



KEY ACHIEVEMENTS

Expand Access to Electric Cooking

Madhesh Province of Nepal

Project Achievement Report

A practical demonstration of how electric cooking can reduce household dependence on firewood, save time and labour, improve the cooking environment, and contribute to environmental and climate goals.

Implemented in collaboration with Ganeshman Charnath Municipality, Dhanusha District, with partnerships involving Clean Cooking Alliance (CCA), USA, Sustainable Prosperity Initiative (SPI) Nepal, and ATEC Global.

Executive Summary

The electric cooking promotion project successfully expanded access to clean cooking solutions and reduced household dependence on firewood. Against a target of 1,250 households, 1,123 households (90%) received electric cookstoves, while 95.7% adopted induction-compatible cookware. User acceptance was strong: 71.25% of users were fully satisfied and 97.25% shared information about electric cooking with others.

The project also recorded substantial changes in fuel use and household time. Average firewood consumption fell from 7.38 kg to 1.55 kg per household per day, while weekly time spent collecting firewood declined from 9.5 hours to 2.7 hours—a 71.6% reduction. These changes were accompanied by reported improvements in indoor air quality, cooking comfort, workload, and household participation in cooking.

1,123

households received electric cookstoves

90%

of the 1,250-household target reached

95.7%

adopted induction-compatible cookware

71.6%

reduction in firewood-collection time

Project at a Glance

Project focus	Expanding access to and sustained use of electric cooking
Geographic focus	Madhesh Province, with implementation in Ganeshman Charnath Municipality, Dhanusha
Household target	1,250 households
Households reached	1,123 households (90% of target)
Key partners	Clean Cooking Alliance (CCA), Sustainable Prosperity Initiative (SPI) Nepal, ATEC Global
Local government partner	Ganeshman Charnath Municipality, Dhanusha District



धुँवारहित, स्वच्छ र सरल भान्साका लागि विद्युतीय चुलो हाम्रो साथ
सुरक्षित र सहि प्रयोग गरे परम्परागत इन्धनको श्रोतलाई दिनेछ माथ



विद्युतीय चुलोका फाईदाहरू

- घर भित्रको वातावरणमा सुधार
- स्वास्थ्यमा सुधार
- वनजंगल तथा वातावरण संरक्षण
- महिलाको कार्यबोभमा कमी






विद्युतीय चुलोका फाईदाहरू

- सुरक्षित र आधुनिक भान्सा
- आर्थिक लाभ
- आयातित इन्धनमा निर्भरता घट्ने
- सुविधाजनक



विद्युतीय चुलो प्रयोग गर्नाले स्वास्थ्य र वातावरणलाई फाइदा पुऱ्याउनुका साथै दिर्घकालिन रूपमा समय र पैसाको बचत हुन्छ




Key Results and Achievements

1. Expanded Access to Electric Cooking

- Against a target of 1,250 households, electric cookstoves were provided to 1,123 households, achieving 90% of the target.
- 95.7% of households adopted induction-compatible cookware, supporting effective use of electric cookstoves.

2. High User Satisfaction and Acceptance

- 71.25% of users reported being fully satisfied, while 26.61% reported being partially satisfied with their electric cookstoves.
- 97.25% of users shared information about electric cooking with friends, relatives, and other people, indicating strong acceptance and positive user experience.

3. Reduction in Firewood and Traditional Fuel Use

- Average daily firewood consumption decreased from 7.38 kg to 1.55 kg per household.
- 97.1% of households reported a reduction in firewood consumption after adopting electric cookstoves.
- The project demonstrated a significant shift away from traditional biomass-based cooking toward cleaner electric cooking.

4. Reduction in Time and Labour for Firewood Collection

- Average time spent collecting firewood decreased from 9.5 hours to 2.7 hours per week, representing a 71.6% reduction.
- 36.1% of surveyed households stopped going to the forest to collect firewood for cooking.
- This reduced the physical workload and time burden associated with fuel collection.

Before-and-After Indicators

Indicator	Before	After	Change
Daily firewood use	7.38 kg/household/day	1.55 kg/household/day	Substantial reduction
Firewood collection	9.5 hours/week	2.7 hours/week	71.6% reduction
Households reporting less firewood	—	97.1%	High adoption impact
Indoor air quality	Traditional biomass cooking	68.8% reported significant improvement	Positive change
Cooking comfort	Traditional cooking burden	94.2% reported easier/more comfortable cooking	Strong improvement

Social, Health and Environmental Outcomes

Improved Health and Indoor Cooking Environment

- 68.8% of households reported a significant reduction in indoor air pollution in the cooking area.
- 94.2% of users reported that cooking had become easier, more comfortable, and less stressful.
- Reduced smoke and the burden of firewood collection contributed to a healthier and more convenient cooking environment.

Reduced Women's Workload and Gender Equality

- Reduced dependence on firewood and traditional stoves helped decrease women's workload, particularly fuel collection and cooking in smoky environments.
- The convenience of electric cooking encouraged greater participation of men in cooking activities, supporting shared household responsibilities.

Environmental and Climate Benefits

- Reduced firewood consumption contributes to forest conservation and reduces pressure on local forest resources.
- The transition to electric cooking reduces exposure to household air pollution and can contribute to lower cooking-related carbon emissions, depending on the electricity source.
- The results create a strong practical basis for exploring future carbon-market opportunities and green climate finance for clean cooking.

“Electric cooking is not only a technology transition—it is a household-level pathway to cleaner air, less fuel collection, more time, and more dignified cooking.”



Electric cooking – clean cooking in practice



Traditional cooking – firewood-based stove

Photo Story: From Biomass to Electric Cooking



Electric cooking in practice. A household uses an electric cookstove for everyday food preparation, illustrating the shift toward cleaner and more convenient cooking.



Traditional biomass cooking. A traditional firewood-based stove illustrates the baseline cooking environment and fuel burden addressed by the project.

Implementation Partnership and Way Forward

The initiative was implemented in direct collaboration with Ganeshman Charnath Municipality, Dhanusha District, and through partnerships involving the Clean Cooking Alliance (CCA), USA, and the Sustainable Prosperity Initiative (SPI) Nepal. The effort encompassed two complementary projects:

- Providing implementation and project management support to expand access to electric cooking in the Madhesh Province of Nepal — supported by the Clean Cooking Alliance/UNF.
- Promotion of Sustained Use of eCook as Clean Cooking Solution in Dhanusha District — supported by ATEC Global.

Lessons for Scaling

- Access must be combined with user orientation, appropriate cookware, follow-up, and demonstration of everyday cooking practices.
- Municipal and community partnerships are important for reaching households, building trust, and sustaining adoption.
- The strongest benefits extend beyond fuel switching: time savings, reduced workload, comfort, cleaner indoor environments, and reduced pressure on forests reinforce the value of electric cooking.
- Future scale-up can integrate consumer awareness, appliance financing, reliable electricity access, monitoring of sustained use, and evidence-based climate and carbon-finance pathways.

Overall Achievement

The project demonstrates that promoting electric cooking can contribute significantly to reducing firewood use, saving household time and labour, improving indoor air quality, and making cooking safer, easier, and more comfortable. It also offers positive pathways for women's empowerment, gender equality, forest conservation, environmental protection, and climate change mitigation. The results provide a strong practical foundation for scaling clean electric cooking as an alternative to traditional biomass-based cooking in other communities of Madhesh and beyond.

A practical model for a cleaner cooking transition in Madhesh
Expanding access • Sustaining use • Reducing firewood dependence •
Improving household well-being