to inform about electric cooking and associated facts. This application is designed to aware people of the requirements, benefits, and uses of electric cooking.



- 17 videos (recipe, cleaning, electricity safety, promotional song)
- Other pamphlets and IEC materials

For Consumers

IVR/Call Center & Bulk Messaging



9886049905



A call centre has been set up to answer the queries from the communities related to electric cooking.



Awareness messages are being sent directly to communities through voice calls using the Interactive Voice Response.

- Reached 5016 households in Parbat & Syangja District
- 75% of participants were very interactive (Listened full audio)
- More than 55% participants called back to learn about E-cooking
- Both men and women have equal participation during IVR campaign
- 30% of the participants enquired about **price and location**

B2B digital platform



Damipasal.com

Damipasal.com is a Business to Business (B2B) platform desined as a digital wholesale market for electric cooking products.



By the end of Project period, *March 2023*:

- 4 Suppliers
- 5 Last Mile Distributors
- 5 Last Mile Retailers
- Sales: 637 sets of eCooktops

For Supply side actors

Electricity Supply Side (CREES)

Management Information System (MIS)

- One stop Information hub about CREES
- Systematic data storage
- Simplifying monitoring by NACEUN
- Simplifying Planning and Projects Development

Self Assessment for CREES

- Status Evaluation
- Tracking Progresses
- Assessing capacity needs for institutional strengthening

Key Learnings

- More time for absorption of innovations – experience impacts
- Exit strategy with partner ownership – key to sustainability of digital systems
- One stop solution digital dashboards – attract more users
- Issues to be addressed – electricity supply systems in addition to demand and supply of goods
- Integrated planning for Electricity supply system, quality technology and digitalization – enhance eCooking adoption rate
- Extensive coordination among Stakeholders – Local Government, Local Media ..

Recommendations

- Allocate more time for testing the innovations as such with more resources
- Onboard private sectors partnership – owns the system
- Extend partnerships with regional-level business networks, local media
- Support local authorities (governments) to priorities clean energy in their plans
- Address affordability, availability, awareness and investment concerns innovatively
- Develop a robust monitoring and evaluation framework

Partners



EnDev Innovation Window
The Netherlands
Enterprise Agency (RVO)



Demand side - NACEUN
(Implementing Partner)



Supply side - ABF
(Resource Partner)



Contributors



**Thank you for
your attention!**

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November 2023

Piloting Electric Pressure Cookers in Kalobeyei (PEPCI-K)

Speaker: Karlijn Groen (SNV)



Background: EnDev in Kakuma & Kalobeyei

- Kakuma refugee camp
 - Established in 1992
 - Currently hosts 255,000 refugees of which 53,000 in Kalobeyei
 - Uses firewood and charcoal for cooking (96%)
- EnDev is active since 2017 with the Market Based Energy Access Project implemented by SNV (Kenya)
 - Transition from donation-based to market-based access to Energy
 - Promoting market-based access to improved cookstoves and solar for household and business use.



Piloting Electric Pressure Cookers in Kalobeyei (PEPCI-K)

Overview

Implementors: SNV (project management and field implementation) & CLASP (research lead)

Objective: Test the commercial distribution and use of EPCs to gain insights into EPC market development and mini-grid capacity requirements

Timeline: November 2021 – December 2022

Location: Kalobeyei integrated settlement (primary focus) and Kakuma area

Partners: Renewvia Energy (Mini-grid developer), UNHCR, Solaria Enterprises (distributor)

Activities

Product testing

Testing of 20 EPCs with 15 HH and 5 eateries

Product distribution

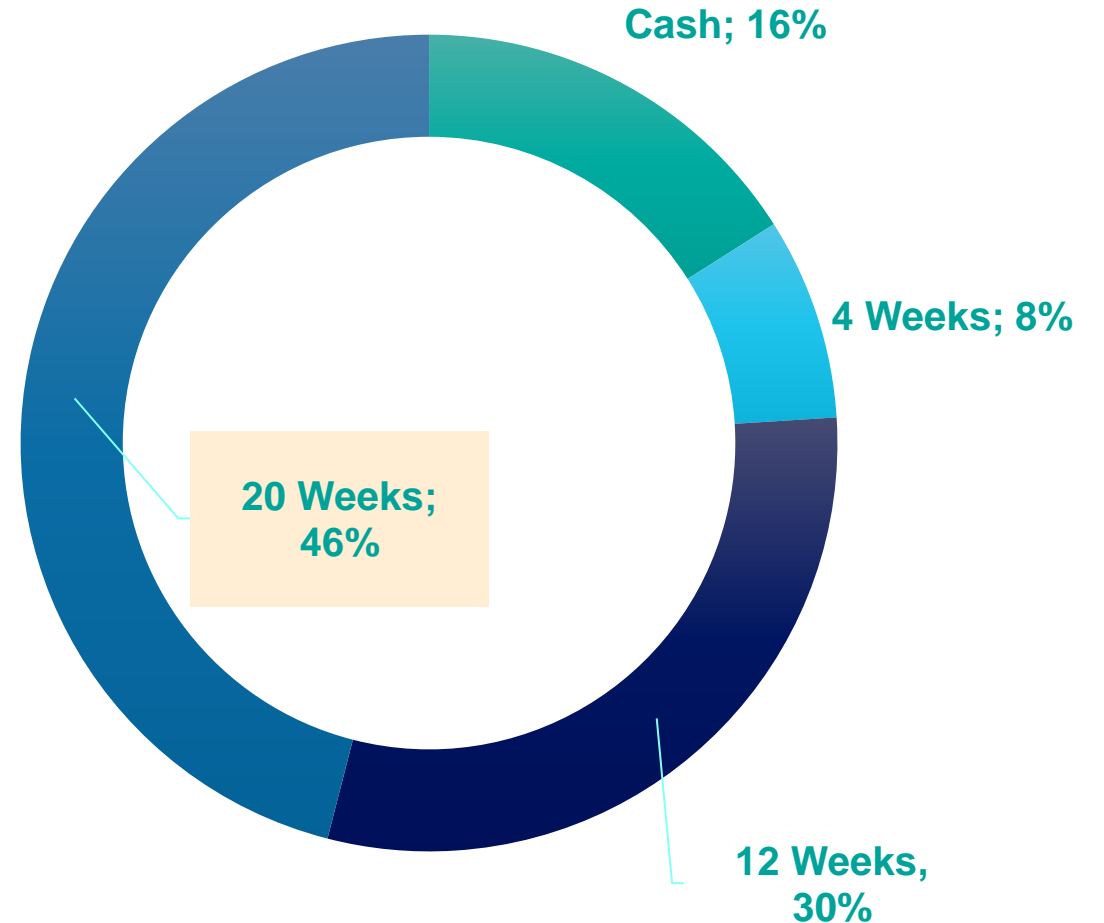
- Commercial distribution of 80 EPCs
- Developing and testing payment products

Data collection & analysis

- EPC uptake and payment products' performance
- End user experience
- Electricity consumption

Outcomes: Commercial distribution and payment models

- **Households showed good demand and willingness to pay for EPCs with 80 units sold**
- **The EPC payment plans recorded high default rates**
- → Mix of insufficient customer vetting and payment recollection processes and system, low purchasing power, common indebtedness culture, focus on distribution as opposed to collection



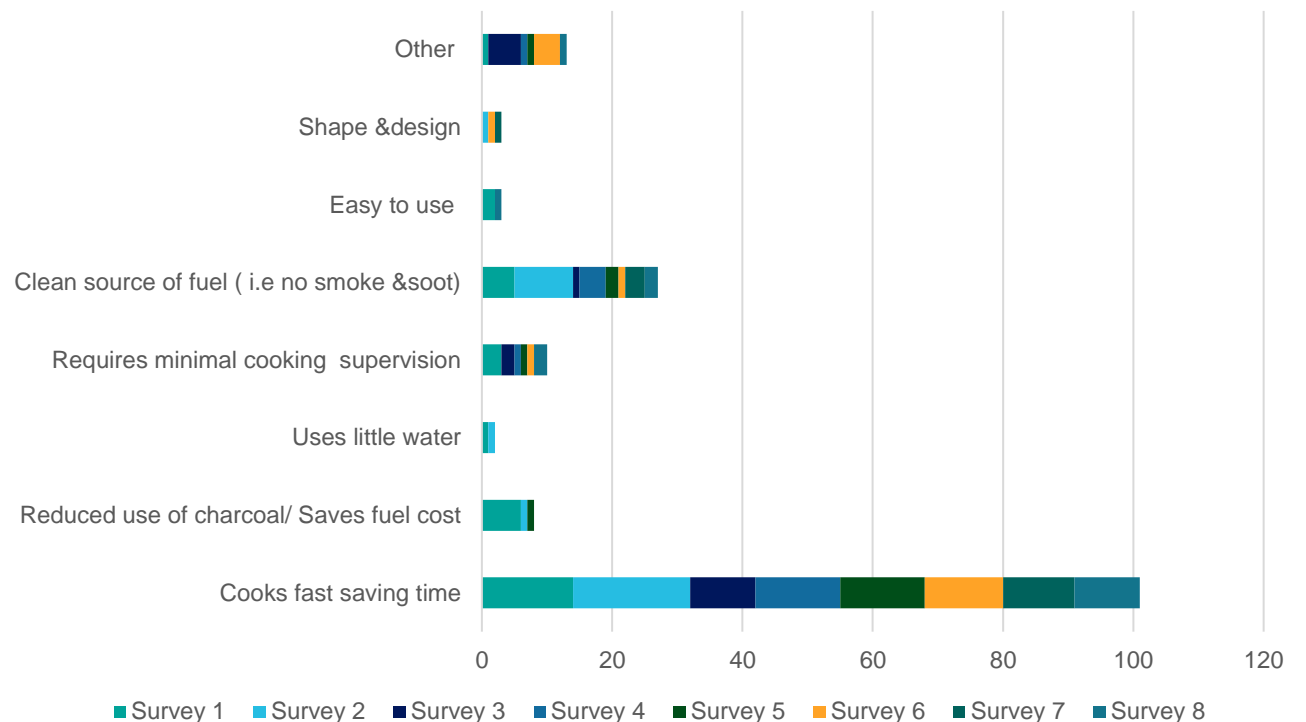
Outcomes: end user experience

- **Good market-product for households**
 - Users cook with EPC 2 times a day (if electricity allows), report primary (biomass) fuel savings, water savings and time savings inc. during cooking
- Local (and diverse) meal preferences compatible with EPC cooking
- People like the faster cooking time, and it being a clean source of fuel most
- Small pot size and lack of spare pot are least liked

Barriers to uptakes:

- People not owning an EPC mention lack of access to finance and the high price of EPC

The Best Liked Aspect of the EPC Appliance



Key learnings & recommendations

- **Good product market fit for household use** and positive impact end users lives by reduced cooking time, fuel costs, water consumption
- **Efforts should focus on after sales end user training** to optimize benefits and ensure sustained use
- **EPCs can be accessed through payment in instalments**, however, the high total price of the EPC and instalment payment collection remains a major challenge hence need for **Access to Finance**
- **Interventions should capacitate the private sector** to build a sustainable supply chain, with inclusive business model and clear reverse logistics for after sales
- **EPC uptake among mini-grid customers has potential to increase mini-grid electricity consumption**, however, requires reliable and consistent supply of energy and additional end user training to ensure sustained and frequent usage

Current situation

Kenya:

- E-cooking market increasingly growing in Kenya in terms of distributors and appliances
- Inc. introduction of data-driven devices allowing for carbon finance integration

Kakuma:

- Mini-grid systems in Kakuma will be extended allowing more households to cook with electricity
- EnDev IV project partnered with two companies who will sell EPCs in Kakuma



Thank you for
your attention!

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Bangladesh Energy Access to Modernization (BEAM)

EnDev Innovation Fund 2022-2023

Global eCooking Coalition (GeCCo)

Accelerating Global eCooking Webinar Series
Innovative eCooking: Sharing EnDev's Perspectives

28.November.2023



Bangladesh Energy Access to Modernization (BEAM)

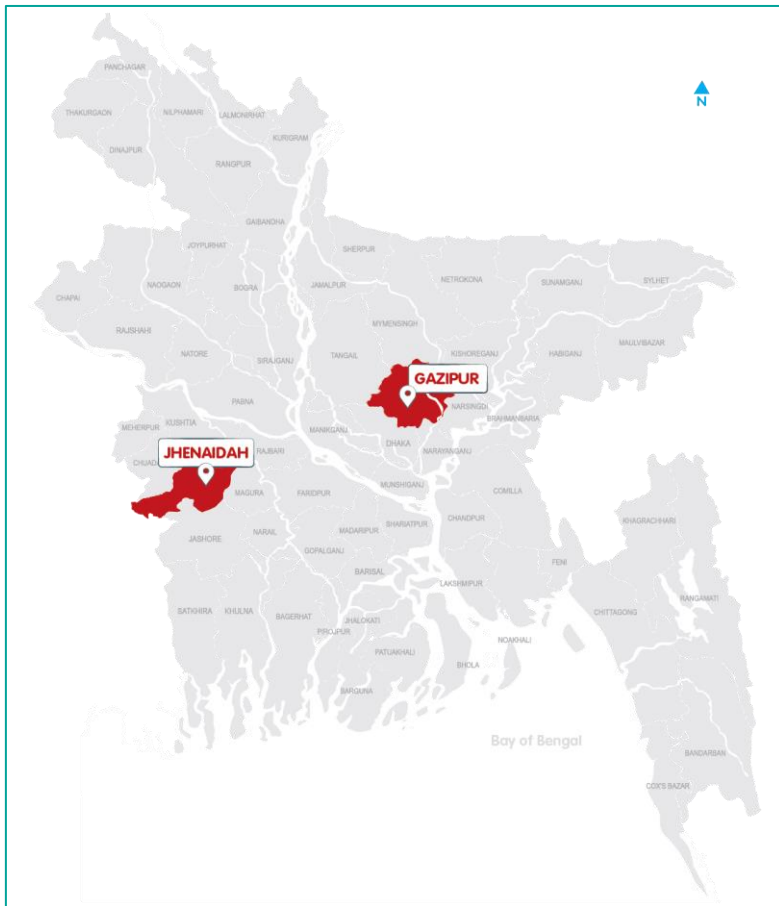
At a glance

Thematic focus	Leave no-one behind Test effectiveness of conditional and unconditional demand-side subsidies for e-cooking
Geographic scope	Bangladesh - Gazipur and Jhenaidah
Project period	November 2021 - June 2023
Budget	EUR ~250,000
Technology	eCooking
Implementer	SNV
Strategic partners	CLASP and 60 Decibels (research partner)
Absolut targets (until 2024)	7,500 persons across 1,500 households with clean cooking access (original target 2,000 hh) by June 2023.



Project Area & Key Achievements in Numbers

BEAM intervention areas



Selected Brands & eCooking Technologies



Demand Side RBF Received

No. Beneficiaries Receiving Subsidy	1,511 (Female:704)
CDA beneficiaries (conditional)	264 (Female 166)
UDA beneficiaries (unconditional)	1,247 (Female 538)

Significant sales difference between UDA (1247) and CDA (264)

- Challenges with targeting CDA Customer Group: costly and limited effectiveness
- Reaching poor individuals in Bangladesh extends to peri-urban and rural areas where vulnerable populations are mainly elderly limited technical literacy

Innovation Testing: Hypothesis Validity & Key Findings

Hypothesis-I

Providing demand-side subsidies increases e-cooking solution acquisition

Conclusion: Hypothesis is supported and true

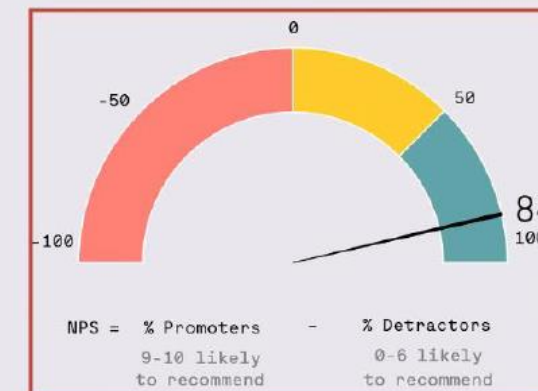
Key Findings

- **Availability of demand-side subsidies** has positively influenced customer acquisition in both UDA and CDA
- **Local retailers experienced a notable 20% increase** in sales compared to their regular (business as usual), demonstrating the success of promoting e-cooking solutions
- Many customers (65% overall) were **first-time users of e-cooking solutions**, indicating a significant potential for market expansion
- Customers reported a substantial improvement in their **quality of life** (93% of customers) and a reduction in their **weekly spending** (87% of customers)
- Customers reported a high satisfaction and loyalty in these e-cooking products, with **high Net Promoter Scores (NPS) of 85 and 84**, indicating a significant potential for market expansion (*60Decibels study on BEAM project 2023*)

The NPS for both groups is very similar; e-Cooking products have an NPS of 84 in Bangladesh, which is excellent and higher than the 60 Decibels Energy Benchmark of 45.

Net Promoter Score® (NPS)

Q: On a scale of 0-10, how likely is it that you would recommend the e-Cooking product to a friend, where 0 is not at all likely and 10 is extremely likely? (n = 326)



TOP 20% - 60dB Benchmark

Segments	NPS
CDA	85
UDA	84

Highlight

UDA and CDA customers express similar satisfaction levels with their e-Cooking product.

Innovation Testing: Hypothesis Validity & Key Findings

Hypothesis-II

Conditional subsidies that target prior ICS owners increase share of poor customers acquiring an e-cooking solution

Conclusion: Hypothesis is valid but not supported and false

Key Findings

- Near identical income segmentation across UDA and CDA populations
 - Largest segment served are Low Income Hh (46% total consumers) earning \$1.90-\$3.20 per day
 - Poor and Emerging Middle Class are equally represented (26% each)

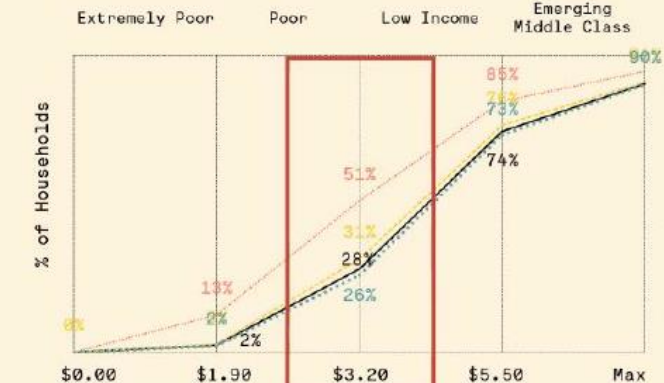
Income Segment	Extremely Poor	Poor	Low Income	Emerging Middle Class
<i>USD per Day</i>	<\$1.90	>\$1.90 <\$3.20	>\$3.20 <\$5.50	>\$5.50
National	13%	38%	24%	15%
UDA Customers	2%	24%	47%	27%
CDA Customers	2%	29%	45%	24%
Overall (UDA,CDA)	2%	26%	46%	26%

The income profiles of CDA and UDA customer groups are comparable.

Customers' Income Distribution Relative to Bangladesh Average

% living below \$x.xx per person per day (2011 PPP) (n = 332)

— e-cooking customers - - - - Bangladesh national population
 - - - - CDA - - - - UDA



Inclusivity Ratio

Degree to which e-Cooking product is reaching low-income clients in Bangladesh (n = 332)

0.54 - Overall
0.58 - CDA
0.52 - UDA

1 = parity with population;
 > 1 = over-serving;
 < 1 = under-serving.
 See Appendix for calculation.
 ●○○○
 BOTTOM 40% - 60dB Benchmark

Key Finding: Importance of tailored marketing efforts

FGDs & demand creation
in the Community



Door-to-door campaign
for awareness-raising and
demand creation



Challenges and Lessons Learned

Challenges



BUILDING TRUST THROUGH LOCAL INVOLVEMENT & ENDORSEMENTS



IMPLEMENTING INNOVATIVE FINANCING FOR LOW-INCOME USERS



BALANCING SUBSIDIES & AWARENESS CAMPAIGNS FOR UPTAKE

Lessons Learned



SUPPORT FROM RETAILERS AND COMPANIES FOR MARKET GROWTH & CREDIBILITY



MONITORING PRODUCT QUALITY FOR CONSUMER TRUST



TARGETED COMMUNICATION METHODS FOR AWARENESS CREATION



IN-DEPTH UNDERSTANDING OF SOCIO-ECONOMIC STATUS OF TARGET AREAS

Recommendations for End User Subsidy Lab

Design	Careful design of conditional subsidies when targeting the poorest customers
Include	Supply chain development with private companies for affordable e-cookers
Collaborate	Collaborate with local government and private sector for awareness campaigns
Learnings	Engage and share learnings with local government to increase ownership
Trainings	Provide training to increase access to digital financial services like Bkash:MFS
Intensify	Intensify community demand creation campaigns, such as live demonstrations
Integrate	Integrate incentives with social assistance programs



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Panel Discussion



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Outlook

Find official webpage [GeCCo – Electric cooking: from niche technology to mainstream living](#)
incl. founding principles, EoI, LoI

GeCCo will be launched at COP28
[Electrifying Cooking: A Just Journey Towards Net-zero \(cop28.com\)](#)

5.12. at 11:30-12:30
Blue Zone, Presidency space



GeCCo



Global Energy Alliance
for People and Planet
GEAPP



Outlook II

EnDev's contribution to GeCCo: [Global eCooking Accelerator – EnDev \(GeCA\)](#)

Stay tuned in 2024: cont. [eCooking webinar series “Accelerating Global eCooking”](#)

- **Innovative financial instruments** to kick-starting markets for eCooking, facilitating Market Entrance and Growth
- Creating an **Enabling Environment** to scale eCooking – e.g. via national policies, eCooking strategies and roadmaps
- Safeguarding **Energy-Efficiency and Quality** via Testing and Labelling of Appliances
- Developing **Value Chains** for eCooking in collaboration with the Private Sector



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Swiss Agency for Development
and Cooperation SDC



Netherlands Enterprise Agency



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