



# Overview of the 18 MECS Projects in Nepal: Developed to Support Scaled Uptake of Electric Cooking

MECS Nepal Dissemination Event 2023. April 7<sup>th</sup>, 2023





# Overview: the 18 MECS projects identified and funded in Nepal

Page	Ongoing research consultancy (initial findings presented in this document)	No of projects in Nepal	Link	Locations	End date
5-13	Sparking the Cooking Supply Chain	3	<a href="https://mecs.org.uk/challenge-fund/current-funds/mecs-sc2-sparking-the-cooking-supply-chain/">https://mecs.org.uk/challenge-fund/current-funds/mecs-sc2-sparking-the-cooking-supply-chain/</a>	KTM valley, Kavrepalanchok, Lalitpur, Banke, Bardiya, Kailali and Kanchanpur district	31/05/23 Phase 1
14-16	Cooking Support on Mini-Grids (COSMO) challenge fund	1	<a href="https://mecs.org.uk/challenge-fund/current-funds/mecs-cooking-support-on-mini-grids-cosmo/">https://mecs.org.uk/challenge-fund/current-funds/mecs-cooking-support-on-mini-grids-cosmo/</a>	Mathagadhi Rural Municipality, Palpa District Gandaki Province	30/06/23 Phase 1
17-22	Unlocking the potential for enterprise level electric cooking in Nepal	2	<a href="https://mecs.org.uk/request-for-proposals-unlocking-the-potential-for-enterprise-level-electric-cooking-in-nepal/">https://mecs.org.uk/request-for-proposals-unlocking-the-potential-for-enterprise-level-electric-cooking-in-nepal/</a>	KTM valley	30/04/23
23-25	A study on repair and end of life – electric cooking and domestic appliances	1	<a href="https://mecs.org.uk/request-for-quotations-a-study-on-repair-and-end-of-life-electric-cooking-and-domestic-appliances-in-nepal-ghana-ethiopia-uganda-kenya-rwanda-zambia-tanzania-and-bangladesh/">https://mecs.org.uk/request-for-quotations-a-study-on-repair-and-end-of-life-electric-cooking-and-domestic-appliances-in-nepal-ghana-ethiopia-uganda-kenya-rwanda-zambia-tanzania-and-bangladesh/</a>	Kathmandu, Mahankal, Janakpur, Aurahi	31/03/23
26-28	Developing policy guidance on standards for electrical cooking appliances	1	<a href="https://mecs.org.uk/request-for-quotations-developing-policy-guidance-on-standards-for-electrical-cooking-appliances/">https://mecs.org.uk/request-for-quotations-developing-policy-guidance-on-standards-for-electrical-cooking-appliances/</a>	Global, carried out by Nepal Energy Foundation and includes a prominent Nepal focus.	31/03/23
29-31	The impact of eCooking appliance subsidies and after-sales services on a sustainable eCooking ecosystem	1	N/A	South Lalitpur	31/08/23

Completed research consultancy (findings to be presented during workshop)	No of projects in Nepal	Link	Locations	End date
In-depth exploration of the implications of households cooking entirely with electricity	5	<a href="https://mecs.org.uk/terms-of-reference-for-in-depth-exploration-of-the-implications-of-households-cooking-entirely-with-electricity/">https://mecs.org.uk/terms-of-reference-for-in-depth-exploration-of-the-implications-of-households-cooking-entirely-with-electricity/</a>	KTM valley, Butwal Sub-metropolitan City, Bharatpur and Kavrepalanchok district	28/02/23
ECO Follow up study - assessing the long-term impact of the ECO pilot studies	4	N/A	Mangaltar, Banepa, Rautahat (ongoing – p32-34), Solukhumbu	31/03/23



# MECS Project Locations and Partners

**Nepal Energy Foundation:**  
*Developing non-technical policy guidance on standards for electrical cooking appliances*  
 Global, includes Nepal focus

**WACN:**  
*ECO Follow up Study*  
 Banepa urban municipality & Temal rural municipality  
 Kavrepalanchok district

**Practical Action Consulting:**  
*ECO Follow up study*  
 Bhumichuli Mangaltaar,  
 Kavrepalanchok district

**PEEDA:**  
*ECO Follow up Study*  
 Solukhumbu - Off grid community

**WACN**  
*Sparking the Supply Chain*  
 Kathmandu &  
 Kavrepalanchok

**WACN:**  
*All Electric Cooking*  
 Kathmandu &  
 Kavrepalanchok district

**Doko Recyclers:**  
*Repair and End of Life*  
 Mahankal Rural Municipality,  
 KTM valley, Janakpurdham Sub-Metropolitan City,  
 Aurahi Rural Municipality (Dhanusha District)

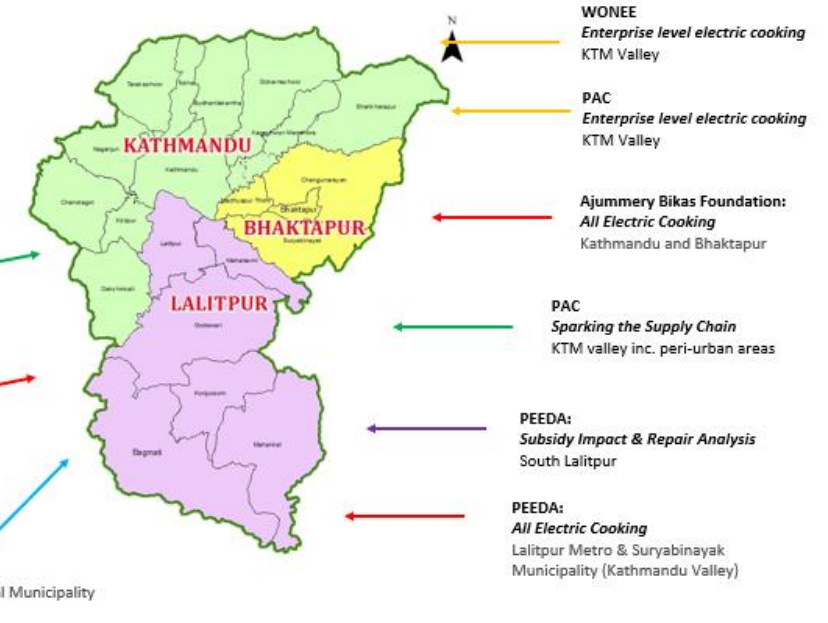
**NAMHUS:**  
*All electric cooking*  
 Suryabinayak Municipality (Bhaktapur District) &  
 Bharatpur Metropolitan (Chitwan District)

**REWSSPC:**  
*ECO Follow Up Study*  
 Kathahariya Municipality  
 Rautahat district

**KAPEG:**  
*All Electric Cooking*  
 Kathmandu Valley &  
 Butwal Sub-metro City

**NAMHUS:**  
*Cooking Support on Mini-Grids (COSMO) challenge fund*  
 Mathagadhi Rural Municipality,  
 Palpa District Gandaki Province

**WONEE:**  
*Sparking the Supply Chain*  
 Lalitpur, Banke, Bardiya, Kailali and  
 Kanchanpur district





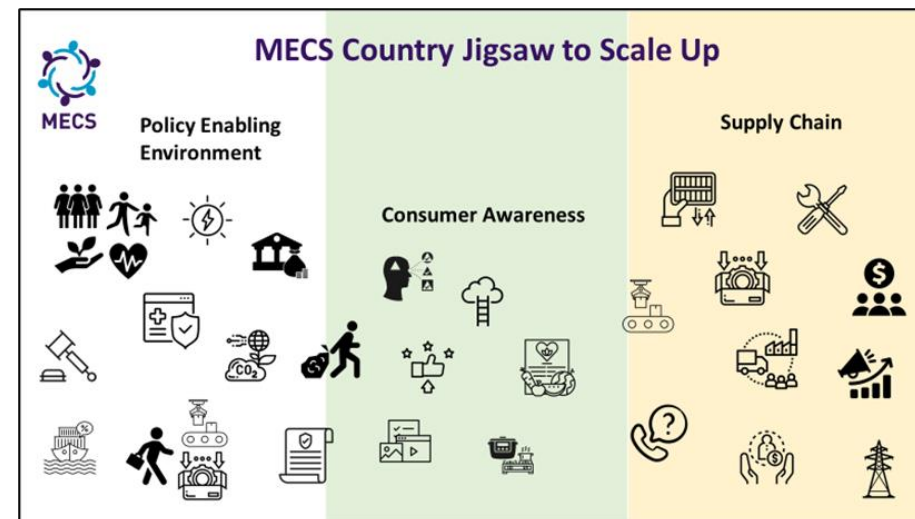
# How stakeholder collaboration and the MECS jigsaw theory of change helped identify projects

The MECS country level theory of change is a jigsaw of pieces, where all the pieces need to be in place to enable scaled uptake of eCooking. The jigsaw framework consists of 3 core areas: enabling environment, supply chain, consumer demand, each consisting of various elements (see appendix for descriptions of the 26 elements).

Building on continuous MECS engagement in Nepal since the programme's inception in 2018, MECS carried out further research in 2022 to better understand the status of the Nepal jigsaw. The research involved meeting with Nepal eCooking stakeholders to help identify:

1. What work is currently taking place in Nepal for each element?
  - a. Which stakeholders are involved?
  - b. Stakeholders who could (should) be involved?
2. What is missing from each element?
  - a. Who could (is best placed to) be involved in working on these missing components?
3. What opportunities are there for MECS to act?

Through this collaborative process, it was possible to identify gaps in the Nepal jigsaw. 18 projects were subsequently developed to help address these gaps and support scaled uptake of electric cooking in Nepal.





# Sparking the Cooking Supply Chain Challenge Fund: Escalating Uptake of Electric Pressure Cookers (EPCs) in Nepalese Households

**Awardee:** Practical Action Consulting

**Project Partner:** Him Electronics Pvt. Ltd

**Location(s):** Kathmandu and Lalitpur District

**Research objective:** Develop sustainable supply chain activation plan for EPC in market segment 1 (urban) and market segment 2 (rural/peri-urban)

## Expected outcomes:

- Identification of market bottlenecks and customer preferences in market segment 1 and 2
- Marketing and promotional strategy for both market segments
- Identification of market actors for both market segments
- Approaches to ensure repair and maintenance and after sale service mechanisms for both market segment
- Dealer details in both market segments

**Practical  
ACTION  
CONSULTING**



EPC Utility Demonstration





# Practical Action Consulting: Initial findings

- In general, knowledge on EPCs is comparatively less than other e-cooking devices like induction and infrared stoves.
- Market segment 1 (urban area) will need awareness raising about the EPC and its utility and are less likely to look for financial support. The private sector themselves provide finance facility but only for products that are above NPR. 30,000 (195 GBP)
- Market segment 2 (rural/peri-urban area) will need finance facility to access EPC.
- Market segment 2 will need additional market actor to ensure supply to customers, while market segment 1 has an existing supply chain but promotional campaigns and marketing strategy are required for its sustainability.
- Local financing institutes (LFIs) are interested to become market players to develop the supply chain for market segment 2.
- Customers residing in areas that had access to subsidies for e-cooking appliances (induction) are resistant to purchase an EPC.



LFI orientation on E-Cooking and Financing e-Cooking

# Practical Action Consulting: Next steps

- Developing EPC promotional materials
- LFI capacity building to develop loan disbursement mechanism to improve access to finance for EPCs.
- Data analysis to understand customer preference and customer profile in both market segments.
- Dealer capacity assessment to promote and sell EPCs
- Understanding perception of clean cooking stakeholders to assess enabling environment to promote EPC through market-based mechanism.
- Finalising market actors and supply chain activation plan for both market segments.





# Sparking the Cooking Supply Chain Challenge Fund: Accelerating the uptake of EPCs in Nepal through Creating a Sustainable Supply Chain and Demand Stimulation

**Awardee:** Women Awareness Centre Nepal (WACN)

**Location(s):** Two districts of Bagmati province: Kathmandu and Kavrepalanchowk

**Research objective:** Accelerating e-cooking by leveraging Saving and Credit Cooperative Organisations' (SACCOs) potential in creating EPC's sustainable supply chain and unlocking demand.

## Key deliverables

Develop a detailed sustainable EPC supply chain activation plan by

- Organising awareness campaigns and demonstration workshop in 15 SACCOs;
- Conducting 500 surveys of LPG users for understanding cooking practices, perspective about e-cooking and willingness to pay;
- Interviewing SACCOs management team;
- Conducting interviews of electricity department officials in the program area.







# Women Awareness Centre Nepal (WACN): Initial findings

- In the initial discussion SACCOS management has shown interest in providing loan to its members for purchasing EPC.
- Awareness campaigns and demonstration workshop generated interest among participants for EPC.
- Positive feedbacks given by ECO and In-depth project participants, about EPC, during campaigns and workshops boosted participants confidence in purchasing EPC.
- People care about established brand and there is acceptance for Philips EPC.
- Majority of the participants, interested in buying EPC, enquired about the capital subsidy.



# Women Awareness Centre Nepal (WACN): Next steps

## Completed activities

- Selection of 15 SACCOS (urban/peri-urban) of WACN network in the two districts.
- Awareness campaigns organised at 15 SACCOs; attended by 713 members.
- Demonstration workshops organised at 15 SACCOs; attended by 536 members.
- Selection of 500 SACCOs members for survey, using LPG.

## Ongoing activities

- Surveys of LPG users; Completed 70 surveys.
- Printing of calendar, highlighting eCooking benefits, to distribute as part of awareness campaign.
- Interviews of SACCOs management team (planned).
- Interviews of electricity department officials (planned).
- Analysis of data and preparing detailed sustainable EPC supply chain activation plan.

Project end date: May 2023



# Sparking the Cooking Supply Chain Challenge Fund: Strengthening Electric Cooking Supply Chain in Nepal

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**Awardee:** Women Network for Energy and Environment (WoNEE)

**Project Partner(s):** Nepal Energy Foundation (NEF)

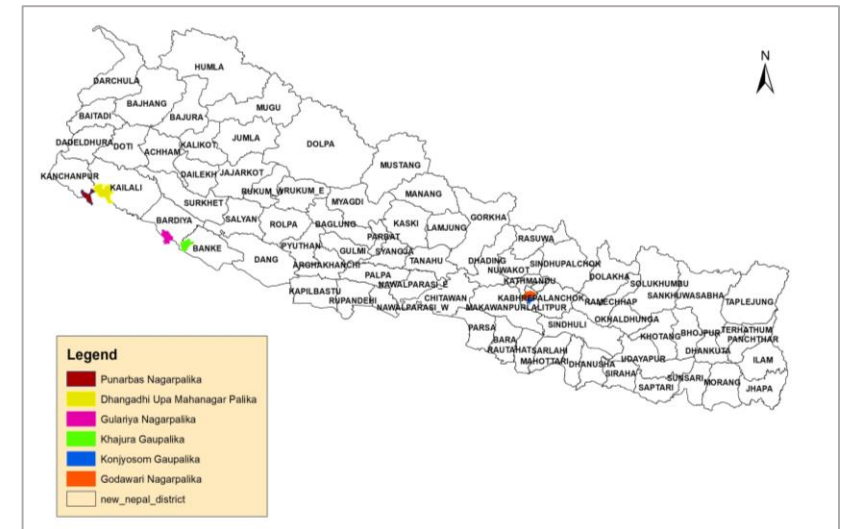
**Location(s):** Lalitpur, Banke, Bardiya, Kailali, Kanchanpur

**Research objective:** The project aims to upscale electric cooking market and initiate a sustainable supply chain of electric cooking in Nepal.

## Key deliverables

Detailed sustainable supply chain activation plan supported by:

- A baseline household survey results with major focus on cooking culture, cooking energy scenario, house wiring, and consumer awareness
- Study on current market/supply chain of electric cooktops
- Current electricity demand-supply scenario in project area





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# WoNEE and NEF: Initial findings

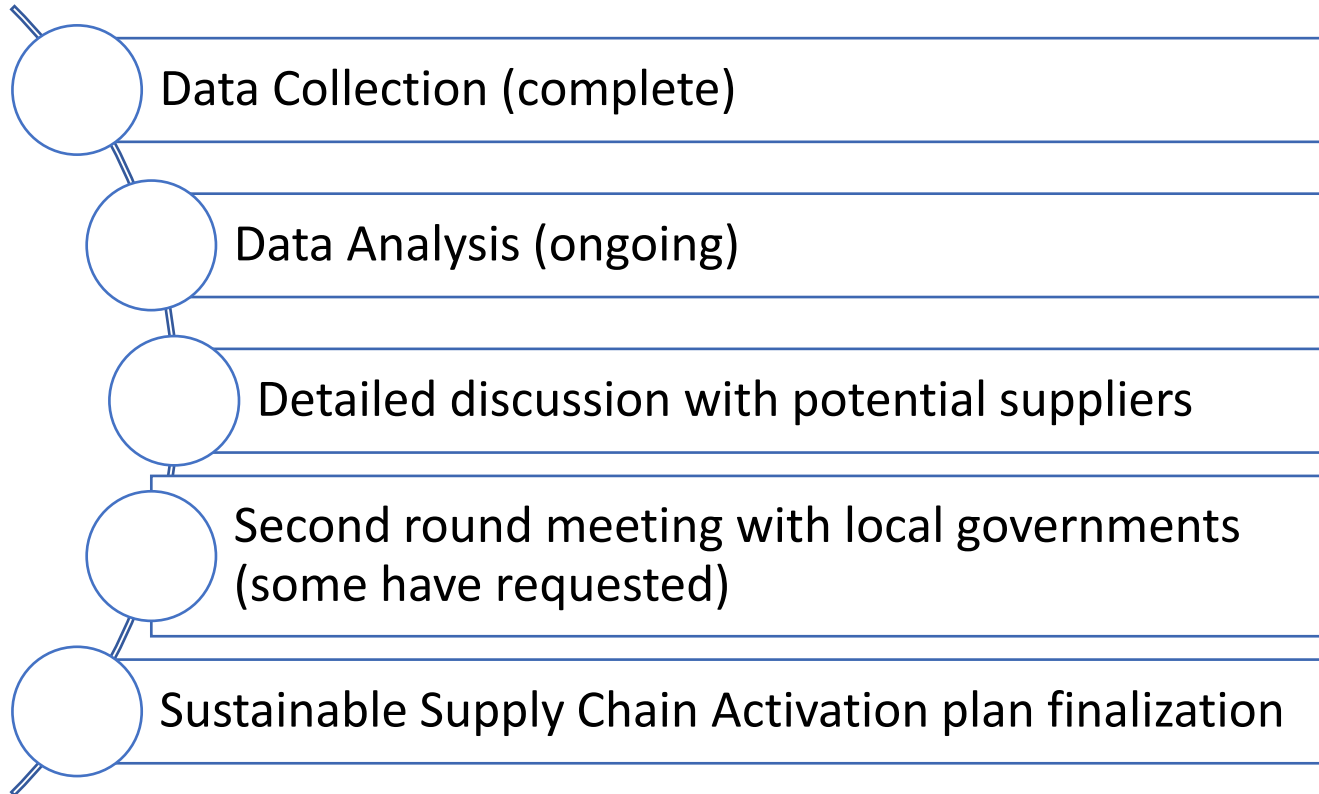
- Local governments are interested in initiation of e-cooking in their areas. However, they lack awareness of different e-cooking technologies.
- The majority of households in the project locations are not aware of e-cooking, only few households use electric cooktops.
- Induction and infrared cooktops are the technologies mainly available in the markets of the project locations.
- Consumers are interested to start using e-cooking - some need support to mitigate upfront costs.
- Retailers are interested to get involved in the e-cooking market supply chain, but are not aware of the initial investment required, and some require financing support.
- Suppliers are interested to expand their network if adequate demand can be created/demonstrated.





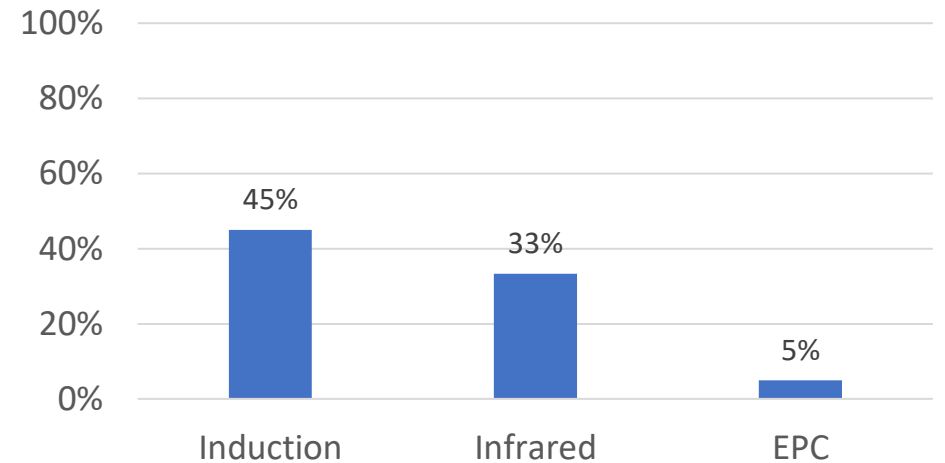
# WoNEE and NEF: Next Steps

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Project end date: May 2023

Availability of electric cooking appliances in retail shops of project areas (N=60)





# Cooking Support on Mini-Grids (COSMO) Challenge Fund: Enabling e-Cooking in Jhumsa Khola Micro Hydro Project]

**Awardee:** National Micro and Mini Hydropower Users Society

**Project Partner(s):** Jhumsa Khola Micro Hydropower Generation Cooperative III

**Location(s):** Mathagadhi, Palpa

**Research objective:** Design and implement an e-cooking model as a pilot project in Jhumsa Khola Micro Hydro Project.

## Key deliverables/expected outcomes

Sustainable supply chain implementation plan including:

- Financial analysis of the mini-grid to implement ecooking
- Load management plan and retrofitting plan
- 1 ➤ Sales and awareness campaign; After sales service plan.





# National Micro and Mini Hydropower Users Society: Initial findings

- Firewood is the primary fuel source for cooking in all households.
- Majority of households are not aware of induction, infra red and EPCs. Mostly have heard of rice cooker and very few are using.
- Consumers are interested to initiate e-cooking and majority need support to mitigate upfront costs and training to use the appliances.
- No e-cooking market nearby. Cooperative will supply and provide services related to ecooking appliances. Capacity building required.
- Grid Connection has been identified as load management plan. Grid Connection Mode will be in Net Metering Mode. LOI from NEA has been obtained.

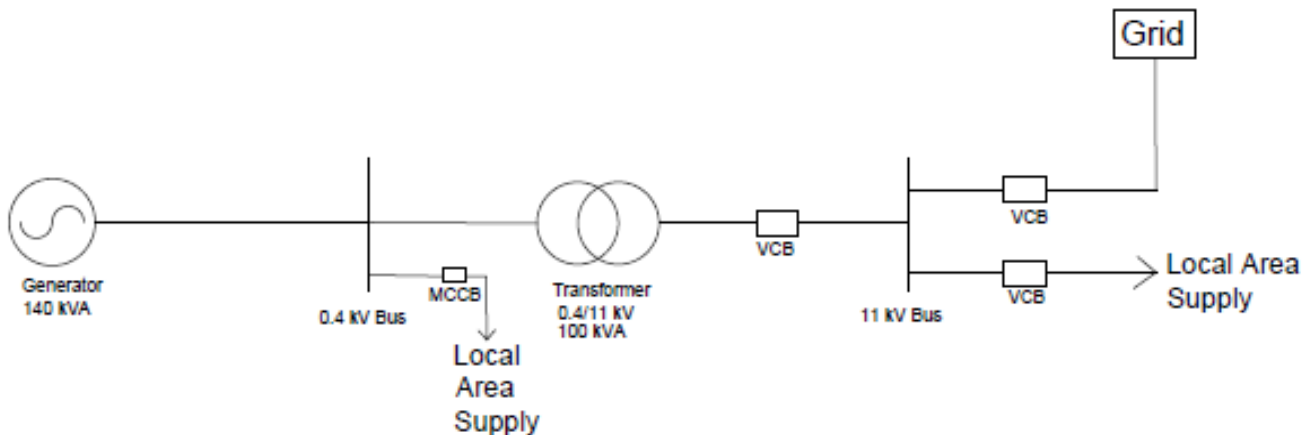




# National Micro and Mini Hydropower Users Society: Next steps

- Survey Data Analysis
- Retrofitting Design of the Distribution System
- Tariff Analysis
- Meeting with Local Government
- Detailed Business Plan

Project end date: 9<sup>th</sup> June 2023







# Unlocking the Potential for Enterprise Level Electric Cooking in Nepal



**Awardee:** Practical Action Consulting

**Location(s):** Kathmandu and Lalitpur District

**Research objective:** To understand the challenges, opportunities, benefits and barriers for the enterprise and institutional sectors to adopt e-cooking and designing research methodology to assess the potential e-cooking in enterprise sector.

## Expected outcomes:

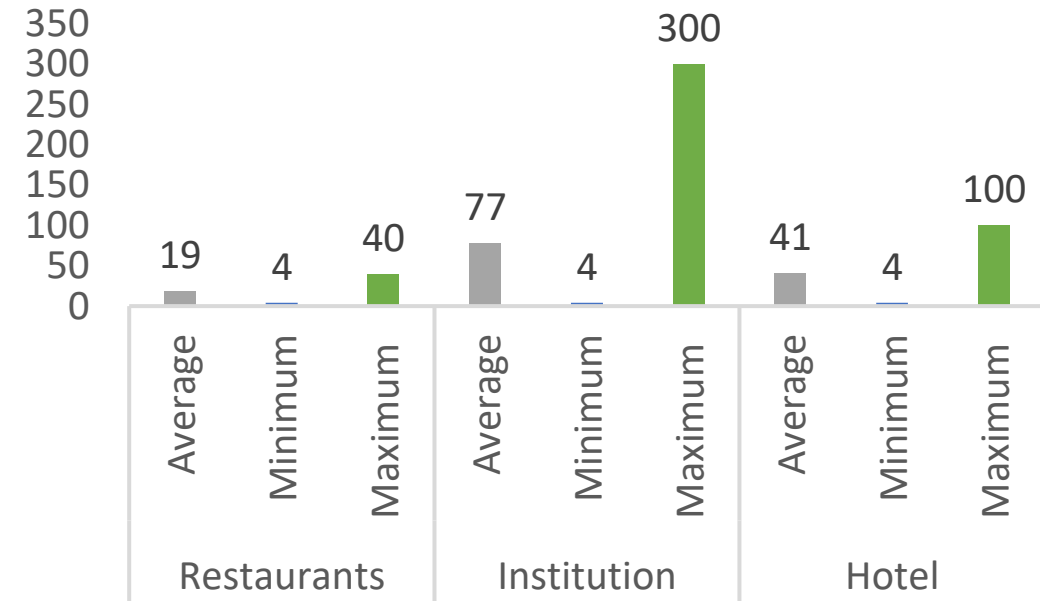
- Current practices (cooking behaviours of chefs, cooks and technologies and the process used for cooking) in the enterprise
- Fuel use pattern in three different enterprise category (restaurants, hotel & accommodation and institutions)
- Inventory of technologies available in the local market and its supply chain
- Recommendation on research methodology to best capture the elements of e-cooking at commercial scale through desired level of participation from the key stakeholders





# Practical Action Consulting: Initial findings

- LPG is most popular fuel for cooking.
- Enterprise scale electrical cooking devices are available in the market.
- Limited suppliers due to selective demand. Suppliers can only supply when there is order.
- Most cooking devices require three phase connection
- In weekdays, the flow of customers in restaurants and hotels is high during evening peak hour for electricity demand.
- For institutions, the flow of customers is high during morning peak hour for electricity demand.
- Weekends had comparatively higher customer flows during the daytime.



LPG Consumption in Enterprise and institutions

# Practical Action Consulting: Next steps

- Survey 60 enterprise/institutions/hotels
- Ethnographic approach for 2-day observations (one weekday and one weekend day) of six enterprises/institutions/hotels – two from each of the sub-sectors chosen.
- Coordinate with WONEE and hold dialogue meeting with association of hotels and restaurants for their feedback on prospects of e-cooking in the enterprise sector.
- Data analysis and reporting

Project end date: July 31, 2023



Electric Pizza Oven



# Unlocking the potential for enterprise level electric cooking in Nepal

**Awardee:** Women Network for Energy and Environment (WoNEE)

**Location(s):** Kathmandu, Lalitpur, Bhaktapur

**Research objective:** Conduct a study on the potential for electric cooking in enterprises in Nepal

## Key deliverables/expected outcomes

- Identify the opportunities and challenges for enterprise level transitions to eCooking
- Identify the requirements to assist transitions to electric cooking in different enterprise sectors.
- Assess the supply chain of the eCooking appliances for enterprise level
- Identify the extent of the potential transition in each enterprise sector





# Women Network for Energy and Environment: Initial findings

- Enterprises are highly interested in e-cooking. Energy security and contribution to national economy are the motivations for the enterprises.
- Enterprises unaware about the cost of e-cooking at present.
- Enterprises unaware about the availability of e-cooking appliances/technologies at present.
- Key barriers: Unreliable electricity supply; high initial cost for appliances; industrial tariff costs; cooking time associated with electric cooking; familiarity of cooks with appliances.





# Women Network for Energy and Environment: Next steps

- Survey of 100 restaurants, 20 hotels, 20 banquettes and 20 school/college canteens.
- Market survey
- Data Analysis
- Enterprise Cooking Ethnography
- Focus Group Discussion with Restaurant and Bar Association Nepal and Hotel Association Nepal
- Policy Analysis
- Report with suggestions and recommendations

Project end date: 31<sup>st</sup> August 2023





# A Study on Repair and End of Life (EoL) – Electric Cooking Devices and Home Appliances



**Awardee:** Doko Recyclers Pvt Ltd

**Project Partner(s):**

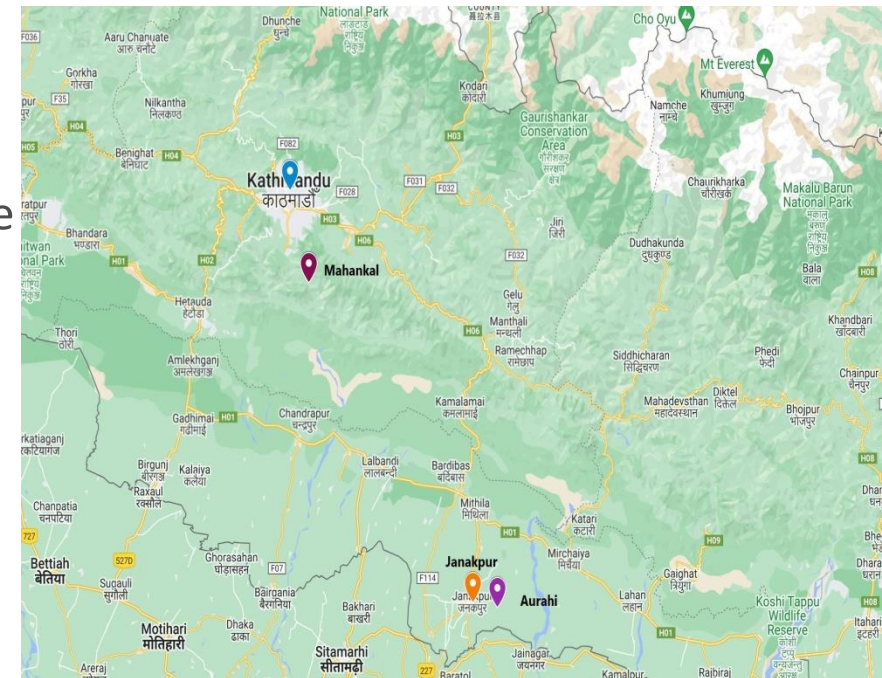
**Location(s):** Kathmandu, Mahankal, Janakpur, Aurahi

**Research objective:**

- Contextual study and customer behaviour survey: understand behaviors and practices on end of life of e-cooking devices and home appliances;
- EoL ecosystem mapping: identify current e-waste handling system, available infrastructure and solution for e-waste management

**Key deliverables/expected outcomes**

- Present status of e-waste management
- User’s / HH perception and method of EoL for e-waste
- Available methods for EoL management for household appliances

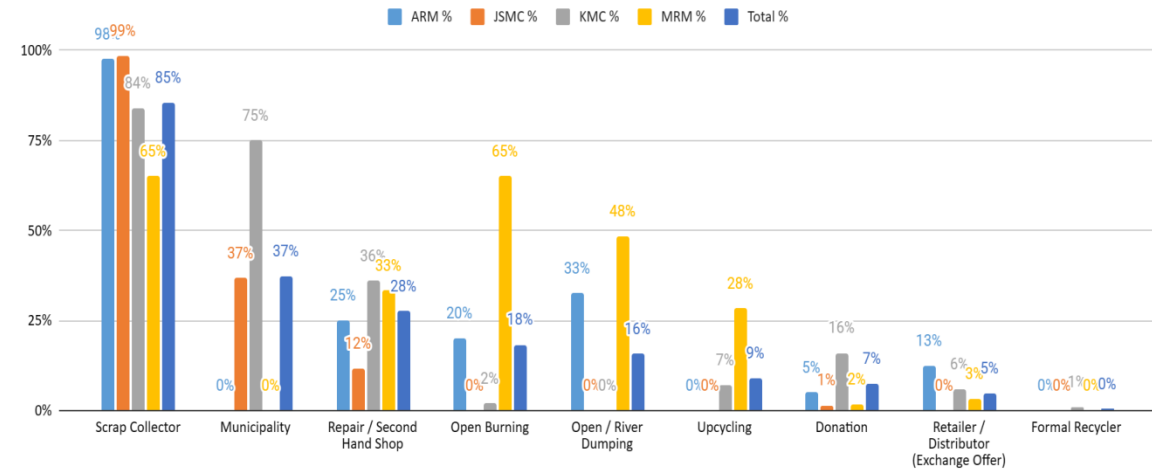
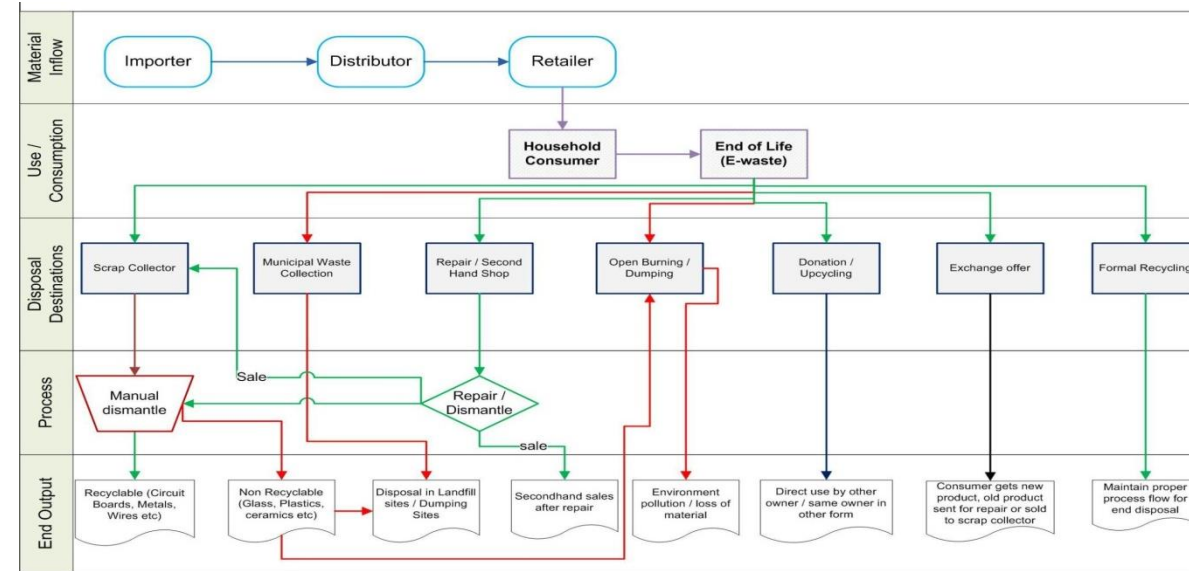




# Doko Recyclers: Initial findings

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- With increase in use of induction (62%) /infrared (186%) cooking device, the volume of EoL device is also increasing
- 51 % of household use some sort of e-cooking device (out of 268 sample in 4 locations)
- Selling the e-waste to scrap collector is first choice (85%) and unaware about how it is being disposed by scrap collectors
- Low value e-waste (CRT TV, Mercury lamps, plastic and glass from e-waste) are not collected by scrap collectors hence either mixed with municipal solid waste (37% as second choice) or thrown in open space & river (16%), burnt (18%)
- There is absence of formal e-waste collection and recycling setup in Nepal

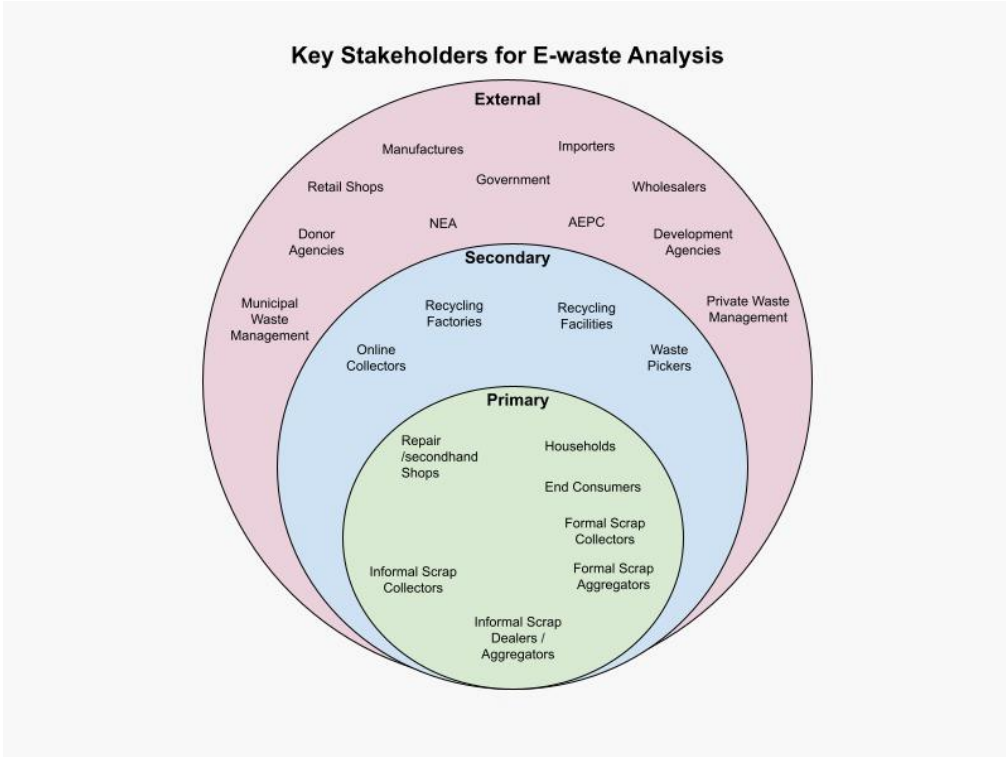






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# Doko Recyclers: Next steps



Project end date: 7 April 2023



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# Developing Policy Guidelines on Standards for Electric Cooking Appliances

**Awardee:** Nepal Energy Foundation

**Location(s):** Global, but including a Nepal focus

**Research objective:** Preparation of non-technical guidelines on safety standards, minimal performance, and end of life for the energy efficient electric cooking appliances

## Key deliverables/expected outcomes

- A succinct and accessible, non-technical guideline of the EPCs, induction hobs, and air fryers
- List of potentially relevant standards and a narrative on how each Standards could be applicable to each of the appliance i.e., Electric Pressure Cooker (EPC), induction hob and air fryer
- Clear advice to policy makers of emerging economies on minimum level of safety standards, minimal performance, efficiency, reliability and interoperability and end of life





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# Nepal Energy Foundation: Initial findings

## Non-technical guidance for EPCs, induction hobs, and air fryers in the Nepal market.

Appliance	Cooking Method	Recipes	Remarks
<b>Electric Pressure Cooker</b>	<b><u>Cooking under Pressure</u></b> Boil, steam, stewing; steam roast, water poach.	Rice/biryani, dal (soup of lentil or other such beans), gravy of chicken, mutton, pork, fish or vegetables, momo/wanton/dumplings.	EPC is most suitable for these cooking method and recipes mentioned.
	<b><u>Cooking in open w/o lid locked in</u></b> Brown, braise, sauté, roast and bake the food.	Dry fry of chicken, mutton, pork, fish; single or mixed vegetable gravy and greens; Soup of fresh or dried vegetables; roti (Indian bread).	EPC can be used for normal cooking for these cooking methods and mentioned recipes. Effective temperature regulation and control.
	<b><u>Deep frying in open (w/o lid locked)</u></b> Boiling the oil and deep frying	Festive recipes like puri, anarasaa, sel-roti, fritters, samosa etc.	Difficulty in attaining high temperature makes EPC not very suitable for deep frying.
	<b><u>Typical Nepalese Cooking Methods</u></b> : Dhindo	Dhindo from corn/millet/buckwheat flour.	EPC can be used for this method and recipe but effective temperature regulation and control required.



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# Nepal Energy Foundation: Initial findings & Next steps

Appliance	Cooking Method	Recipes	Remarks
<b>Air Fryer</b>	<b><u>Air Frying with Convection Heating</u></b> fry, grill and roast, bake and reheat the already cooked food like in oven.	<b>Grilled or roasted</b> mutton, chicken, duck, pork, fish, shrimp and meat balls. <b>Dry fried</b> wedges of potato, sweet potato, taro, yam, cauliflower, zucchini, eggplant etc. <b>Chips of</b> banana, potato, sweet potato etc. as starter, main course or side dish.	Air fryer is suitable for cooking these types of food. Effective temperature control and time setting is required for best results.
<b>Induction Cooktop</b>	<b><u>Open air cooking</u></b> Boiling, stewing, roast, brown, braise, sauté, deep frying and typical Nepalese cooking.	Rice; soup or gravy of lentils, vegetable, chicken, mutton, fish; dry fried, chicken, vegetables, greens, fritters, puri; roti (Indian bread), dhindo (almost all Nepalese recipes).	Induction is suitable for cooking these types of food. Induction cooktop gets switched off by itself at high temperature while using for deep frying and may require repeated switching actions.

- Draft guidelines on standards of selected e-appliances submitted on 28<sup>th</sup> February 2023
- Next steps – Finalization of the Guidelines after incorporation of comments (if any received)
- Project End Date: March 2023. Findings to be published: May, 2023.



# Assessing the impact of electric cooking interventions in Mahankal Rural Municipality

**Awardee:** People, Energy & Environment Development Association (PEEDA)

**Location(s):** Mahankal Rural Municipality, South Lalitpur

**Research objective:** Assess the impact of eCooking appliance subsidies and after-sales services on a sustainable eCooking ecosystem in Nepal

## Key deliverables/expected outcomes

- Monitor and compare eCooking usage between households receiving eCook devices for free and those which part paid.
- Develop an evidence base to inform policy makers on the effective use of subsidies to support sustainable eCooking adoption.
- Create an inventory of eCooking appliance repair and maintenance issues
- Identify, train, and monitor local stakeholders to provide after sales services for eCooking





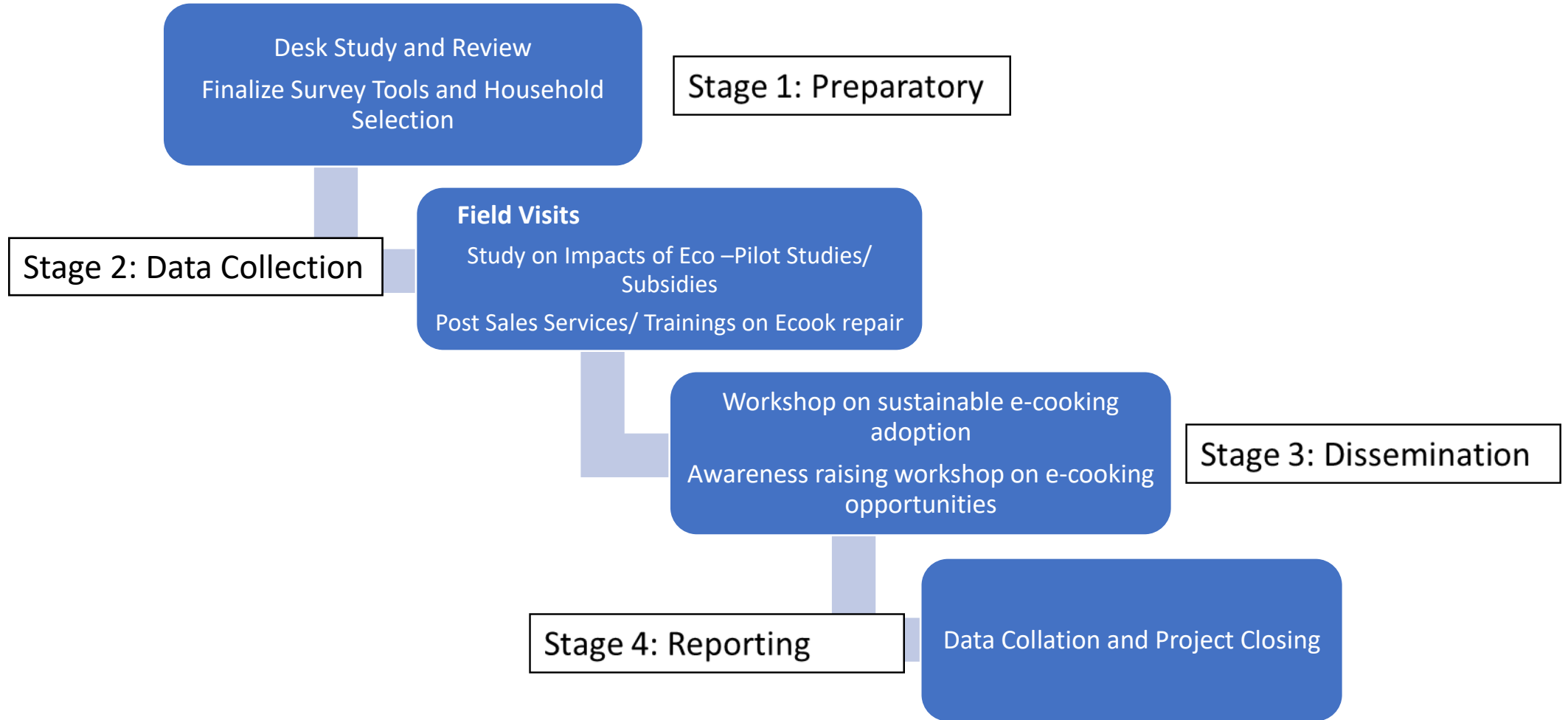
# PEEDA: Background Information

- Nepal's Nationally Determined Contributions (NDCs) target 25% of households using electricity as a primary cooking fuel by 2030.
- Under the MECS ECO challenge fund, PEEDA + KAPEG provided EPCs to 110 households in Mahankal Rural Municipality (South Lalitpur) in 2021. EPCs were part-paid for by community contributions.
- The Alternative Energy Promotion Center (AEPC) and the Mahankal Municipal Government provided e-cooking technologies to a further 2000 households in the community, offering larger subsidies than the PEEDA/KAPEG project.
- Interventions have tended to overly prioritize distribution, with actual usage and operational sustainability overlooked and potentially compromised by a combination of over-subsidisation and insufficient focus on after sales services.





# PEEDA: Next steps



Project end date: 31/08/2023



# Electric Cooking Outreach (ECO) Follow up Study: Efficient Electric Cooking Market Uptake in Nepal

**Awardee:** Environment Protection Centre Nepal (EPC Nepal)

**Location(s):** Katakariya Municipality, Rautahat

**Research objective:** to understand the longer-term impact of the ECO study and whether the pilot study has led to greater awareness of electric cooking to inform the potential opportunities for further local uptake

## Key deliverables/expected outcomes

- Adoption of EPCs as primary or secondary cooking following the ECO project
- Understand non-participant views of electric cooking
- Recommend measures to outscale electric cooking in the community and its surroundings

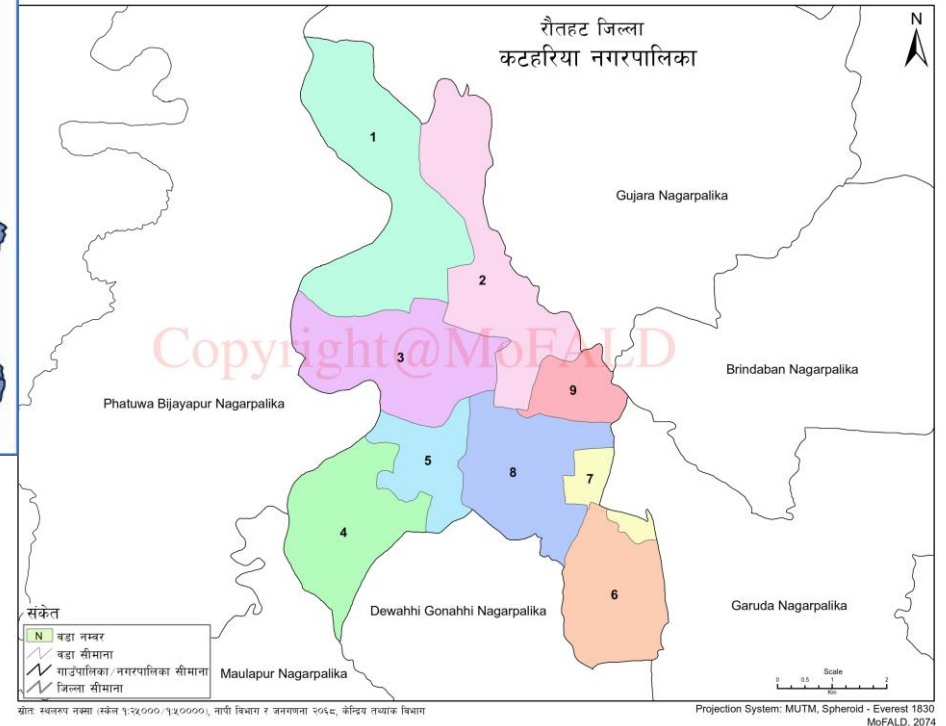
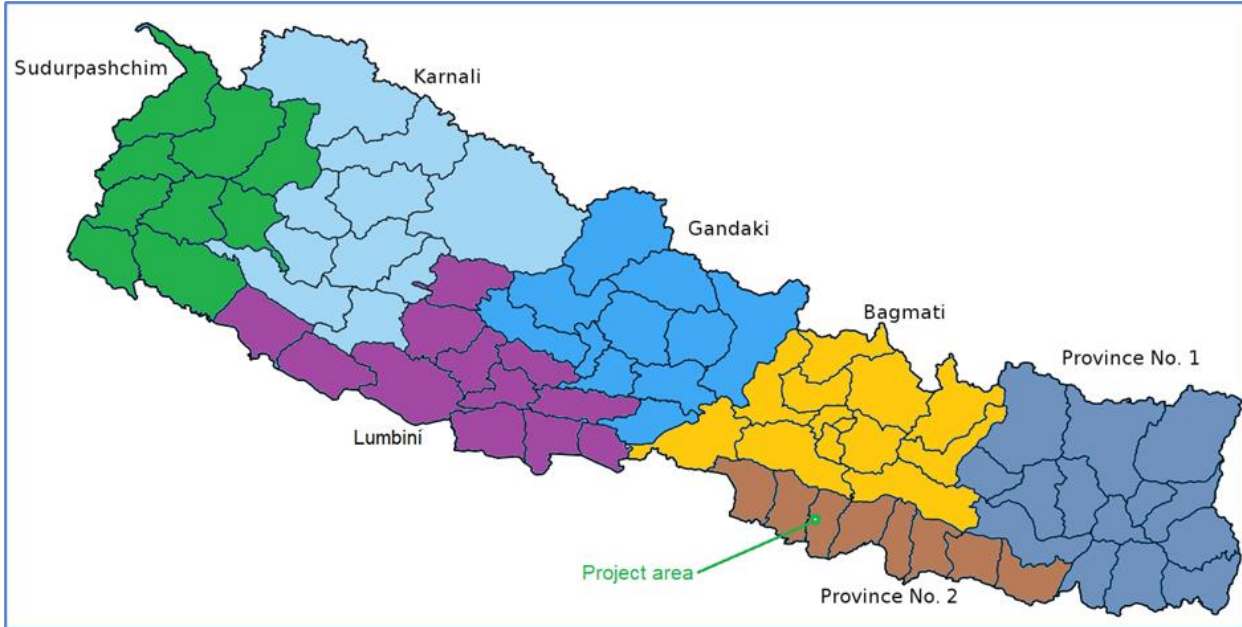






# Project area

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## Location

- Province 2
- District: Rautahat
- Municipality: Katahariya
- Ward: 2 and 3





# EPC Nepal: Next steps

- Survey of 30 Eco-participant households from wards 2 and 3
- Survey of 50 non-participant households from wards 2 and 3
- Cooking diary study of 10 Eco-participant households
- FGD between ECO participants and non-participant households



Project end date:





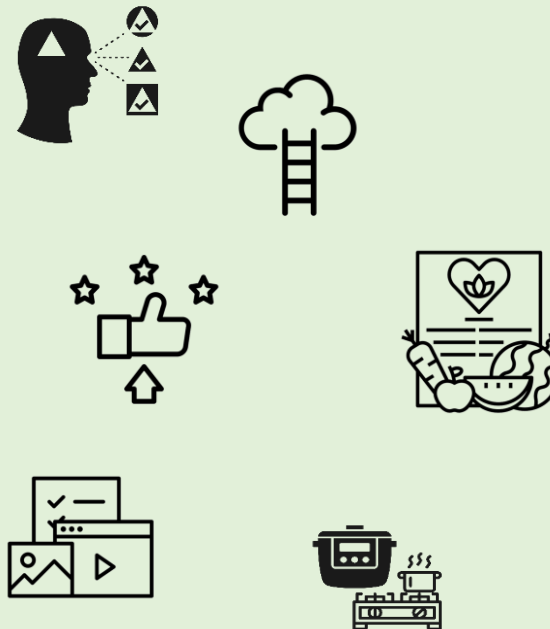
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# Appendix: MECS Country Jigsaw to Scale Up

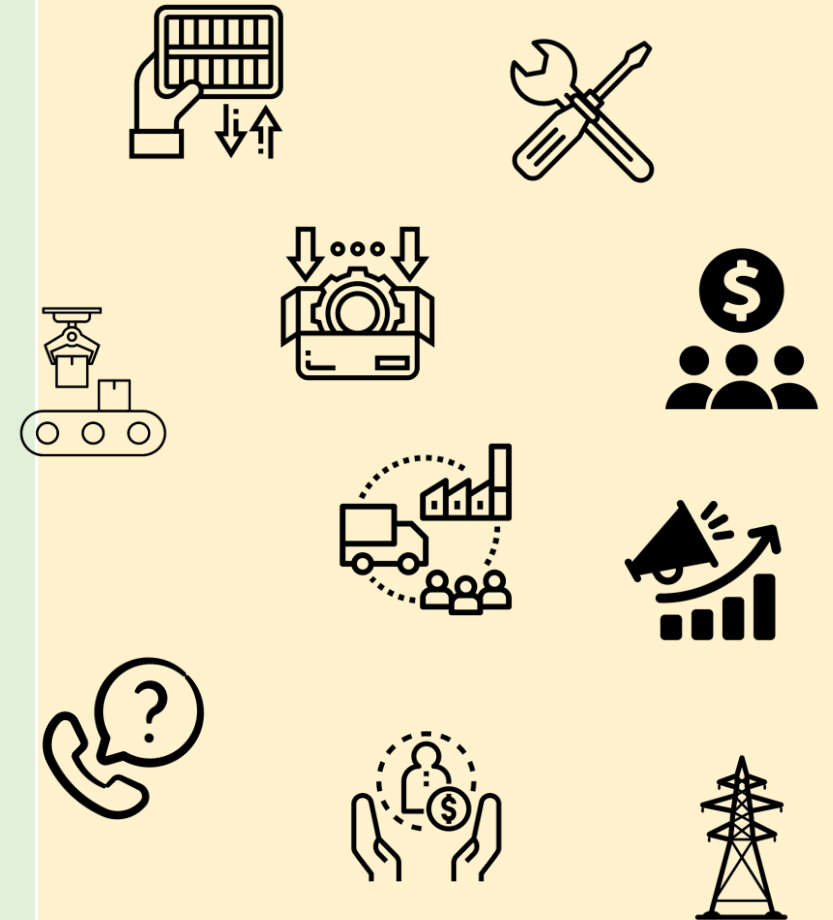
## Policy Enabling Environment



## Consumer Awareness



## Supply Chain





# The Jigsaw Concept

- The MECS country level theory of change is a jigsaw of pieces, where all the pieces need to be in place to enable scaled uptake.
- Predominantly eCooking focussed but acknowledges role of other tier-5 fuels in transition.
- Jigsaws and their 'solutions' are location specific.
- Helps prevent project issues/failures occurring due to another piece of the jigsaw not yet being in place.



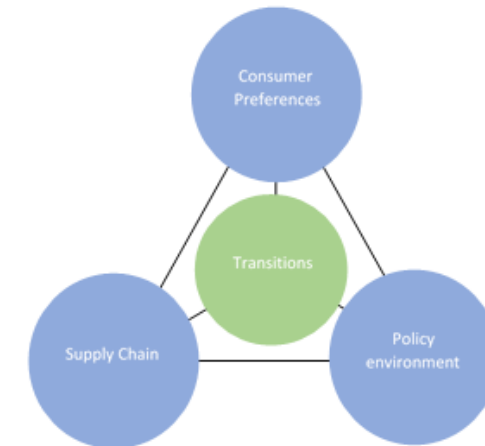
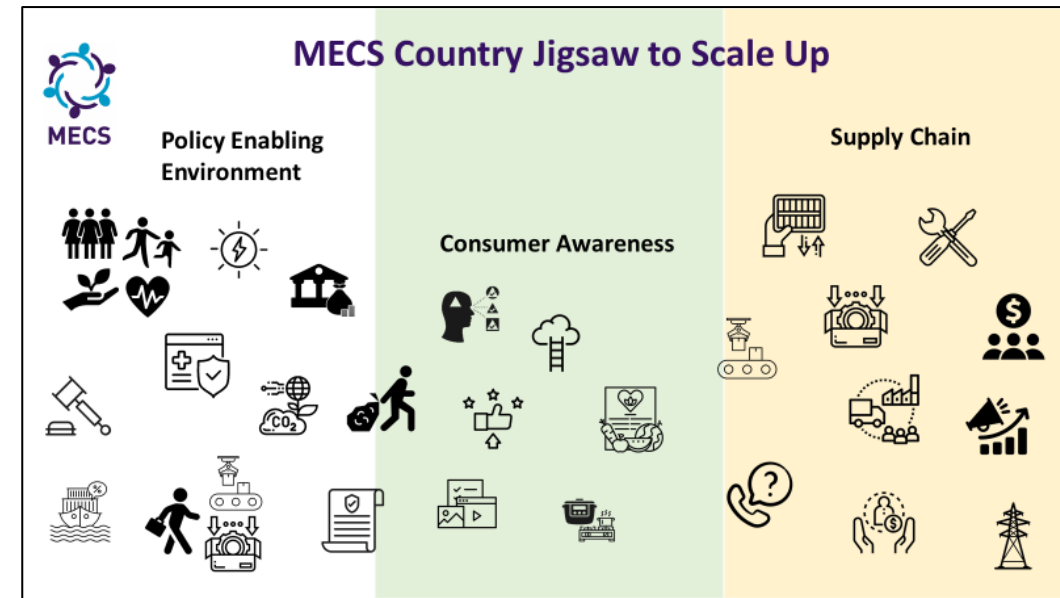
# Jigsaw Framework

The jigsaw framework consists of 3 core areas






- Each consisting of various elements






Key questions to be answered for each element

1. What work is currently taking place for each element?
  - a) Which stakeholders are involved?
  - b) Stakeholders who could (should) be involved?
2. What is missing from each element?
  - a) Who could (is best placed to) be involved in working on these missing components?
3. What opportunities are there for MECS to act?


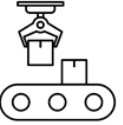







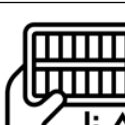

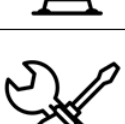
# Policy Enabling Environment

	<b>Access to modern energy</b>	Is eCook framed as increasing modern energy access or as solution to cooking sector problems?
	<b>Existing policy</b>	Is the policy environment supportive/constraining? (which parts do what? Any influence from international policy/processes?)
	<b>Import tariffs</b>	If components are imported, are they subject to tariffs? What are those impacts?
	<b>Job creation</b>	If systems or components are assembled locally or if a help centre and service agents are in place, is this a sell point in job creation?
	<b>Specific/general finance</b>	Should credit for the system be specific to the institution, or to the consumer, or general to the consumer?

	<b>Public good... gender, health, child welfare, climate</b>	Where will the marketing focus be? (e.g. cost savings, health, public good)
	<b>Safety and standards</b>	Of appliances, fuels, guarantees - what are they, and do they need to change?
	<b>Regulatory environment</b>	Tariff structures, tax, VAT, business environment - what are these structures and do they need to change?
	<b>Waste disposal</b>	Will waste disposal be a problem. Recycling of components, recycling of chemicals? Lifetime of appliances (realistic length of use)?
	<b>Carbon and sustainability</b>	To what extent can modern electric cooking services help to reach national carbon targets?

# Supply Chains

	<b>Investment finance</b>	Initial or growing investment capital - where does it come from?
	<b>Component production</b>	Are components imported or made locally? Are quality assurances covered? If imported, is the supply secure?
	<b>System assembly</b>	If most components are imported, is there a local assembly of the whole system? Can efficiency gains be made that reduce the cost of the whole system?
	<b>Reliable supply chains</b>	How can reliability and sustainability be built into supply chain? (for fuels, appliances, services etc).
	<b>Consumer finance</b>	What is being offered and how? Part of utilities, pay as you go, lease, funded by general micro credit? Are there plans for finance or stimulating the market?

	<b>Marketing and digital support?</b>	Is this specific to the institution (utility, off grid, SHS scheme, general merchants) or is it a nationwide campaign? Messaging? How does the information get spread?
	<b>Help centre/customer services/complaints</b>	How will eCook use be supported?
	<b>Linkages to local economy</b>	How will local businesses promote & sell the product/service?. Opportunities to pivot existing supply/fuel networks to eCook (e.g. charcoal sellers)?
	<b>Infrastructure and grids</b>	How do plans for increased access to the grid and off-grid energy apply to eCook? How does eCook compare to alternative fuels? Impact of fuel stacking (and reduction in stacking).
	<b>Maintenance &amp; spares</b>	Are there people/local institutions that can maintain the equipment? Can spares be obtained? (beyond whole import of systems or having to purchase whole replacements)



# Consumer Awareness

	<b>Existing beliefs</b>	What existing beliefs, factual or otherwise, hold back the transition for a significant group of people.
	<b>Fuel stacking</b>	Is fuel stacking an opportunity or an issue - eg gradual transition, vs continued poor health from partial HAP.
	<b>Mixed media promotion</b>	How can we mix media promote the proposition both within the 'product' sales but also at a meta level?

	<b>eChefs recipes</b>	Cooking is a cultural thing! - How do we engage to make sure people see the best cultural outcomes & good tasting food? (customer demos?).
	<b>Consumer confidence</b>	Are consumers responding positively? Have business models been sufficiently demonstrated? How to build confidence in consumers and suppliers?
	<b>Aspiration</b>	How can we make eCook become an aspirational proposition like mobile phones? What motivation is strongest?