



 **Norway**

**ADB**



**PROJECT  
COMPLETION  
REPORT**

DECEMBER 2025

**TA 6526 NEP**

South Asia Sub-regional Economic Cooperation Power Transmission and Distribution System Strengthening Project - Implementation Support for Gender Equality and Social Inclusion (50059-003)  
April 2021-October 2025





## **TA 6526 NEP**

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South Asia Sub-regional Economic Cooperation Power Transmission and Distribution  
System Strengthening Project - Implementation Support for Gender Equality and Social  
Inclusion (50059-003)  
April 2021-October 2025

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# ACRONYMS

<b>ADB</b>	Asian Development Bank
<b>BMT</b>	Business Management Training
<b>CRT/N</b>	Center for Rural Technology, Nepal
<b>DCS</b>	Distribution and Consumer Services
<b>DSSO</b>	Dalit Society Service Organization
<b>EDO</b>	Enterprise Development Officer
<b>EDT</b>	Entrepreneurship Development Training
<b>ENERGIA</b>	The International Network on Gender and Sustainable Energy
<b>EUC</b>	Electricity Users Committee
<b>FCD</b>	Family and community dialogue
<b>FGD</b>	Focus group discussion
<b>GESI</b>	Gender and Social Inclusion
<b>KII</b>	Key Informant Interview
<b>KMC</b>	Knowledge, management and communications (strategy)
<b>LFP</b>	Local Focal Partner
<b>M, E &amp; L</b>	Monitoring, evaluation and learning
<b>NEA</b>	Nepal Electricity Authority
<b>NACEUN</b>	National Association of Community Electricity Users-Nepal
<b>PPMS</b>	Project Performance Monitoring System
<b>PTDSSP</b>	Power Transmission and Distribution System Strengthening Project
<b>PUE</b>	Productive Use of Energy
<b>RMA</b>	Rapid Market Assessment
<b>RNE</b>	Royal Norwegian Embassy, Nepal
<b>SASEC</b>	South Asia Subregional Economic Cooperation
<b>SEAH</b>	Sexual Exploitation, Abuse, and Harassment
<b>TA</b>	Technical Assistance
<b>ToT</b>	Training of trainers
<b>TS</b>	The Story Kitchen

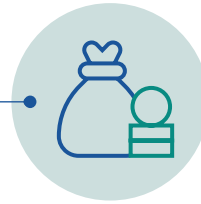
# EXECUTIVE SUMMARY

## Overview of TA 6526 NEP

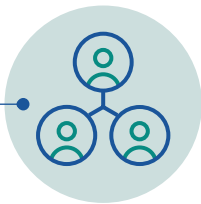
South Asia Subregional Economic Cooperation Power Transmission and Distribution System Strengthening Project – Implementation Support for Gender Equality and Social Inclusion (50059-003), Contract No. 164196-S53897

**Project aim:**

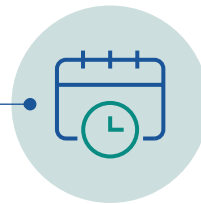
TA 6526 NEP aims to assist the Nepal Electricity Authority (NEA) in implementation of GESI Action Plan of the project. The TA project also strengthens the institutionalization of Gender Equality and Social Inclusion (GESI) within NEA's operations and to support women and the disadvantaged group to productively use energy with safety and efficiency.

**Funding support:**

The TA was supported by the Asian Development Bank (ADB) and the Royal Norwegian Embassy, Nepal (RNE).

**Implementing agencies:**

Humanist Institute for Co-operation with developing countries, Netherlands (Hivos); Center for Rural Technology, Nepal (CRT/N) and National Association of Community Electricity Users-Nepal (NACEUN).

**Project duration:**

April 2021 until September 2024, extension period until October 2025

# AN OVERVIEW OF PROJECT RESULTS

INDICATORS AND TARGETS	ACHIEVEMENTS
<b>Intervention 1: Institutionalization of GESI in NEA</b>	
An operational GESI secretariat along with GESI team members in NEA directorates	<p>GESI Coordinator appointed in MD's Secretariat. GESI core team members appointed in NEA directorates [8 men and 16 women] [Brahmin Chhetri 19 (79%), Janajati 5 (21%)], none in Subsidiary Agencies and projects.</p> <p>Additional activities undertaken include:</p> <ul style="list-style-type: none"> <li>Development and approval of the Code of Conduct for Sexual Exploitation, Abuse, and Harassment (SEAH) Prevention to mitigate sexual harassment at work. Through this initiative, SEAH policies are now formally embedded within the organization, with NEA responsible for monitoring and overseeing the implementation of SEAH Code of Conduct within its work environment.</li> <li>Development of a Returning Mothers Guideline, aimed at promoting conducive workplace practices for new mothers returning after maternity leave.</li> <li>A GESI curriculum, developed as an integral part of NEA training curriculum, rather than a standalone initiative.</li> </ul>
An annual GESI action plan for each directorate	<p>All nine directorates developed GESI- responsive work plans and four have implemented their action plans.</p> <p>101 NEA staff from different directorates were trained by the GESI focal persons. [48 men (48%) and 53 women (52%)] [Brahmin Chhetri 72 (71%), Janajati 20 (20%), Madhesi 4(4%), Muslim 1 (1%), Dalit 1 (1%) and others 4 (%)].</p>
500 NEA staff (20% women and 30% disadvantaged group) oriented on GESI strategy, guidelines and manual	<p>556 NEA staff from 78 districts oriented on GESI strategy, operational guidelines and manual [304 men (55%) and 252 women (45%)] [Brahmin Chhetri (Hill) 333 (60%), Brahmin Chhetri (Tarai) 47 (8%), Janajati Hill 29 (5%), Janajati Tarai 84 (15%), Madhesi 15 (3%), Muslim 4 (1%), Hill Dalit 2 (0.4%) Tarai Dalit 37(7%) and others 5 (1%)].</p>
Training on complaint/grievance handling mechanism on Sexual Exploitation, Abuse, and Harassment (SEAH) provided to the GESI focal persons and GESI Coordinator	<p>Grievances handling included in all orientations on GESI strategy and operational guidelines. 80 NEA staff oriented on SEAH [58 men (72.5%) and 22 women (27.5%)] [Brahmin Chhetri (Hill) 31 (39%), Brahmin Chhetri (Tarai) 12 (15%), Janajati Hill 12 (15%), Janajati Tarai 3 (4%), Muslim 5 (6%), Dalit Hill 1(1%), Dalit Tarai 13 (16%) and others 3 (4%)].</p>
Special support to women and disadvantaged groups provided in pilot DCS offices (2)	<p>Separate toilet for males and females in DCSs, childcare room set up in Lalbandi DCS. DCSs in Janakpur and Lalbandi constructed ramps to help the disabled access the counters and helpdesks to support the elderly and the illiterate consumers.</p> <p>The MD has instructed all offices to install separate toilets, plan for childcare and make suitable arrangements for customers at the service counters.</p>

INDICATORS AND TARGETS	ACHIEVEMENTS
<b>Intervention 2: Skill building and energy-based livelihoods in Madhesh Province</b>	
400 entrepreneurs trained in energy-based livelihood enhancement, including safety measures and/or energy-efficient technologies (50% women of which at least 20% from disadvantaged group and 50% men preferably youth, aged 18-40 years, from disadvantaged social groups) 100% of trained entrepreneurs provided business counselling and hand holding support	<p>The TA provided training to 442 entrepreneurs (329 existing, 113 new businesses) majority of who are micro-entrepreneurs. Of these, 233 are women-led, 319 from disadvantaged communities and 235 are youth-led. 39 entrepreneurs dropped out, because of personal reasons or inability to raise investment.</p> <p>422 of these received skill training in the main phase and 320 received refresher training during the extension phase.</p>
100% of trained entrepreneurs provided business counselling and hand holding support	<p>All of the 403 active entrepreneurs (55% women and 52% youth) received business counselling and handholding support.</p> <p>79% of trained entrepreneurs participated in refresher courses on various topics, based on their demand.</p>
200 persons trained on vocational education (of whom 20% are women and 50% are men from disadvantaged groups)	203 people trained. Among them, 89 (44%) were women among which 74% were from disadvantaged groups. 114 (56%) are men among which 95% are from disadvantaged groups. 95% of all are youth. 72% of the trainees are currently employed.

INDICATORS AND TARGETS	ACHIEVEMENTS
<b>Intervention 3. Mass awareness programs on GESI and electricity use, last mile electrification and electric cooking</b>	
600 persons covered through orientation to reduce gender and social barriers in Madhesh Province (at least 50% men)	<p>A total of 2874 community members, including 1451 men (50.5%) and 1423 women (49.5%), were engaged to reduce gender and social barriers in Madhesh Province. Three policy dialogues were conducted, two in Madhesh Province and one in Kathmandu.</p> <p>Other products include 12 radio PSAs on GESI and electricity use, disseminated through 11 local radio stations, four video PSAs on GESI and electricity use and six video documentaries covering electrification, farmers groups, local focal partners (LFPs), and disadvantaged communities.</p>
Mass awareness campaigns: 200 mass awareness campaigns on gender and exclusion issues and on electricity use and safety (10,000 people participating with at least 30% women and 30% disadvantaged group)	A total of 478 mass awareness programs (including 122 community-level events, 231 radio shows, 176 radio programs, four Video PSAs, and 31 key messaging programs through Viamo) reached more than 757,360 community members. This includes 5,738 participants from local events, 672,356 through radio, and 81,969 through VIAMO's 3-2-1 platform. 481 households were reached through a door-to-door awareness campaign on safe electricity use and billing, complemented with support in internal house wiring.

<p>24 orientation and demonstration program on benefits and safe use of cooktops to the community in Madhesh Province</p>	<p>36 orientation and demonstration programs on benefits and safe use of cooktops to the community, benefitting about 1689 persons [645 men (38.1%) and 1044 women (62.9%)].</p> <ul style="list-style-type: none"> <li>• User training conducted for 457 community members (201 men and 256 women) to ensure proper usage.</li> <li>• Repair and maintenance training conducted for 12 technicians (men).</li> </ul>
<p>Support NEA to develop a mechanism to ensure electricity access to poor &amp; disadvantaged households in Province 2</p>	<ul style="list-style-type: none"> <li>• Contribution to upgradation of electricity systems in eight districts of Madhesh Province, enabling the roll-out of new services like irrigation and electric cooking</li> <li>• Many communities that require electricity upgradation identified and reported to SASEC project<sup>1</sup> and respective DCS offices.</li> <li>• Approximately 4,100 households received improved power quality through upgraded distribution lines (1,427 poles, approx. 50 km of cables, 14 transformers of various sizes) through collaboration between the TA project and SASEC project</li> <li>• Identified and mapped over 5,454 poor and un-electrified households in Madhesh Province.</li> <li>• Documentation prepared for 1,512 households for availing free meters</li> <li>• 1,300 disadvantaged households received electricity through NEA's free meter scheme because of direct efforts and handholding support of the TA project in eight districts while 27 households paid for the meters.</li> <li>• 452 most disadvantaged households received electricity because of demand collection support of TA in Saptari district</li> <li>• 25 households received electricity because of provisions of information on availability of meters in Siraha district arranged by GiZ.</li> <li>• In the extension phase, door-to-door awareness sessions were held for 482 newly electrified disadvantaged households along with support on internal wiring (including 55 wiring upgrades to support e-Cooking).</li> </ul>
<p>400 households adopt induction cooktops realising its benefits</p>	<p>481 induction cooktops have been disseminated, 400 in Sarlahi and 81 in Bara (59% women owners) [33% B/C; 17% Janajati hill; 41% Madhesi; 5% Muslim; 2% Dalit Tarai; 1% Dalit hill]</p>

<sup>1</sup> ADB Loan SASEC PTDSSP



# 01 | Introduction

“

TA 6526 NEP has contributed towards the economic upliftment of our community. By conducting various skill development trainings and facilitating the organizational development of Sagun Samudayik Vidyut Samaj Nepal, it has supported in improving the administrative and financial aspects of the organization and also helped improve the relationship with the community.

”

PURNA BAHADUR BAL,  
WARD CHAIRPERSON, WARD NO. 11, BARDIBAS, MAHOTTARI

## 1.1 Background

Nepal's electricity sector has progressed significantly over the years. Nepal Electricity Authority (NEA), the apex body responsible for generation, transmission and distribution of electricity in Nepal, aims to provide electricity access for every household. At the same time, it is working towards enhancing system reliability through network reinforcement, increasing domestic demand and facilitating clean energy transition in sectors like cooking, transportation and manufacturing.<sup>2</sup> Supported by the Asian Development Bank (ADB), the South Asia Subregional Economic Cooperation (SASEC) Power Transmission and Distribution System Strengthening Project (PTDSSP)<sup>3</sup> aims to reinforce and modernize power supply system in and around Kathmandu Valley in Bagmati Province.

<sup>2</sup> NEA Annual Report, 2022/2023

<sup>3</sup> Henceforth mentioned as the SASEC project

TA (Technical Assistance) 6526 project (referred to as TA 6526 NEP in this report), attached to the SASEC PTDSSP, is supported by ADB and the Royal Norwegian Embassy, Nepal (RNE) and aims to assist NEA in implementation of the GESI (Gender and Social Inclusion) Action Plan of the PTDSSP.

**BOX 1.****CONCEPTS USED WITHIN THE CONTEXT OF TA 6526 NEP**

**Gender equality and social inclusion (GESI)** is a concept that addresses unequal power relations between women and men and between different social groups. It focuses on the need for action to re-balance these power relations and ensure equal rights, opportunities and respect for all individuals regardless of their social identity (A Common Framework for Gender Equality and Social Inclusion, United Nations Development Program (undp.org)).

**Gender** refers to the social, behavioral, and cultural attributes, expectations and norms associated with being male or female.

**Disadvantaged Groups** in Nepal refer to women, persons who are Adivasis, Janajati, Dalit, Madhesi, Muslim, have disabilities, elderly people and people living in remote areas. Such groups have remained disadvantaged over a long time due to economic, caste, ethnic, gender, disability and geographic reasons and include sexual and gender minorities.

The TA 6526 NEP project duration was from 19 April 2021 until 30 September 2024, after which it was extended until 31 October 2025, on an extra-cost basis to accommodate additional activities, in areas of enterprise development, awareness creation and last mile electrification. The TA project was implemented by the Humanist Institute for Development Cooperation, Netherlands (Hivos - CMS No. 016102), together with Center for Rural Technology, Nepal, Nepal (CRT/N - CMS No. 008521) and National Association of Community Electricity Users-Nepal (NACEUN-CMS No. 010518).

## 1.2 Rationale and objective of the TA Project

In 2015, Nepal adopted its new constitution which emphasizes the need to develop energy for economic development. Nepal's constitution has a strong commitment to GESI, with the aim to achieve "gender equality, proportional inclusion, participation and social justice" for its people. At the same time, Nepal is a signatory to various international conventions on GESI including the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Convention on the Rights of Persons with Disabilities (UNCRPD). Despite these commitments however, gender inequality and discrimination based on caste/ethnicity continues in many forms. Accordingly, the government has adopted measures to engage disadvantaged groups in the formulation, implementation and monitoring of sectoral policies, plans and programs.

In line with the national commitment to GESI, NEA adopted its **“Gender Equality and Social Inclusion Strategy and Operational Guidelines”** in 2020, with a mission to “ensure that the NEA is an inclusive and equal opportunity organization that provides electricity services to the Nepalese population in a manner that contributes to the economic and social empowerment of men, women and all individuals at risk of exclusion and to the sustainable development of Nepal”. Subsequently, an implementation manual was developed and training for staff and NEA partners initiated.

TA 6526 NEP supports NEA to operationalize its “Gender Equality and Social Inclusion Strategy and Operational Guidelines”. It strengthens the institutionalization of GESI considerations in NEA’s operations and supports women and disadvantaged group to productively use energy with safety and efficiency in Madhesh Province. By doing so, the TA project contributes to the Government’s goal of “energy for all”, supporting electrification for the poor and the disadvantaged.

### 1.3 The project completion report of TA 6526 NEP

This is the project completion report of TA 6526 NEP and presents the key activities and results of the project, in relation to the scope of work and objectives set out in the Terms of Reference (ToR) and the contract. The activities and results relate to two main outputs:

**Output 1:** Strengthened capacity of NEA to implement approved GESI strategy, operational guidelines and manuals.

**Output 2:** Increased capacity of women, poor and the disadvantaged to use electricity efficiently and productively.

The report focuses on the project objectives and achievements, implementation strategies adopted, challenges and mitigation measures. It is accompanied by a separate lessons learned document titled “Lighting the Path to Empowerment: A Model for GESI Responsive Electrification”, which documents the lessons learned from the TA project and makes recommendations on how to design, implement and monitor GESI-responsive rural electrification programs.

The structure of the report is aligned to the Intervention areas (IA) under the Technical Assistance (TA):

**FIGURE 1. STRUCTURE OF THE REPORT**

### **CHAPTER 1. INTRODUCTION**

presents the background, rationale and overall objective of TA 6526 NEP.

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### **CHAPTER 2. AN OVERVIEW OF TA 6526 NEP**

provides an overview of the TA project, how it is organized, the overall approach and timeline, and partners and the implementation arrangements.

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### **CHAPTER 3. THE ROAD TO INSTITUTIONALIZATION OF GESI IN NEA**

deals with Intervention Area 1 and presents the TA's work on institutionalizing GESI considerations within NEA.

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### **CHAPTER 4. BUILDING ENTREPRENEURSHIP AND RESILIENCE FOR THE POOR**

presents the objectives, strategies and results of Intervention Area 2, covering enterprise development and job creation.

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### **CHAPTER 5. RAISING AWARENESS ON GESI AND ELECTRICITY USE**

presents the objectives, strategies and results of Intervention Area 3A.

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### **CHAPTER 6. LAST MILE ELECTRIFICATION IN MADHESH PROVINCE**

presents the TA's efforts in supporting NEA to extend electricity to the poor and disadvantaged communities in Madhesh Province, made under Intervention Area 3B.



## **CHAPTER 7. PROMOTION AND DISSEMINATION OF INDUCTION COOKTOPS IN MADHESH PROVINCE**

presents the objectives, strategies and results achieved in Madhesh Province under Intervention Area 3C.

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## **CHAPTER 8. MONITORING, EVALUATION AND LEARNING**

presents the monitoring, evaluation and learning framework and the processes adopted.

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## **CHAPTER 9. CONCLUSION AND WAY FORWARD**

presents suggestions on how to further integrate GESI measures within the functioning and operations of NEA.

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## 02 | An overview of TA 6526 NEP

### 2.1 TA Objectives and scope of work

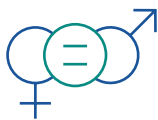
TA 6526 NEP supports NEA to strengthen its GESI mainstreaming process and to improve the access, reliability and efficiency of power supply in a pro-poor and gender-responsive manner. At the same time, it demonstrates a GESI-responsive energy service delivery model in Madhesh Province, including the elements of productive use of energy, last mile electrification, electric cooking and employment generation. As defined in the ToR, the scope of the work covers four key activities:

#### Activity 1



Capacity of NEA to implement GESI strategy strengthened.

#### Activity 2



Community awareness on gender equality and social inclusion enhanced.

#### Activity 3



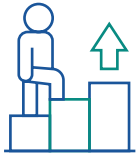
Energy-based livelihood enhanced, and skills developed.

#### Activity 4



Awareness of women and disadvantaged groups increased for efficient and productive use of electricity.

For effective implementation and considering the synergies between various tasks, the activities have been clustered under the following Intervention Areas:



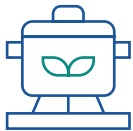
#### INTERVENTION AREA 1

Capacity building and institutionalization of GESI in NEA (aligned with Activity 1 of the ToR), discussed in chapter 3.



#### INTERVENTION AREA 2

Skill building and energy-based livelihoods in Madhesh Province (aligned with Activity 3 of the ToR), discussed in chapter 4.



#### INTERVENTION AREA 3

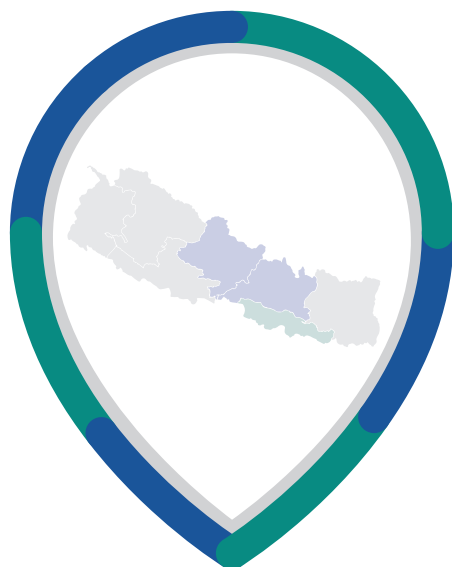
Community-level awareness creation on GESI issues, energy-based livelihoods and electric cooking (aligned with Activities 2 and 4 of the ToR). Intervention area 3 has the following sub-components:

**Intervention Area 3A:** Mass awareness campaigns on GESI and electricity use, discussed in chapter 5.

**Intervention Area 3B:** Ensure electricity access to poor and s households in Madhesh Province, discussed in chapter 6.

**Intervention Area 3C:** Promotion of e-cooking in Madhesh Province, discussed in chapter 7.

FIGURE 2. PROJECT LOCATIONS



#### IN MADHESH PROVINCE

SAPTARI

SARLAHI

SIRAHA

RAUTAHAAT

DHANUSHA

BARA

MAHOTTARI

PARSA

KATHMANDU VALLEY

POKHARA

BHARATPUR

## 2.2 TA implementation approach and timeline

The activities under the TA are undertaken at multiple levels:

**FIGURE 3. AN OVERVIEW OF TA 6526 NEP ACTIVITIES**



**FIGURE 4. THE TIMELINE OF TA 6526 NEP****INCEPTION AND PREPARATORY PHASE**

- Inception report and detailed planning of activities
- Selection/ orientation of field teams (all interventions)
- Institutional assessment of the DCSs in Madhesh Province (IA 1)
- Preparatory studies and baseline development (IA 2)
- Initial engagement with local focal partners (LFPs) and setting up of PUE (productive use of energy) facilities within LFPs (IA 2)
- Design of communication strategy and awareness creation plans (IA 3A)
- Strategy development for electric cooking and last mile electrification (IA 3B and 3C)
- Donor review mission in March 2022

**APRIL 2021- APRIL 2022****MAY 2022-  
SEPTEMBER 2024****IMPLEMENTATION PHASE**

- Staff orientation on GESI strategy, guidelines and manual (IA 1)
- Capacity building of NEA GESI focal persons (IA 1)
- Mainstreaming GESI in pilot DCSs in Madhesh Province (IA 1)
- Developing systems for improving work life for women in NEA (IA 1)
- Enterprise orientation, business management training, skill training and TVET training (IA 2)
- Mentoring support to entrepreneurs and TVET trainees (IA 2)
- Awareness creation on electricity and GESI (IA 3A)
- Support NEA in last mile electrification through mapping, documentation and coordination (IA 3B)
- Concurrent monitoring and data collection of all activities (all interventions)
- Donor review mission in February 2023 and February-March 2024 (all interventions)
- Policy dialogues (all interventions)
- External evaluation (all interventions)

**OCTOBER 2024-  
OCTOBER 2025****EXTENSION PHASE**

- Post training support for skills and entrepreneurship development (IA 2)
- Final data collection for intervention area 2
- Continuation of last mile electrification activities (IA 3B)
- Support for upgrading internal house wiring for newly electrified households (IA 3B)
- Donor review mission in May 2025
- Handover meeting in Madhesh Province in October 2025 (all interventions)

## 2.3 Administrative processes

**Kick off activities:** The initial months of the project were used to get the TA experts and the field team on board and acquainted with the project area in Madhesh Province. ADB organized a virtual TA kick-off meeting on the “South Asia Subregional Economic Cooperation (SASEC) Power Transmission and Distribution System Strengthening Project (PTDSSP)” and the attached TA 6526 NEP project in May 2021. This was followed by a virtual inception meeting in October 2021, which included NEA, RNE and ADB and another meeting with NEA and PMD in November 2021. An inception report was submitted, including proposed strategies, detailed work plans, and a Project performance Monitoring System (PPMS). An updated PPMS as well as an updated GESI Action Plan of PTDSPP are included in Annex 1.

**Initial delays and changes:** The start of the TA 6526 NEP project was slower than anticipated due to the lock down in Nepal and other countries because of the COVID pandemic. Most of the TA project's personnel either fell ill with COVID, had to care for family members infected with the virus or experienced side effects of the COVID vaccine. Nonetheless, the project was up and running by September 2021. This was possible due to the existing knowledge and experiences of the TA team members, as they built on previous experiences gained under TA 9334 NEP.

**Baseline study:** A baseline study was conducted in early 2022 to capture the needs of the communities in the selected geographical clusters of the project. The report of the baseline study is included as Annex 2. In addition, each intervention area conducted its own preparatory studies, as described in the subsequent chapters.

In 2022, 2023, 2024 and 2025, implementation continued, with many activities being implemented by staff in the field simultaneously. Desk-based activities were carried out during festival seasons, local and national elections (2022) and during monsoons.

**Reporting:** The reports submitted to ADB include an Inception Report, Progress Reports (8); Interim Reports (3) and a Draft Final Report (1) in the main phase (September 2021-September 2024). During the extension phase, reports submitted included an inception report and work plan, a progress cum interim report was submitted for the period October 2024 to June 2025, and the final completion report. Additionally, approach notes, budgets and activity reports were submitted relating to workshops, seminars, training programs, studies and surveys, and equipment (budget lines 1300, 1400 and 1200) conducted. The draft and final reports of the external evaluation study were shared with ADB. Moreover, the TA Team has submitted with the ADB Nepal office information as per their request as well as PowerPoint presentations and financial overviews.

**Contract variations:** In all, twelve project contracts variations were issued during the project period in relation to the TA 6526 NEP contract. These relate to changes in milestone payments, adding a new budget line (1200), receiving advance payments, changes in personnel and their time allocation, changes to travel costs and shifts between budget lines. Contract variation 9 issued on 24 September 2024 provided a no-cost extension to the TA until 30 September 2025, however, the addition budget was made available only on 10 April 2025 via Contract variation 10, approving a total project cost of USD 2,548,386 (increasing from the original contract of USD 1,969,288). The delay in issue of contract variation 10 and disbursement of the corresponding

advance payment affected the project implementation adversely. Funding constraints led to the postponement of key activities, including technology procurement for the entrepreneurs. While Hivos pre-financed critical activities and staff remuneration to mitigate the impact, the delay disrupted project momentum and compressed the implementation timeline. Contract variation 11 made a provision to provide cash advances of US\$49,000 under 1200. Contract variation 12 Contract shifted the completion date from 30 September 2025 to 31 October 2025.

**Changes in team composition:** During the project, some changes had to be made to the personnel composition. In October 2022, Ms. Manjari Shrestha replaced Mr. Bibek Shrestha as the Enterprise Development and Vocational Skill Development Expert. Mr. Mahendra Chudal, who had been engaged with the project as the Energy Technical Expert from its start, unexpectedly passed away on 21 March 2023, and was replaced by Ajaya Sharma. In the extension phase, Ms. Ashma Pakhrin, the monitoring, evaluation and learning (M, E and L) coordinator was replaced by Ms. Anzoo Shrestha. The contracts of the National GESI Expert (Indira Shakya), the International Enterprise Development Expert (Remco van Stappershoef), and the Knowledge Management and Communication Expert (Sumiran Shrestha) were closed at the end of the main phase, upon successful completion of their tasks. Engagement of the remaining team members was maintained during the extension period.

**Review missions:** Four SASEC PTDSPP Review Missions, held in March 2022, February/March 2023, February/March 2024 and May 2025, were conducted in which the TA team was actively engaged.

**External evaluation study:** As per the signed contract agreement, a final external evaluation study was to be undertaken by the project and assigned to an external firm, Scott Wilson Nepal (SWN), in June-August 2024.

**Approval from Social Welfare Council (SWC):** Any project funded by foreign aid must be registered and approved by the Social Welfare Council of Nepal. As the project extension contract was delayed by more than six months, the SWC raised concerns on the intention and genuineness of the TA project. As a result, CRT/N received delayed project implementation approval.

**Sustainability actions:** The closure phase of the TA was focused on strengthening individual and institutional capacity at all levels, assisting NEA, the local partner institutions and other stakeholders to develop roadmaps to take the TA activities forward and continue the focus on systems required for institutionalization of GESI in NEA. These are discussed further in the chapters on each Intervention area.

**Final handover:** On 16 October 2025, a final handover meeting was held in Madhesh Province. This was attended by the participating LFPs, local governments, the DCSs, the Provincial Chief, ADB and the RNE, and TA team, including field staff and representatives from CRT/N, NACEUN and Hivos/ENERGIA. The local partners presented their feedback on the TA activities as well as their own concrete plans to take the activities forward.

## 2.4 Implementation modality and team composition

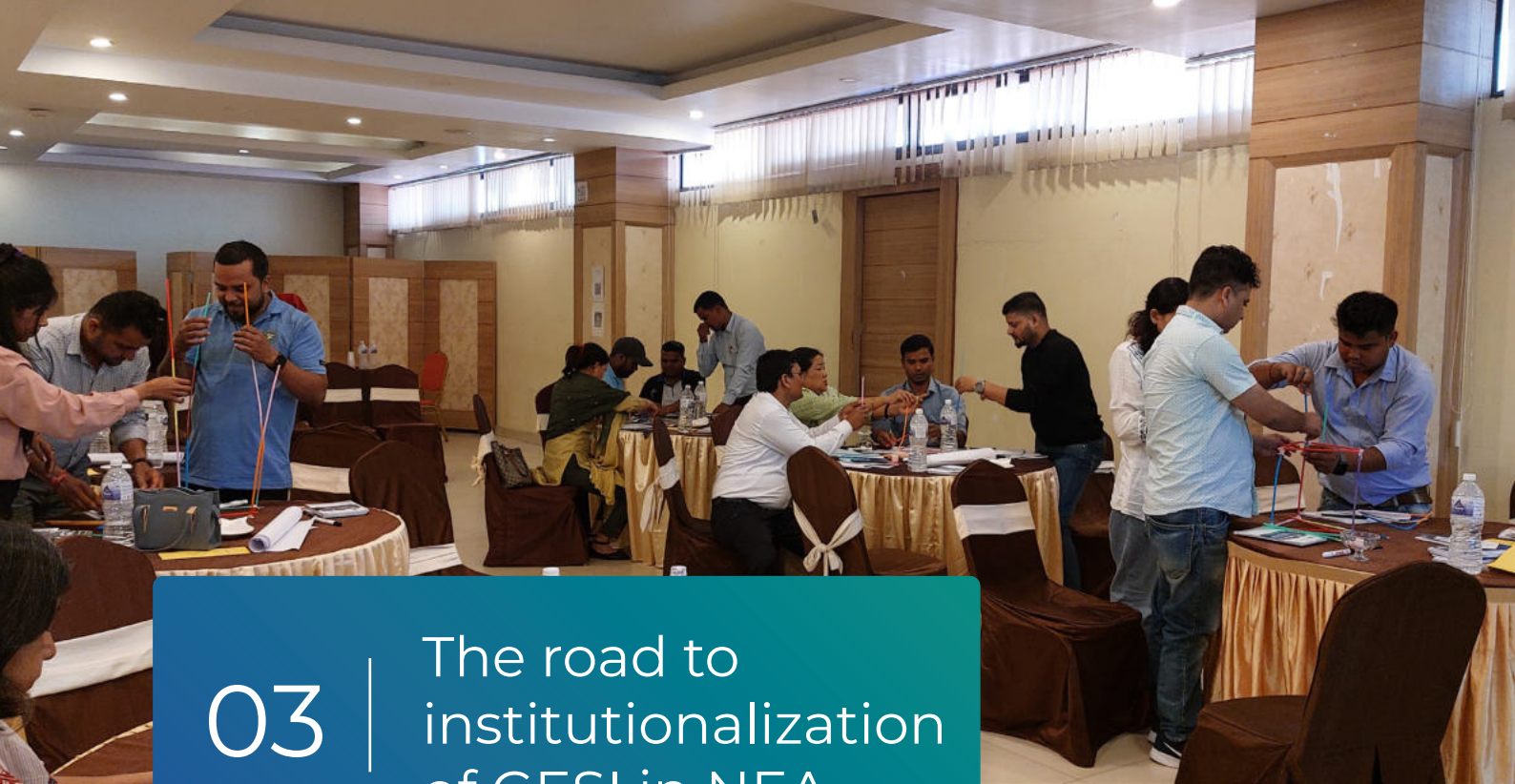
The TA activities were executed by a team that combines a locally recruited field team from Madhesh Province, supported by an international and national teams from Hivos/ENERGIA, and CRT/N and NACEUN. In addition, specialized organizations, such as Nepal Engineering, Management and Development Consultancy Pvt. Ltd, VIAMO, Story Kitchen (TSK) and Scott Wilson Nepal, among others, were engaged in support of the community awareness creation and monitoring and evaluation initiatives. In Madhesh Province, the TA worked closely with local institutions as partners, who would take the activities forward after the TA exits. An overview of the team is provided in the table below:

**TABLE 1. TEAM MEMBERS**

ORGANIZATION	POSITION	NAME OF EXPERTS
<b>International experts</b>		
Hivos/ENERGIA	GESI Expert and Team Leader	Soma Dutta
Hivos/ENERGIA	Co-Team Leader	Sheila Oparaocha
Hivos/ENERGIA	Enterprise Development Expert	Remco Van Stappershoef
<b>Intervention Area 1, national experts</b>		
GESI Officer	Indira Shakya	Indira Shakya
<b>Intervention Area 2, national experts</b>		
Hivos/ ENERGIA	Enterprise Development and Vocational Skill Development Expert	Bibek Shrestha / Manjari Shrestha
<b>Intervention Area 3, national experts</b>		
CRT/N	Knowledge Management and	Sumiran Shrestha
NACEUN	Energy Technical Expert	Mahendra Chudal/ Ajaya Sharma
<b>Field level activities, national experts</b>		
CRT/N	Enterprise Development and Livelihood Coordinator	Likh Ram Chaudhary
CRT/N	Enterprise Development and Livelihood Coordinator	Mina Kumari Basnet
NACEUN/ CRT/N	Field facilitator/ Enterprise Development Officer (EDO), Bara	Samita Panjiyar
NACEUN/ CRT/N	Field facilitator/ EDO, Parsa	Santosh Bishokarma (replacement R. Chaudhary)
NACEUN/ CRT/N	Field facilitator/ EDO, Siraha	Binita Chaudhary (replacement R. Bishwokarma)
NACEUN/ CRT/N	Field Facilitator/EDO, Sarlahi	A. Chaudhary / Shyam Mahato

NACEUN/ CRT/N	Field Facilitator/EDO, Rautahat	Ram Sharan Shah (replacement A. Chaudhary)
NACEUN/ CRT/N	Field Facilitator/ EDO, Dhanusha	Utim Lal Pandit
NACEUN/ CRT/N	Field Facilitator/ EDO, Mahottari	Tanka B. K. Diyal
NACEUN/ CRT/N	Field Facilitator/ EDO, Saptari	Rupesh Kumar Chaudhary (replacement Pustika Chaudhary)
<b>Monitoring, evaluation and learning, national expert</b>		
CRT/N	Monitoring, Evaluation and Learning Expert	Ashma Pakhrin/ Anzoo Sharma
<b>Project finance and administration, national expert</b>		
CRT/N	Project Finance/Administration Officer	Pawan Kumar Singh – replacement of Prabin Mulmi

Additional resources have been made available by Hivos/ENERGIA in support of the TA project, such as the support of a project officer, Caroline Brants.



# 03

## The road to institutionalization of GESI in NEA

### 3.1 Context and background

Intervention Area 1 of TA 6526 NEP was aimed at supporting NEA to operationalize its GESI Strategy 2020 developed under TA 9334 NEP and approved by the NEA Board during its 827th Board Meeting in 2020. This foundational document provides the necessary framework and directives for implementing GESI initiatives within NEA. After this, a step-by-step implementation manual was developed, including detailed procedures and actions required to operationalize the GESI strategy with responsibilities, timelines and specific activities. At the same time, an institutional structure was established to support the GESI strategy. This includes a GESI Core Team within each NEA directorate with designated roles, ensuring that there is a clear hierarchy and reporting mechanism to oversee the strategy's implementation. Intervention Area 1 included staff training on GESI, on-the-ground actions in Madhesh Province to demonstrate GESI-responsive actions, and other activities to institutionalize GESI within NEA (Figure 5).

FIGURE 5. MILESTONES IN INSTITUTIONALIZATION OF GESI WITHIN NEA



## 3.2 Summary of outputs delivered

Several activities were implemented to ensure the implementation of GESI approach at all levels within NEA. A summary of the outputs is described in the table below.

**TABLE 2. OUTPUTS DELIVERED UNDER INTERVENTION AREA 1**

EXPECTED OUTPUTS (AS PER TOR)	ACHIEVEMENTS	ACHIEVEMENT STATUS
An operational GESI secretariat along with GESI team members in NEA directorates	<p>GESI Coordinator appointed in MD's Secretariat</p> <p>24 GESI Core Team members appointed in NEA directorates [8 men and 16 women] [Brahmin Chhetri 19 (79%), Janajati 5 (21%)], none in Subsidiary Agencies and projects.</p> <p>Additional activities undertaken include:</p> <p>The TA facilitated the development and approval of the Code of Conduct for SEAH Prevention to mitigate sexual harassment at work and development of a Returning Mothers Guideline, aimed at promoting conducive workplace practices for new mothers returning after maternity leave.</p> <p>A GESI curriculum, developed as an integral part of NEA training curriculum, rather than a standalone initiative</p>	<b>Target achieved</b>

500 NEA staff (20% women, 30% disadvantaged group) oriented on GESI strategy, guidelines and manual	556 NEA staff oriented on GESI strategy, operational guidelines and manual [304 men (55%) and 252 women (45%)] [Brahmin Chhetri (Hill) 333 (60%), Brahmin Chhetri (Tarai) 47 (8%), Janajati Hill 29 (5%) Janajati Tarai 84 (15%), Madhesi 15 (3%), Muslim 4 (1%), Hill Dalit 2 (0.4%) Tarai Dalit 37(7%), Others 5 (1%)].	<b>Target surpassed</b>
An annual GESI action plan for each directorate	9 directorates developed action plans for implementation but due to budget constraints, 4 were able to implement with support from the TA.  As part of implementing the action plans, 101 members from the directorates were trained by the GESI focal persons [48 men (48%) and 53 women (52%)] [Brahmin Chhetri 72 (71%), Janajati 20 (20%), Madhesi 4 (4%), Dalit 1 (1%) and Others 4 (4%)].	<b>Target achieved</b>
Training on grievance handling mechanism on Sexual Exploitation, Abuse and Harassment (SEAH) to GESI focal persons and GESI coordinator	Grievances handling included in all orientations on GESI strategy and operational guidelines.  80 NEA staff oriented on SEAH [58 men (72.5%) and 22 women (27.5%)] [Brahmin Chhetri (Hill) 31 (39%), Brahmin/Chhetri (Tarai) 12 (15%), Janajati Hill 12 (15%), Janajati Tarai 3 (4%), Muslim 5 (6%), Dalit Hill 1(1%), Dalit Tarai 13 (16%), Others 3 (4%)].	<b>Target achieved</b>
Special support to women and disadvantaged groups provided in pilot DCS (Distribution and Consumer Services) offices (2)	GESI- friendly infrastructure including separate toilet for male and female staff and childcare room set up in Lalbandi DCS.  DCSs in Janakpur and Lalbandi constructed ramps to help the disabled access the counters and helpdesks to support the elderly and the illiterate consumers. The MD has instructed all offices to install separate toilets, plan for childcare and plan for customers at the service counters.	<b>Target achieved partially</b>



*GESI Core Team Meeting Participants*

### 3.3 Overview of strategy to mainstream GESI in NEA

The TA developed and implemented a comprehensive framework for GESI institutionalization, comprising of four elements:



**Operationalization of GESI secretariat and GESI focal persons within NEA:**

The institutionalization of GESI involves embedding GESI principles into the core operations, policies, and culture of NEA. This included establishment of dedicated GESI Core Teams in the Directorates with clear roles and responsibilities, integrating GESI objectives into strategic plans, and ensuring leadership commitment at all levels. Additionally, it includes gathering consensus on a GESI-responsive monitoring and evaluation system to track progress and results, ensuring accountability.



**Capacity building:** Comprehensive orientation/training programs were conducted to equip staff with the knowledge and skills necessary for effective GESI implementation.

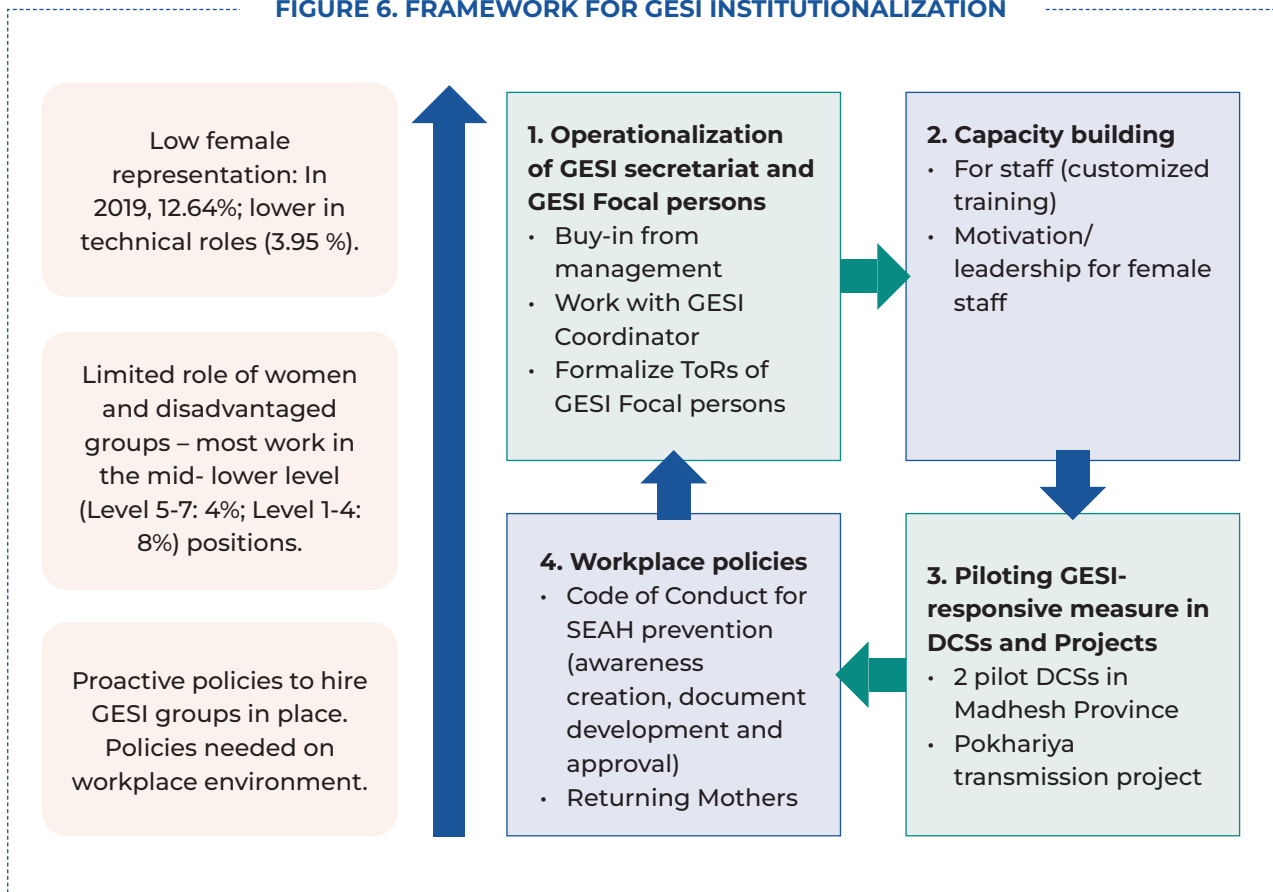


**Piloting GESI-responsive measures in DCSs and projects:** GESI initiatives were piloted at two DCSs in Madhesh Province including customized GESI training for staff, piloting accessible customer service practices for all genders, ages and social backgrounds. GESI-responsive approaches were also demonstrated in one of the NEA projects, currently at the design stage.



**Workplace policies:** Establishing and maintaining safe workplace environment, free from harassment, discrimination and violence is critical to supporting GESI goals. The TA facilitated the development and approval of a Code of Conduct for SEAH Prevention to mitigate sexual harassment at work, and the development of a Returning Mothers Guideline, aimed at promoting conducive workplace practices for new mothers returning after maternity leave.

FIGURE 6. FRAMEWORK FOR GESI INSTITUTIONALIZATION



## 3.4 Overview of activities implemented

### 3.4.1 Staff orientation on GESI strategy, guidelines and manual

As part of the TA, NEA staff members received an orientation on skills required to implement the GESI strategy. These orientation programs targeted all levels of the organization, including managerial staff, Core Team members and employees, including technical and non-technical staff. The orientation programs were customized for three groups of staff, aligned to their specific nature of work and designated functions: (a) Generation, Transmission and on-going projects; (b) Distribution and Customer Service Centers; and (c) Administration and Accounts.

The training covered GESI principles, practical implementation strategies as well as measures to facilitate organizational change. Additionally, empowerment, team building and leadership were included. The orientation/training was a 2-day program for DCSs and Project level staff, while for the Administration/Finance group it was for one day. For design of the orientation, see Table 3.

**TABLE 3. DESIGN OF ORIENTATIONS ON GESI STRATEGY AND OPERATIONAL GUIDELINES**

Content of the Orientation/ Training	Generation+ Transmission (Projects)	Distribution and Consumer Services	Administration + Finance	Remarks
Module 1: Basic concepts of GESI	✓	✓	✓	Common
Module 2: GESI issues in the power sector: organizational, services and project	✓	✓	✓	Common
Module 3: Implementing NEA's GESI Strategy and Operational Guidelines	✓	✓	✓	Specific for each group
Module 4: Grievance Redressal Mechanisms and prevention of sexual harassment	✓	✓	✓	Common
Module 5: Communication tools and techniques	✓	✓	✓	Specific for each group
Module 6: Building empowerment and leadership qualities and team building	✓	✓	✓	Common
Module 7: Integrating GESI considerations in HR Strategy			✓	Specific for Admin/ Finance Group
Module 8: Monitoring, evaluation and reporting through GESI lens: Gender Audit and Gender Budgeting	✓	✓	✓	Specific for each group
Length of Orientation/ Training	2 days		1-day	

A total of 556 participants attended the orientations on implementing GESI Strategy and Operational Guidelines, the breakup of which is given in . The complete list of participants is provided in Annex 3 to this report.

**TABLE 4. PARTICIPATION IN NEA STAFF TRAINING**

Group	No. of Programmes	Total participants	Gender		Ethnicity								
			Male	Female	Brahmin/Chhetri (Hill)	Brahmin/Chhetri (Tarai)	Janajati (Hill)	Janajati (Tarai)	Madheshi	Muslim	Dalit (Hill)	Dalit (Tarai)	Others
DCS	14	368 (66%)	202 (55%)	166 (45%)	211 (57%)	35 (10%)	15 (4%)	59 (16%)	11 (3%)	2 (1%)	1 (0%)	30 (8%)	4 (1%)
Project	5	91 (16%)	65 (71%)	26 (29%)	59 (65%)	8 (9%)	6 (7%)	11 (12%)	0 (0%)	2 (2%)	0 (0%)	4 (4%)	1 (1%)
Admin/ Fin	5	97 (17%)	37 (38%)	60 (62%)	63 (65%)	4 (4%)	8 (8%)	14 (14%)	4 (4%)	0 (0%)	1 (1%)	3 (3%)	0 (0%)
<b>Total</b>		<b>556</b>	<b>304 (55%)</b>	<b>252 (45%)</b>	<b>333 (60%)</b>	<b>47 (8%)</b>	<b>29 (5%)</b>	<b>84 (15%)</b>	<b>15 (3%)</b>	<b>4 (1%)</b>	<b>2 (0.4%)</b>	<b>37 (7%)</b>	<b>5 (1%)</b>

In addition to the planned GESI orientations, other programs were conducted on specific demand, for example:

- GESI orientation in Nepalgunj in preparation for upcoming ADB activities in the province.
- Orientation on SEAH for women staff, including one for the Load Despatch Centre of the Transmission Directorate in Kathmandu.
- Motivational session for female staff of various DCSs in Madhesh Province and the GESI Core Team members at Nagarkot.

### 3.4.2 Capacity building of NEA GESI focal persons to take the GESI agenda forward

In order to strengthen the capacity of the Core Team members who are tasked with leading the GESI agenda within NEA, training of trainers' programs (ToTs) were conducted for the Core Team members and followed up through regular meetings. The objectives of the ToT were to (a) develop a common understanding about NEA's commitment to GESI; (b) familiarize the GESI Core Team with the GESI Strategy and Operational Guidelines, and how these are to be used within the organization; (c) ensure that the tasks of the GESI focal persons are well understood; (d) share good practices on how GESI principles are adopted in other utilities; and (e) upgrade the training skills of GESI focal persons so that they are able to conduct further trainings. A summary of participation and the attendance at these meetings is presented in Annex 4. The GESI focal persons reported increased understanding of GESI issues and the possibility of application of GESI concepts within their own work. Most importantly, many reported increased level of confidence on these issues and an interest in conducting GESI training within their directorate. In fact, many conducted GESI training within their respective directorates, with minimal support from the TA team.

9 directorates developed action plans for implementation



4 were able to implement with support from the TA but due to budget constraints



**101**

members from the directorates were trained by the GESI focal persons



**101**

NEA staff from different directorates were trained by the GESI focal persons

Following the ToT, the GESI focal persons in nine directorates developed GESI action plans. Due to budgetary constraints within NEA, these could not be implemented with their internal funding. However, with support from the TA, four directorates implemented the action plans, including GESI training for their directorates and disaggregated staff data collection (Table 5).

**TABLE 5. TRAINING PROGRAMS CONDUCTED IN DIRECTORATES AS PART OF ACTION PLANNING**

Directorate	Theme	Total Participants	Gender		Ethnicity				
			Male	Female	Brahmin/Chhetri	Janajati	Madhesi	Dalit	Others
Transmission	SEAH	22	15 (68%)	7 (32%)	13 (59%)	5 (23%)	4 (18%)	0 (0%)	0 (0%)
Administration and Finance	GESI Strategy & implementation	21	8 (38%)	13 (62%)	17 (81%)	3 (14%)	0 (0%)	0 (0%)	1 (5%)
DCS	GESI Strategy & implementation	31	11 (35%)	20 (65%)	22 (71%)	8 (26%)	0 (0%)	0 (0%)	1 (3%)
Engineering	GESI Strategy & implementation	27	14 (52%)	13 (48%)	20 (74%)	4 (15%)	0 (0%)	1 (4%)	2 (7%)
<b>Total</b>		<b>101</b>	<b>48 (48%)</b>	<b>53 (52%)</b>	<b>72 (71%)</b>	<b>20 (20%)</b>	<b>4 (4%)</b>	<b>1 (1%)</b>	<b>4 (4%)</b>

**BOX 2.**

**CUSTOMIZED TRAINING FOR LOAD DISPATCH CENTRE**



SEAH prevention is of utmost importance especially because female staff are now deputed even for night shifts in the Load Dispatch Centre. Understanding the subject and putting it to practice will make a huge change in enhancing self-confidence of the female staff. At the same time, this needs to be understood by the male counterpart too and it will be useful to conduct regular training on this theme.



RANJU PANDEY, DIRECTOR, LOAD DISPATCH CENTRE

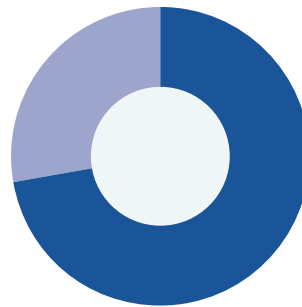
**TRAINING ON GRIEVANCE HANDLING MECHANISM**



**80**

NEA staff oriented on SEAH prevention

**22**  
Women



**58**  
Men



To support NEA's GESI agenda in the long run, a curriculum on GESI integration has been developed for the NEA Training Centre, with modules customized for Administration, Distribution and Consumer Services and Projects. The figure below provides the layout of the curriculum designed for this purpose.

**FIGURE 7. AN OVERVIEW OF GESI CURRICULUM**



**1. CONTEXT**

- Gender concepts
- Diversity and inclusion
- Creating a GESI conducive workplace



**2. SOFT SKILLS**

- Empowerment building
- Leadership qualities
- Team building
- Communication tools and techniques



**3. MANAGEMENT**

- Strategic planning to implement GESI practices
- Effective consumer services
- Addressing conflict and SEAH prevention
- Provisions for returning mothers



**4. LEADERSHIP**

- Effective team management
- Balancing work within teams



**5. INTEGRATION**

- Capturing diversity in HR (Human Resources) data
- Integrating GESI in work plans and allocating budget
- Effective monitoring system

### 3.4.3 Engagement with NEA management

Engaging with NEA management is crucial for securing commitment of the leadership to ensure their involvement in policy formulation, championing GESI initiatives, allocating necessary resources and fostering a culture of inclusivity and accountability. Regular update meetings were conducted to align management with GESI objectives. Participants included the Managing Director, Directorate level Management representatives, GESI Coordinator and ADB. Besides these, separate meetings were held with DMDs (Deputy Managing Directors), Provincial Chief of Madhesh Provincial Office and Chiefs of the DCSs in Madhesh Province.

### 3.4.4 Mainstreaming GESI in Pilot DCSs in Madhesh Province

Prior to developing a strategy and selecting DCSs for piloting GESI initiatives, an institutional assessment was carried out in Kaski, Bharatpur, Madhesh Province and Kathmandu. The study included 40 DCSs (24 in Madhesh Province, three in Pokhara, one in Bharatpur and 12 in Kathmandu Valley) and 157 staff members. See Annex 5 for participants of Focus Group Discussions (FGD) and Key Informant Interviews (KII).






#### BOX 3.

#### STAFF COMPOSITION IN 40 DCS (NEA GESI INSTITUTIONAL ASSESSMENT, 2023)

- Women constitute less than 20% of staff. The percentage of female staff is lowest in Madhesh Province (6%) and highest in Kathmandu Valley (33%) with 32% in Pokhara and 25% in Bharatpur.
- Of the 20% female staff, 6% are in technical and 14% in non-technical roles. In Madhesh Province, only four DCSs (Birgunj, Kalaiya, Lahan and Simara) have women in technical roles and in all, 1% of the female staff are in technical roles. In Pokhara and Bharatpur, 10% and 8% of the women staff are in technical roles respectively and Kathmandu Valley has 10% women in technical roles.
- Majority of the women are concentrated in levels 4 and 5. There are no women in Levels 9 and above. Level 1 has 0.6% female staff; Level 2 and 3 have 2% each; Level 6 and 7 have 0.42% each and Level 8 0.19%.
- In terms of ethnicity, majority (39%) belong to Brahmin Chhetri (Hill), followed by 21% Brahmin Chhetri Tarai, 15% Janajati (Hill), 6% Janajati (Tarai), 14% Dalits, 1% Muslims and 3% Others.

See Annex 6 for staff in the 40 DCSs covered in the Institutional assessment.

**TABLE 6. STATUS OF SEPARATE TOILETS FOR WOMEN IN DCSS (SEPTEMBER 2024)**

S.NO.	DISTRICT	STATUS OF SEPARATE TOILET FOR WOMEN
1	Janakpur DCS	
2	Birgunj DCS	
3	Lalbandi DCS	
4	Simara DCS	
5	Chadranigahpur DCS	The office is operating in a rented space and hence unable to make any changes. There is no separate toilet for women.
6	Provincial Office Janakpur	

The assessment showed that the level of service delivery varies from one DCS to another. Some have adopted a single-window service for the customers. Most have some infrastructure gaps: absence of separate toilets (6 of the 24 DCSs have separate toilets), lack of drinking water for consumers and ramp for the disabled are common; however, seating arrangements are made for consumers. In contrast to this, the DCS in Lalbandi has made provisions for drinking water and mobile charging, has a TV display of safe use of electricity and other information pertaining to customer services. Similarly, DCS in Thimi has created its own website for sharing customer-related information and complaint reporting.

A common challenge expressed by the management is retaining female staff as meter readers and as technicians (linesmen). The Bhaktapur DCS has been able to retain a female linesman for the last 15 years by instituting measures for her safety and immediate actions in case of any untoward incidence that might occur while at work. See Table 7 for gaps identified in the DCSs and the solutions that the TA experimented with.

After a detailed institutional assessment of the DCSs in Madhesh Province, Janakpur and Lalbandi were selected for on-site GESI interventions.

- Staff composition at Janakpur DCSC: Male 94 (96%) Female 4 (4%); [Brahmin Chhetri (Hill) 15 (16%), Brahmin/ Chhetri (Tarai) 15 (16%), Janajati Hill 1 (1%), Janajati Tarai 6 (6%), Madhesis 14 (15%), Dalit Tarai 11 (12%), Muslim 1 (10%), Others 31 (33%)].
- Staff composition at Lalbandi DCSC: Male 39 (93%); Female 5 (75)2; [ Brahmin Chhetri (Hill) 13 (33%), Brahmin/ Chhetri (Tarai) 1 (3%), Janajati Hill 2 (8%), Janajati Tarai 5 (13%), Madhesi 4 (10%), Dalit Hill 2 (5%), Dalit Tarai 4 (10%), Others 8 (20%)].<sup>4</sup>

<sup>4</sup> Data at the end of the project period

**TABLE 7. GENDER GAPS AND SOLUTIONS PILOTED UNDER TA 6526 NEP**

GENDER AND SOCIAL INCLUSION GAPS	SOLUTIONS PILOTED
<p><b>Cultural issues:</b></p> <ul style="list-style-type: none"> <li>• Low appreciation for and limited skills for implementing a GESI approach at work</li> <li>• Limited acceptance of and support for women in technical roles, in decision-making positions and in meetings and trainings</li> <li>• Women feel unwelcome and unheard in project sites and even the managers prefer to deal with male staff for delegating technical responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>• Staff orientation on GESI issues and good practices</li> <li>• Awareness creation through use of slogans</li> <li>• Development of GESI Training Curriculum for NEA</li> <li>• Sensitization of NEA management (central level and in the provinces)</li> </ul>
<p><b>Women's safety, workload and multiple responsibilities:</b></p> <ul style="list-style-type: none"> <li>• Women need to fulfil multiple roles; dual responsibilities (home and office) make it difficult for women especially after returning from maternity leave</li> </ul>	<ul style="list-style-type: none"> <li>• Specific provisions to support mothers returning from maternity leave</li> <li>• Development of an SEAH prevention and redressal strategy</li> <li>• Capacity building and leadership development</li> </ul>
<p><b>Facilities for women (staff and customers) and the disabled in DCSs:</b></p> <ul style="list-style-type: none"> <li>• Absence of separate women's toilets equipped with necessary amenities in most NEA offices for staff as well as customers</li> <li>• Lack of drinking water and ramp for the disabled.</li> </ul>	<ul style="list-style-type: none"> <li>• Lobby with DCSs for separate women's toilets and childcare facilities</li> </ul>

In discussion with the DCS management, the following activities were undertaken:

- Piloting GESI-responsive service delivery approaches at Lalbandi DCS included separate toilets for male and female staff and for consumers and a childcare room. For consumers, drinking water provision with a shaded area with seats in the waiting area, a digital audio and visual display system providing various information for consumers, and an electronic token system to maintain order at the counter had been introduced.
- An exposure visit of all DCS chiefs in Madhesh Province to Lalbandi was arranged, which led to an understanding of a GESI-responsive approach and necessary infrastructure required to ensure effective services and safe and convenient workplace for women.
- Staff training on specific themes were conducted, as requested by the DCS staff, including on gender audit and gender budgeting, agency-based empowerment, leadership and team building, communication techniques and SEAH. See Annex 6 for list of participants in these events.

### 3.4.5 Mainstreaming GESI in project processes

For piloting and demonstration of GESI approaches in practical terms, several activities were implemented at the Hetauda-Parwanipur-Pokhariya 132 KV Transmission Project site. On 23 November 2023, the Project Team and Contractor of the Pokhariya project agreed on the following actions, documented in minutes of a meeting (refer to Annex 7).

- Include at least one female representative in the first-level GRM committee.
- Engage at least 10% of the total labour as female labour.
- Ensure employment opportunities for the local communities.
- Wage rate should comply with that of the local Government norms.
- Separate water, sanitation and hygiene facilities for male and female.
- Information and signboards on the project should be in a language well understood by the communities.
- Safeguard and SEAH measures must be in place (zero tolerance subjected to immediate action).
- All parties must attend the awareness programs regarding safe use of electricity and GRM procedures.
- Maintain disaggregated data of labours.
- Maintain modality of Grievances Redressal Committee as per framework agreed upon between the various representatives.
- Maintain cleanliness and hygiene in the working site including labour camp.

### 3.4.6 Improving work life for women within NEA

NEA is an equal employment organization and is committed to providing a safe work environment. It also serves both men and women with its services and engages with communities. NEA believes that its employees and the communities it engages with have the right to be treated with dignity.

The women staff in NEA, the management and the GESI Core Team emphasized the importance of an institutional approach to preventing and addressing sexual harassment. In response, a Code of Conduct for SEAH Prevention was developed, which was approved by NEA in October 2025 to ensure the safety and well-being of NEA employees, with a particular focus on protecting women and disadvantaged groups. The Code of Conduct includes comprehensive anti-harassment initiatives, channels for reporting and addressing grievances and ensuring that staff are trained in recognizing and preventing workplace harassment at workplace.

Additionally, a document on provisions for returning mothers was developed and submitted to NEA's legal department. This is in response to the challenges that women joining work post-maternity leave or in adjusting to the workplace environment after a gap, the biggest being a concern about the child's wellbeing during working hours. Suggested measures include providing proactive communication support during their absence, and upon return,

mentoring, training and upskilling programs, flexibility and choice in work engagements, flexible scheduling and other benefits. Both documents are included as Annexes 8 (Code of Conduct for SEAH Prevention) and 9 (Proposed provisions for returning mothers) to this report.

### 3.4.7 Integrating GESI in data management

Disaggregated data as a basic GESI principle has been in discussion for a long time in NEA. Its importance and use were discussed at the various staff training courses and management meetings. A framework was developed and shared with the Administration Directorate. This is included as Annex 10. This year the Administration Directorate has worked on this agenda and provided gender- disaggregated staff data and is now in the process of installing software for managing the data as per GESI principles. This is also being adopted by the Administration department of NEA Madhesh Province office. This information is also being processed for reporting in the upcoming Annual Report.

## 3.5 Results and insights

### 3.5.1 The GESI Agenda is taking root and progressing well within NEA.

The GESI secretariat operates under the MD's Secretariat and ensures that GESI focal person positions that fall vacant because of transfers/ retirements are filled. Three new Core Team members were nominated in 2023-24 to fill the vacancy created by those retiring or being transferred out. The TA has created a critical pool of personnel trained on GESI issues through its orientations and training programs. At the same time, interactions at the pilot DCSs have enhanced the knowledge on GESI issues and highlighted the need for crucial infrastructural provisions to address challenges encountered by the staff as well as consumers. Practical measures at pilot projects help develop a framework for labour information, complaints handling and conducive workplace environment.

#### BOX 4.

#### ARTICULATION OF GESI IN ANNUAL REPORTS

Extract from 2022-23 annual report for first time mention of GESI: The 2022-23 NEA Annual report includes, for the first time, a write up on GESI, which increased visibility and accountability of GESI initiatives within NEA.

In line with the national commitment on Gender Equality and Social Inclusion (GESI), NEA has adopted the "Gender Equality and Social Inclusion strategy and Operational Guidelines" for mainstreaming GESI consideration within the organization. NEA has been prioritizing the GESI principles throughout its operation supporting women and excluded.

#### MANAGING DIRECTOR'S REPORT in NEA, Annual Report 2022-23

The subsequent annual reports continue to cover GESI issues in detail.

### 3.5.2 NEA is showing commitment to GESI issues at multiple levels.

Within NEA, positive changes are observed in the adoption of GESI provisions. Some commitments made at the management level are stated below.

- Construction of separate toilets for women in all offices: Directive sent out by the Central Office for provision of appropriate amenities.
- Establishment of childcare units in all offices: Directive sent out by the Central Office (provision to be made depending on the presence of female staff in the office, alternate mechanisms under discussion).
- Approval of a Code of Conduct for SEAH Prevention to mitigate sexual harassment at work.
- Directive sent out for installation for appropriate infrastructure and amenities for consumers in the counter area of DCSs by the management.
- Disaggregation of human resources by gender and ethnicity within the organization has been initiated by the Administration Directorate.
- Targeted efforts to be made in identifying last mile households without electricity and measures for enabling access to electricity by DCSs.
- Promotion of digital payment system.
- The Project Management Directorate, through its Social Safeguard and Environment Management Department (SSEMD) has actively implemented a variety of GESI-focused initiatives. These include community awareness programs, skill development training, and professional development activities for NEA staff, such as officer-level training on smart metering and customer service.
- NEA is an institutional partner of the South Asian Regional Network – Women in Power Sector (WePOWER) since April 2021. As a committed member, NEA regularly reports its GESI-related initiatives to WePOWER.

**NEA's Board Meeting (no. 1002) held on 17 June 2025 endorsed the NEA Child Care Center Formation and Operation Guideline 2082**

#### BOX 5.

#### GESI AT NEA PROVINCIAL LEVEL

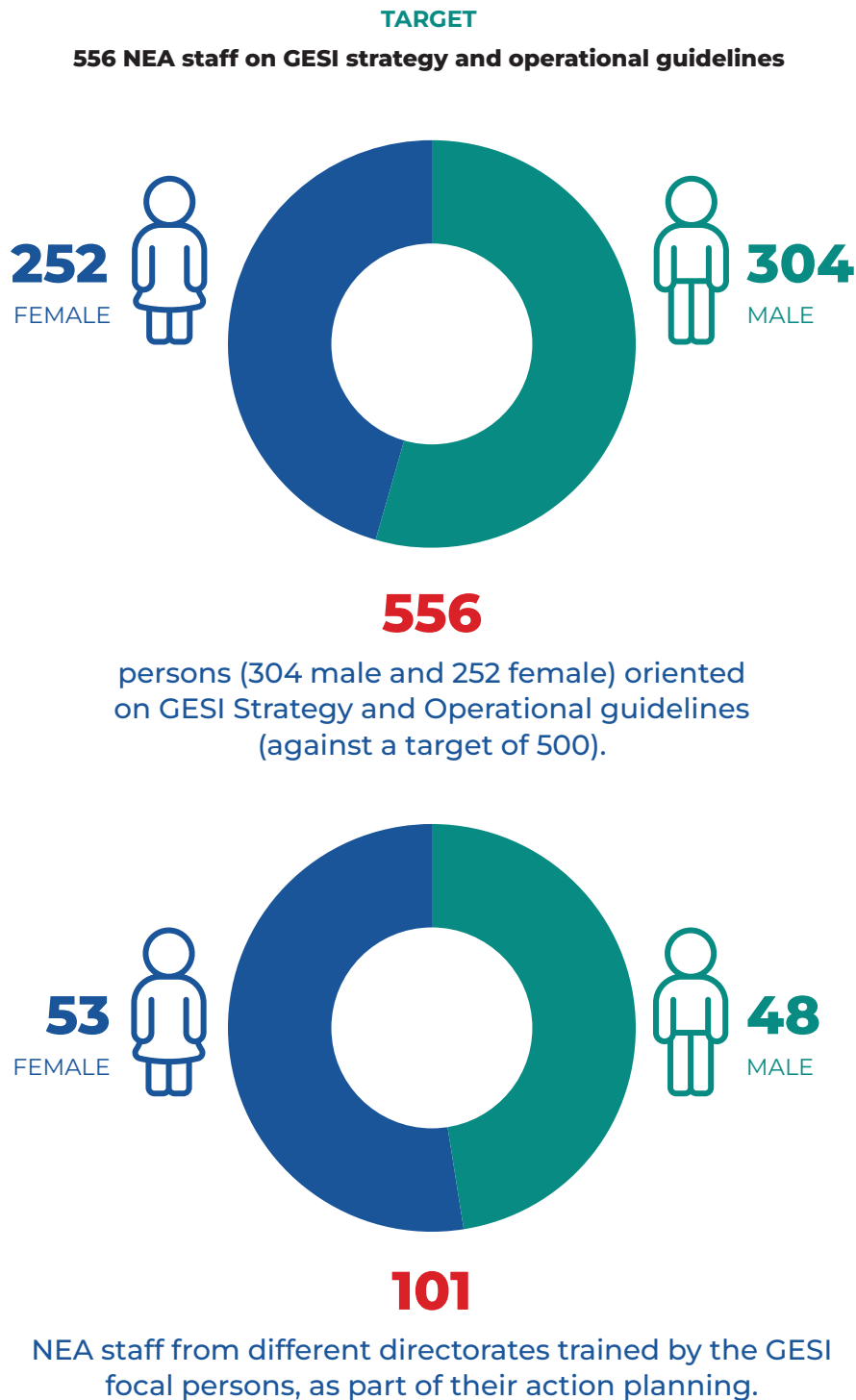
Implementing GESI approach must be done conspicuously both at the domestic end and in NEA. This ensures safe and secure environment for all staff and offers overwhelming value for the organization in terms of working environment leading to profitable gains. For this, the primary focus must be on changing mindsets, supported by appropriate policies and stringent regulations and effective execution.

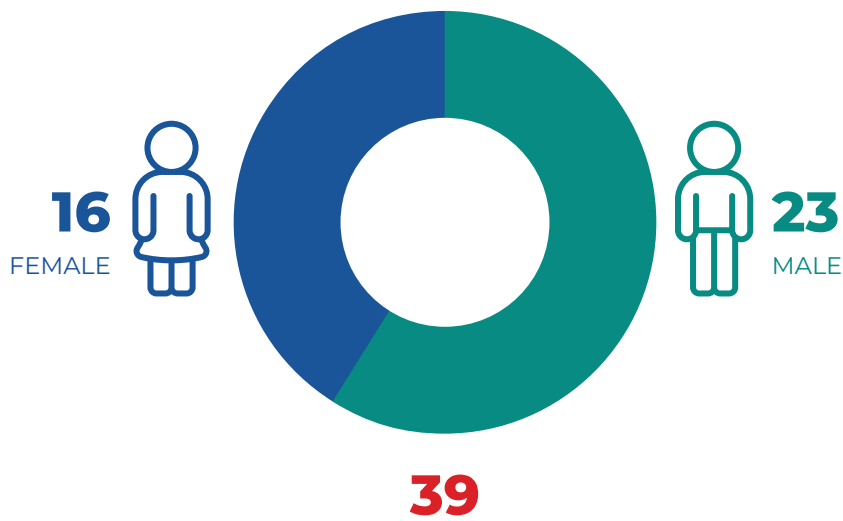
**Munindra Thakur, Former Chief of NEA, Madhesh Province Provincial Office**

### 3.5.3 The TA helped create a cadre of persons within NEA oriented and trained on GESI issues.

The capacity of 556 people were built through various kinds of orientations and training sessions. As a result, NEA now has a cadre of The GESI focal persons who are well-versed with and capable of training their colleagues on NEA's GESI strategy and operational guidelines and other GESI issues.

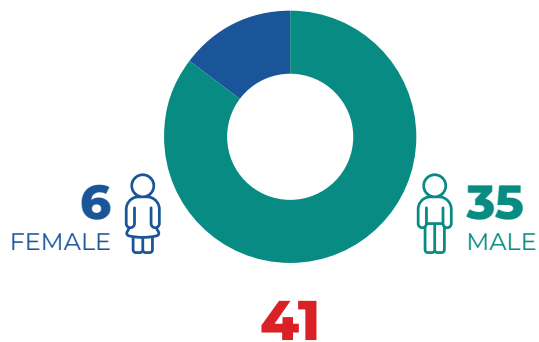
FIGURE 8. CAPACITY BUILDING IN TA 6526 NEP IN NUMBERS



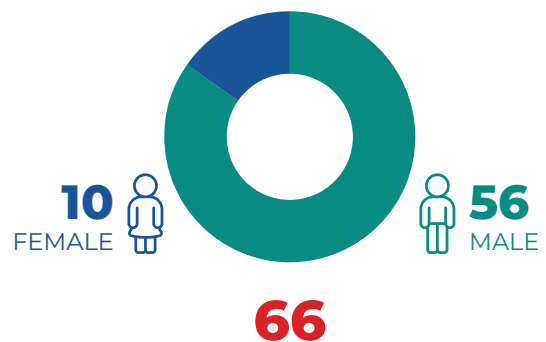


persons from Core Team members and Transmission Directorate built knowledge on SEAH.

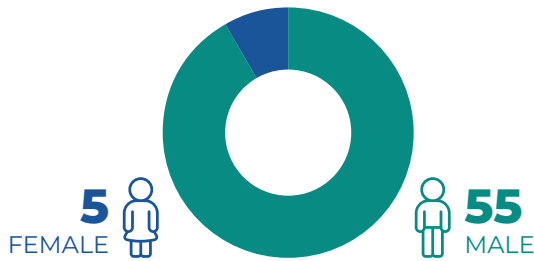
#### AT PILOT DCSs



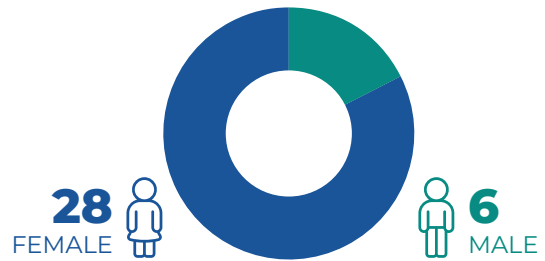
persons from Lalbandi and Janakpur DCSs oriented on SEAH prevention.



persons received orientation on GESI concepts and issues in power sector as well as the NEA GESI Strategy and Operational Guidelines.



persons from Lalbandi and Janakpur DCSCs oriented on empowerment, gender audit and gender budgeting.



staff from 16 DCSCs in Madhesh Province participated in the motivation session.

**23**

DCS Chiefs (all male) and Provincial Chief in Madhesh Province taken for exposure visit on GESI.

(Note: There is an overlap between these numbers as in some cases, the same individuals attended sessions on more than one topic)

The training covered six out of the seven provinces in the country. These included Koshi, Madhesh, Bagmati, Gandaki, Lumbini and Karnali provinces. In the case of districts, the orientation included 51 out of 77 districts of the country.

#### CAPACITY BUILDING OF NEA STAFF



**556** NEA staff from 78 districts oriented on GESI strategy, operational guidelines and manual

#### TARGET

**500** NEA staff (20% women, 30% excluded group) oriented on GESI strategy, guidelines and manual)

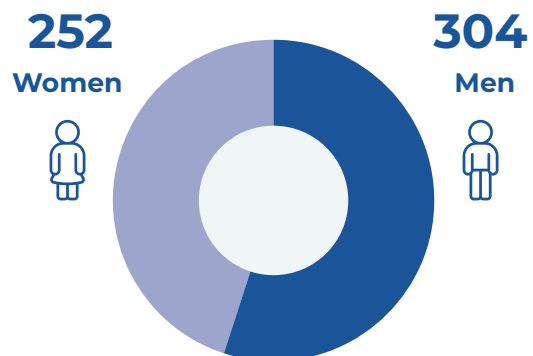


FIGURE 9. CAPACITY BUILDING ON GESI IN THE PROVINCES

## Province-wise coverage of GESI orientations

**9 of 14**districts in  
Koshi Province**All 8**districts in  
Madhesh Province**All 13**districts in  
Bagmati Province**10 of 11**districts in  
Gandaki Province**9 of 12**districts in  
Lumbini Province**2 of 10**districts in  
Karnali Province**The orientations included 78 of the 129 DCSs of NEA.**

Training evaluations were conducted as part of the training courses through pre- and post-tests to assess the quantum of knowledge gained. See Annex 11 for pre- and post-test data. The post-test assessment results indicated that the orientations were well received (Table 8. Results of pre- and post-tests at GESI orientations

**TABLE 8. RESULTS OF PRE- AND POST-TESTS AT GESI ORIENTATIONS**

THEME	PRE-TEST ASSESSMENT RESULT	POST-TEST ASSESSMENT RESULT
<b>On GESI concepts and its relevance to NEA's work</b>	7% women and 3% men were aware. 15% women and 20% men had a slight knowledge, and 78% women and 77% men had no knowledge of it.	84% women reported significantly increased knowledge, 14% report a slight increase while 2% report no change. Similarly, 83% men report high increase in knowledge, 13% state a slight increase and 4% state no change.
<b>On Implementing GESI strategy and operational guidelines</b>	9% women and 8% men were aware of the NEA GESI Strategy and Operational Guidelines. 14% women and 16% men had slight knowledge, while 78% female and 76% male staff had no knowledge.	84% female and 83% male found the session on implementation of GESI Strategy and Operational Guideline excellent; 14% female and 16% male found it good whereas 1% each found it satisfactory.

*The percentages are from the number of people who responded to the tests.*

#### BOX 6.

##### GESI TRAINING RESULTS

Our understanding of the GESI aspects of electricity has been enhanced by today's presentation. It is beyond what we expected. Do let us know how we can further support this initiative.

**Dirghayu Kumar Shrestha, Distribution and Consumer Service Directorate DMD**

The overall outcome of the training sessions, interactions and on-the-ground implementation of GESI provisions in TA 6526 NEP was further evaluated using Outcome Harvesting<sup>5</sup>. The assessment was targeted at staff in select DCSs, projects and Administration. See Annex 12 for Questionnaire to review the outcomes. Eight principal outcomes were pointed out by the respondents and the degree of contribution of the TA project are presented in Table 9. All these outcomes were substantiated by the respective individuals nominated by the participants. The substantiators<sup>6</sup> were largely heads of the organization or Administration Chiefs. See Annex 13 for results. It may be noted that the table below reflects the perceptions of the respondents only.

<sup>5</sup> Outcome Harvesting collects ("harvests") evidence of what has changed ("outcomes") and, working backwards, determines whether and how an intervention has contributed to these changes

<sup>6</sup> A substantiator is someone consulted during outcome harvesting to validate outcome statements or information about how a program/intervention contributed to a particular change.

**TABLE 9. RESULTS OF OUTCOME HARVESTING TO CAPTURE TA RESULTS AND ATTRIBUTION**

S. NO	OUTCOME STATEMENT	WHAT WAS THE CHANGE	DEGREE OF CONTRIBUTION OF TA (RATING FROM 1-10)	TYPES OF CHANGE
1	Increased female workforce participation	The percentage of women employed in technical roles within the utility increased from 12% in 2019 to 17% in 2024.	8	Role change
2	Improved customer service for vulnerable groups	Customer satisfaction among vulnerable groups, women and low-income households improved significantly. The waiting area has better seating arrangements, digital displays, drinking water and separate women's toilets.	7	Systems change
3	Enhanced women's safety and security	Safety and security measures for women employees being drafted towards a zero tolerance in workplace harassment incidents.	9	Rule change
4	Increased community engagement	There is a notable increase in community engagement and support for GESI initiatives, leading to stronger community relationships.	9	Systems change
5	Development of gender-sensitive policies	Gender-sensitive energy policies that consider the unique needs of women (separate toilets and child-care units).	8	Relationship change
6	Enhanced GESI awareness in employees	Increased awareness and understanding of GESI principles among project staff.	8	Rule change
7	Increased women's representation in leadership	The representation of women in leadership and decision-making roles within the utility increased from 15% to 30%.	7	Relationship change
8	Improved HR data	NEA improved its data collection and monitoring systems to track GESI-related outcomes and inform decision-making.	7	Role Change

- i. Role Change: a new way of acting that exhibits a difference in how responsibility is understood and realized through changed practices and/or behaviours.
- ii. Relationship change: a new way in which individuals interact that exhibits a difference in their interaction, for example whether these demonstrate changed cooperation or coordination.
- iii. Resource change: a resource that is introduced to the system or an existing resource that is repurposed to greater effect, enabling system actors to pursue their actions.
- iv. Rule change: an introduction of new rules or an existing rule that is adapted or operationalized in a more effective way.
- v. System change: a new way that interdependent system parts work together to produce change

### **3.5.4 The number of women in NEA and those in higher positions is increasing, though it will take a few more years of sustained efforts to get more women in leadership positions.**

The need to adopt effective GESI measures in all development activities has been emphasized in the Nepalese Constitution. Accordingly, the government has instituted several measures for promoting employment opportunities for female staff, together with measures for safe and equality at workplace for women.

Between TA 9334 (starting year 2019) and TA 6526 NEP (ending year 2025), there has been a significant change in the percentage of female staff in NEA. The overall share of female staff has increased from 13% in 2019 to 17% in 2024, when the main phase of the TA and activities under Intervention 1 ended. Positive changes are also seen in employment across the levels except at Level 10 where there is a reduction of 0.6%. There is also a change in female staff by type of job. The percentage of female non-technical and technical staff were 3.9% and 8.69% respectively during ADB TA 9334. During the time of TA 6526 NEP, the figures rose to 6.78% and 10.88% respectively.

At the same time, there has been an increase in the number of women in the DCSs. Data collected from the Madhesh Province Provincial office shows that during the period of the TA, there has been an increase of 27% in the total female staff (20% in non-technical and 6% in the technical group).



Photo credit: ADB

# 04

## Building entrepreneurship and resilience for women and the poor

### 4.1 Background: livelihoods and employment in Madhesh Province

Madhesh Province is Nepal's second-most populous province and has a multi-caste, multilingual and predominantly rural population. Some of the key characteristics of Madhesh province with respect to livelihoods are as follows:

- The province records Nepal's highest unemployment rate at 20.1%, which is 8.7 percentage points above the national average of 11%. It also has the largest number of returnee migrant workers following the COVID-19 pandemic. At 48.3%, Madhesh Province has the highest proportion of youth (aged 15–24 years) not in education, employment or training (NEET). Where women are employed, they earn significantly less than men (average monthly earnings of men is NPR 16,550, as compared to NPR 11,415 for women).
- There is huge gap between female and male literacy in Madhesh province. 72.45% of the men can read and write and as against this, only 54.7% of females in Madhesh can read and write.<sup>7</sup>
- Majority of young people that enter the labour market every year are unskilled or have limited employability, largely because of lack of practical skills, vocational and on-the-job training, resulting in a mismatch between industry requirements and available labour.
- Entrepreneurship development is constrained by a low level of education; flooding of local markets by cheap, competitive products as well as labour from India (all districts have an open border with India); limited use of technologies; and low engagement with formal banking system due to an inability to arrange collateral and low financial literacy.

<sup>7</sup> Source: **National Population and Housing Census 2021**.  
<https://censusnepal.cbs.gov.np/results/downloads/national>

- Despite the above trends, a substantial energy access rate, high concentration of industries, population density and road infrastructure provide good scope for promoting productive use of energy, entrepreneurship as well as employment creation. However, issues of migration, illiteracy, lack of education, patriarchy and caste discrimination have proved to be persistent bottlenecks to economic empowerment.



*Kiran Devi in Dhanusha using electricity for irrigation and drinking water.*

This situation poses challenges for promoting entrepreneurship and employment in the province, which the TA project tried to address, to the extent feasible. In this context, Intervention Area 2 is aimed at increasing the capacity of women, poor and the disadvantaged to use electricity efficiently and productively. The intervention has two components, with the targets of: (a) 400 entrepreneurs trained in energy-based livelihood enhancement (among them 50% women of which at least 20% from disadvantaged group and 50% men preferably youth from disadvantaged social groups); and (b) 200 persons trained on vocational education, (of whom 20% are women and 50% are men from disadvantaged groups).

## 4.2 Summary of outputs delivered

As part of IA 2, the project implemented various activities for entrepreneurship development and employment opportunities in the field. The results in terms of outputs for the TA regarding IA 2 are:

**TABLE 10. OUTPUTS DELIVERED UNDER INTERVENTION AREA 2**

EXPECTED OUTPUTS (AS PER TOR)	ACHIEVEMENTS	ACHIEVEMENT STATUS
400 entrepreneurs trained (among them 50% women of which at least are from 20% from disadvantaged group and 50% men preferably youth from disadvantaged social groups)	<p>442 entrepreneurs trained on entrepreneurship and business management (329 existing, 113 new business) (Among them, 233 are women among which 319 are from the disadvantaged groups. 47.3% are men of which 70.3% from disadvantaged groups. 235 are youth<sup>8</sup>).</p> <p>422 entrepreneurs trained on technical skills (Among them, 225 are women and 197 men, 304 are from disadvantaged groups and 221 are youth).</p> <p>403 of the trained entrepreneurs are active/operational.</p>	<b>Target surpassed</b>

<sup>8</sup> Age 18-40

100% of trained entrepreneurs provided business counseling and hand holding support	100% of 403 active entrepreneurs provided business counseling and handholding support (3.2% dropped out soon after training because of various reasons and another 5.6% dropped out during the project; total drop out: 8.8%). 318 received refresher training, based on their demand during the extension phase.	<b>Target achieved</b>
200 persons vocationally educated (of whom 20% are women and 50% are men from disadvantaged groups)	203 people trained.  Among them, 89 (46%) are women and among which 74% are from disadvantaged groups. 114 (53%) are men among which 95% are from disadvantaged groups. 95% of all are youth.	<b>100% target achieved</b>

### 4.3 Overview of strategy

In supporting women, poor and disadvantaged groups for enhancing their capacity to use electricity efficiently and productively for increased income, ensuring employment and improving their livelihoods in Madhesh Province, the Intervention has taken a number of key approaches, as shown in figure 10.

#### BOX 7.

#### LOCAL INSTITUTIONS AS “SPECIAL PURPOSE VEHICLES” FOR ENTREPRENEURSHIP

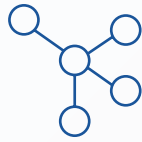
An innovative strategy in the project design was to work with local institutions who are engaged as local focal partners (LFP). As “Special Purpose Vehicles”, they are involved in planning, implementation and monitoring of the TA activities. The TA benefitted from their specific characteristics relevant to supporting the beneficiaries in their respective regions. Madhesh Province was divided in 8 clusters, and in each, institutions aligned with the TA objectives and desirous of engaging with the TA were selected through rigorous selection criteria as focal institutions for establishing a Productive Use of Energy (PUE) Promotion Facility. These included Electricity Users Committees (EUC), cooperatives, micro-finance institutions (MFIs) and private sector associations. These operated as project partners and their capacities were built through the project.

- EUCs can expand their energy services with selling and/ or renting out appliances, as distribution point or point of sales.
- Farmers Cooperatives can aggregate produce, operate value-added services (for example, dairy/ cheese), and sell bulk produce to others.
- MFIs like Mahuli operate at scale. They can potentially partner with technology providers and roll out a financial package for the selected technology.
- Business Associations have networks that can expand services to entrepreneurs, conduct trainings and provide business facility services.

FIGURE 10. APPROACH ADOPTED FOR INTERVENTION AREA 2

## STAGES OF INTERVENTION

01

**Landscape mapping**

Market potential  
Skills: opportunities and gaps  
Potential partners

02

**Partnerships**

Local focal partners  
Other stakeholders  
Roles & responsibilities

03

**Entrepreneur selection**

Screening and selection of entrepreneurs  
Engaging families  
Potential assessment

04

**Enterprise development package**

Capacity development  
Energy management  
Access to finance & others  
Empowerment

05

**Sustaining**

**Linkages:** loans  
government, NEA, markets  
**Business upgradation:**  
registration, accounting,  
business planning, taxation  
Customized mentoring  
Institutions

## 4.4 Overview of activities implemented

### 4.4.1 Understanding the landscape

Through TA 9334 NEP, the TA team had prior knowledge of the local context, existing relationships with local stakeholders and experience in Madhesh Province. During the proposal development phase, a field visit was undertaken to understand the impact of Covid-19, identify potential sectors and value chains and renew relationships with key entrepreneurial ecosystem stakeholders. During the preparatory phase, a Rapid Market Assessment (RMA) helped identify promising value-chains, market opportunities and challenges; skill gaps and training needs; financing options; existing policies, plans and budget of the local governments; capacity of ecosystem stakeholders; and opportunities and barriers for sector-wide changes, for both PUE promotion and local employment creation. This, in combination with a baseline study, helped identify eight geographical clusters for enterprise development and employment creation, with one LFP responsible in each cluster (see table 11)

**TABLE 11. LOCAL FOCAL PARTNERS IN THE EIGHT GEOGRAPHICAL CLUSTERS**

S.NO	DISTRICT	GEOGRAPHICAL CLUSTER	LOCAL FOCAL PARTNER (LFP)	TYPE
1	Saptari	Kanchanrup Municipality	Mahuli Laghubitta Bittiya Sanstha Ltd., Mahuli	Micro Finance Institution
2	Siraha	Lahan Municipality	Sana Kisan Krishi Sahakari Ltd., Padariya	Farmers' Association (focus: goat farming)
3	Dhanusha	Bateshwor Rural Municipality	Navadurga Mahila Krishi Cooperative Ltd., Bateshwor	Women's group
4	Mahottari	Bardibas Municipality	Sagun Samudayik Samaj Nepal, Khayarmara	Electricity Users' Cooperative
5	Sarlahi	Bagmati Municipality	Samudayik Gramin Vidyut Sahakari Sanstha Ltd., Shankarpur	Electricity Users' Cooperative
6	Rautahat	Chandrapur Municipality	Sana Kisan Krishi Sahakari Ltd., Santpur (M)	Farmers' Association (focus: dairy)
7	Bara	Kalaiya Sub-metropolitan City	Bara Chamber of Commerce & Industries	Business Association
8	Parsa	Paterwa Sugauli Rural Municipality	Shree Vidyut Upabhokta Samiti, Gadi	Electricity Users' Cooperative

The next step was a more Detailed Market Assessment (DMA) that zoomed in on specific sectors to explore specific opportunities for entrepreneurship and promising interventions to unlock these. See Annex 14 for a summary of the DMA.

**TABLE 12. KEY LIVELIHOOD SECTORS AND VALUE CHAINS FOR ENTERPRISE DEVELOPMENT IN MADHESH PROVINCE**

SECTORS	VALUE CHAINS
Agriculture	Vegetables
Livestock	Cow/buffalo, poultry, goat, fish and pig
Manufacturing/ Processing	Agro-processing (rice), edible oils, bhujija, banana, bakery, dairy (ice-cream, yoghurt, mozzarella cheese, packaged milk) and animal feed Forestry –plywood and furniture Others –packaging, steel furniture, garment and grill
Service	Hotels, restaurants, car/bike servicing, boutique, beauty parlor and charging station
Handicrafts	Indigenous products including bamboo, leaf plates and clay products

Lastly, a labor market study was conducted which provided insights on local employment opportunities, key skill trades required in the areas and potential employers. The report on the labour market assessment is included in Annex 15.

**TABLE 13. KEY SECTORS AND OCCUPATIONS IN MADHESH PROVINCE**

SECTORS	OCCUPATIONS
Agriculture, livestock and Forestry	Farm machine operators
Manufacturing	Sewing Machine Operators (Garment), Lathe Worker, Machine Fitter/Operator, Industrial Electrician and Welder
Tourism	Baker, Baristas
Construction	Construction Equipment Operators, Construction Equipment Repairer
Service	Jewellery making, Grill workshops, TV, fan, motor, mobile and Induction cooking repair, automobile repair, beautician

#### 4.4.2 Creating partnerships: working with local institutions

Throughout the project implementation, the TA team worked with the LFPs, not only to deliver the entrepreneurship program, but also to strengthen their institutional capacity and support long-term sustainability of initiatives rolled out by the project.

To ensure accessible and continued business support services to entrepreneurs and job seekers, a dedicated PUE Promotion Facility was established in each LFP as an embedded service. Organizational assessment workshops and follow-up sessions helped strengthen their

capacity to operate the PUE facility, their own systems and processes and engage with other stakeholders. Each LFP nominated a focal person who was attached to the TA and received training on different aspects of enterprise development which included business management and enterprise development, account-keeping as well as on business counseling and mentoring process.

#### BOX 8.

#### OUR PARTNERS IN MADHESH PROVINCE

The TA partnered with three different types of LFPs, with each a specific feature that we sought to leverage:

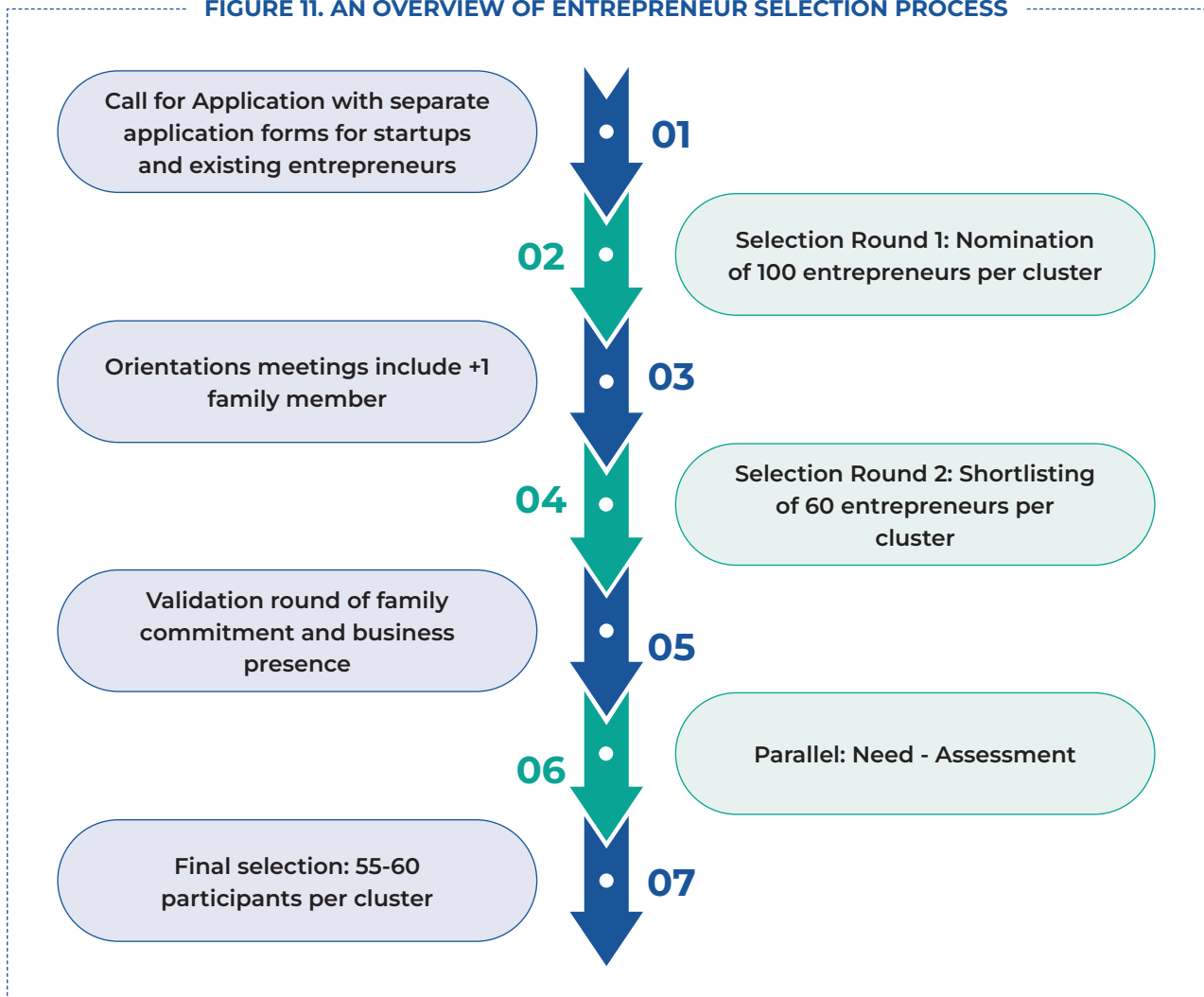
- Energy user committees (three), in which the team replicated the experience from previous TA 9334
- Microfinance institution (one) that can leverage on their loan and credit activities
- Farmers' Cooperatives (three) where entrepreneurs can benefit from credit lines and which can aggregate specific technology distribution and explore market aggregation (Dairy, fish/ goat, agriculture)
- Business Association (one) that can leverage on a network of business partnerships, entrepreneur training facilitators, and provide B2B (business to business) services

### 4.4.3 Strengthening existing and start-up enterprises

#### 4.4.3.1 Screening and selection of potential entrepreneurs

In order to invite potential entrepreneurs to join the program, each LFP circulated a call for applications in its area, together with a helpdesk to answer any queries. Applicants went through a screening and selection process, led by a selection committee comprising of representatives of LFP and local government. The potential entrepreneurs were short-listed based on their applications and the pre-agreed selection criteria, including priority for women, disadvantaged groups (participants from Tarai Dalit, Tarai Janajati, Madhesi, Muslim and Hill Dalit) and youth. Both existing and start-up entrepreneurs were invited. For existing entrepreneurs, their growth potential was considered while for the start-ups, feasibility of their business idea and their financial ability to establish the enterprise, was considered. All training courses were demand driven and aligned to the personal needs of the entrepreneurs.

FIGURE 11. AN OVERVIEW OF ENTREPRENEUR SELECTION PROCESS



Potential entrepreneurs, along with their family members, were invited for orientation meetings to ensure that both the TA and the entrepreneur understand fully their expectations from each other, and that the entrepreneurs' capacities, commitment and family support are ensured before they join the project. Each entrepreneur filled up a self-assessment form to assess their entrepreneurial aptitude and possibility of growth. The participants were also oriented about the planned activities.

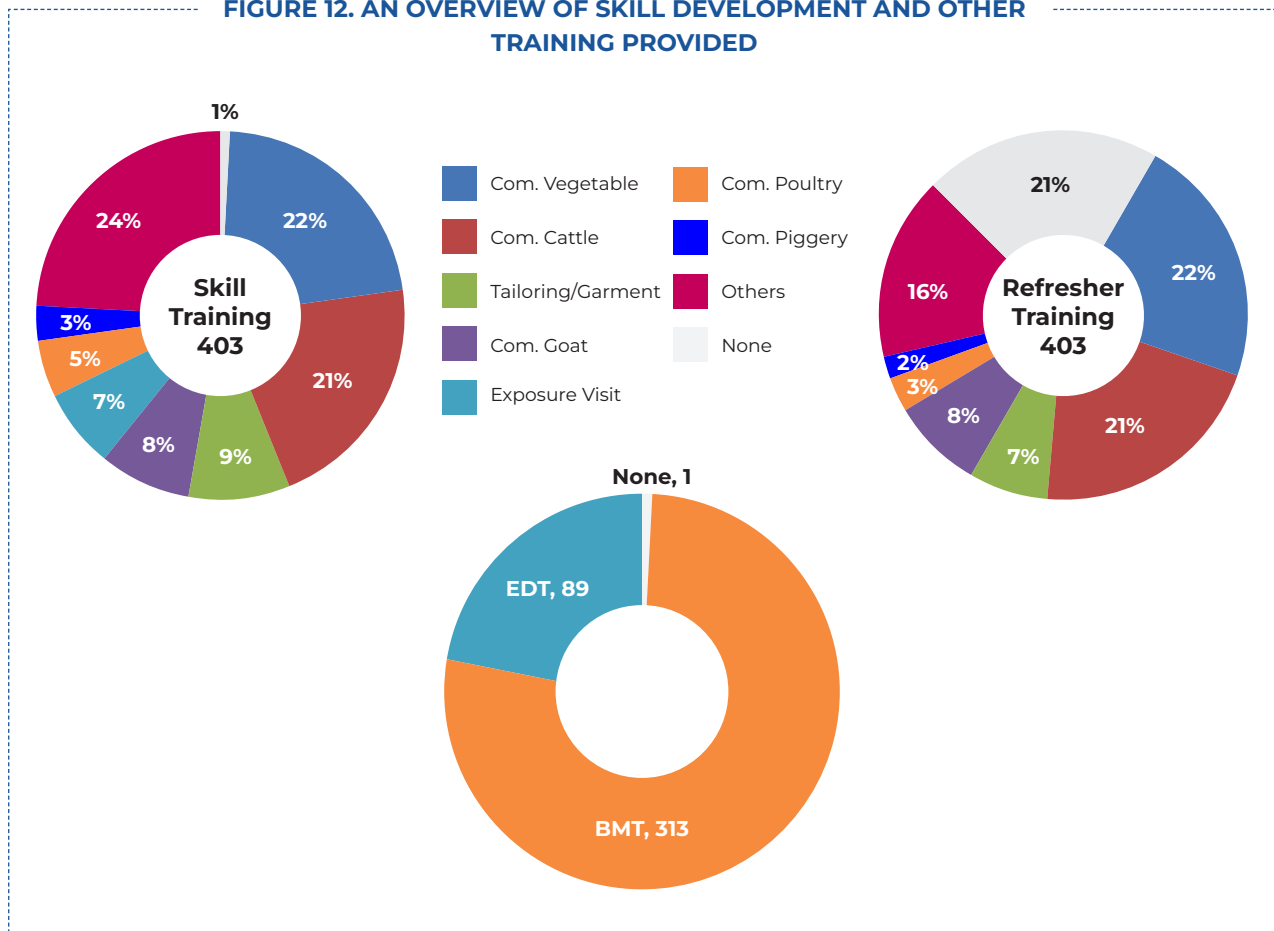
The TA team visited the shortlisted entrepreneurs. Commitment letters from the family were necessary to ensure the commitment and consent of family members. The family commitment was especially helpful for women entrepreneurs for assuring mobility, support for investment and releasing them from household burdens to engage in entrepreneurial activities.

#### 4.4.3.2 Building capacities to start and manage businesses

During the main project phase, the TA trained 442 entrepreneurs, majority of them micro-entrepreneurs. Existing entrepreneurs were supported to upgrade their existing business (type 1) and new ones in establishing a start-up business (type 2). Training modules were developed for both types. Business Management Training (BMT) was carried out for existing businesses while Entrepreneurship Development Trainings (EDT) were conducted for start-up businesses.

The training included sessions on market mapping, business management and business model canvas,<sup>9</sup> and agency-based empowerment<sup>10</sup> and leadership skills, among others. Entrepreneurs prepared individual action plans, which helped the TA team to determine the exact support needed for each entrepreneur and provide counseling support accordingly. After these training programs, 75% of entrepreneurs reported that their knowledge is highly increased, and the rest reported moderate level of knowledge increment.

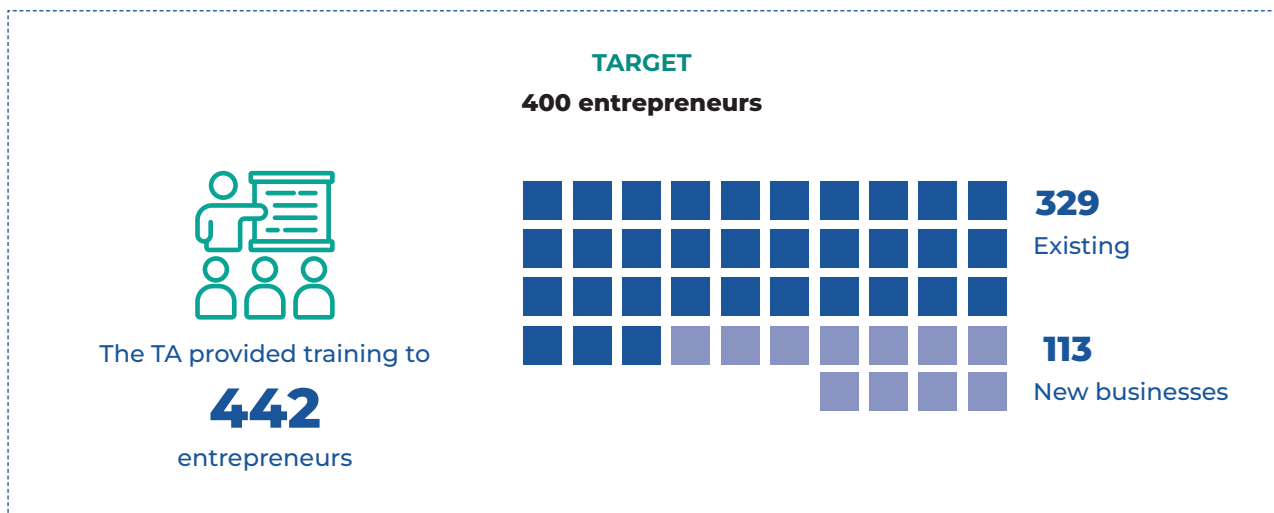
**FIGURE 12. AN OVERVIEW OF SKILL DEVELOPMENT AND OTHER TRAINING PROVIDED**



The business management training (average duration of 4 days) was followed by technical skills training on specific trades like poultry, vegetable farming etc. (average duration of 5 days), and included custom-made practical training and exposure visits, as needed and accounts and bookkeeping training (average duration of 2 days). A few entrepreneurs were trained in customized skills at the premises of relevant industries. Local level resource persons such as Agriculture and Livestock experts/ technicians from Agriculture Knowledge Centres and Livestock Service Centres were utilized. This helped to link with local service providers for continued support. The TA team also organized repair and maintenance training for induction cooktops.

<sup>9</sup> **The Business Model Canvas** is a strategic management template used for developing new business models and documenting existing ones. It offers a visual chart with elements describing a company's or product's value proposition, infrastructure, customers, risks and finances.

<sup>10</sup> Adapted from the Empowered Entrepreneur Handbook (2015). [cleancooking.org/wp-content/uploads/2021/07/342-1.pdf](https://cleancooking.org/wp-content/uploads/2021/07/342-1.pdf)



During the extension phase, need-based refresher training was provided to 320 entrepreneurs (average duration of 3 days), addressing specific gaps/ challenges faced in the business or helping them diversify into new products and services. Topics covered technical skills, new technologies, strategizing and marketing. This was particularly useful in view of the new technologies they acquired in the extension phase. The following table gives an overview of the various skill-based training and refresher courses conducted.

**TABLE 14.SKILL-BASED REFRESHER COURSES**

SKILL TRAINING CATEGORY	NUMBER OF PARTICIPANTS OF TECHNICAL SKILLS TRAINING DURING MAIN PHASE	NUMBER OF PARTICIPANTS OF REFRESHER COURSES DURING EXTENSION PHASE
Commercial vegetable	93	88
Commercial cattle	89	84
Others	37	33
Tailoring/ garment	31	27
Commercial goat	35	33
Exposure visit	38	0
Commercial poultry	22	14
Commercial piggery	13	9
Hotel - eatery	14	3
Dairy products making	10	0
Beauty parlor	12	7
AC, fridge repair	9	5
E-Rickshaw repair	8	0
Commercial fishery	7	5
Mill maintenance	4	0
Business management <sup>11</sup>	0	12
<b>Total</b>	<b>422</b>	<b>320</b>

FIGURE 13.

*Refresher course on tailoring in Parsa*

Account-keeping was a gap identified in the business practices of entrepreneurs, with just 1.4% of them maintaining any form of accounts. As a result, most had no idea about costing or a pricing strategy. During the TA project, 410 entrepreneurs (221 women and 189 men) were trained in simple account-keeping. Those unable to read and write brought along their family members to support them during the training. They learned accounts management, which is required to understand the status of the enterprise as well as for costing and pricing of products. Sessions included contextualized examples and practice for preparing Day Book, Cash Book, Sales Book, Purchase and Expenses Book, Creditors and Debtors Account and Profit and Loss Account. Though eight entrepreneurs didn't attend accounts keeping training event, they were mentored and supported by the TA team in filling the accounts book during counseling sessions.

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<sup>11</sup> In the first phase Business Management Training (BMT) was provided to all existing entrepreneurs.

An overview of the various types of training courses is presented in the table below:

**TABLE 15. PARTICIPATION IN TRAINING COURSES**

Types of Training Events	Total number of Events	Number of Entrepreneurs			Ethnicity								
		Male	Female	Total	Brahmin/Chhetri (Hill)	Brahmin/Chhetri (Tarai)	Adivasi Janajati (hill)	Adivasi Janajati (Tarai)	Dalit (Hill)	Dalit (Tarai)	Madhesi	Muslim	Others
BMT / EDT	20	233	209	442	70	0	54	131	23	22	126	16	0
Accounts keeping	24	221	189	410	65	0	49	126	23	22	112	13	0
Technical Skills	37	225	197	422	66	0	53	128	23	21	117	14	0
Refresher courses (extension phase)	53	200	120	320	49	0	41	112	17	15	81	5	0

#### 4.4.3.3 Providing business advisory services through mentoring

Given the socio-cultural and economic barriers that women, poor and disadvantaged groups in Madhesh Province face, capacity development alone was not sufficient. Accordingly, the team provided regular counseling and mentoring to every entrepreneur. Counselling covered varied topics including business planning, day-to-day operations, product diversification, market linkages, registering businesses, information on relevant regulations and taxation, and new technologies. Each entrepreneur maintains a file, with a copy with the LFP, with details on its growth plans, business model canvas and their counseling forms, documenting the specific challenges faced and mitigation measures planned.

The TA team supported entrepreneurs to connect with relevant stakeholders such as local governments, government agencies such as Cottage and Small Industries Office, Agriculture Knowledge Centre, private sector, banks and financial institutions and other programs, which helped entrepreneurs to leverage additional support. The representatives from LFPs and local governments were involved in most of the TA project activities and committed to supporting the entrepreneurs in various ways.

The entrepreneurs were encouraged to register their businesses. This was done through different modalities. Some entrepreneurs were registered with the local municipality office, while others with the Cottage and Small Industries office, while some got recorded at the Ward office. In Parsa, four farmers groups were registered with the Rural Municipality, with about 15 farmers in each group. Among them, 40 entrepreneurs were supported by the TA project. In Siraha too, a farmers' group was registered. These group registrations have helped farmers in leveraging support from the Rural Municipality. Majority of the enterprises have registered their businesses.

#### 4.4.3.4 Engaging with NEA to improve the electricity supply

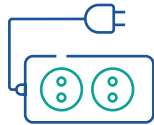
In many areas, the quality of electricity was not strong enough to support the energy needs of the entrepreneurs. In such areas, NEA supported the TA team to strengthen the electricity supply system. These measures included NEA's support to install additional electricity poles to extend electricity to new areas, electrification of enterprises, other upgradation measures such as additional or upgradation of transformers.

#### 4.4.3.5 Managing energy services efficiently and safely in enterprises

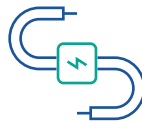
Managing the energy supply system is crucial for the safe and efficient operation of any enterprise. The following steps were taken to assist the entrepreneurs to improve their energy management systems.

- A set of local technicians (one in each district) was trained by the TA team on assessing the energy use in enterprises, specifically focusing on the types of businesses the TA entrepreneurs are engaged in.
- Together with the TA team members, the technicians visited each entrepreneur (at least four rounds) and audited the energy systems to assess the gaps and potential for improvement in energy use practices. In addition, the energy systems for the induction cooktop users in Kalaiya were also assessed. The audit revealed that most businesses have poorly managed wiring, damaged or missing power sockets and faulty switches. Additionally, some have meters with inadequate capacity, necessitating an upgrade, while others do not have their own meters at all. Most lack basic awareness on electrical safety, earthing and energy efficiency.
- The technicians shared practical knowledge on topics such as electrical safety, energy efficiency, and electricity tariffs with the entrepreneurs. These consultations also included information on modern technologies and best practices, equipping business owners with the knowledge needed to enhance their operations and maintain high standards of safety and efficiency.
- After the first consultations, each entrepreneur was provided with a list of materials they were required to purchase in order to make the necessary upgradations. Once this material has been procured by the entrepreneur, the technicians implemented the energy system improvement plan, including sharing information about technologies and equipment and the way of operation etc., and documenting the process.
- Most enterprises made improvements to their wiring systems, by securing their wiring with clips and listels, installing joint boxes at cross-connections, and replacing damaged power sockets and switches. During the visits, the technicians provided another round of awareness and the necessary technical modifications. Many entrepreneurs were supported to upgrade their meters with Miniature Circuit Breakers (MCBs) of adequate capacity. Some businesses replaced old wiring with new cables with higher ampere capacity to support increased electrical loads, in line with their operational capacity and needs.
- The process was carried out for the entrepreneurs as well as induction cooktop users. In addition to improving the wiring, induction cooktop users were encouraged to upgrade their meters to 15 Amps (from the existing 5 Amps), which is needed for electric cooking. This was done with support from the local DCS.

- In addition, many enterprises have taken steps to improve workplace hygiene and sanitation, ensuring a safer and cleaner environment for both personnel and equipment. By addressing these critical aspects, they have significantly mitigated risks associated with electrical hazards.

**BOX 9.****KEY CHANGES MADE TO ENERGY USE PRACTICE TO ENHANCE BUSINESS PRODUCTIVITY**

**67%** replaced broken switches and burnt-out plugs and power sockets; add power sockets for new equipment



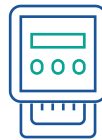
**58.56%** improved wiring practice - fastening with clips or using pipe/listel



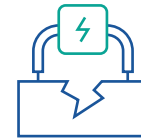
**47%** changed or added joint box & MCB



**38%** replaced old wires with new wires - that can withstand power required



About **5%** upgraded electric meter (to 15 or 30 A - based on need)



About **2%** of the entrepreneurs installed or improved earthing

**4.4.3.6 Facilitating access to energy-efficient technologies**

An important project component was supporting entrepreneurs to adopt energy-efficient technologies. In the extension phase, entrepreneurs were supported financially to adopt energy-efficient technologies. The need of support for adopting technologies was evident during the main phase of the TA and also pointed out during the external evaluation in July 2024, as more than 70% of the entrepreneurs engaged in the project are from disadvantaged communities and unable to afford investments required to acquire new technologies.

During the extension phase, a new intervention aimed at supporting entrepreneurs in adopting energy-efficient technologies was introduced. Financial support included partial support in purchasing the equipment and the accessories needed to operate the equipment and support for auxiliary embedded services such as transportation and installation. Partial support for the entrepreneurs included:

- For individual entrepreneurs, upto 50% of the total cost of equipment, accessories and auxiliary services, not exceeding NPR 25,000 (approx. US\$ 176) per entrepreneur

OR

- For equipment purchased by a group, 50% of the total cost of equipment, accessories and auxiliary services, not exceeding NPR 15,000 (approx. US\$ 105) per group member



#### 4.4.3.7 Accessing finance to grow

Access to finance has been a challenging area for the TA project. The government scheme on subsidized loans for the poor available earlier was halted during the project implementation. Further the ongoing economic depression increased the interest rate on loans from commercial banks.<sup>12</sup> Only a few of the selected entrepreneurs agreed to take loans at commercial rates. Some were not eligible for bank loans (no collateral, entrepreneur not considered loan-worthy).

Some of the LFPs supported the entrepreneurs in accessing finance. The LFPs in Rautahat and Lahan designed a scheme for entrepreneurs at 9% interest rate. The LFP in Sarlahi was able to obtain wholesale loans for the entrepreneurs from NACEUN's revolving fund.<sup>13</sup> The other two EUCs are also in the process of obtaining loans from NACEUN. To support entrepreneurs access loans, in some places, the TA team organized financial literacy training through commercial banks like Agriculture Development Bank and NMB Bank, in which 41 women and 40 men participated. The team also facilitated visits of bank representatives to entrepreneurs and supported the entrepreneurs to prepare necessary documents, in assessing loan requirements and repayment ability and going through due diligence process.

#### 4.4.3.8 Strengthening the ecosystem for sustainability

Under the TA project, the LFPs were provided with capacity building support. Each of the LFPs assigned a focal person to support the TA project and continue to support the entrepreneurs. During the extension phase, the team took stock of the various activities that the LFPs have engaged in, reviewed the action plans developed by them, identified gaps in their strategies and provided targeted capacity building, as per their specific needs. The LFPs were supported further to strengthen their organizational processes and explore how they can carry the work forward, developing their management capacity as well as in their capacity to access funds for promoting PUE in their areas. Several workshops were conducted. Two EUCs (Mahottari and Sarlahi) received support on cooperative management. The LFP in Mahottari has recently transitioned into a cooperative and has started operations the current fiscal year, while there has been a recent change in executive committee in LFP in Sarlahi. This training on cooperative management was deemed necessary for sustainable operation of both LFPs. The LFP at Bara requested continued support on strategy development, and integration of GESI-responsive measures and budget in their strategy.

In September 2025, final hand over meetings with each of the LFPs was planned, however this had to be dropped because of the political situation in Nepal resulting from the September 2025 protests. Subsequently, a final handover meeting was held on 16 October 2025 in Madhesh Province, and had the participation of all the LFPs, local governments as well as the DCSs. Each of the LFPs shared their intent and plans to take the entrepreneurship development activities further.

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<sup>12</sup> The minimum commercial rate of interest of the commercial banks in Nepal is more than 12%.

<sup>13</sup> NACEUN manages a revolving fund supported by GIZ/EnDev project that supports EUCs to promote access to grid electricity, productive use of electricity and promotion of induction cookstove.

#### 4.4.4 Creating jobs

In order to provide technical and vocational education and training (Target: at least 200 persons among them 20% women and 50% men from households of disadvantaged groups), the following approach was adopted:

- Responding to industry needs, job seekers were selected based on pre-announced criteria, prioritizing women and disadvantaged groups.
- Career counselling was provided to help them choose suitable occupations and related training packages.
- Responding to the needs of potential employers, the project supported institutions under Technical and Vocational Education Training (TVET) to develop modules and provide skill-based training, including those on soft skills such as customer relations.
- Employment avenues were identified with major industries and on-the-job training (OTJT) organized in industries with job guarantees.

##### 4.4.4.1 Mapping job opportunities and skills and matching industry needs

During the preparatory phase, a Labor market study was conducted to assess existing skills and job opportunities (Table 17). Exploratory meetings were conducted with potential employers to understand their requirements on skill sets and willingness to hire employees. The program for job-seekers was started after the enterprise development program as the TA team was keen to explore job opportunities with the entrepreneurs for growing their businesses and supporting the local economy.

**TABLE 17. POTENTIAL TRADES IDENTIFIED FOR SKILLING AND JOB CREATION**

S.N.	DISTRICT	IDENTIFIED TRADES IN WHICH EMPLOYMENT CAN BE GENERATED
1.	Saptari	Electrician, welder and AC/refrigerator repair
2.	Siraha	Electrician, furniture making, brick making, garment, tailor and welder
3.	Dhanusha	Electrician, plumber, backhoe load operator, furniture making and industrial electrician
4.	Mahottari	Electrician, advanced tailoring, plumber, AC/refrigerator repair, electrical motor winding
5.	Sarlahi	Electrician, AC/refrigerator repair and furniture making
6.	Rautahat	Masonry, electrician, welder and AC/refrigerator repair
7.	Bara	AC/refrigerator repair, industrial electrician, plumber and welder
8.	Parsa	Electrician, bag making and tile & marble fitter



*Dhanti Devi Shah rearing cattle after training*

#### **4.4.4.2 Selection, screening and counseling**

Once the potential trades were shortlisted, calls for applications from job seekers were announced in the project clusters through the LFPs in coordination with the ward offices. The calls were also announced in areas where NEA substations were being constructed through SASEC PTDSSP. The call for applications had to be re-announced as there were few applicants in some districts in the first round. Responding to industry needs, as identified in the labour market analysis, job seekers were selected based on pre-announced criteria, giving priority to women, disadvantaged groups and returnee migrants. The shortlisting and selection were carried out together with the LFP and local government representatives and interviews were conducted by the employers and training providers.

The potential applicants received career counseling to help them choose suitable occupations and related training packages. Alongside, family counseling and commitments were also given priority. A constraint faced was that many applicants were unwilling to leave their homes and go to other places for training and for jobs. In spite of repeated counselling, in some cases, this did not change.

#### **4.4.4.3 Technical & vocational skills building**

Training programs for job seekers were organized based on the agreed approach with the employers and the TVET service providers with the intention of guaranteed jobs or self-employment opportunities after the completion of the training.

In consultation with the companies, hybrid training programs were developed (average period of 70 days), during 2024 and 2025. A mix of training approaches was used, depending on the industry (Table 18).

**TABLE 18. A PROFILE OF TRAINING PROVIDED UNDER THE TA PROJECT**

S.No.	Training type	Average Training Duration (in days)	Trainees			Adivasi Janajati (hill)	Adivasi Janajati (Tarai)	Brahmin/ Chhetri (hill)	Brahmin/ Chhetri (Tarai)	Dalit (hill)	Dalit (Tarai)	Madhesi	Muslim
			Female	Male	Total								
1	Heavy equipment operator	30	2	38	40	2	12			1	7	14	4
2	Garment	90	32	1	33	2	16	1	1		8	5	
3	Beautician	90	16		16		7	4			1	4	
4	AC/fridge repair and maintenance	90		14	14		3				6	4	1
5	Bag making	90	12	1	13		4	2				6	1
6	Building electrician	63		12	12	1	2					6	3
7	Tailoring	79	9	2	11	4	1			1	1	2	2
8	Plumber	81		8	8	1	3					4	
9	EV technician	30		8	8		2				2	4	
10	Offset press technician	90		5	5		1					3	1
11	Fiber bag	90	5		5	1		3		1			
12	Fiber cotton making	90	2	2	4							4	
13	Bakery	60	2	1	3		2					1	
14	Motorcycle mechanic	65		3	3								3
15	Motor fan repairing	30		3	3			1				2	
16	Dairy	90		3	3							3	
17	Embroidery	90	3		3		1		1			1	
18	Leaf plate	60	3		3		3						
19	Saloon	30		2	2							2	
20	Bhuja udhog (snacks) operator	30		2	2							2	
21	Motor fan repair	90		2	2							2	
22	Auto mobile mechanic	90		2	2		2						
23	Car mechanic	65		2	2							2	
24	Hotel	30	2		2		2						
25	Barista	60		2	2			2					
26	Gold	90		1	1							1	
27	Mobile & induction cooktop repair	90		1	1							1	
	<b>Total</b>		<b>88</b>	<b>115</b>	<b>203</b>	<b>11</b>	<b>61</b>	<b>13</b>	<b>2</b>	<b>3</b>	<b>25</b>	<b>73</b>	<b>15</b>

The project worked with TVET service providers for skill- building in technical areas like backhoe loader<sup>14</sup>, motorcycle mechanic, automobile mechanic, plumber, electrician as well as for others like garment making, bag making, hair saloon and beauty parlours. During the extension phase, two additional TVET training courses were conducted: (a) repair and maintenance training on electric vehicles and (b) Motor and fan repair training. The EV training was requested by the EV company.

#### 4.4.4.4 Finding jobs

On-the-job training (OTJT) was organized in industries with job guarantees from the companies. The local government was also involved in identifying employment opportunities. However, finding jobs was not easy, despite the assurance given by the employers. Specifically, the training on backhoe loaders did not translate into jobs. This was because of a slowdown in the construction industry. It was also difficult to get women involved in non-traditional jobs. Two women were trained as JCB operators, they were however unable to secure jobs. In some cases, the entrepreneurs supported by the TA gave the trainees jobs.

## 4.5 Results and achievements

### 4.5.1 The TA provided training to 442 entrepreneurs, of which 233 (52.7%) were women-led enterprises and 323 (73.2%) from disadvantaged communities. The majority of these were micro-entrepreneurs.

Among the entrepreneurs trained in business management and enterprise development, 329 already had small existing businesses and 113 had either recently started a business or were interested in starting one ( see table 19).

#### BOX 10.

##### LIVELIHOOD OPTIONS FOR THE ULTRA-POOR

Engaging the ultra-poor in enterprises proved to be difficult and this is an important lesson. The ones that were trained in enterprise development were largely unable to start new enterprises as they were unable to arrange necessary investment themselves. They are also unable to arrange for collateral for loans from commercial banks. A few disadvantaged communities do have indigenous skills. However, many are on the verge of being lost due to competition in the market (for example, bamboo products vs plastic products). The younger generations prefer to go for foreign employment for better livelihood opportunities, rather than engage in traditional crafts and agriculture. Further, even though interested, most are unable to spare time for attending training programs, as they need daily earnings to help their families survive, being the sole provider. Given this reality, the TA focused on creating jobs for the ultra-poor, as against enterprise development.

<sup>14</sup> A **backhoe loader** is a heavy equipment vehicle that consists of a tractor-like unit fitted with a loader-style shovel/bucket on the front and a backhoe on the back.

**TABLE 19. PROFILE OF ENTREPRENEURS**

Type of Entrepreneurs	Number of Entrepreneurs			Ethnicity								
	Female	Male	Total	Brahmin/Chhetri (Hill)	Brahmin/Chhetri (Tarai)	Adivasi Janajati (hill)	Adivasi Janajati (Tarai)	Dalit (Hill)	Dalit (Tarai)	Madhesi	Muslim	Others
Existing	163	166	329	52	0	36	102	15	12	103	9	0
Start up	70	43	113	18	0	18	29	8	10	23	7	0

A number of case stories on entrepreneurs supported under the TA is included as Annex 16.

**BOX 9.****MUNDRIKA KUMARI CHAUDHARY: TRANSFORMING UNPAID CARE WORK TO ENTERPRISE**

“Prior to the training, I was confined to my household chores, with limited opportunities. The training program has broadened my horizons,” Mundrika, Saptari district.

32-year-old Mundrika Kumari Chaudhary lives in a small village in Saptari. As a homemaker, her days are spent in household chores and working in the fields. Things changed in 2023 when Mundrika and her husband decided to join the TA project. They attended the business management training and established a business on fiber dolls and cushion products. They even ventured into retail by opening their own shop. This venture completely changed their lives, becoming their main source of income and improving their standing in the community.

Through the guidance of the ADB TA team, Mundrika and her husband have started participating in local fairs. They have expanded their business into new areas and started selling in Kathmandu, Rajbiraj and Lahan. Mundrika has learnt to respond to customer demand, producing dolls of various sizes and types to meet customer preferences. Using electrical sewing machines, she can complete tasks quickly, which is essential for meeting high production demands. They hire additional staff members when necessary. Mundrika now earns approximately NPR 100,000 (approximately US\$ 700) in monthly sales.

Previously limited to domestic responsibilities, Mundrika is a rising entrepreneur, confidently engaging with her customers as with high-ranking officials. The success of Mundrika’s enterprise has not only improved her family’s financial stability but has also earned them recognition and respect within the community and beyond. Mundrika aims to inspire further positive change, promoting economic empowerment and self-reliance in the region. Now recognized as a skilled fiber doll trainer, she is regularly invited by institutions near and far to share her craft and inspire other women.

**Note: Mundrika has been supported by Rupesh Chaudhary, EDO, Saptari and Mina Basnet, EDLC, Eastern Cluster.**

Throughout the course of the TA, the team members continuously reflected on the various aspects of enterprise development. These reflections are summarized in an internal note for the team (Annex 17). Additionally, several training resources were produced on enterprise development, which are included in Annex 18.

#### **4.5.2 8.8% (39) entrepreneurs dropped out during the project, mainly because of personal reasons or inability to raise investment.**

Among the 442 entrepreneurs trained initially, four dropped out right after the first training event due to personal issues. Another 35 dropped out during the project implementation, some because they migrated, including for foreign employment. Among them, three entrepreneurs passed away during the implementation while a few of the start-up entrepreneurs abandoned the idea of establishing enterprises due to lack of investment support. In fact, this has been a major bottleneck in implementing the TA.

By the endline survey conducted in September 2025, the TA was supporting 403 entrepreneurs. The proportion of dropout among males is more than in females (Female drop out: 5% and male drop out: 13%). Similarly, the dropout among the start-ups is four times higher than among the existing entrepreneurs (Existing drop out: 5% and start-up drop out: 19%). The database of these entrepreneurs is included in Annex 19.

#### **4.5.3 390 (97%) of the entrepreneurs have improved their business practices or expanded their enterprise.**

Majority of entrepreneurs have made multiple improvements in their business, including expanding and diversifying them. A few entrepreneurs have made improvements in terms of relationship building, renovation, promotional activities, and electrical equipment adoption, especially received from stakeholders.

##### **BOX 12.**

#### **TYPICAL CHANGES MADE BY VEGETABLE FARMERS**

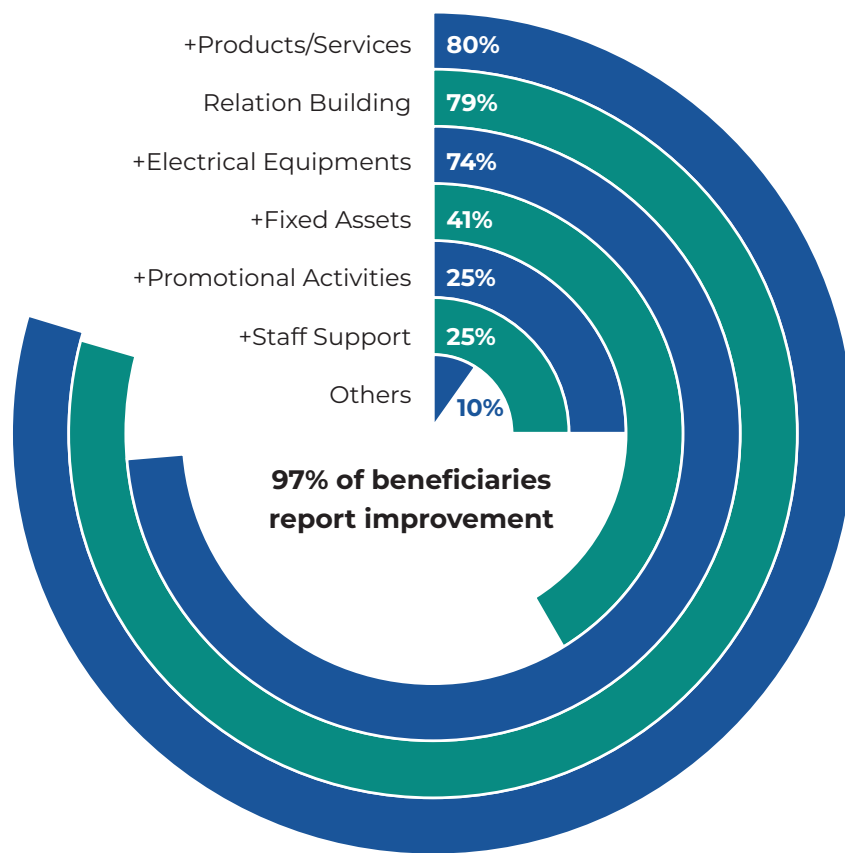
- Most follow crop calendars to plant and harvest commercial crops year-round.
- Many expanded their farming land; some even leased land for commercial vegetable farming.
- Some entrepreneurs have expanded their markets, targeting nearby regional markets, in addition to selling in the immediate vicinity.
- Many have started using electrical equipment like water pumps/motors (70%), rechargeable spray tank (60%), reporting convenience of work (95%), increased productivity (93%), increased income (93%), improvement in product quality (71%), time saved (60%) and reduction in manual labor (32%).
- The farmers now maintain better relations with their customers and identified stakeholders.

**TABLE 20. INVESTMENTS MADE AND EXPANSION OF BUSINESS**

S.N.	EXISTING		START UP		TOTAL	PERCENTAGE OF TOTAL
	FEMALE	MALE	FEMALE	MALE		
Number of entrepreneurs reporting improvement/ addition in business	156	147	59	27	390	97%
Number of entrepreneurs reporting on investments in business	158	147	60	28	393	98%

Out of total 403 entrepreneurs

**FIGURE 14. CHANGES MADE IN THE BUSINESSES BY ENTREPRENEURS**



Out of 403 entrepreneurs

**BOX 13.****FROM STRUGGLES ABROAD TO SUCCESS IN BARDIBAS**

Somlal Ghalan, a 31-year-old entrepreneur from Bardibas-II, Khayarmara, has faced numerous challenges throughout his life. Like many others, he had migrated abroad to Malaysia to work in the construction industry. Despite long hours and physically demanding labor, the promised financial stability never materialized. Disheartened, he returned home.

Two years ago, on a small plot of land by the river, Somlal decided to start afresh in his own country. Initially, farming proved to be difficult as his crops were affected by diseases, and he had limited knowledge of sustainable practices. However, hope arrived with the ADB TA 6526 NEP project, when he received training in vegetable farming and about modern agricultural techniques such as composting, mulching, and tunnel farming from an expert at the Krishi Gyan Kendra.

Somlal implemented many of these skills on his 25 kattha land (ten of which are rented). His wife joined him, not only in working in the field but also in managing accounts, turning it into a family business. The first major challenge came when heavy rain threatened to destroy everything they had achieved. Resourceful as he is, Somlal built a road to divert the water, saving their crops in the process. The electricity users' cooperative, Sagun Samudayik Samaj, supported entrepreneurs like him by upgrading the infrastructure—replacing wooden poles with steel ones and converting single-phase lines to three-phase—ensuring a reliable electricity supply. This up-gradation allowed Somlal to employ 10-15 local workers, whom he paid NPR 600-700 per day, contributing to local employment.

Now producing non-seasonal vegetables, Somlal has connected with Lalbandi Mandi, where middlemen come and purchase his produce, guaranteeing a steady monthly income of NPR 30,000 to 35,000. However, being an entrepreneur at heart, Somlal didn't stop there. He realized that he could make an even greater impact by sharing knowledge and resources with nearby farmers, sometimes even marketing their produce together. There is discussion in the village about forming a cooperative (Samuha) to eliminate middlemen and increase collective bargaining power. For future expansion, Somlal dreams of growing high-value crops.

**Note: Somlal Ghalan has been supported by Tanka Diyal, EDO, Mahottari and Mina Basnet, EDLC, Eastern Cluster.**

Among the existing entrepreneurs, a few are faced with personal and family issues, and hence have not been able to expand their business so far. However, they are determined to progress in their businesses in the future. The TA team and the entrepreneurs worked together to facilitate access to finance and develop business plans. The primary reason for difficulty in accessing loans has been the entrepreneur's limited ability to arrange collateral, especially those who do not own land. Another reason was the high interest rate of the loan during the project implementation which was not affordable.

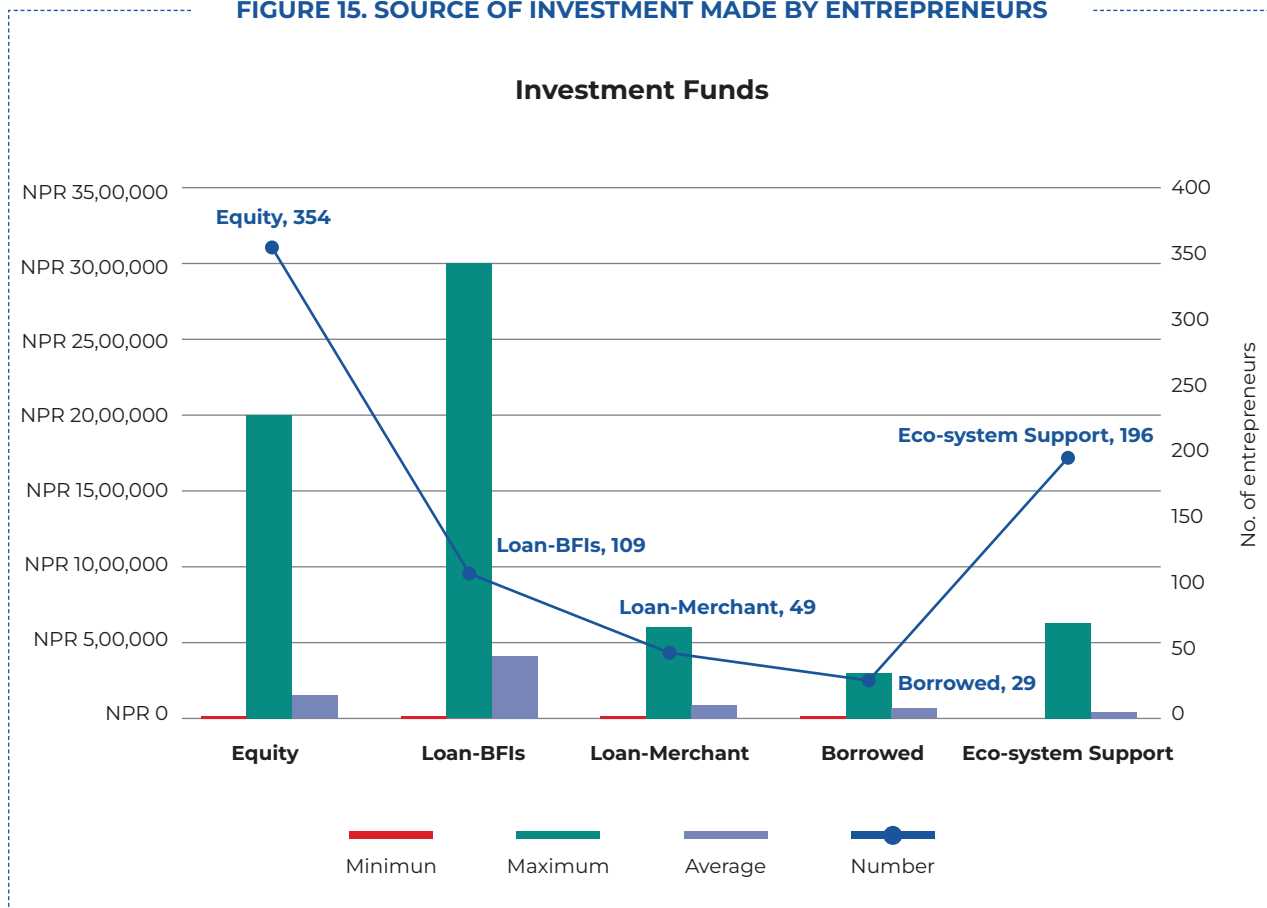
**4.5.4 395 (98%) of the entrepreneurs have made investments in their businesses. Even though most are micro-entrepreneurs, they have invested more than NPR 101 million, equivalent to US\$717,000 in their businesses.**

**TABLE 21. RANGE OF INVESTMENT MADE BY ENTREPRENEURS**

INVESTMENT RANGE IN NPR	NO. OF ENTREPRENEURS	INVESTED AMOUNT (NPR)
1000 - 50000	133	3,681,570
50000 - 100000	67	5,120,000
100000 - 500000	150	37,370,500
more than 500000	43	55,081,000
<b>Total</b>	<b>393</b>	<b>101,253,070</b>

In total, more than NPR 101 million has been invested by entrepreneurs in their businesses. As the project is working with micro and small entrepreneurs, the individual investment size is small. 90% of the entrepreneurs invested their own savings, 28% took loans from financial institutions, 12% took informal loans from friends/relatives/merchants and 7% borrowed from friends/relatives at higher interest rate ranging from 12%-48%.

**FIGURE 15. SOURCE OF INVESTMENT MADE BY ENTREPRENEURS**



The investments made by start-ups are mainly used to purchase raw materials for expansion of production, building new structures or renovating existing structures, buying equipment (electric and non-electric), buying cattle, etc.

**BOX 14.****BABITA KUMARI TELI'S JOURNEY IN COTTON YARN BUSINESS**

The ADB TA 6526 NEP training program gave me the tools and confidence to transform my business. Now, I want to help others in my community achieve their dreams and create a better future for themselves.



For over a decade, Babita has run a cotton yarn business with tireless dedication. However, irregular production and inefficiencies plagued her operations, leading to inconsistent income and economic instability. In 2023, Babita joined the entrepreneurship development program under TA 6526 NEP. The comprehensive training program provided Babita with the skills necessary to revolutionize her business operations and to adopt modern production techniques and advanced machinery. With this newfound knowledge, Babita added three new machines, including a fiber machine, to her operations, which boosted her production capacity. The productive use of electricity enabled her to operate the new machines efficiently, further enhancing production and reducing downtime. Babita received electrical safety guidance from NEA DCS Kalaiya, which added to her confidence to use more electric-powered machines.

As a result of these improvements, Babita's income saw a substantial rise, from NPR 150,000 to NPR 200,000 per month. She now employs 17 workers, including six women, contributing to local employment and economic growth. This transformation not only improved her economic stability but also elevated her social standing within the community. Babita's success did not go unnoticed. She received a state award for entrepreneurship from Madhesh Province in April 2023, recognizing her hard work and business success, as well as a Presidents' award. "I owe much of this success to the support from our trainers, especially Samita Ma'am, who helped with the award application and all necessary formalities," Babita acknowledged.

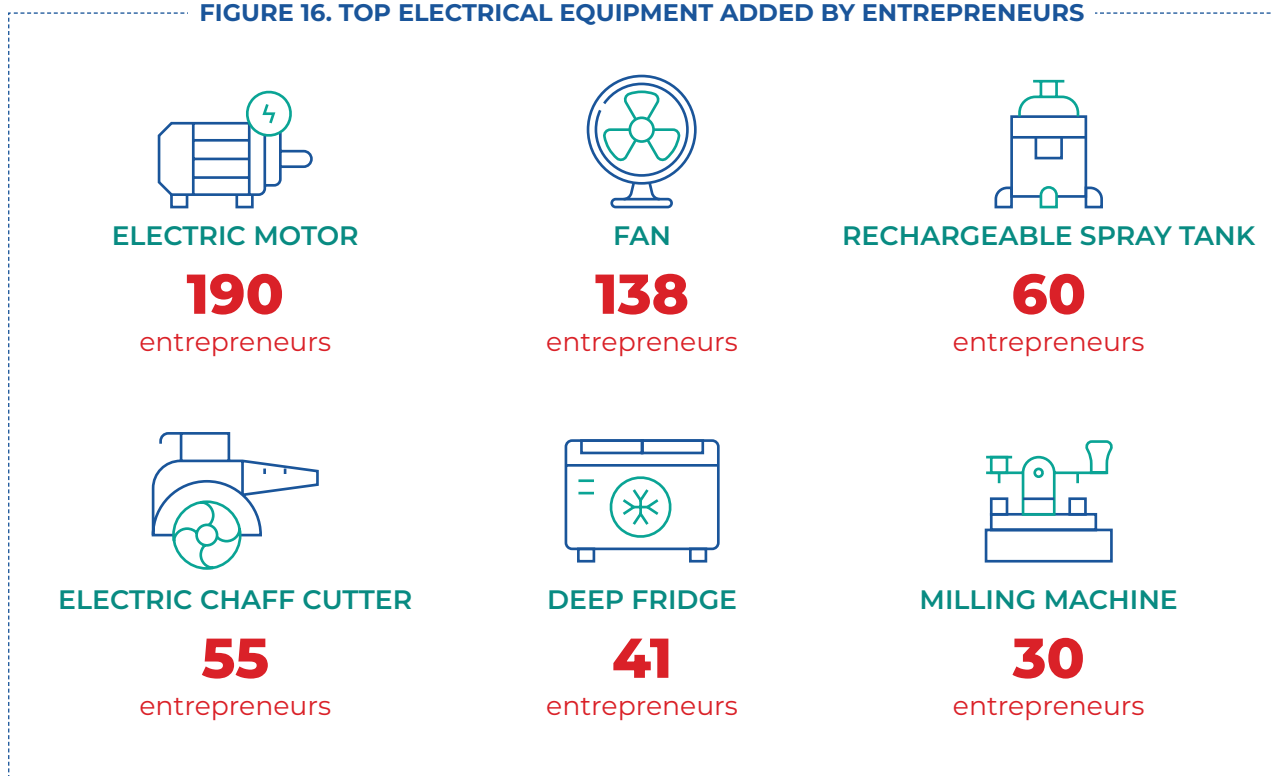
In addition to her entrepreneurial success, Babita was selected as a Community Champion to support community-level awareness events in Bara district. This role enabled her to contribute to promoting gender equality, social inclusion, and electricity safety in her community. Her involvement in these events further solidified her position as a respected and influential figure in the community.

**Note: Babita has been supported by Samita Panjiyar, EDO, Bara, and Likh Ram Chaudhary, EDLC, Western Cluster.**

#### 4.5.5 298 entrepreneurs availed of the technology support provided by the TA project. The investment made in acquiring new technologies by the entrepreneurs was more than the support for technologies provided to the entrepreneurs from the TA.

As discussed, during the extension phase of the project, partial support for technologies was offered to the entrepreneurs. Entrepreneurs made use of this facility, investing 50% of the technology costs on their own. Even though this could be managed only towards the end of the TA, this was a game changer for most of them, enabling them to enhance their productivity, improve product quality, securing better prices in the market and in the case of agriculture irrigation-related technologies, mitigating the vagaries of nature. The following are the common equipment adopted by the entrepreneurs.

FIGURE 16. TOP ELECTRICAL EQUIPMENT ADDED BY ENTREPRENEURS



In addition to the technologies supported by the TA project, many entrepreneurs invested their own money to upgrade their technologies. The investment ranges from NPR 1100 for purchasing a small electric equipment to NPR 1,800,000 for setting up a water purification unit. Around 31% of the entrepreneurs have added electrical equipment to enhance productivity of their businesses.

**BOX 15.****NAVIGATING NEW HORIZONS: ELECTRICITY TRANSFORMS RAM PUJAN YADAV'S POULTRY FARMING**

“

Prior to the training, I had limited understanding of business management and handling poultry diseases. The training provided me with comprehensive knowledge and introduced new prospects.

”

RAM PUJAN YADAV, DHANUSHA.

Ram Pujan Yadav, a 39-year-old resident of Dhanusha district returned home from working abroad and started a poultry farm. He, however, lacked the knowledge and skills needed to run a business, particularly in handling diseases and related issues in poultry farming.

In 2023, Ram found out about the enterprise development program under TA 6526 NEP via a referral and decided to enroll. The program included focused instruction on poultry farming techniques, disease identification and control, financial administration, and growth strategies for business expansion. Through extensive training and assistance, he has learned to diagnose diseases accurately and treat them before they worsen. This helped in reducing the unnecessary medication usage and improved poultry health. The program also helped Ram in devising and executing overall business strategies. Consequently, Ram's monthly earnings increased: prior to program participation, his monthly income stood at approximately NPR 30,000. This has more than doubled, reaching approximately NPR 70,000 per month. His poultry farm has expanded its market reach to Kathmandu.

A key success factor for Ram was his effectively using electricity in his farm operations. Leveraging his electronics background, Ram implemented energy-efficient practices like electric incubators and optimized lighting systems, which reduced operational costs. The poultry farm operates efficiently, utilizing modern technologies and improved management practices. By raising and selling broiler chickens, he has generated a steady income. The training in financial management taught him how to maintain accurate records of profits and losses, enabling better business decisions. Ram has ambitious plans to strategically grow his enterprise, prioritizing future expansion and sustainability.

**Note: Ram Pujan Yadav has been supported by Utim Lal Pandit, EDO, Dhanusha and Mina Basnet, EDLC, Eastern Cluster.**

#### **4.5.6 389 (96.5%) of the active entrepreneurs have improved their energy use practices.**

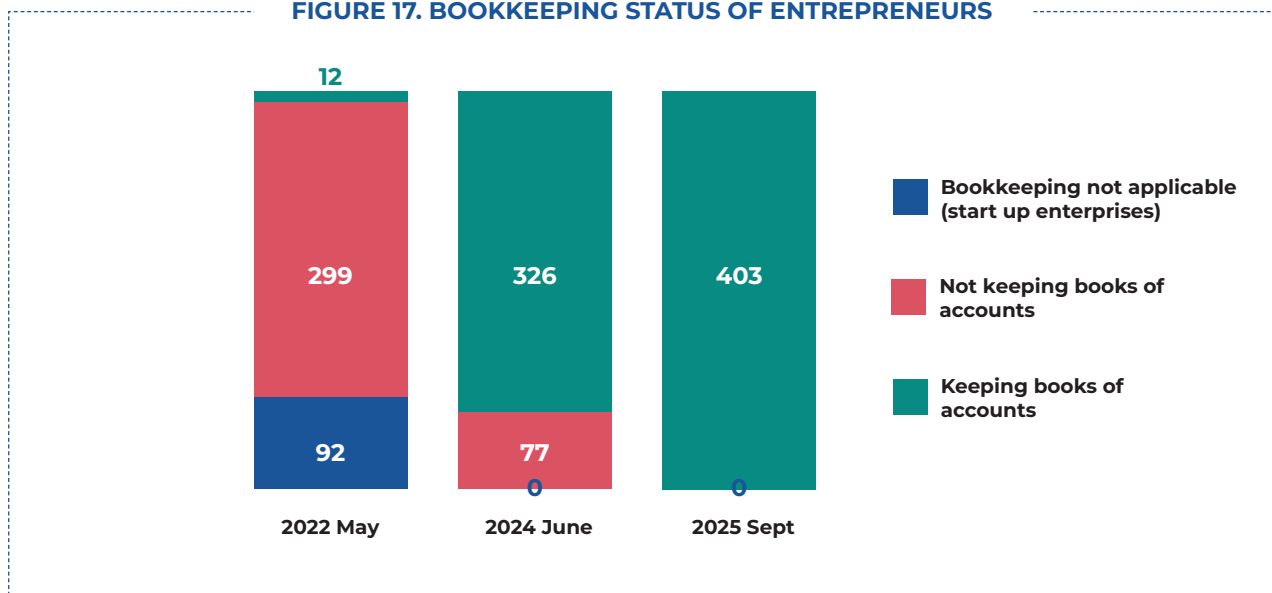
These include improvement in their wiring, including new connections of meters and motors, better quality wires and sockets as well as the addition of MCB as safety measures. The

information on workplace sanitation and hygiene was also given to the entrepreneurs, which was observed to be improving.

#### 4.5.7 The vast majority 399 (99%) of entrepreneurs now maintain formal accounting records, compared to only 6 (1.4%) prior to the project. Majority of the remaining 1% are illiterate.

Out of the 403 entrepreneurs currently supported, only six were keeping records of their sales and expenses before engaging in the project. During the endline survey in September 2025, almost all active entrepreneurs had started keeping accounts, few in a separate register and many in the book provided by the TA (see figure 17). Less than 1% i.e. 3 entrepreneurs are yet to maintain books of accounts, and this is mainly because of low level of profits. Many entrepreneurs who could not read and write are supported by family members or by the project field staff.

**FIGURE 17. BOOKKEEPING STATUS OF ENTREPRENEURS**



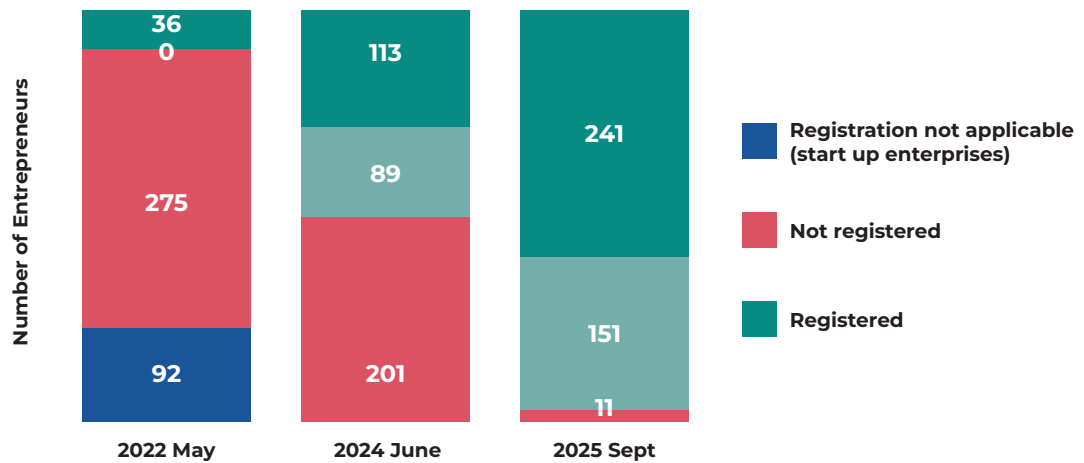
**TABLE 22. ENTREPRENEURS KEEPING ACCOUNTS**

BOOKKEEPING	EXISTING		START-UP		TOTAL
	FEMALE	MALE	FEMALE	MALE	
Keeping books of accounts	160	150	61	29	400
Not interested in keeping accounts		1	1	1	3

#### 4.5.8 Except for eleven, all entrepreneurs have registered their businesses.

The importance of registering businesses cannot be overstated. Registration can help gain access to government subsidies, and support from ecosystem stakeholders. By the end of the TA project, through the facilitation of the EDOs, a vast majority had registered their businesses. Some entrepreneurs were registered with the local municipality office, while others with the Cottage and Small Industries office, while some got recorded at the Ward office.

FIGURE 18. REGISTRATION STATUS OF BUSINESSES



*Singata Paudel Gautam with her electrical chaff-cutter*

#### 4.5.9 The total amount leveraged as support from government agencies and other projects/ programs is about NPR 7.09 million. The support received from agriculture and livestock service extensions is small-sized, but critical to enterprise growth.

47 entrepreneurs leveraged financial support for improved technologies for businesses like tailoring and sewing machines, fiber or cotton making machines, electric motors, chaff cutters and beauty parlor equipment, from different stakeholders. Besides this, 86 entrepreneurs participated in training programs conducted by the government. Similarly, support in the form of vegetable seeds, medicines, fertilizers, compost manure, etc. and free Junior Technical Assistant (JTA) visits was received from the Agriculture Services Unit and Livestock Service Unit. 38 entrepreneurs received cash subsidies to build improved sheds. The Ward office of Paterwa Sugauli Rural Municipality helped expand the weekly agriculture market with NPR 10 million budget, being used by 1000 households. The local government has also supported registering the farmers' groups which makes it easier for them to receive support in groups.

**BOX 16.****A WOMEN'S GROUP TRANSFORMS CHHAFI VILLAGE**

Chhafi, a small village in Paterwa Sugauli Rural Municipality in Madhesh Province, is primarily inhabited by the Magar community. Surrounded by the Chitwan National Park Forest, the villagers face numerous challenges, including frequent wildlife incursions, seasonal floods and economic hardship.

The establishment of the Shree Pavitra Duna Tapari Agricultural Group, supported by TA 6526 NEP, ushered in a change. Under the TA activities, nine women from Chhafi applied for the duna tapari (leaf plate) training, and two were selected to receive training in business management and leaf plate production.

The training boosted the confidence of the women. However, upon returning to the village, they faced skepticism about the production process due to the lack of machinery. The EDO facilitated discussions with local authorities, leading to the formation of the Shree Pavitra Duna Tapari Agricultural Group. With 18 members, including 16 women, the group started saving and lobbying for a leaf plate machine. The local government made available a machine to produce duna tapari, mechanizing the process and improving the quality of products. These eco-friendly leaf plates, sold at NPR 5 each, replaced the traditional NPR 1 leaf plates, resulting in an increase in income. The group registered their business with the municipality and obtained a PAN number from the revenue office.

The journey was not without challenges: initial skepticism from the community, delays in acquiring the machine, and the need for continuous support were just a few. The project's approach, combining skill development with practical support, helped them overcome these.

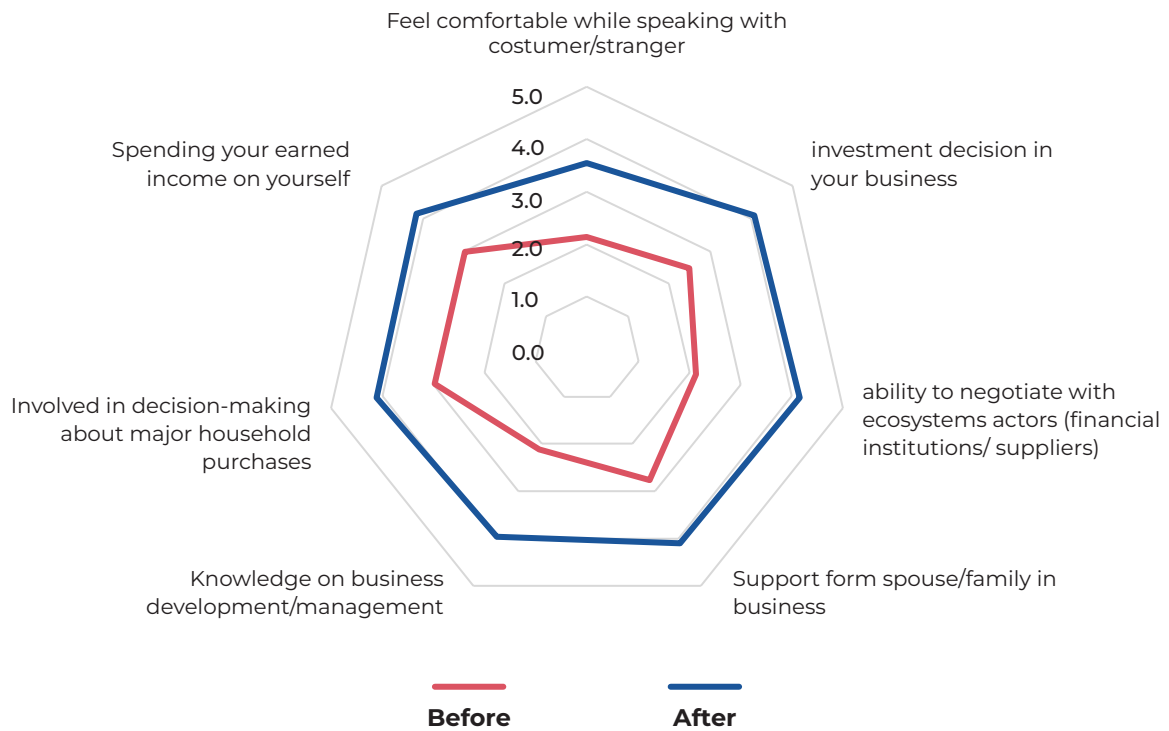
Economic empowerment brought about more than just financial benefits: the women gained confidence, leadership skills and a sense of community. Monthly meetings and savings schemes strengthened their financial stability and resilience. The group's success has earned Chhafi the reputation of being the "village of duna taparis," demonstrating the potential for eco-friendly businesses in rural areas.

**Note: Shree Pavitra Duna Tapari Agricultural Group has been supported by Santosh Shashankar, EDO, Parsa and Mina Basnet, EDLC, Eastern Cluster**

#### 4.5.10 Entrepreneurs have experienced a sense of empowerment.

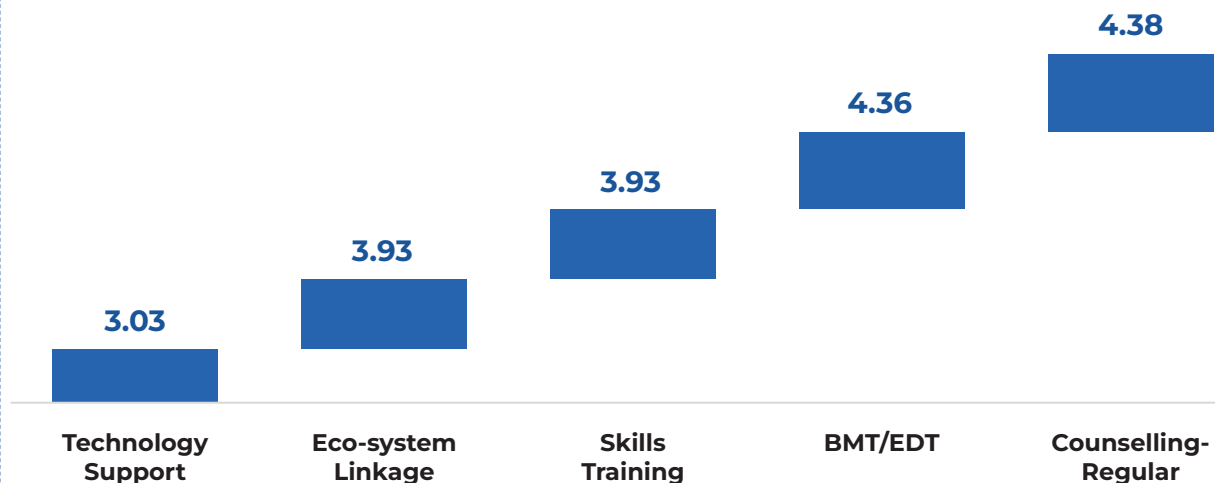
Several positive changes, beyond productivity and business incomes, have been experienced. Many women, who used to hide behind veils have come forward and can discuss on social matters among the community. Access to information and empowerment has raised the involvement of women and disadvantaged groups in development processes and helped reduce social disparity and discrimination within the community. The activities also increased family bonding with children and youths: many are involved in the family business, parents can provide better for the children, and there has been a reduction in drug use and other addictions among the youth.

**FIGURE 19. EMPOWERMENT SENSED BY THE ENTREPRENEUR (WEIGHTED AVERAGE VALUE FROM LIKERT SCALE<sup>15</sup>)**



Based on endline survey data

**FIGURE 20. DRIVERS OF EMPOWERMENT AS STRENGTHENED BY THE PROJECT (WEIGHTED AVERAGE VALUE)**



<sup>15</sup> The Likert scale is widely used in various fields to measure empowerment, including psychological empowerment in the workplace, women's empowerment, and older people's empowerment. These scales typically include items that assess aspects such as meaning, competence, self-determination, and impact. The responses are categorized to determine the individual's level of empowerment, with higher scores indicating a greater sense of empowerment.

For women running small businesses, electrification had a transformative impact. Access to electric tools and lighting allows them to expand their enterprises, increase productivity, and earn higher incomes, which in turn has boosted their confidence and status in the community. These outcomes show electricity's potential as an empowerment enabler when coupled with supportive measures. At the same time, challenges, such as unreliable power supply, financial constraints, and patriarchal norms, can limit how far electricity could translate into real independence for these women<sup>16</sup>.

#### 4.5.11 A total of 203 job seekers were trained in 27 different trade skills. Among them 93 (46%) are women and more than 85% from disadvantaged groups and 95% youth.

**TABLE 23. PROFILE OF JOB SEEKERS**

NUMBER OF SKILLS	NUMBER OF PARTICIPANTS			ETHNICITY								
	FEMALE	MALE	TOTAL	Brahmin/Chhetri (Hill)	Brahmin/Chhetri (Tarai)	Adivasi Janajati (hill)	Adivasi Janajati (Tarai)	Dalit (Hill)	Dalit (Tarai)	Madhesi	Muslim	Others
27	88	115	203	13	2	11	61	3	25	73	15	0

Among the job seekers, women were mainly trained on skills like garment making, bag making and beautician which do not require them to move away from their homes for employment. Men were trained mostly in technical skills such as heavy equipment operator, ac/fridge mechanic, building electrician, etc. More than 89% of the TVET trainees expressed satisfaction with the training they received.

The details of various trades for job creation are given in Annex 20.

#### 4.5.12 As of September 2025, 154 of the trainees have received jobs.

One of the trainees passed away after the completion of the training and two trainees have left for foreign employment. A few other trainees are in the process of processing their documents for foreign employment. Few trainees cited personal reasons for not getting engaged for jobs, such as cropping season or sick family members. Some of the trades like back-hoe loader are seasonal engagements, and hence, it is difficult to engage trainees in such jobs. The TA team is continuously working with the training providers to ensure jobs for all the trainees. The details of the TVET trainees are included in Annex 21.

<sup>16</sup> As articulated in Kempf, Saskia, 2025. **Measuring the impact of electrification on women's empowerment and quality of life: implementing an SPT-CA framework on a case study in Nepal**. Final Master Thesis, October 2025. Eindhoven University of technology.

**TABLE 24. EMPLOYMENT STATUS OF TRAINEES**

STATUS	NUMBER OF JOB SEEKERS
Engaged in foreign employment	23
Switched skills and working in a new job	33
Unemployed	56
Working in a job related to the skills received from training	79
On Job Training	11
Dead	1
<b>Grand Total</b>	<b>203</b>

#### 4.5.13 The local focal partners are committed to continuing their work on enterprise development.

The local focal partners have played a critical role in the implementation of the TA project. On their part, they have reported positive changes, including improvements in organizational processes such as holding regular meetings and systematic record keeping. The LFPs supported entrepreneurs by providing low-interest loans, financial literacy sessions, and connections with market actors and relevant agencies. The LFP in Bara has started online services for new member registration and renewal fee payment. It also provides business-to-business services to entrepreneurs. The Sarlahi LFP has started savings and credit activities to facilitate access to finance for entrepreneurs. The LFP in Siraha expanded their working area and has provided financial literacy sessions to the entrepreneurs. The LFP in Saptari conducted interaction with entrepreneurs and developed entrepreneur-friendly loan packages. The EUCs that are operating as LFPs have started upgrading their electricity distribution systems to ensure reliable electricity supply for enterprises and induction cooktop promotion. EUCs also benefitted from an increase in revenue due to increased electricity consumption, while cooperatives' income also increased due to interest gains.

In most districts, the local government representatives have committed to allocating budget for supporting entrepreneurs including conducting training, exposure visits and for technologies. Similarly, the LFPs are committed to provide regular counseling and mentoring support to entrepreneurs besides their specific expertise. However, the representatives from the local government and the LFPs reiterate the need for continued external support in terms of their own capacity development and that of the entrepreneurs. The provision of low interest credit facilities, development of a platform for coordination and collaboration of the stakeholders were also discussed as necessary inputs for continued improvement in the enterprise sector.



05

## Mass awareness campaigns on GESI and electricity use

“

I am delighted to be invited to this awareness program, which was incredibly effective. As a person with a disability, I have not had many opportunities to attend public awareness programs like this one. Usually, people with disabilities, like me, are only invited to disability-specific meetings. However, this program was different and groundbreaking with everyone seated together and receiving the same information on electricity and GESI, regardless of their abilities. It was a new and empowering experience for me, and I hope to participate in more programs like this in the future.

”

GAYENDRA DAS, A PERSON WITH DISABILITY, PARTICIPANT FROM SAPTARI DISTRICT

### 5.1 Background

Intervention 3A focused on implementing mass awareness campaigns to address GESI issues and promote effective electricity use. Early on, an assessment of the current media environment; a strength, weakness, opportunities, and threats (SWOT) analysis and a needs assessment of the communities was carried out. Based on these, a Knowledge Management and Communication Strategy was developed as a key guiding document. The knowledge management and communications (KMC) strategy identified the communication objectives and the target audiences and explained the approach which includes the key messages and communication strategies, outputs, and activities to accomplish TA objectives.

## 5.2 Summary of outputs delivered

**TABLE 25. SUMMARY OF OUTPUTS DELIVERED UNDER IA 3A**

TARGET	ACHIEVEMENT	ACHIEVEMENT STATUS
200 mass awareness programs on gender and exclusion issues and on electricity use and safety in project areas, including DCSs in Kathmandu Valley, Bharatpur, and Pokhara, with 10,000 people participating (at least 30% women and 30% disadvantaged group).	<p>A total of 478 mass awareness programs, comprising 122 community-level events, 231 radio shows, 176 radio programs, four Video PSAs, and 31 key messaging programs through Viamo, reached more than 757,360 community members. This includes 5,738 participants from local events, 672,356 through radio, and 81,969 through VIAMO's 3-2-1 platform.</p> <p>481 households covered through door-to-door awareness campaign on safe electricity use, safety and billing along with support in internal house wiring.</p>	<b>Target surpassed</b>
600 persons covered through orientation to reduce gender and social barriers in Madhesh Province (at least 50% men).	A total of 2874 community members, including 1451 males (50.5%) and 1423 females (49.5%), were engaged to reduce gender and social barriers in Madhesh Province.	<b>Target surpassed</b>
Target Areas: Madhesh Province, and DCSs in Kathmandu Valley, Bharatpur, and Pokhara		

### BOX 17.

#### KNOWLEDGE, ATTITUDES AND PRACTICES (KAP) SURVEY RESULTS

The intervention's impact was assessed through a Knowledge, Attitude, and Practice (KAP) survey to evaluate the community's current knowledge, attitudes, and practices related to GESI and electricity usage, with specific aims to assess awareness of GESI issues and electricity use, conducted with a sample of 540 individuals from Madhesh Province.

##### **Emerging outcomes:**

**Community Engagement:** High participation from women and disadvantaged groups in educational programs empowered these groups, fostering leadership and ownership within their communities.

**Technology adoption:** There was strong interest in digital payment systems and energy-efficient appliances, though barriers such as cost and digital literacy limited widespread adoption.

Capacity Building: The project's emphasis on training and awareness created a sustainable foundation for ongoing education, with integration into community structures enhancing long-term impact.

**Barriers and Opportunities:**

Challenges: Practical barriers, including high costs of electric stoves and limited digital skills, hinder broader adoption of new technologies.

Cultural Shifts: A notable shift towards gender equality was observed, particularly in Parsa, where women are increasingly participating in community activities without traditional restrictions.

## 5.3 Overall strategy

Based on the needs assessment and stakeholder engagement process, communication and knowledge gaps were identified, and KMC objectives formulated to contribute to the TA 6526 NEP objectives, aligned to NEA's approved GESI Strategy and Operational Guidelines. The needs assessment served as a preliminary reference not only for developing the various awareness themes but also for segmenting the target audience for strategic outreach. The strategy for mass awareness on GESI and electricity use included two primary strategies: (a) Mass Media and (b) Communication for Development (C4D). A mix of communication channels, such as community radio, social media, and mobile-based platforms like VIAMO, was used to reach the target audiences. Detailed case studies were developed for (a) Innovative media and communication channels, (b) KMC strategy, (c) Storytelling and (d) Youth and community champions, examining how the specific strategy was rolled out and what the results were. These are included in Annex 22. Further, A detailed one-page strategic document was developed for planning and implementing each KMC action. These are included as Annex 23.

**Mass media initiatives:**

- Produced 12 radio PSAs on GESI and electricity use through 11 local radio stations.
- Five radio shows were broadcasted through 11 radio stations.
- Four video PSAs produced on GESI and electricity use, contributing to widespread awareness.
- Six video documentaries on electrification, farmers groups, LFPs, disadvantaged communities and field teams.
- VIAMO's 3-2-1 platform reached 81,969 community members, further extending the campaign's impact beyond traditional media.
- Social media campaigns through NEA DCSs and LFP social media platforms contributed significantly but are yet to be fully quantified in terms of reach.

**Community events:**

- GESI Focus Group Discussion (FGD): 24 events conducted.
- Family and Community Dialogue (FCD): 16 events conducted.
- NEA DCS Events: 32 events conducted (15 in phase I and 17 in extension phase).
- Street Performances: 29 events conducted (10 in phase I and 19 in extension phase).

- School Events: 16 events conducted.
- Women champions of change
- Policy Dialogues: 3 events conducted.

The intervention strategically engaged specialist organizations—VIAMO, The Story Kitchen (TSK), and the Dalit Society Service Organization (DSSO) and Chandra Bindu Bikas Nepal. VIAMO contributed through its innovative information and communication technology for development (ICT4D) products, including the 3-2-1 platform and Wanji games, which were proven effective in rural and low-income settings. These tools were deployed to overcome barriers and encourage the productive use of electricity. The Story Kitchen and DSSO were instrumental in supporting mass media and C4D interventions. The Story Kitchen, a women-led organization based in Kathmandu, led the consortium, coordinating mass media efforts in the Kathmandu Valley, Bharatpur, and Pokhara, and aligning these with C4D initiatives in Madhesh Province in collaboration with DSSO. DSSO, the local implementing partner based in Siraha, Madhesh Province, focused exclusively on C4D efforts within Madhesh, leveraging its local networks.

## 5.4 Overview of activities

### 5.4.1 Mass media awareness campaigns on GESI and electricity use

The awareness campaign explored the use of NEA's mobile application, caller tunes system, NTC's enquiry and SMS system and TA 9334's mobile application for communication. Interventions included developing Radio/TV PSAs and campaign videos, innovative media outreach through VIAMO, organizing events at DCS, developing articles and human-interest stories, producing videos including stories of change, designing and printing electrical safety materials producing information leaflets and visual clips on various electricity-related topics, and coordinating with NEA for media airtime and mobile application content. The links to all the audio and video media produced are included in Annex 24.

#### 5.4.1.1 Community radio/social media

The campaign utilized community radio and social media to disseminate messages and employed mass media and Information, Education, and Communication (IEC) materials in English, Nepali, and local languages to reach target audiences in the project locations. NEA's social media channels were also used to promote key messages through audio-visuals and quality photography, maximizing the reach and impact of mass awareness campaigns.

#### 5.4.1.2 Radio programs

The project leveraged radio as a key medium for mass awareness, utilizing two major activities: radio Public Service Announcements (PSAs) and radio shows. The radio PSAs were concise, 5-minute informative pieces focusing on GESI issues and electrical safety. Meanwhile, the radio shows were more comprehensive, 30-minute programs broadcast on 11 radio stations nationwide, covering critical topics such as electricity hooking, digital payment systems, electrical safety and first aid, electricity conservation, and electricity audits in each episode.

In total, the project developed four distinct radio PSAs and five radio shows, each of which was translated into Nepali, Maithili, and Bhojpuri, resulting in a total of 12 PSAs. These PSAs were broadcast across three to five districts over four months on the same radio stations, amounting to 176 individual broadcasts. Similarly, the five radio shows were aired through 11 radio stations, culminating in 55 broadcasts. Altogether, the project disseminated 231 radio programs, significantly surpassing the initial target of 100 broadcasts.

The estimated reach of the radio program Gharai Ujyalo was a total audience of 372,356 listeners. Additionally, similar estimated audience of over 300,000 was reached through the 12 Radio PSAs including in Nepali, Maithali and Bhojpuri. Since the radio stations provided general estimates for the audience reach, disaggregated data on gender and disadvantaged groups were not readily available. To address this, a small-scale knowledge, attitudes and practices (KAP) survey was conducted with a sample of 504 participants, of which 233 acknowledged receiving information on GESI and electricity usage through the radio shows, of which 182 (78%) were women and 180 (35%) from disadvantaged groups.

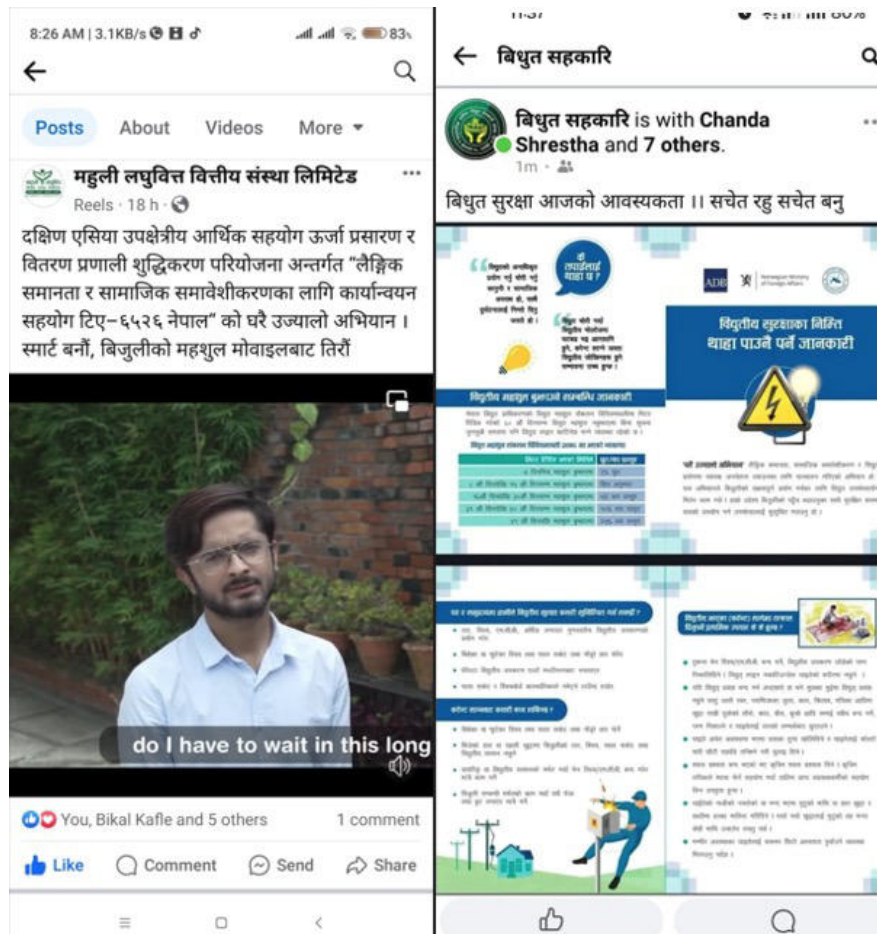
**TABLE 26. ESTIMATED NUMBER OF AUDIENCES OBTAINED FROM THE 11 RADIO SHOWS**

S.N.	RADIO STATION	DISTRICT	ESTIMATED AUDIENCE
1	Radio Barahi	Pokhara	6,72,000
2	Gunjan F.M.	Rautahat	12,00,000
3	Radio Mithila	Kathmandu and Janakpur	1,00,00,000
4	Narayani F.M.	Parsa	8,00,000
5	Bhorukawa F.M.	Saptari	50,000
6	Radio Madhesh	Sarlahi	3,00,000
7	Radio Rudraksha	Janakpur	10,00,000
8	Radio Samagra	Siraha	17,000
9	Sanskar F.M.	Bara	20,00,000
10	Vijaya F.M.	Nawalpur	2,00,000
11	Radio Janakpur	Janakpur	3,00,000

#### 5.4.1.3 Social media

The target audience for the social media tools included community members and electricity consumers, members and followers of LFPs, followers of local government and NEA social media pages. The platforms selected included NEA's Facebook page as the primary source of official information; local government Facebook pages in Madhesh Province for localized information; NEA Distribution Consumer Service Facebook pages in regions such as Madhesh Province, Kathmandu, Bhaktapur, Lalitpur, Bharatpur, and Pokhara for service-specific updates; and LFPs' facebook pages in Madhesh Province to leverage existing networks and localized trust. The KAP survey findings revealed that 52 participants (10%) became aware of GESI through social media, with 25 (5%) specifically learning about the connection between GESI and electricity usage via platforms like Facebook.

FIGURE 21.



Samples of social media presence

### 5.4.2 Events at NEA DCSs

The NEA DCS events aimed to increase awareness and knowledge of safe and efficient energy use, particularly focusing on electricity billing, consumption practices, and safety within the distribution system.

In the extension phase, at the express request of the Provincial Chiefs and the DCS Chiefs, awareness raising sessions were conducted in the newly electrified clusters under the TA project. A list of sessions conducted is as follows:

Details of awareness raising sessions conducted in the extension phase



Group discussion on electrical safety

**TABLE 27. DETAILS OF AWARENESS RAISING SESSIONS CONDUCTED IN THE EXTENSION PHASE (CUMULATIVE FIGURES INCLUDED IN TABLE 30)**

S.No.	Location	Resource person/ designation	Total participants			Ethnicity							
			Women	Men	Total	Hill Brahmin Chhetri	Tarai Brahmin Chhetri	Hill Janajati	Tarai Janajati	Hill Dalit	Tarai Dalit	Madhesi	Muslim
1	Bahudarmai Municipality-7, Bankori	Buddhinath Jha, Chief, Pokhariya DCS, Parsa	22	22	44	0	1	0	1	0	2	40	0
2	Paterwa Sugauli RM -5, Deuriya		20	22	42	0	1	0	7	0	30	1	3
3	Kalaiya-27, Rampur	Sagar Sah, Engineer, Kalaiya DCS, Bara	19	25	44	0	0	0	0	0	14	21	9
4	Kaliya-26, Siswa Maheshpur		88	6	94	0	0	0	0	0	21	41	32
5	Gujara Municipality-2 Chocha Maidha	Dhirendra Kumar Yadav, Chief, Chandranigahpur DCS, Rautahat	28	16	44	1	0	0	23	1	19	0	0
6	Chandrapur Municipality-2 Jaruwa		28	18	46	0	0	46	0	0	0	0	0
7	Ishworpur Municipality-7, Bela	Shyam Sundra Mahato. EDO. TA6526	33	1	34	0	0	0	15	0	18	0	1
8	Agnisair Krishnasawaran RM-1, Beharachap	Upendra Mahato, Engineer, Kanchanrup DCS, Saptari	22	7	29	0	0	0	0	0	29	0	0
9	Bateshwar Rural Municipality-4, Dhanusha	Prabin Kumar Mishra, DCS Chief, Sakhuwa DCS, Dhanusha	27	5	32	0	0	0	0	0	17	15	0
10	Bateshwar Rural Municipality-5 Shantipur, Dhanusha		32	5	37	0	0	0	0	0	30	5	2
11	Lahan Municipality -11, Padariya	Pramod Kumar Shah, Asst. Engineer, Lahan DCS Siraha	17	8	25	0	0	0	0	0	24	1	0
12	Lahan Municipality-12, Bhitiyatol		23	4	27	0	0	0	2	0	22	2	1
13	Lahan Municipality-15, Lagraha		15	9	24	0	0	1	3	0	17	3	0

14	Haripur Municipality-2 Hathisar	Tribhuvan Yadav, DCS Chief, Lalbandi DCS, Siraha	28	8	36	0	0	35	0	0	0	1	0
15	Haripur Municipality-7 Pachagachhiya		38	1	39	0	0	0	1	0	37	1	0
16	Bagmati Municipality-3, Dharhara		60	20	80	4	0	35	0	0	29	12	0
17	Ishworpur Municipality-9 Kurainya		35	2	37	0	0	0	0	0	33	4	0
<b>Total</b>			<b>535</b>	<b>179</b>	<b>714</b>	<b>5</b>	<b>2</b>	<b>117</b>	<b>52</b>	<b>1</b>	<b>342</b>	<b>147</b>	<b>48</b>

Results of pre- and post-test results of a sample of participants of the DCS events are presented below.

**TABLE 28. RESULTS OF PRE- AND POST-TEST RESULTS OF 707 PARTICIPANTS**

AWARENESS TOPIC	RESULT OF PRE-TEST	RESULT OF POST-TEST
Awareness of safe and efficient energy use at home	321 were unaware of safe energy practices, while 386 were aware.	The unaware group decreased to 42.
Knowledge of the process of paying electricity bills	377 were unaware of the bill-paying process, while 330 were aware.	All of respondents reported awareness, including knowledge of online billing options through various platforms like the NEA website, mobile apps, and digital payment services such as eSewa, Khalti and CellPay.
Perception of safety in digital payments	318 did not feel safe using digital payments, 304 felt safe, and 85 were unsure.	The perception of safety improved significantly, with 700 feeling safe, 7 unsure and none feeling unsafe.
Awareness of safety systems at the distribution system	246 were unaware of safety implementations, while 461 were aware.	All of respondents became aware of safety requirements and were able to identify common causes of electricity hazards, including using low-toxicity materials, avoiding exposed wires, not overloading sockets and keeping power outlets out of reach.

The pre/post analysis revealed substantial progress in knowledge and behavior regarding energy use and safety and increased understanding and application of safe energy practices, confidence in digital payments and improved safety measures.

### 5.4.3 VIAMO

The TA project partnered with VIAMO, a mobile engagement platform, to provide access to interactive audio clips addressing gender and social barriers. Target audiences used a toll-free code, 32100 to access tailored, engaging content with actionable messages. The 30 key messages (in Nepali and Maithili) were listened to a total of 326,497 times<sup>17</sup> between January 2023 to December 2023. The content reached 81,969 unique listeners (45.8% women). In the KAP survey covering 504 individuals from Madhesh Province, 204 (160 from disadvantaged groups) reported using the 3-2-1 platform. However, it is important to acknowledge that the survey may not fully capture the precise reach to disadvantaged groups due to its limited scale and budget constraints. The survey was designed to offer a general overview of the project's success.

A significant increase in engagement was observed during the months of April and May, with the delivery of 55,140 and 53,868 key messages, respectively. Like the key messages, the Wanji game was translated and recorded in Maithili to increase participation from Madhesh Province. Originally developed by Peripheral Vision International, and African company as the Wanji game, the audio edutainment game was adapted by VIAMO in Nepal to align with local cultural contexts and needs. A total of 33,739 unique contacts entered the game, with 11,976 completing it and 9,109 players repeating it. Remarkably, one player played the game a maximum of 188 times.

### 5.4.4 Communication FOR Development (C4D)

Community activities focused on engaging families and community members through dialogues and focus group orientations. Decision-makers and community members participated in participatory sessions to address GESI challenges and promote energy use knowledge. Interactive street dramas across Madhesh Province conveyed key messages on GESI and safe energy use. Community leaders, including elected women representatives, women champions of change were engaged as well. These dialogues aimed to find solutions through a participatory approach, ensuring the dissemination of the project's key messages and strengthening community ownership.

“

This is my second time participating in this awareness event. I will be spreading informative messages in my community and educating my family and neighbors about the benefits of digital payments.

”

AMAN YADAV, BARA

#### 5.4.4.1 Family and community dialogues

The Family and Community Dialogues (FCDs) aimed to enhance community knowledge and practices related to electricity use, with a focus on safety, efficiency and gender equality. The dialogues were designed to be interactive, promoting mutual understanding and solutions. 16

<sup>17</sup> The total number of listeners is calculated based on the number of individuals who have engaged with the content by listening to at least 75% of the messages, between January 2023 and December 2023.

FCDs in Madhesh Province engaged 537 participants (223 males, 314 females), with a strong representation of women (58.5%) and disadvantaged groups (92.7%). Key results include:

**Increased awareness:** The percentage of participants unfamiliar with digital electricity bill payments decreased from 75 to 25% post-event, while those unaware of new electricity line connections dropped from 65 to 33%. Additionally, awareness of e-cooking increased, with participants' lack of knowledge reducing from 53 to 14%. At the same time, the percentage of participants unaware of GESI issues dropped from 68% pre-event to 18% post-event.

**Enhanced electrical safety knowledge:** Knowledge of first aid in electrical accidents improved from 41% pre-event to 80% post-event, and the proportion of participants feeling insecure about digital payments decreased from 27 to just 9%.

**Youth and inclusion focus:** The active involvement of youth and people with disabilities enriched the dialogues, fostering a more inclusive environment. Youth participants played a crucial role in facilitating discussions, helping to ensure that key messages were understood and that all voices were heard.

#### 5.4.4.2 Focus group discussions

The Focus Group Discussions (FGDs) aimed to enhance community understanding of safe and efficient electricity use, alongside raising awareness about GESI. Across Madhesh Province, these discussions engaged community members, youth and decision-makers within families. The FGDs encouraged intergenerational dialogue and collective problem-solving, and covered a range of topics, including electricity safety, efficiency, conservation, digital payment methods and the role of women in decision-making and leadership. The use of gender-sensitive and socially inclusive materials contributed to a deeper understanding and commitment to GESI principles among participants. Key results include:



*A young girl taking lead in discussion on electrical safety*

**High engagement:** The FGDs engaged 829 individuals (394 males, 435 females), a 38% over-achievement over the original target of 600 participants, including 403 youths. Diverse demographics, including senior citizens, disadvantaged women, and individuals with disabilities, were engaged.

**Improved knowledge and behavior:** The percentage of participants uncertain about electricity theft and its consequences dropped from 12 to 4% post-event. Similarly, understanding of electricity conservation increased, with those lacking knowledge decreasing from 30 to 7%. Significant gains were also observed in awareness of GESI, safe electricity use, electric cooking, and digital services.

**Increased digital literacy and empowerment:** The program promoted digital literacy related to electricity, with many participants embracing online payment methods and gaining confidence in their digital skills. Youth participants reported personal growth, increased confidence, and a commitment to spread awareness within their communities.

### 5.4.4.3 Street dramas

In the main phase, the street dramas aimed to raise awareness about safe and efficient energy use, particularly in rural areas of Madhesh Province and targeted disadvantaged communities. In the extended phase, it was specifically targeted to the areas where the electricity thefts were rampant and was aimed at increasing awareness on the procedure for last mile electrification for landless households, electrical hazards due to electricity theft, electrical use and safety, and billing procedure. The use of local language and an interactive format made the performances relatable and impactful. In the main phase, ten street dramas reached 262 individuals (112 males, 150 females), while the extension phase covered nineteen street dramas covering 1,989 individuals (1,159 males and 830 females). Visible outcomes were as follows:

**Knowledge gains:** Before the event, only 12% of participants understood the electricity bill payment process, which increased to 98% post-program. Similarly, knowledge of safe energy use at home rose from 7 to 67%, and awareness of health and safety practices related to electricity usage improved from 11 to 97%.

**Behavioral shift:** The performances prompted changes in attitudes towards electricity-related health and safety risks and in behavior. Concern for these risks increased from 11% pre-program to 34 percent post-program. The percentage of participants reporting implementing safety measures at home increased dramatically from 17% before the program to 98% after, reflecting a strong shift towards adopting safer energy practices.

**Community and organizational support:** The events received strong support from DCS offices, local leaders and community organizations. Feedback suggested expanding future events to include digital payment portals and financial literacy messaging, highlighting the community's interest in energy education.

In the extension phase, Chandrabindu Bikas, Nepal, a local street drama team based in Rautahat, was engaged directly for conducting the street dramas. These were conducted in the local language and the content used in the main phase was further tailored to highlight four issues: the procedure for obtaining free meters by disadvantaged communities, digital bill payments, electrical safety and the hazards of stealing (hooking). In all, 19 street dramas were conducted, the sites selected in discussion with DCS staff. The street dramas proved to be a very effective medium to engage illiterate communities and drew large crowds, at time up to 500 people. Both women and men were keenly interested, however in some Muslim villages, the women watched from a short distance. Most street drama performances had the participation of the DCS staff and DCS Chief, who were able to resolve many doubts and issues through a discussion at the end of the performance. In Parsa, seeing the successful street drama conduction, Er. Buddhinath Jha, the DCS Chief of Pokhariya requested for an additional one in the marketplace in Sakhuwa Pasauni RM-2, Shreepur Bajar. The team pivoted quickly and conducted an additional one, attended by a large crowd.



*A street drama in progress*

## BOX 18.

“

I learnt the good practice of electricity use through this street drama where community members should not hook or steal electricity, make use of meter boxes to monitor electricity usage, benefits of shifting to electric cooking techniques from traditional cooking and more. I have been making payments for electricity bills through digital payment for the past three years. In the future, such awareness programs could perhaps also include a training package for community members to better emphasize the purpose.

”

RAJ KAPUR DAS THARU, STREET DRAMA AT PARSA

Details of the street dramas conducted in the extension phase are given in the table below.

**TABLE 29. DETAILS OF THE STREET DRAMAS CONDUCTED IN THE EXTENSION PHASE (CUMULATIVE FIGURES INCLUDED IN TABLE 30)**

DISTRICT	LOCATION	EVENT DATE	PERSONS PARTICIPATING		TOTAL
			MALE	FEMALE	
Rautahat	Brindawan Municipality-1, Ramoli Bairiya	Friday, 9 Shrawan	16	68	84
	Gujara Municipality -5 Laxmipur ward office		20	45	65
Sarlahi	Lalbandi DCS Working area, Ward-Kabilasi-2 papariya	Saturday, 10 Shrawan	40	48	88
	Barahathwa DCS working area (Chakraghatta Rural Municipality ward n.2, Bhelhi)		48	26	74
Mahottari	Ramgopalpur municipality-9, Gothbanauli	Sunday, 11 Shrawan	40	63	103
	Aurahi Municipality-2, Chepkat		54	76	130
Dhanusha	Bairiya Bazaar Mukhiyapatti Musarniya-5	Monday, 12 Shrawan	79	23	102
	Rambag Tole Nagarain Municipality-3, Phulgama		67	26	93
Siraha	Bhagwanpur Rural Municipality- 1, Bhagwanpur	Tuesday, 13 Shrawan	122	30	152
	Bariyarpatti Rural Municipality-3, Bariyarpatti Chowk		47	76	123
Saptari	Mahadeva Rural Municipality-5, Bhagwatpur Bazar	Wednesday, 14 Shrawan	85	14	99
	Trihut Rural Municipality-5, Lohajara		101	33	134
Dhanusha	Mithila Municipality wada no- 11 Tulsi	Thursday, 15 Shrawan	45	35	80
Sarlahi	Basbariya Rural Municipality ward 1, Manpur		53	45	98

Bara	Mahagadhimai-6, Babuain	Friday, 16 Shrawan	53	20	73
	Kalaiya-10, Matiarwa vegetable market		10	164	174
Parsa	Parsagadi municipality-7 Raghunathpur	Saturday, 17 Shrawan	84	10	94
	Bahudarmai Municipality-7, Bistrampur		131	22	153
	Sakhuwa Pasauni RM-2, Shreepur Bajar		64	6	70
<b>Total events</b>	<b>19</b>		<b>1159</b>	<b>830</b>	<b>1989</b>

#### 5.4.4.4 Community champions

To address the issues surrounding lack of confidence and awareness among women, a total of 16 community champions were supported, two from each district, to empower and educate disadvantaged communities, particularly women from Muslim and Dalit communities. These community champions were selected for their ability to influence and motivate disadvantaged groups, particularly women, within their communities. Their role was vital in engaging participants, especially those with limited access to opportunities and information. The Champions reached out to families, especially Muslim women facing barriers to participation, overcoming skepticism and building trust. Their efforts ensured broad participation by coordinating with local stakeholders and organizing community activities, effectively strengthening community bonds. Their role was crucial in bridging the gap between the program and hard-to-reach families, especially Muslim women who faced barriers to public participation.

#### 5.4.4.5 Creative expressions competitions/School STEM events

The school events in Madhesh Province were designed to educate students about electricity, focusing on safety, proper usage and the prevention of electrical hazards. Through hands-on activities and practical experiences in building and tinkering with electric circuits, the events deepened students' interest in and understanding of electricity. Additionally, the program sought to enhance the capacity of schoolteachers to deliver similar educational experiences. Conducted in 16 schools for students in Grades 7 to 10, the events reached a total of 497 participants (229 males, 268 females). Key results include:

**Enhanced interest in and understanding of electricity:** The events improved students' knowledge of electricity, particularly in understanding conductors and insulators. Students were surprised to learn that everyday materials, such as grass, soil, and even wet slippers, can conduct electricity. This hands-on learning experience boosted students' confidence and competence in working with electric circuits.

**Promotion of inclusivity and challenging gender stereotypes:** The events emphasized the importance of inclusivity, encouraging students to consider factors beyond gender, such as caste and disabilities. The interactive environment fostered open discussions on sensitive topics, leading to a broader understanding and acceptance of diverse perspectives. The positive shift in students' perspectives, particularly among female participants, suggests that

the program successfully challenged traditional stereotypes and promoted equal opportunities in STEM (Science, Technology, Engineering, and Mathematics) education.

**Positive feedback from educators:** Teachers and principals were actively involved in the events, encouraging students and reinforcing the importance of the topics discussed. The success of the program in engaging students and educators alike highlights its potential for scalability and long-term impact.



*A school event on electrical safety in progress*

#### BOX 19.

##### RAISING INTEREST IN STEM EDUCATION

The sessions had a profound impact on students' perceptions of gender roles and social inclusion, particularly within the context of STEM. Extensive discussions about the socially constructed nature of gender roles led to a significant shift in student engagement, with female students participating more actively than their male counterparts. This marked a notable departure from previous experiences, challenging the misconception that technical activities are only for boys and promoting more equitable participation in STEM activities. The high level of enthusiasm and active participation from female students exceeded expectations, highlighting a successful counter to traditional gender norms.

#### 5.4.4.6 Policy dialogues

##### 5.4.4.6.1 Madhesh Policy Dialogues

The Madhesh Policy Dialogues were convened in Bardibas (27 May 2024) and Birgunj (29 May 2024) to bridge policy gaps and outline strategic actions to improve electricity access for disadvantaged households, promote GESI, enhance energy-based livelihoods and electric cooking. The events involved a diverse group of stakeholders, including community members, youth, local government representatives, and other actors. The policy dialogues facilitated critical discussions that led to tangible actions, such as the expansion of electricity

infrastructure and skill-building initiatives. Key results include:

**Wide stakeholder engagement:** The dialogues engaged 109 participants. The involvement of stakeholders from various sectors, including NEA DCS, SASEC, and community champions, ensured a rich exchange of ideas and discussions on the challenges and opportunities in promoting electricity access and GESI.

**Impacts of TA's economic empowerment interventions:** The dialogues highlighted the progress in transitioning from manual labor to machinery, which has increased productivity and product quality. Targeted training programs and entrepreneurship initiatives empowered individuals, particularly women and youth, leading to enhanced financial management, improved living standards, and increased economic activity driven by reliable electricity access.

**Improved energy access:** TA 6526 NEP played a critical role in expanding electricity infrastructure, electrifying households and providing free meters to households, improving the electricity access for disadvantaged communities.

**Strong community impact:** The dialogues highlighted the need for improved coordination among agencies, fostering community trust and confidence. Within the TA, this led to effective problem-solving, better resource utilization, and the development of innovative strategies to overcome challenges related to product marketing, pricing, and market identification. Increased female and youth participation: Women's involvement in economic activities has grown, with many managing businesses and gaining a better understanding of financial dynamics. Youth engagement in business and farming has also increased, contributing to reduced substance abuse and stronger family relationships. The focus on GESI has been pivotal in ensuring that these groups are integral to the community's economic development.

#### **5.4.4.6.2 Kathmandu Policy Dialogue**

The Kathmandu Policy Dialogue conducted on 25 July 2024 was a national-level event aimed at advancing energy-based policies and integrating insights from provincial discussions, particularly from Madhesh Province. This dialogue marked the culmination of the TA efforts, with key findings and recommendations being consolidated into policy papers and a comprehensive policy brief. The event aimed to bridge the gap between provincial and national stakeholders, enhancing collaboration, transparency, and accountability in policy development. Participants included representatives from the Royal Norwegian Embassy, SASEC, NEA, and implementing partners such as CRT. Key results include:

**Advancements in GESI integration:** The dialogue highlighted the progress made by NEA in incorporating GESI into its operations. NEA has extended electricity access to 99.95% of the population in Madhesh. These efforts have improved infrastructure and enhanced the quality of essential services such as irrigation and education, contributing to inclusive socio-economic development.

**Policy influence and collaboration:** The event facilitated the translation of provincial insights into national policy discussions. Provincial recommendations, particularly those related to GESI, skill-building, and energy access, were communicated to national stakeholders, promoting an integrated policy framework.

**Promotion of inclusive energy projects:** The dialogue underscored the efforts of ADB and SASEC in integrating GESI principles into energy projects. SASEC's focus on cultural integration and awareness in promoting GESI, despite challenges in implementation, demonstrates a commitment to sustainable development through early incorporation of these principles. Transformative examples of GESI integration: The dialogue showcased transformative examples, such as the GESI-integrated DCS center in Lalbandi, highlighting the positive outcomes of early GESI integration in project design. These examples demonstrated that incorporating GESI principles from the outset leads to better project outcomes and more sustainable development.

The outcomes and discussions were synthesized as policy briefs and are included in Annex 25.

#### 5.4.4.7 Media workshop

The media workshops in Madhesh Province, held in Birgunj and Bardibas, aimed to emphasize the importance of media coverage on electricity safety and consumption. The workshop sought to share the status, improvements post-project implementation, and discuss future improvements. The two workshops reached 39 participants including journalists, radio program partners, and the Local Federation of Nepali Journalists. The workshop reinforced the crucial role of investigative journalism in uncovering and addressing electricity-related challenges, and the need for continuous media attention on these issues. Key results include:

- **Media engagement:** The workshop engaged local and national media representatives, encouraging them to focus on electricity-related issues. Participants recognized their role in raising awareness, solving problems, and promoting public discourse on critical electricity topics.
- **Diverse story ideas:** The workshop generated past and proposed story ideas, ranging from electricity access in disadvantaged communities to the rise of electric vehicles and the safety challenges in electricity usage. These topics reflect the dual nature of electricity as both a danger and an opportunity, emphasizing its impact on development and human rights.
- **Increased awareness on electricity issues:** Discussions highlighted the evolving role of the media in addressing issues such as load-shedding, tariffs, the growing use of induction cooktops and EVs, and the transformation in communities' post-electricity access.

## 5.5 Results and achievements

### 5.5.1 The awareness programs conducted under the TA project reached more than 757,360 community members. (target 10,000 people)

The awareness programs conducted under the TA project reached more than 750,000 people, through community events, radio programs, Video PSAs, and key messaging programs through Viamo, significantly enhancing the reach and impact of the GESI and energy use messages across the targeted regions.



### 5.5.2 The awareness creation adopted a holistic and systematic approach, engaging both specialist as well as local agencies.

The TA worked in close coordination with the LFPs and local stakeholders which leveraged local networks and relationships, ensured community engagement and long-term sustainability of the project's outcomes. The LFPs were engaged to independently manage KMC activities, ensuring the sustainability of the project's achievements. Engaging the local street drama company ensure that the content was fully local and adapted to every single event.

At the same time, the TA engaged three specialist agencies, The Story Kitchen (TSK), Dalit Society Service Organization (DSSO) and VIAMO, to access existing platforms and a larger pool of human resources to reduce risk, improve quality, increase efficiency, and improve value for money for the interventions.

### 5.5.3 The TA project gave a voice to women and disadvantaged communities.

Intervention 3A empowered women from disadvantaged communities, particularly Muslim and Dalits, who had been confined by traditional restrictions. It provided opportunities for personal and professional growth, enabling women to gain confidence and knowledge about electricity safety. This newfound empowerment allowed them to engage in community activities, increase their control over household decisions, and take on leadership roles. The intervention's emphasis on education helped women overcome traditional barriers, leading to transformative changes such as speaking up, selling products, and organizing community initiatives. By prioritizing disadvantaged groups and supporting community champions, the TA project not only raised awareness of disparities but also catalyzed long-term, positive changes within families and communities, promoting sustained inclusive growth. A detailed case study on one of the community champions is included in Annex 26.

#### BOX 20.

#### ASHMA KHATUN, A COMMUNITY CHAMPION

Ashma Khatun, one of the 16 community champions under the ADB TA 6526 NEP project, represents how marginalized women can overcome traditional barriers and emerge as leaders within their communities. As a Muslim woman from Bara district, Ashma faced significant social constraints that limited her mobility and engagement in external activities. However, through the program, she gained knowledge about electricity safety, built confidence, and became an advocate for inclusive development.

Ashma's role as a community champion involved actively engaging women, especially from marginalized backgrounds, and encouraging them to participate in the program. She visited households, addressed language barriers, and worked tirelessly to persuade families to allow their women to take part in the initiatives. Her leadership extended beyond the program, as she often supports to organize community awareness activities and supports local community members in accessing government resources.

Through her efforts, Ashma has not only transformed her own life but has also become a voice for other Muslim women, inspiring them to break free from

traditional limitations and pursue personal growth. Her story highlights how the TA project empowered disadvantaged communities, promoting GESI and a positive change within Madhesh Province.

#### **5.5.4 Awareness creation initiatives were instrumental in mobilizing local communities over issues of common interest. The street dramas drew great interest from the local communities.**

The intervention engaged community champions, particularly focusing on women from Muslim and Dalit communities who had previously faced barriers to participation. These champions played a crucial role by conducting door-to-door visits, organizing family discussions and offering language support. Their efforts broke down cultural barriers, encouraged women's participation and built trust within the community, leading to increased confidence and involvement of women in public activities. The street dramas conducted in the extension phase were able to raise awareness on critical issues, especially that of electricity thefts, or “hooking”, as it is popularly called.



*Street drama at Brindawan Municipality-1, Ramoli Bairiya*

#### **5.5.5 The TA project worked collaboratively with NEA at all levels.**

NEA and SASEC officials were pivotal in supporting community events, particularly the NEA DCS events, where their active participation provided valuable insights and guidance. Their involvement ensured smooth execution and reinforced messages on gender equality, social inclusion, and efficient energy use, lending credibility to the campaign. They facilitated discussions, answered queries, and offered practical advice on energy conservation and safety. Beyond their event roles, NEA and SASEC officials coordinated logistics, ensured resource availability, and supported the development of IEC materials like safety manuals and informational leaflets. Their proactive engagement was crucial in exceeding participation targets and raising awareness about GESI issues and energy efficiency across a diverse audience.

#### **5.5.6 External resources were leveraged to provide additional services to the communities.**

Distribution of technological resources: Eight computers, sourced from Turkish Airways, distributed to enhance digital access for students and community members, bridging the digital divide and improving educational outcomes.

Communication and information dissemination: 25 radios provided to communities, ensuring that vital information and educational content reached remote and underserved areas.

Long-term educational support: The Global Partnership for Education, a three-year funded project in seven municipalities, has been introduced in Madhesh, reinforcing the sustainability and impact of the interventions.



# 06

## Last mile electrification in Madhesh Province

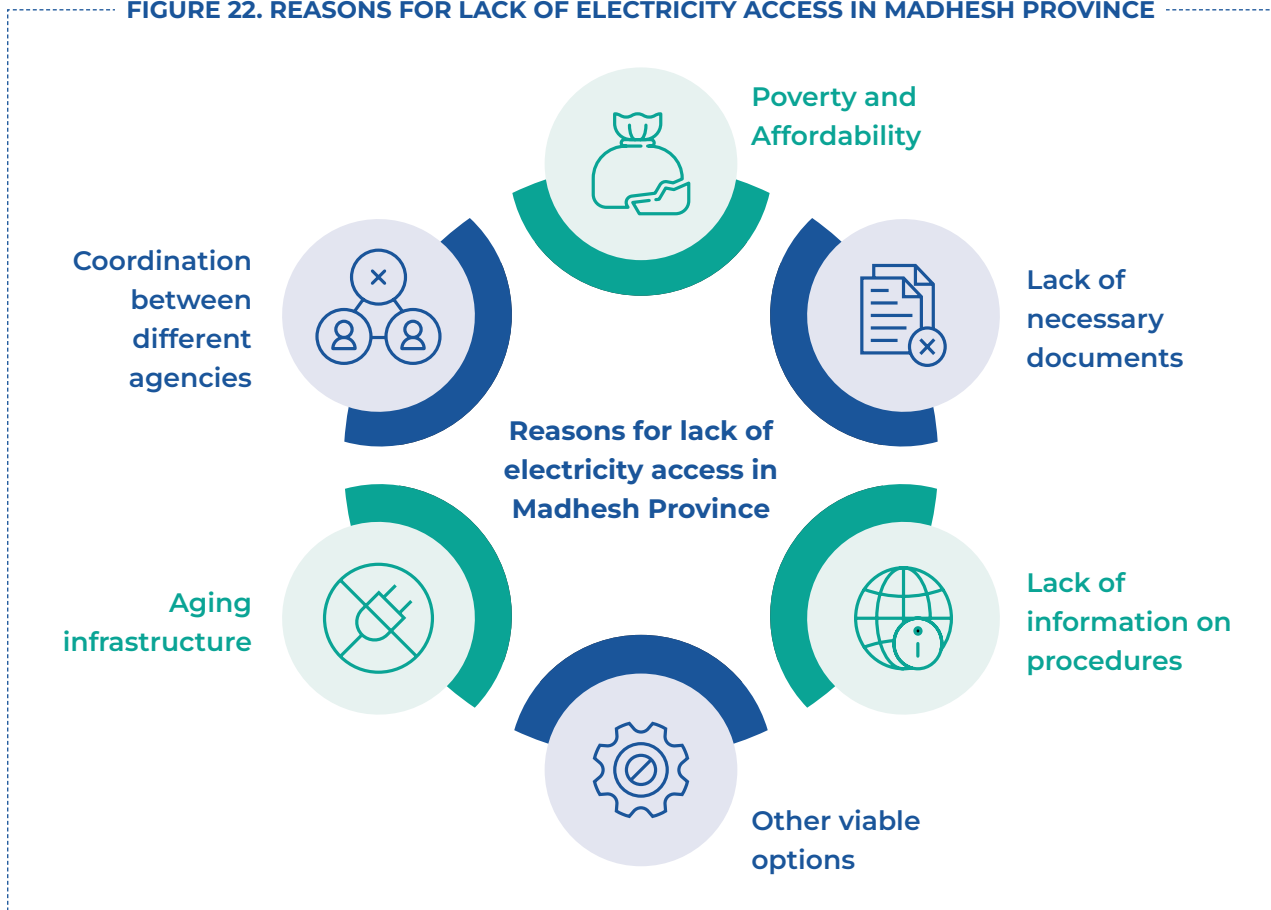
### 6.1 The context and challenges in last mile electrification

Nepal's electricity sector has progressed well over the last decade and over 99 %<sup>18</sup> of the households have electricity access. Madhesh Province has the highest electrification rate and Karnali province has the lowest. NEA's provincial Office in Madhesh Province serves 1201248 consumers (85.84% of these are domestic consumers) through 23 Distribution Centers. The province has a distribution loss of 14.05%

Despite this impressive performance in Madhesh, there are pockets within the population that are still not electrified, which can be attributed to various reasons. Households without electricity access mostly belong to the poorest and most disadvantaged communities, including Dalits (Musahar and Dom communities), Janajatis, and Muslims. These face economic hardships and feel incapable of paying for costs related to connecting to the grid. Many Madhesis in these pockets do not have citizenship certificates, despite having lived for several generations in the province. Without a citizenship certificate, they cannot get land registration deeds (lalpurja). Historically, the Musahars have been predominantly landless and work as agricultural laborers. In the absence of a land ownership certificate (or lalpurja), they must pay a dharauti (additional security deposit) to obtain a connection from NEA, which further increases the access costs. The average connection cost is in the range of NPR. 5000, which is a high pay for the communities having unstable and seasonal income. Further, one may not want to invest if they have no ownership over the land and confidence that they can benefit from their investments for the coming years. The majority are also unaware of the procedures and documentation required for electrification. Despite provisions in the Electricity Distribution Bylaw 2069 and its successor, Bylaw 2078, to electrify the household residing on unauthorized public land, some clusters remained unidentified and consequently unelectrified. These clusters, often on public land, have struggled to gain access to electricity despite previous requests to local governments and the NEA.

<sup>18</sup> NEA Annual Report 2024/2025, NEPAL ELECTRICITY AUTHORITY ([nea.org.np](http://nea.org.np))

FIGURE 22. REASONS FOR LACK OF ELECTRICITY ACCESS IN MADHESH PROVINCE



At the same time, even the households that are electrified face issues related to quality and reliability, including interruptions in the power supply due to maintenance, faults, or load shedding; inconsistent voltage levels that can damage appliances and affect their performance; and aging inadequate infrastructure that results in unreliable power supply. Many newly electrified households inform that they do not receive a bill for the initial 2-3 months, which is followed by a large bill, calculated cumulatively. When they don't have a clear understanding of the calculations, people tend to think that electricity is very expensive, leading to misconceptions.

Lack of knowledge about electrical safety and electricity thefts is rampant in the province. Many people directly tap electricity by connecting wires directly to the power lines before the meter, bypassing the meter entirely. Some tamper with the meter to record less consumption than used, while others set up unauthorized connections to the power grid, often seen in informal settlements. To avoid the initial connection cost, several households may share a meter with a next-door neighbour, which is an expensive option, as the meter owners can feel free to charge extraordinarily high fees from their neighbours. Hastily connected wires also pose a safety risk. These methods not only cause financial losses to the utility but also pose safety risks and can lead to power outages.

Another practical difficulty in extending electricity to the last mile<sup>19</sup> is the overlapping and often unclear division of responsibility between the various institutions that have a role in electrification. As mentioned above, a common issue faced by poor households is that they

<sup>19</sup> **Last mile electrification** refers to the process of extending electricity supply to the most remote and underserved areas, often referred to as the "last mile" of the power distribution network. This concept is crucial for ensuring that all communities, especially those in rural and isolated regions, have access to reliable and sustainable electricity.

are unable to bear the cost of household meters that they must purchase from NEA to be electrified. In reality, NEA has instituted a mechanism of providing free meters to the poorest unelectrified households. For this, the local government is required to identify and make a recommendation for the specific electricity deprived households to DCS, based on poverty levels. However, in most cases, the local government is not aware of this process and the communities remain unserved. In some cases, the households remain unelectrified as they are in informal settlements, or the electricity lines must pass through forested areas, and the Divisional Forest Offices (DFOs) do not allow extension of the national grid through forest areas.

Even when these communities obtain electricity connections, a serious challenge is the quality of internal wiring in their houses. NEA's provision in electrification is only up to the meter box and the internal wiring within the house is taken care of by the household themselves. This is also true for the households who have adopted electric cookers in Kalaiya. Since majority of the houses electrified are extremely poor, they resort to the cheapest options and as a result, the wiring in the households is not up to the mark.

## 6.2 Summary of outputs delivered

The TA team has been supporting NEA to extend electricity to last mile communities in Madhesh Province in order to contribute to the achievement of the following outcomes: (a) Socially disadvantaged communities of Madhesh Province will have access to reliable energy supply; and (b) The access to quality energy supply will improve the livelihood and boost economic activities in such communities.

The following targets<sup>20</sup> were achieved under this intervention:

- Contribution to upgradation of electricity systems in all eight districts of Madhesh Province, thus enabling the roll-out of new services like irrigation and electric cooking.
- Approximately 4,100 households received improved power quality through distribution line (poles:1,427, cable: approximately 50 km, transformers: 14 of various sizes) upgradation because of collaboration between the TA project and SASEC project
- Identification and mapping of over 5,454 poor and un-electrified households in Madhesh Province.
- Documentation prepared for 1,512 households to avail free meters.
- 1,300 most disadvantaged households received formal electricity connection with free meter with the direct efforts and handholding support of the TA project. 27 disadvantaged households received formal electricity connection with paid meters with the direct efforts and handholding support of the TA project.
- 452 most disadvantaged households received electricity because of demand collection support of TA in Saptari district.
- 25 households received electricity because of provisions of information on availability of meters in Siraha district arranged by GIZ.
- 427 houses were supported for upgrading their house wiring and another 55 electric cooker users were supported with upgrading their wiring for electric cooking.

<sup>20</sup> No specific quantitative targets were assigned to the project under this intervention.

See Annex 27 (a, b, c and d) for details on last mile electrification details and the database of households electrified.

**TABLE 31. ELECTRIFICATION SUPPORT PROVIDED TO HOUSEHOLDS IN MADHESH PROVINCE**

Type of support	Households		Public Institutions	Total	Ethnicity								Remarks	
	Female	Male			Brahmin Chhetri Hill	Brahmin Chhetri Tarai	Adivasi Janajati (Hill)	Adivasi Janajati (Tarai)	Dalit (Hill)	Dalit (Tarai)	Madhesi	Muslim		Others
Facilitation, handholding and documentation support	702	595	3	1300	14	1	209	194	38	543	228	70	3	Documentation complete and electrified with free meter
	79	106		185				7	3	113	39	23	0	Documentation complete but not electrified
<b>Total</b>	<b>853</b>	<b>770</b>	<b>3</b>	<b>2,103</b>	<b>14</b>	<b>1</b>	<b>278</b>	<b>205</b>	<b>46</b>	<b>698</b>	<b>286</b>	<b>95</b>	<b>3</b>	

### 6.3 Overall strategy and overview of activities

The TA team has been working closely with NEA and the SASEC team to mitigate the bottlenecks that communities and the implementing agencies are facing in the electrification of unelectrified households as well as upgrading the infrastructure in the project clusters.

With the intent to engage NEA proactively into last mile electrification, continuous discussions with NEA at all levels was the centre-point of the TA strategy. The SASEC team (in Madhesh Province and central NEA office), the Madhesh Province Provincial Chief, and the 10 DCS that the TA engaged with, all were key stakeholders and instrumental in shaping the strategy: monthly meetings were held with the DCSs, updates shared, and next steps planned. A final meeting was held in April 2025, with representation from all the participating DCSs.

For this component, a multi-pronged strategy was adopted:

#### **a. Improve quality of electricity through infrastructure development:**

There are several areas in Madhesh Province, where either electric poles are fragile or the cables are in poor condition or transformers are overloaded. The TA team identified many locations with aging infrastructure and poor quality of electricity supply and supported SASEC to upgrade the electricity distribution infrastructure in such areas. Specific activities include:

- Map and conduct field surveys to identify areas and communities that most need system upgradation.
- Connect and coordinate between different stakeholders like DCSs, the road department, municipalities, and the District Administration offices to resolve problem issues like

right-of-way issues, compensation disputes, site clearance for new grid extension or line upgradation, and electricity access for irrigation facilities.

- Support EUCs to obtain funding for improving electricity supply through system upgradation.
- Advocate with NEA DCS for grid expansion/ system upgradation.

The TA project assisted in the expansion of approximately 50 km of distribution network, facilitated the upgradation/ installation of 15 transformers of various sizes and improve the quality of electricity supply to around 4,097 households.

**TABLE 32. LINE UPGRADATION SUPPORT PROVIDED BY NEA AND FACILITATED BY THE TA PROJECT**

	PHASE I	EXTENDED PHASE	TOTAL
Beneficiary households	1,687	2,410	4,097
Poles	1,110	317	1,427
Transformer	1*50 KVA 5*100 KVA 1*200 KVA	1*25 KVA 3*50 KVA 3*100 KVA	
Cable extension	27,750	Approx 22 Km	Approx. 50 Km

### b. Community engagement:

This requires involving local communities in the planning of electricity services to ensure the solutions meet their specific needs and are sustainable.

- Assist poor communities to obtain electricity connections by educating them about the process for obtaining electricity connections, assisting them with preparing necessary documentation, filling up necessary forms, depositing security and fee in banks and following up with the local DCS offices.
- Assist poor households to access free meters and arrange for other connection costs including support for house wiring by liaising with DCS offices, local municipalities and ward offices.
- In newly electrified locations, conduct door-to-door awareness raising and communication campaigns on varied topics such as safe, efficient & productive use of electricity and against electricity theft, understanding electricity bills and tariff structure, alternative/ digital methods of payment, with the local DCSs using promotional material (shared in Annex 28) and PSAs.



*A newspaper article on last mile electrification in Madhesh Province*

### c. Support NEA with extending new connections for poor disadvantaged communities:

The team was requested to assist the Madhesh Province DCS offices to complete the documentation process for potential poor households that need to be electrified in several clusters. The team coordinated with the ward offices to identify unelectrified clusters of especially landless families and collect recommendation of residency for the marginalized landless and poorest households. The applications were made to the corresponding DCS who verified the households. With support from DCS and/or the ward offices, the poorest households were provided with free electric meters and electricity. The TA supported documentation of 1,505 extremely poor households and could enable 1,283 free meter connections and 130 paid meter connections.

**TABLE 33. FREE METERS GIVEN TO DISADVANTAGED GROUPS PROVINCE**

District	Female	Male	Public place	Total	Brahmin/Chhetri (Hill)	Brahmin/Chhetri (Tarai)	Adivasi/Janajati (Hill)	Adivasi/Janajati (Tarai)	Dalit (Hill)	Dalit (Tarai)	Madhesi	Muslim	Public Place
Bara	34	52	0	86				2		12	51	21	
Sarlahi	321	219	0	540	7	1	96	96	22	199	75	44	
Siraha	93	85	0	178			10	51		104	13		
Parsa	2	39	0	41				2		15	24		
Rautahat	69	73	1	143	6		80	4	7	44	1		1
Saptari	104	61	2	167	1		10	32		108	12	2	2
Mahottari	3	12	0	15						15			
Dhanusha	76	54		130			13	7	9	46	52	3	
<b>Total</b>	<b>702</b>	<b>595</b>	<b>3</b>	<b>1,300</b>	<b>14</b>	<b>1</b>	<b>209</b>	<b>194</b>	<b>38</b>	<b>543</b>	<b>228</b>	<b>70</b>	<b>3</b>

#### BOX 21.

### AFTER LIVING IN DARKNESS FOR 32 YEARS, A MUSAHAR COMMUNITY ENJOYS ELECTRICITY

Until last year, the twelve households of the Musahar community in ward 11 of Saptari district depended on kerosene lamps for lighting their homes, spending NPR 600 per month on kerosene expenses and several households paying an additional NPR 140 per month for charging their mobile phones. Families were forced to economize: the whole household using a single lamp for lighting, often in the kitchen where the children studied, social activities took place and food was cooked. In the absence of outdoor lighting, there was the perpetual fear of wild animals and snakes. Women and girls didn't feel safe outside in the late evening or even in their homes when alone with small children while their husbands were out doing construction nighttime labor work.

Much has changed for the households following the facilitation support received from the TA team and NEA's support to bring in electricity and facilitated free meters. Houses and streets are now well lit, people can charge their mobile phones, women and girls feel secure and children have started showing more interest in studying. The number of mobile users has increased, connecting with others has become easier, and family bonding has intensified, as there are now more hours family members can spend together during nighttime. Some households have invested in electrical appliances, such as a much-needed fans in the hot weather, radio and TVs.

Most importantly, the low-income households have been able to cut their monthly energy expenses from NPR 600 for kerosene to an electricity bill of NPR 30. Many women use the saved money to buy extra food for their families or pay for school fees and school supplies. With access to electricity, they can also take up income generating activities, such as making traditional bamboo handicraft products. The community members stated that they were forced to live in darkness for decades because of their limited knowledge of the process of getting electricity connection, high upfront costs, fear of high monthly electricity bills and lack of interest and support from the concerned authorities. If the project had not helped them connect to the national grid, the households would still be living in the dark with fewer socio-economic opportunities.

**Note: The Musahar community has been supported by Rupesh Chaudhary, EDO, Saptari and Mina Basnet, EDLC, Eastern Cluster**

A detailed case story is presented in Annex 29.

#### d. Improving the quality of wiring in newly electrified households:



*Wiring before upgradation*



*Wiring upgradation in progress*



*Wiring after upgradation*

As discussed, the quality of house wiring in the newly electrified households, most of whom are very poor, is sub-standard and risky. The TA took the initiative to support the poorest households to upgrade their quality of internal wiring in the extension phase. This included:

- i. Clusters/households to be supported were identified in coordination with local government.
- ii. Local electricity technicians were identified and trained to undertake this task.
- iii. The technicians visited the newly electrified extremely poor households, assessed the quality of wiring and upgraded the connections.
- iv. Each household received support covering a switchboard with cable, switchboard with switches, plug points, sockets for up to two light points, two fans, and internal cables.
- v. Alongside, In Kalaiya ward no. 26, the TA project had earlier facilitated the supply of 81 induction cooktops to students from disadvantaged households. The TA project supported 55 of these to improve their internal wiring systems in the extension phase.

**TABLE 34. HOUSEHOLDS SUPPORTED WITH INTERNAL HOUSE WIRING**

District	Female	Male	Total	Brahmin/Chhetri (Hill)	Brahmin/Chhetri (Tarai)	Adivasi/Janajati (Hill)	Adivasi/Janajati (Tarai)	Dalit (Hill)	Dalit (Tarai)	Madhesi	Muslim	Remarks
Bara	21	30	51				2		7	31	11	Internal house wiring support
Parsa	6	55	61				7		29	24	1	
Sarlahi	100	52	152			3	32	2	93	12	10	
Siraha	38	33	71				10		59	1	1	
Saptari	33	17	50			1	3	17	28	1		
Dhanusha	28	14	42					1	30	8	3	
<b>Grand Total</b>	<b>226</b>	<b>201</b>	<b>427</b>			<b>4</b>	<b>54</b>	<b>20</b>	<b>246</b>	<b>77</b>	<b>26</b>	

**e. Increasing the awareness of newly electrified households:**

The electricity technicians also used the assignment as a door-to-door awareness raising opportunity among these households. The importance of quality of wiring and appliances, understanding the tariffs and of electricity bills, and the importance of regular bill payments and the importance of avoiding illegal connections were discussed. 427 door-to-door awareness raising sessions were conducted for extremely poor households. The details are given below.

**TABLE 35. DETAILS OF DOOR-TO-DOOR AWARENESS RAISING SESSIONS CONDUCTED IN NEWLY ELECTRIFIED HOUSEHOLDS**

District	Municipality-Ward	Female	Male	Total	Ethnicity					
					Adivasi/Janajati (Hill)	Adivasi/Janajati (Tarai)	Dalit (Hill)	Dalit (Tarai)	Madhesi	Muslim
Bara	Kalaiya Sub-Metropolitan-26 and 27	21	30	51	0	2	0	7	31	11
Parsa	Bahudarmai Municipality-4	0	25	25	0	1	0	0	24	0
	Paterwa Sugauli RM-5	6	30	36	0	6	0	29	0	1
Sarlahi	Haripur Municipality-2,5&7	51	22	73	0	32	0	23	8	10
	Ishworpur Municipality-5,6 &9	49	30	79	3	0	2	70	4	0
Siraha	Lahan Municipality-11&12	38	33	71	0	10	0	59	1	1
Saptari	Kanchanrup Municipality-7&11	10	6	16	0	0	0	16	0	0
	Agnisair krishna Sawarne RM-1	23	11	34	1	3	17	12	1	0
Dhanusha	Bateshwor RM-5	28	14	42	0	0	1	30	8	3
<b>Grand Total</b>		<b>226</b>	<b>201</b>	<b>427</b>	<b>4</b>	<b>54</b>	<b>20</b>	<b>246</b>	<b>77</b>	<b>26</b>

## 6.4 Results and achievements

### 6.4.1 The TA team brought together the different institutions responsible for electrification in Madhesh Province.

The TA project has brought all institutions that potentially have a role in electrification together in the same forum, to discuss and address barriers that communities are facing for electrification. These include municipalities, divisional forest office, road department, DCSs, SASEC and community leaders. Multiple meetings and open discussions strengthened the cooperation and coordination between the stakeholders towards the common goal of access to electricity and ensuring reliable electricity supply. In Khayarmara, Bardibas Municipality, Mahottari, the Electricity Users Committee (EUC) area had an overloaded 25kVA distribution transformer in the market area and old wooden poles throughout the working area. The TA facilitated discussion between Sagun EUC, the LFP and Bardibas Municipality after which the Municipality supported replacement of 45 old wooden electric poles. Additionally, Bardibas municipality also supported in getting 15 households of Musahar Basti connected to grid electricity including meters, wiring and MCBs (miniature circuit breaker). The municipality provided NPR 100,000 (approx. US\$ 700) for the electricity connection and Sagun EUC took care of the human resources for the connection.

## BOX 22.

## THE STORY OF JARUWA TOL ELECTRICITY

“

The bright lights from the electrification allow me to work flexibly, without being restricted to daylight. I no longer need to carry grain to the nearby city for grinding because electric grinding machines are now available in the village.

”

---

MAYA PAHARI, JARUWA TOL

About 10 km from the Mahendra Highway in Rautahat District lies Jaruwa Basti, a small tribal village comprising of 60 households surrounded by hills in the middle of the forests. Jaruwa was not connected to the national grid and no developmental work had taken place for several decades. In the absence of the national grid, people had to walk for 2-3 hours for grinding, milling and to charge a mobile phone. The people are poor and most women worked as a laborer in the nearby village. With no irrigation, nothing other than millets and corn grew and the community could barely eat well for 3 to 4 months in a year. Children had to walk 3 kms through the forest to go to school and watch out for attacks by wild animals.

When the TA team saw the situation in Jaruwa tol, they started engaging with the villagers and at the same time, with the Chandrapur municipality and the local DCS, exploring the possibility of reaching electricity to Jaruwa. Through continued coordination efforts of the TA team, a consumer committee was created which supported NEA to conduct necessary mapping and survey. NEA took care of the infrastructure development and electricity was brought to Jaruwa.

19th July 2023 will remain etched in the memory of Jaruwa residents when the Provincial Chief Munindra Thakur inaugurated the lighting. In 75-year-old Maili Maya Pahari's words, "Not only this village has become bright, but this electric light has brought light to our future. The village is bright, and the hearts are bright". Indeed, there has been a sea change in the village. Incomes have increased as people have installed electric motors for irrigation, and started cultivating rice and vegetables, along with millet and corn. The village has three irrigation motors, a grinding mill and most homes have refrigerators and fans. After the arrival of electricity, it has become easier for children to study. Wanting to be part of the development process, the local government has allocated a budget to provide drinking water and a school in this settlement.

**The electrification in Jaruwa Tol has been supported by Ram Sharan Shah, EDO, Rautahat and Likh Ram Chaudhary, EDLC, Western Cluster.**

## 6.4.2 Electrification has contributed to improved quality of life and economic prospects for poor and disadvantaged communities.

Electrification has brought several social and economic benefits to electrified households. In addition to improved lighting and comfort, electrification has enabled the charging of mobile phones, acquisition of electrical appliances like fans, grinder mixture, extended study hours of children, enhanced mobility and security, particularly for women and girls. As a replacement for kerosene-based lighting sources, electric lighting reduces indoor air pollution and carbon emissions. Businesses remain open late into the evening and some have now started making handicrafts even during nighttime increasing the income, even though that may increase the workload for women.

Transitioning away from shared meters and unsafe electrical wiring offers significant benefits for households and communities. Individual metering ensures accurate billing and accountability, reducing disputes and promoting responsible energy consumption. Safe and standardized wiring minimizes the risk of electrical hazards, including shocks, short circuits, and fires, thereby improving overall safety. Furthermore, reliable electrical infrastructure enhances energy efficiency, supports the use of modern appliances, and ensures compliance with regulatory standards. These improvements not only increase the reliability of electricity supply but also create a foundation for future upgrades, such as smart metering and renewable energy integration.

### BOX 23.

#### WORSHIPPING AN ELECTRIC METER BOX

Electricity powers everything in a modern home: lights, cooking, heating, communication, and more. While many of us take it for granted, for many families in Madhesh, owning an electric meter box is not just a utility, it's a long-awaited dream come true. A symbol of progress, dignity, and connection to the modern world. Worshipping the electric meter box can symbolically mean:

- Wishing for uninterrupted power (i.e., no outages or faults)
- Praying for the long life of the meter and the electrical system, so that it continues to serve the household or business without failure
- Showing gratitude and respect, which in turn is believed to bring good fortune and long-lasting prosperity.



*Worshipping an electric meter box*



*Happy women with their meters*

As pointed out by Ms. Saskia Kemps in her masters thesis for which she conducted research with the TA project, electricity access brought immediate improvements in daily life, homes became safer, chores less physically demanding, and some tasks more efficient, contributing to a better quality of life. However, women's empowerment within these households saw only modest gains. Electrification alone did not shift underlying gender roles or decision-making power. Barriers such as low income, restrictive social norms, and limited education or technical know-how meant many women could not fully leverage electricity for greater agency or new opportunities (Kemps, 2025)<sup>21</sup>.

#### BOX 24.

##### ELECTRICITY AND SAFETY

“

My husband does night shift as a laborer in the nearby construction site. In the dim light of kerosene wick lamp, I had to stay with my small children back home, scared and with fear. I used to keep calling my husband to come home soon, disturbing him at his work. Now that there is light, I no longer fear living alone and have stopped calling my husband during his work. My husband is also relieved that he can work with no tension of leaving the family back home in darkness. I can also do free movement during nighttime due to the lamp posts in the street.

”

RITA DEVI, SAPTARI

<sup>21</sup> Kemps, Saskia, 2025. Measuring the impact of electrification on women's empowerment and quality of life: implementing an SPT-CA framework on a case study in Nepal. Final Master Thesis, October 2025. Eindhoven University of technology.

## BOX 25.

## BETTER LIVES, IMPROVED INCOMES IN KHORIYA TOL, SIRAHA

“

I love watching agriculture channel in the TV. It has enhanced my agriculture knowledge resulting to the increased yield.

”

MAGAIN CHAUDHARY, HUSBAND OF ADB TA ENTREPRENEUR

Khoriya is a settlement of 76 households belonging to a mixed community in Siraha district, around five kilometers south from the East-West Highway. Grid electricity came to Khoriya Tol ten years back. However, the electricity supply was inadequate and couldn't even operate fans, let alone irrigation pumps. While the community could have used hand motors, the low voltage meant that only one person could use them per day, further reinforcing their dependence on unpredictable rainfall patterns. As a result, the households were forced to rely on rainfed agriculture and grew only pointed gourd, selling in nearby Khoriya and earning only NPR 72,000 per year.

In 2023, the SASEC project, with facilitation support of ADB TA Project, installed a 50 KVA transformer and upgraded the existing single-phase line in the settlement to a 3-phase one. Thanks to reliable irrigation, the women from 14 households growing gourds earlier have now diversified their crops and have emerged as successful women entrepreneurs. They learned skills like seed selection, seasonal vegetable farming, bookkeeping, and better farm management. Armed with irrigation and capacity building and market linkage support from the TA project, they now produce and sell other vegetables such as onions, garlic, cabbage, bitter gourd, lady's finger, cauliflower and others, and have witnessed a twofold income increase, with the present yearly income being at least NPR. 200,000. Happy entrepreneurs stated that they have also started saving NPR. 2000 per month with the local cooperative i.e. Sana Kisan Krishi Sahakari Sanstha (LFP). Seven women have taken agriculture meters which are shared among the 14 Entrepreneurs. The happy entrepreneurs stated that good earnings and the acquired knowledge has enhanced their confidence to make decisions across many spheres of life: households, business and social. With reliable electricity and additional income, most of the 76 households have purchased televisions, over 30 have also invested in electric cookers.

**The women of Khoriya tol have been supported by Binita Chaudhary, EDO, Siraha, and Mina Basnet, EDLC, Eastern Cluster.**

### 6.4.3 Providing internal house wiring support to extremely poor families has brought multiple benefits that go beyond simple electrification.

With proper wiring, protective devices, and safe connections, households are now protected from the risks of electrocution, short circuits, and fire hazards that often result from unsafe makeshift wiring. Reliable access to electricity has allowed families to use essential appliances such as lights, fans, and water pumps, making daily life easier and safer. It has also reduced their dependence on firewood and kerosene, leading to better indoor air quality and improved health, especially for women and children. At the same time, the support has eased financial burdens by eliminating repeated repair costs and ensuring that families can benefit fully from their electricity connection. Beyond practical advantages, safe and reliable wiring has helped restore dignity to poor households, enabling them to enjoy the same level of energy access as others in their community.

**FIGURE 23. IMPROVED WIRING SUPPORT**



*Internal wiring support provided by the TA project (Free meter box, main switch, 5x3 switch board and neatly tied cables)*



*Child, in a newly electrified house, sleeping calmly under the fan in Kalaiya, where the temperature is usually above 35°C during summer.*



07

## Promotion and dissemination of induction cooktops in Madhesh Province

### 7.1 Background of electric cooking in Nepal

In Nepal, traditional energy sources dominate the energy mix, comprising 64.17% of total consumption comprising of fuelwood, animal dung and other agro-wastes. Fuelwood remains the primary fuel type consumed, accounting for 58.53% of total fuel consumption. The dominant cooking fuel in urban households and peri-urban households is liquefied petroleum gas (LPG), while the rural areas persist with the use of fuelwood and dung-cakes. At the present juncture, an emerging option for clean cooking is electric cooking. Over the years, Nepal's national electricity grid has become more reliable and can support households in Nepal to switch to electric cooking (electric cooking). Currently, 99% of the urban population and 95% of the rural population have access to electricity, either from the grid or from off-grid solutions. This opens viable avenues for households to adopt electric cooking.

The Government of Nepal (GoN) has committed to achieving universal access to clean cooking by 2030, including ensuring that 25% of households adopt electric cooking as the primary mode of cooking. This is also one of the targets in Nepal's NDC. The political commitment is reflected strongly in the Energy White Paper, the first policy paper that explicitly provides guidance for the promotion of e-cooking in every household. As a result, electric cooking has received prominence in the 15th and the 16th Five-Year Plans and in AEPC's (Alternative Energy Promotion Centre) activity plan.

However, market growth of electric cookstoves has been slower than anticipated and the commercial ecosystem is still nascent. Barriers to adoption of electric cooking in Nepal include lack of awareness on electric cookstoves and their benefits, lingering perceptions that electric cooking is not viable or too expensive or unsafe, an underdeveloped supply chain, cultural cooking preferences, skepticism of newer products and a high upfront cost, and a barely available post-purchase support.

In Madhesh Province, Nepal's most densely populated province, nearly 70% of families burn wood and cow dung in open fires or biomass stoves for their daily cooking. The resulting air pollution makes cooking a leading cause of early mortality. In addition to the direct health risks, women and children can spend a great deal of time doing the tedious work of collecting wood. Promoting induction cooktops in Madhesh Province has been fraught with several challenges:

- Electric cooking is a new technology and there have hardly been any systematic attempts at creating awareness and practical knowledge on a mass scale. Further, the penetration of markets is still restricted to major cities. As a result, the confidence level in technology is relatively low.
- There is widespread perception that electric cooking is more expensive than options like LPG. For the consumers using freely available firewood, the upfront cost of induction cooktops and utensils needed creates an additional financial burden. Given the culture of subsidies in the country, most community members expect (and are willing to wait for) to receive induction cooktops on subsidy from the government.
- Even when people start using electric cooking, they rarely switch completely from one fuel to another. Rather, households experience cookstove and fuel 'stacking', a phenomenon of using multiple stove-and-fuel cooking combinations within the same household. Apart from the recurrent problem of power cuts and unstable voltage and perceptions of high cost, many think that certain foods taste better when cooked on traditional stoves.
- Lack of trained technicians for repair and maintenance of induction cooktops at local level.
- In most areas, aging electricity infrastructure including overloaded transformers, results in unreliable electricity supply, frequent outages, and voltage fluctuations. At the same time, most houses have poor quality wiring, and appliances are run without basic electrical safety equipment like power sockets and protective equipment like MCBs and earthing. Further, most of the consumers have a 5 Ampere meter connection, which is not sufficient for efficient operation of induction cooktops. All of these reduce the efficacy of the induction cooktops.
- Despite the high priority accorded to electric cooking by the government, most municipalities and local governments lack awareness on how to promote induction cooktops, neither do they have any policy frameworks, documents or plans for promotion of electric cooktops.

In this context, the TA project was assigned the task to promote the use of electric induction cooking and conduct workshops for the representatives of households on benefits and effective use of induction cooking.



*Rajiv Kumar Singh repairing induction cooktop in Soaltee bazar*

## 7.2 Summary of outputs delivered

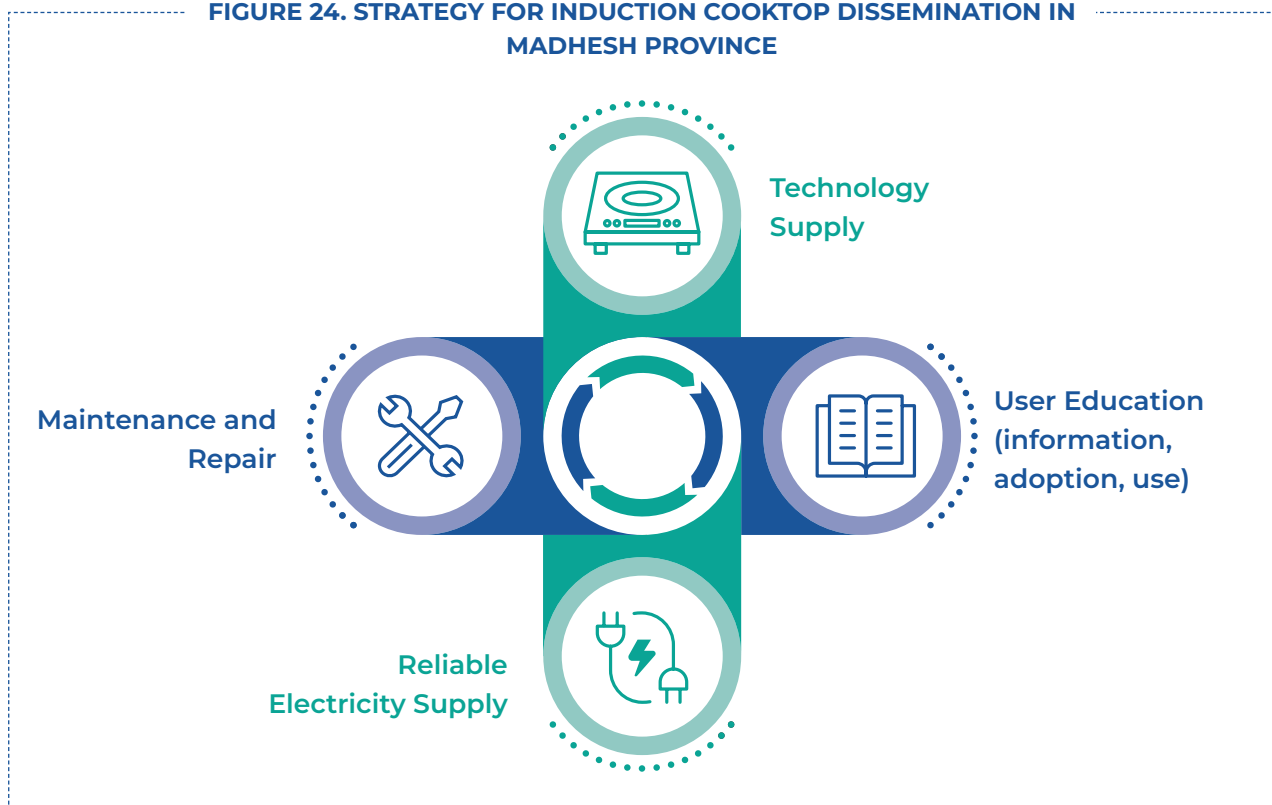
Several activities were initiated at various levels for creating a sustainable market for electric cooking devices in Madhesh Province. A summary of the outputs achieved is reflected below:

- 481 households in Sarlahi (400) and Bara (81) districts adopted induction cooking against a target set for the TA project of at least 400 households. In addition, several households in Parsa, Rautahat, Dhanusha, Mahottari and Saptari adopted induction cooktops after the demonstration events, the number has, however, not been tracked. (target: 400 households). The data on respondents is included in Annex 31.
- 24 Orientation and demonstration events conducted engaging LFPs, schools and the community, reaching out to approximately 1180 community members. Details of the o&d events are included in Annex 32.
- User training conducted for 457 community members from user households (201 men and 256 women) to ensure proper usage.
- Repair and maintenance training conducted for 12 technicians.
- Door-to-door awareness conducted along with meter upgradation from 5 Amp to 15 Amp and internal wiring upgradation at 55 extremely poor households to promote cooking in induction cooktops.
- Households supported to upgrade their electric meters from 5 Amp to 15 Amp, which is appropriate for electric cooking.

## 7.3 Overall strategy and overview of activities

Even though the TA was assigned a relatively small dissemination target, the team focused on demonstrating a sustainable and GESI-responsive model for the promotion and sales of induction cooktops in Nepal. The strategy comprises of the following four elements:

**FIGURE 24. STRATEGY FOR INDUCTION COOKTOP DISSEMINATION IN MADHESH PROVINCE**



Ensuring a reliable electricity supply to support electric cooking is an essential prerequisite for the success of electric cooking. Electricity system upgradation was done in collaboration with NEA, DCS, and local governments. At the same time, (rural) municipalities and other development partners were engaged to support activities like meter capacity upgradation for poor households<sup>22</sup>, house wiring improvement, installation of power socket, adoption of electrical safety devices etc. After having discussion with LFPs and NEA and SASEC project team, it was decided to pilot induction cooktops only in areas where the electricity distribution system is strong/ reliable enough to meet the added load of the additional electric equipment. In Sarlahi, the EUC, Gramin Vidyut Sahakari Sanstha Ltd., Shankarpur Sarlahi, upgraded the electricity infrastructure through a cost sharing agreement between NEA (bearing 90% of cost) and the community (bearing 10% of the cost). Infrastructure upgradation included the installation of 146 new electric poles and 5 new 100kVA transformers, and replacement of the power cables. This contributed significantly towards ensuring a reliable electricity supply.

The pilot was done in a phased manner, starting with Sarlahi, where electricity upgradation was undertaken. The LFP, the DCS office and provincial office of NEA all participated in the promotion of induction cooktops. In the second phase (towards the end of the TA project), Bara was selected, where after significant coordination effort by the TA team, SASEC agreed on upgradation of the electricity supply system including distribution lines, HT lines and transformer capacities.

<sup>22</sup> Generally, in rural areas, most households have 5 Ampere meters. This capacity is sufficient for lighting requirements, however not for operation of induction cooktops, for which the meters must be upgraded to 16 Ampere.

Local government offices were supported to develop a strategy for dissemination of electric cooking, including assisting local governments to avail of and disseminate the subsidized products provided by AEPC. Earlier, AEPC had partnered with many local governments of Madhesh Province to promote clean cooking solutions including induction cooktops. AEPC supported 60% of the cookstoves' cost, while the remaining 40% was borne equally by the local governments and the users. AEPC procured cookstoves in bulk and sent them to the various local governments as per the agreements. Bagmati Municipality had induction cooktops but could not make timely distribution due to issues with beneficiary identification and unreliability of electricity supply. As a result, these induction cooktops remained unutilized in the storage for around 2 years i.e., beyond the warranty period. The TA Project, with support from the LFP coordinated with the Municipality for smooth distribution of the induction cooktops in Soltibazar area.

The dissemination was complemented with consumer-centric promotion and user education to increase the awareness of the benefits of electric cooking. Orientations and demonstrations on electric cooking were organized at local offices, community centres and marketplaces, and schools for potential users. This raised interest among the potential users, and many users expressed willingness to pay NPR. 1100 as their contribution to buy cookstoves. Of this NPR 100 goes to the LFP for upgradation of household electricity infrastructure such as MCB, wires and sockets. Subsequently, hands-on use training was conducted in neighborhoods for households that have purchased induction cooktops.

Creating a local infrastructure for repair and maintenance is an important element of the electric cooking ecosystem. To develop locally available skilled manpower, the TA conducted a training for induction cooktop repair and maintenance for 12 local technicians and facilitated them to set up businesses.

During the extension period, the induction cooktop users in Kalaiya were supported to upgrade their house wiring as well as upgrade their meter capacity from 5 Amp to 15 Amp.

**TABLE 36 INTERNAL WIRING UPGRADATION TO SUPPORT COOKING ON INDUCTION COOKTOP IN KALAIYA- WADA 26, BARA**

DALIT (TARAI)	MADHESI	MUSLIM	BRAHMIN/ CHHETRI (HILL)	GRAND TOTAL
15	33	6	1	55

## 7.4 Results and insights on induction cooktop use: consumer perspective

A summary of feedback from the induction cooktop users is presented below, based on focus group discussions and in-depth use data collected from a sample of users in Sarlahi.

### 7.4.1 Customer profile

The adoption of induction cooktops is similar among men and women, slightly higher among women. A typical customer is in the age group of 45 and 60, living in a household of 4-5 members. As shown below, 126 of the 481 households that transitioned to induction cooktops (26%) belong to disadvantaged communities.

**TABLE 37. PROFILE OF INDUCTION COOKTOP ADOPTERS**

District	Number of households			Ethnicity							
	Male	Female	Total	Brahmin/Chhetri (Hill)	Brahmin/Chhetri (Tarai)	Adivasi/Janajati (Hill)	Adivasi/Janajati (Tarai)	Dalit (Hill)	Dalit (Tarai)	Madhesi	Muslim
Sarlahi	200	200	400	161	0	84	1	5	1	142	6
Bara	14	67	81	1	0	0	0	0	30	40	10
<b>Total</b>	<b>214</b>	<b>267</b>	<b>481</b>	<b>162</b>	<b>0</b>	<b>84</b>	<b>1</b>	<b>5</b>	<b>31</b>	<b>182</b>	<b>16</b>

When the TA project was initiated, the majority of the people had only limited and incomplete information about the technology in the area where induction cooktops were disseminated. Out of 34 respondents participating in the focus group discussions, the o&d (orientation and demonstration) events conducted by the TA team was found to be the main source of information for 22, while 16 respondents had also seen others using these, and for 5, the first source of information was the media (radio/ TV).

### 7.4.2 Usage, satisfaction and experience

All customers are using the induction cooktops daily, except for one who was waiting for the necessary wiring to be completed. Nearly all customers also use a second cooking device in addition to their induction cooktops, as they prefer to cook some items like meat in their typical traditional style on other devices. Majority of the households use induction cooktops to prepare rice, daal, green vegetables, milk, snacks and tea besides boiling water.

All customers reported a high level of satisfaction with the device and an improved quality of life resulting from reduced energy expenses, time savings and overall efficiency gains. Most customers felt that the value for money of the device is very good and expressed a willingness to use the stove on a long term and for all cooking purposes. They were also willing to replace the present stove with a new one if necessary. However, most would prefer to invest in a two-pot induction cooktop, instead of a single-pot system that they are using at present.

FIGURE 25. PERCEIVED BENEFITS OF INDUCTION COOKTOPS



Specific features that are most appreciated are as follows:

- **Convenience and speed of cooking**, including rapid heating, especially water boiling and precise temperature control, which enhances the cooking process, particularly for delicate dishes.
- **Safety**, especially for young children or elderly family members, resulting from doing away with an open flame, reducing the risk of kitchen fires and burns, and the auto-Shutoff feature, which means that the induction cooktop shuts off automatically when no cookware is detected.
- **Lower energy consumption**, because of the energy-efficient nature of induction cooking and lower energy bills. There is a noticeable reduction in the monthly fuel cost. All respondents in the discussions had switched from LPG to induction cooktops. Earlier an LPG cylinder lasted for around 2-3 months (using together with firewood). After using induction cooktops, the LPG cylinder lasts for nearly a year. On average for a family having five members, cooking of daily meal for two times on induction consumes 60 units per month, amounting to NPR 480.
- **Ease of cleaning**, enabled by the smooth, flat surface of induction cooktops. Spills do not burn onto the surface, making cleanup quick and hassle-free. The dishes remain cleaner compared to when using firewood, which often leaves a dirty surface. Cleaning the cooking utensils is also easier. With reduced smoke emissions, the kitchen is cleaner and more pleasant to stay in. This has led to significant time savings in cleaning the kitchen.

### 7.4.3 Changes in energy use pattern

In addition to the induction cooktops, LPG and firewood stove continue to be used in most of the households. In fact, 29 of the 34 households are still using LPG (in addition to induction cooktops). Free availability of firewood appears to be the motivation for them to continue using biomass stoves. In addition, users cited taste, especially meat, and space heating as major advantages of firewood over other cooking fuels. Majority of the user households reported using firewood or LPG to cook during festivals, some specific rituals and when there were large gatherings in the family even after adopting induction cooktops. Firewood also continues to be used for cooking cattle-feed.

**BOX 26.****CUSTOMER VOICE**

“

With the induction stove, I am now helping my wife in the meal preparation on a regular basis. There is no smoke and preparation time is fast. The technology itself is very interesting for me. I am so comfortable using this stove that when the electricity was cut-off today, I eagerly waited for it to come back rather than use the LPG- and that was for a couple of hours!!!

”

---

AN ELDERLY FEMALE PARTICIPANT

**7.4.4 Changes in cooking behaviour**

While female member(s) of the household remain in charge of cooking in majority of the households, the involvement of male member(s) in household cooking has increased after the adoption of induction cooktops. No households were found to have made any major adjustments in their cooking behaviour after bringing induction cooktop into their kitchens, except for the shift toward fuel mix.

“

I am scared of electricity and that is true with LPG as well. Though I do not prepare the meals, I am happy to see that my daughters- in-law are working comfortably in the kitchen and I am not exposed to the smoke on a daily basis.

”

---

AN ELDERLY FEMALE PARTICIPANT

“

I am so used to cooking on the induction stove that today when the electricity was cut-off, I had to spend time looking for my lighter for my LPG. I am so happy with this induction stove; I want to buy one for my daughter too.

”

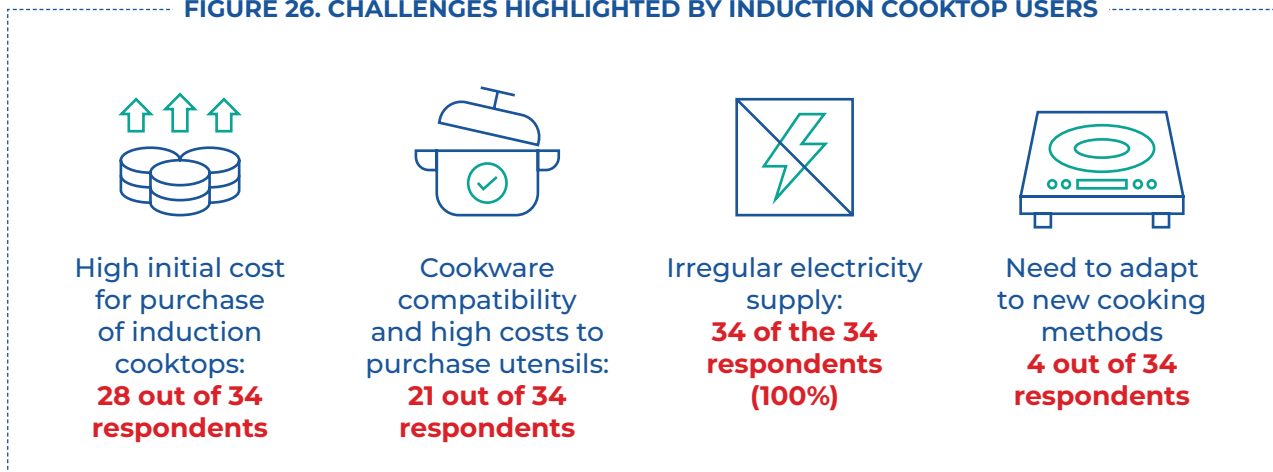
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A YOUNG INDUCTION COOKTOP USE, SARLAHI

**7.4.5 Challenges in induction cooktop use**

While there was appreciation for induction cooking in general, some shortcomings were also highlighted by the users, which are as follows:

FIGURE 26. CHALLENGES HIGHLIGHTED BY INDUCTION COOKTOP USERS



- **Irregular electric supply:** This bottleneck was pointed out by all respondents who said that there are frequent power cuts which makes it inconvenient for the users to rely completely on induction cooktops. Also, once cooking has started, it is tiresome to shift over to another device.
- **Cookware compatibility:** The primary bottleneck is related to cookware compatibility. Most users have had to purchase new cookware that is compatible with induction cooktops, an additional expense. Some users found it challenging to find compatible cookware, particularly as they live in areas with limited retail options. Further, the available size of pots is limited, and this inhibits the amount of food that can be cooked and the number of people that can be served.
- **Initial cost:** The initial cost of induction cooktops is a significant investment, making it a less accessible option for some households despite the potential long-term savings. A survey of 34 induction cooktop users revealed that 28 of the 34 households highlighted high cost as the primary bottleneck to adoption. Expenses must also be incurred in new wiring and other requirements for operating the stove, for example, a suitable socket for safely operating the induction cooktop.
- **Need to adapt to new cooking methods:** A few users mentioned that using a new device takes some practice and elderly people do not find it easy to make this switch. The rapid heating and precise controls need adjustments in cooking techniques to avoid overcooking or burning food initially.

## 7.5 Lessons for future dissemination of induction cooktops

The pilot provided valuable insights into the experiences of induction cooktop users. While there are some challenges, particularly related to cookware compatibility and initial costs, the benefits in terms of efficiency, safety, health and ease of cleaning contribute to high overall user satisfaction. Addressing the identified challenges and implementing the suggested improvements could further enhance the user experience and increase the adoption rates of induction cooktops.

### 7.5.1 Induction cooktops must be disseminated in areas which have a reliable electricity supply.

The electricity supply quality in most rural areas is currently not of a quality that can support induction cooktops in large numbers. Most households also do not have high quality wiring and 16 Ampere meters that are suitable for electric cooking. Even though these prerequisites considerably limit the scope of dissemination of electric cooking, nonetheless these are important considerations and should be a determining factor in site selection. Steady voltage, power availability at cooking time, quality wiring, 16 Ampere meters, electric connection, 7/22 wiring and dedicated power socket in the kitchen are the necessary requirements for electric cooker dissemination.

### 7.5.2 In most rural areas, there are limited repair and maintenance services available in the community.

This makes it difficult to get timely service. Given this, before promoting induction cooktops, there is a need to ensure that well-trained technicians in sufficient numbers and in suitable locations are developed.

### 7.5.3 Affordability remains a problem issue for most people and increasing affordability for the poor is a must for upscaling.

An induction cooktop, together with basic utensils can cost anywhere between NPR 8000-12,000. A formidable amount for many. In the long run the savings made through reduction in kerosene/ wood/ LPG use mitigate this, nonetheless, many find it difficult pay the upfront cost. This necessitates financing schemes – such as set up by Sana Kisan - that can mitigate or reduce the initial cost of induction cooktops and make them more accessible to a broader audience.

### 7.5.4 There is considerable lack of understanding of the benefits and proper usage of induction cooktops among potential users.

There is a plethora of misconceptions about electric cooking, largely resulting from the fact that there still are many people, especially women, in rural areas, who have not seen these devices, but only heard about them. This necessitates that any dissemination program must incorporate the following elements:

- **Clearer guidelines on cookware compatibility:** Participants suggested that there is the need to provide clearer information on cookware compatibility, including a start-up set of compatible cookware with the purchase of the stove.
- **Awareness raising:** Activities like orientation and demonstration sessions, awareness campaigns, user education, display of video documentaries, broadcasting of radio PSAs etc. are helpful in spreading awareness and clearing misconceptions. Awareness needs to be raised not only among the potential users, but also local institutions like local governments that can play a role in promotion and dissemination.
- **User Education:** After purchase, users need to receive better education on use, including cooking tips and techniques specific to induction cooking, could help new users adapt more quickly and efficiently.



# 08

## Monitoring, evaluation and learning

### 8.1 Overall approach

A results-based monitoring, evaluation and learning (M, E and L) system was designed and implemented for effective management and accountability in TA by defining realistic expected results and gender-disaggregated performance indicators (output and outcome level); determining baseline and carrying out performance monitoring and conducting end-line survey based on indicators to measure progress towards social/gender-related results and systemic changes; identifying and documenting success & failure factors and integrating lessons learnt into strategic thinking, continuous improvement and adapting work plan/ budget to achieve results; and evaluating the project performance.



### 8.2 The M, E &L framework

A Project Performance Monitoring System (PPMS) was designed during the inception phase which was utilized to assess interventions' performance, measure outputs and outcomes, and ensure the achievement of TA's objectives. The framework includes Key Performance Indicators (KPI) and targets on aspects of institutionalization of GESI within NEA, women's economic empowerment and changes in knowledge attitude and practices (KAP), assumptions/risks, data sources and collection methods and reporting procedures. The PPMS was aligned with the GESI Action Plan for the SASEC project. The framework includes the elements of concurrent monitoring, periodic reviews and a learning agenda. The following are employed to operationalize the same:

### 8.2.1 Data collection methods and tools

Data collection methods include surveys, assessments, interviews, Focus Group Discussions (FGD), observations, case studies, stories of change and outcome harvesting. Surveys include periodic beneficiary-based surveys (survey of project beneficiaries) and the assessments include baseline study, needs assessment and final evaluation study. These methods captured both quantitative and qualitative insights. Digital data collection tools were adopted for carrying out surveys, online surveys and mobile data collection apps. For online surveys, an online platform, Google forms were used at NEA level while for beneficiaries' level, mobile data collection and analysis app, KoBo Toolbox, was used.

### 8.2.2 Data validation, analysis and visualization

The TA carried out both qualitative and quantitative data collection and analysis. Data was triangulated with available sources (baseline values, periodic values) and with observations made during field visits. In case of major deviations, field visits were carried out, and corrections were undertaken. Quantitative analysis involved interpreting numeric data collected from surveys, using statistical methods, descriptive analysis and inferential analysis. Statistical analysis software, IBM SPSS was used for quantitative analysis including descriptive analysis for detecting outliers and data variations across sources and formats. Qualitative analysis involved interpreting non-numeric data, such as notes from interviews, focus group discussions and open-ended survey questions. The interpretation was done through an in-depth examination and identification of themes and common patterns, for drawing conclusions. For meaningful interpretation of data, data visualization was used presenting data in a visual format, such as graphs or charts, to make it easier to compare, understand and interpret the data.

### 8.2.3 Reporting

The findings from data collection were documented as various reports, such as beneficiary based survey reports, periodic review and planning event reports, learning event reports, field monitoring reports and field de-briefing. Periodic progress reports and interim reports were submitted to ADB and RNE to enhance transparency in TA implementation.

## 8.3 Concurrent monitoring

The main purpose of concurrent monitoring is to track progress on a continuous basis, towards achieving the intended outcomes, identifying implementation challenges, assessing effectiveness of interventions and enhancing accountability. Data is collected at pre-decided intervals throughout the project period, to track the TA's performance and to determine if activities need adjustment during the intervention. Routine monitoring data was collected for training, awareness events and other outreach events.

### 8.3.1 Baseline study

In the inception phase, a baseline study was carried out to collect detailed information on the status of the geographic areas in which the project aimed to operate. The study was undertaken to (a) map the socio-economic, gender and poverty status of proposed beneficiaries; (b) identify gender and social related barriers especially for women and disadvantaged groups; (c) identify the awareness level on safe and efficient use and productive use of energy in Madhesh Province, Pokhara, and Bharatpur and (d) identify energy use patterns, feasibility, opportunities, and challenges in the adoption of induction cooktops. The baseline report is attached as Annex 2.

### 8.3.2 Beneficiary-based surveys of entrepreneurs and TVET trainees

The beneficiaries in the context of the TA include entrepreneurs, induction cooktop users, electrified households and vocational trainees, who received technical and handholding support. The beneficiary-based survey refers to data collection of direct beneficiaries, and includes initial baseline surveys, periodic and final values to monitor changes (outcomes). The survey questionnaires were developed aligned to performance indicators of TA's PPMS and disaggregated by sex, age, and caste/ethnicity. The questionnaires were customized in digital platform, KoBo Toolbox and were collected using smart phones.

Kobotool is particularly useful for field-based surveys as this app supports offline data collection, GPS tagging and multimedia data capture capabilities. Kobotoolbox also enables real-time reporting and enhances the efficiency and accuracy of data gathering process. This data collection tool has built-in validation features and data quality checks, helping to ensure the accuracy and integrity of collected data. The tool has special features like skip logic, data validation rules, and error alerts, which reduce the likelihood of data entry errors and inconsistencies, resulting in higher data quality and reliability. See Annexes 33, 34, 35, 36 and 37 (a and b) for the questionnaires for baseline data collection for existing entrepreneurs, baseline data collection for start-up entrepreneurs, midline data collection for all entrepreneurs, end data collection for all entrepreneurs and data collection for TVET trainees (midline and endline). In addition, face-to-face interviews and FGDs were carried out with structured or semi-structured interactions.

All EDOs mentored the entrepreneurs regularly, and this was recorded in the monthly counseling forms (included in Annex 38). The data on entrepreneurs under IA 2 was collected by the EDOs who were trained for this purpose. For all data collection, ethical considerations were adhered to, which included taking permission from beneficiaries for collecting information and taking photos and ensuring data security. Data security was ensured by data collection platform, Kobotoolbox, which has robust security features to protect data during collection, transmission and storage. In order to improve the entrepreneur performance tracking, entrepreneurs are classified into 5 categories:

- i. **Excellent:** fully independent, highly proactive, maintaining account books and engaging with ecosystem actors.
- ii. **Good:** Self-sufficient but require light touch support or guidance on account and engaging with ecosystem
- iii. **Satisfactory:** show potential but require regular handholding and capacity-building support

- iv. **Struggling:** require intensive training, close mentoring and ecosystem support
- v. **Drop out:** Disengaged from the project

The EDOs were assigned tracking the status of entrepreneurs and identifying difficulties and mentoring them with tailored business support, coaching and handholding support and submitting the digital report to the central team.

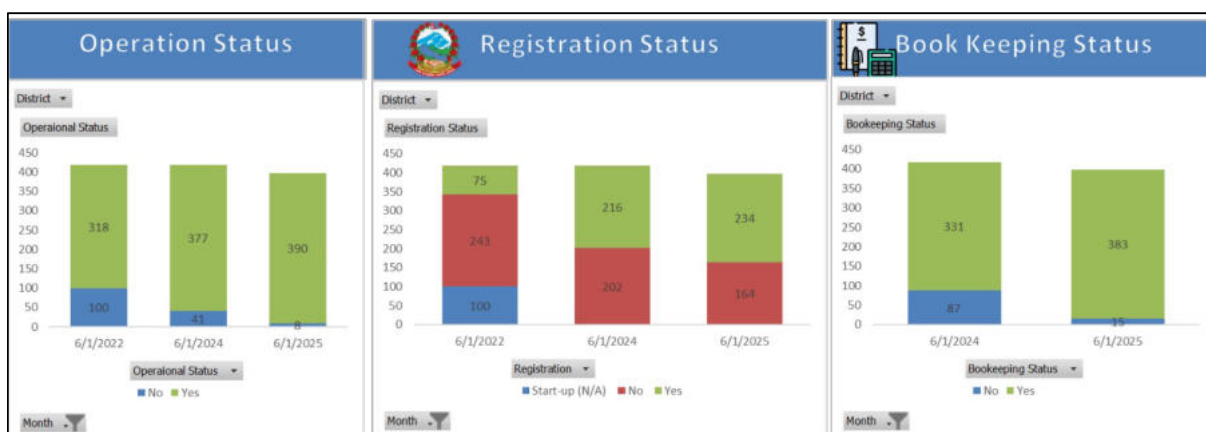
An excel-based interactive dashboard was developed for internal project management which facilitates informed decision-making and strategic planning. The interactive dashboard displays the complete profile of the entrepreneur on a click (unique id) as shown in the figure below.

**FIGURE 27. SNAPSHOT OF THE INTERACTIVE DASHBOARD**



With this approach, the central staff and field staff had a common data framework to work with. This not only tracked the status of the entrepreneurs but also monitored the performance of the project team and project as well by tracking the process.

**FIGURE 28. KEY PERFORMANCE INDICATORS OF ENTREPRENEURS**



### 8.3.3 Measuring training effectiveness

Several training events were conducted as part of the TA, for NEA staff, for entrepreneurs, for users of induction cooktops and for the staff of LFPs. For the entrepreneurs, training included topics of business management/enterprise development integrating agency-based empowerment, specific skills-based training and accounts management. In addition, post training support was provided through mentoring.

FIGURE 29. THE KIRKPATRICK MODEL OF EVALUATION



The Kirkpatrick Model of Evaluation was adopted to assess the effectiveness of training programs. This model helps measure the immediate through long-term results of a training course. Effectiveness refers to how well a training program accomplished its intended objectives, whether it was successful in improving the participants' knowledge and skills, attitudes and practices (KAP), as captured in the PPMS. The Kirkpatrick Model includes four levels of evaluation: reaction, learning, behaviour and results.

- a. Reaction:** This first level of evaluation, reaction, refers to how satisfying, engaging and relevant the training experience was, captured through a short survey at the conclusion of the training event.
- b. Learning:** The second level, learning, refers to whether the trainees have learned/ acquired knowledge from the training, also captured through the same survey.
- c. Behaviour:** This refers to whether the trainees have used/ brought into practice the knowledge and skills acquired from the training. In the case of entrepreneurship, this refers to outcomes such as changes in business practice: relationship building with customers, keeping sales records, business investments, and adoption of electrical equipment.
- d. Results:** This fourth level of evaluation examines whether the trainees have made significant changes in their work. For entrepreneurship development, this includes changes like improved sales, business expansion/diversification, employment, satisfaction level etc.

Reviewing PPMS, observing entrepreneurs directly, and conducting performance reviews through beneficiary-based surveys and focus group discussion were carried out to measure third and fourth level of evaluation, behaviour and results respectively.

### 8.3.4 Outcome harvesting to capture GESI related institutional changes

An evaluation of Intervention 1 of the TA 6526 NEP was conducted using the Outcome Harvesting method, which assesses observed outcomes without relying on predefined objectives. This approach examines how the change agent contributed to the outcomes, prioritizing those related to the project's strategic goals, sustainability, and inclusivity. The salient feature of this tool is that it is suited for projects where outcomes are emergent and not easily quantifiable in advance. The process includes:

- **Backward-looking analysis:** The tool explores observed outcomes after they have occurred, making it adaptable to complex and unpredictable environments.
- **Contribution assessment:** It examines the specific contributions of the project or change agent to the observed outcomes, highlighting the role played in achieving them.
- **Flexible criteria:** Instead of predefined success criteria, Outcome Harvesting identifies outcomes based on the realities of what has transpired, allowing for a more nuanced understanding of impact.
- **Stakeholder involvement:** The process often involves gathering evidence from diverse stakeholders, ensuring that the findings are well-rounded and substantiated.

The evaluation aimed to understand the impact of GESI interventions in the electricity utility sector over the past three years. It was conducted through group work with staff from selected DCSs, projects, and GESI Core Team members guided by pre-set questions, with key findings substantiated by relevant stakeholders. The survey was carried out in the Provincial and DCS offices of Pokhara, Butwal, Janakpur, Lalbandi and the GESI Core Team members and selected management personals of Kathmandu. A total of 102 staff participated in the survey. Of this 54 (53%) were male and 48(47%) female staff. In terms of ethnicity 47% were Brahmin Chhetri, 12% Janajati, 27% Madhesis and 7% Dalits.

### 8.3.5 KAP study for capturing behavioural changes

The KAP survey and FGDs assessed community engagement and awareness with GESI and electricity usage, revealing significant progress and areas for improvement. The study used a random stratified sampling method, collecting data from 504 individuals across eight districts in Madhesh Province. Data was gathered through a large-scale phone survey with a questionnaire designed to capture quantifiable data relevant to the PPMS. Additionally, four FGDs with 48 members were conducted for qualitative insights. Secondary data was also reviewed from various community events and activity reports to provide context and to allow for comparative analysis.

## 8.4 Periodic reviews and progress validation

With the purpose of close implementation oversight, identify and mitigate challenges and ensure synergy across the TA interventions, periodic reviews were held, including monthly reviews with field team- virtual, team (national and international) bimonthly reviews- virtual and quarterly review (IA Leads and Field Team)-in person. Additionally, several WhatsApp groups ensured quick messages and responses, sharing achievements and discussing challenges. In addition, the PPMS was periodically updated and progress reviewed, regular online and face-to-face meetings were organized with TA Team including field team, and field visits were conducted to interact with beneficiaries. This validation helped identify deviations and the persisting challenges which required adaptive management and corrective actions.

## 8.5 Pause-and-reflect meetings

In order to review and acknowledge achievement, identify gaps and challenges and to address them jointly, make an honest assessment of gaps, make decisions on the basis of data-driven evidence, review strategies and document lessons learned, pause and reflect meetings were held on quarterly basis. The meetings adopted a forward-looking perspective and ended with individual level concrete plans for the next quarter, also used to monitor individual progress.

## 8.6 Donor review missions

Four SASEC PTDSSP Review Missions were conducted in which the TA team was actively engaged. During these missions, TA Management, experts and field staff interacted in person with the Review team members, comprising of representatives of the Royal Norwegian Embassy, ADB, and NEA. The primary objective of the review missions was to assess the overall progress on the implementation of the TA 6526 NEP project, identify successes and areas for improvement, determine challenges and mitigation actions to address these. 3–4-day review missions included directly engaging with project stakeholders (such as LFPs, local government and local leaders, observing project activities implemented, and a debriefing meeting with and beneficiaries.

## 8.7 External evaluation

An external evaluation was implemented in June-August 2024 to get objective feedback on the TA, to understand the effectiveness of the various interventions, capture achievements, effective strategies, good practices and lessons learned and draw strategic recommendations to inform future similar projects. After a competitive process, Scott Wilson Nepal was assigned the task.

In May 2024, CRT/N issued an open call for the submission of technical and financial proposals to conduct the external evaluation study based on a ToR that was approved by ADB. CRT/N received eight proposals which were assessed based on predetermined selection criteria. Scott

Wilson Nepal (SWN) was awarded the contract and agreed to conduct the study during the period June to August 2024.

The evaluation report with key findings and recommendations is attached in Annex 39.

## 8.8 M&E For learning

Lateral learning and knowledge sharing was a core element in the TA and involves a continuous process of learning for effective and efficient intervention planning. For this, single/combination of following activities were undertaken:

- **Data based reflection:** The interventions' strengths, weaknesses, and areas for improvement were identified with the process of periodic data collection, analyses, and interpretation. This approach helped make evidence-based decisions for adaptive management in interventions.
- **Learning focused team meetings:** Dedicated learning-focused team meetings, focused on themes were organized. These followed varied formats, one of which was discussions around the initial assumptions and the effectiveness of various strategies adopted. For example, how did the strategy of engaging local institutions work, what worked, what did not and what could have been done differently.
- **Key Informant Interviews (KII) / Focus Group Discussions:** KIIs were carried out with stakeholders involved in the process of electrifying households in Madhesh Province; local government and NEA/DCS. FGDs were also held with electrified households (beneficiaries). The findings (qualitative and quantitative information) of the interactions combined with a beneficiary survey of electrified households are documented in learning briefs and case stories.
- **Collaborative learning with key partners:** Several periodic and end of project learning forums were organized to engage local stakeholders. These include learning forums with the LFPs and local governments and end-of-project policy dialogues (as discussed in chapter 5).

## 8.9 Student learning

In 2025, Ms. S.H.I. (Saskia) Kemps, a master's student from the Eindhoven University of Technology, Netherlands, conducted research with the TA project. The ambition of her thesis was to analyze the relations between access to electricity, women's empowerment, and quality of life among rural women in developing countries. The overall aim is to bridge the gap between technical measures of electrification, often expressed in connection rates or consumption levels, and the lived realities of women whose daily practices, agency, and quality of life are shaped by energy access. Her fieldwork included interviews and observations with recently electrified households and women entrepreneurs in the case region, alongside interviews with project staff, to capture multiple perspectives on electricity's impacts. In total, 40 interviews were conducted: 10 project employees, 11 women from recently electrified households, and 19 women entrepreneurs. Saskia's final master's thesis contributes to a more holistic understanding of electrification that goes beyond infrastructure and captures its social and gendered dimensions.



# 09

## Conclusion and way forward: a pro-poor and gender-responsive approach works

TA 6526 NEP has been assisting NEA to operationalize a GESI agenda into its organizational systems and operations. During this period, the team has had successes and at the same time, faced several challenges, some of which they were able to address. Given the nature of activities (GESI institutionalization, enterprise development) and the target group (women, poor, disadvantaged communities), it has taken considerable amount of time for the results of TA 6526 NEP to become visible. In fact, many have appeared towards the end of the project period and will further get strengthened after the project period is over.

### BOX 27.

#### TA 6526 NEP SUCCESSES

- ✓ The TA team supported and worked in a collaborative manner with NEA. NEA has taken concrete steps to mainstream a GESI approach within the institution, develop a GESI operational framework, build its internal capacity to address GESI issues.
- ✓ The TA supported NEA with the development of key institutional documents like the Code of Conduct for SEAH Prevention and demonstrated how to improve the access, reliability and efficiency of power supply in a pro-poor and gender-responsive manner.
- ✓ The locally based EDOs and EDLCs established their credibility, gained respect from local stakeholders and beneficiaries and were able to support them throughout. The EDOs and EDLCs have managed, with the support of other stakeholders, to improve the access, reliability and use of power supply within their areas of operation. They have proven that a pro-poor and gender-responsive approach works. They have also shown that it is possible to electrify last mile communities, mostly comprising of poor and vulnerable communities.

- ✓ The TA activities resonated well with the local institutions, partners and communities as well as with NEA and the targeted beneficiaries, given the fact that the activities were responsive to the identified needs and demand-driven. This has resulted in a high level of stakeholder buy-in into the project.
- ✓ Engaging local institutions and embedding the TA activities within these organizations was a win-win strategy for all. The capacity building of local organizations and the collaboration with local governments ensured local ownership. The plans presented at the handover meeting made it amply clear that the local organizations intend to and are well-equipped to take these activities forward.
- ✓ The TA's support to strengthen electricity supply went beyond its mandate and was highly appreciated by NEA and other stakeholders engaged in the project, including beneficiaries. The notion of last mile electrification has taken root in NEA, and the DCSs understand the importance of and are keen to take this forward.

## 9.1 Recommendations for NEA to strengthen its GESI agenda

TA 6526 NEP has been instrumental in demonstrating to NEA how the impacts of electricity access can be amplified through a GESI approach. A GESI approach includes raising awareness and capacity within staff to address GESI issues in their work, targeted efforts to reach the last mile, a GESI-responsive approach to productive use of energy and promoting electric cooking and raising awareness on critical issues including electrical safety as well as electricity conservation, and thefts.

The progress achieved under TA 6526 NEP demonstrates that GESI integration is both feasible and impactful within NEA. However, sustaining and scaling these gains will require deliberate action from management, GESI teams, and development partners. The following recommendations build on lessons from capacity building, policy development, and pilot initiatives, offering practical steps to institutionalize GESI, strengthen accountability, and ensure that inclusive practices benefit both NEA staff and consumers nationwide.

Recommendations for NEA to further strengthen its GESI agenda are as follows:

## 9.1.1 Recommendations for strengthening GESI considerations at the institutional level for NEA

### For NEA Management

- **Oversight:** Ensure the Administration Directorate provides consistent oversight and accountability.
- **Budgeting:** Create a dedicated budget line for GESI initiatives and infrastructure upgrades.
- **HR systems:** Adopt and implement SEAH and Returning Mothers guidelines within HR systems.
- **Infrastructure:** Improve facilities (toilets, childcare, ramps, counters).
- **Data Systems:** Track gender and ethnicity-disaggregated data.
- **Visibility:** Feature GESI prominently in NEA publications, especially the Annual Report.

### For GESI Teams

- Continue capacity building through internal trainers.
- Replicate successful pilots across provinces.
- Engage consumers, especially women and vulnerable groups, in feedback and service design.

## 9.1.2 Recommendations on institutionalizing last mile electrification and PUE within NEA

Madhesh Province has already achieved a very high level of electrification. The households and communities that are still left behind are the poorest and unless special efforts are made, they will continue to be left out. Further, Madhesh Province continues to face insufficient electricity supply, frequent interruptions and voltage fluctuations. The year 2025 showed the impacts of climate change, with extreme heat in summer which led to frequent shutdowns and incessant rains and floods which led to flooding, damage of electricity infrastructure and difficulties for the communities.

The TA project coordinated with the local governments in Madhesh Province to map the unserved clusters in all eight districts of Madhesh Province. At the same time, it partnered with SASEC to expand the distribution network and NEA-DCS offices to liaison free meter to the extremely poor households. And last, but not least, the project team garnered additional support to provide internal wiring support to extremely poor households.

Sustainable Development Goal (SDG) 7.1 aims for “universal access to affordable, reliable and modern energy”. Achieving this requires substantial investment and wide range of interventions targeted at the underserved populations. As suggested by the report of the World Bank “ Multi-Tier Framework for Energy Access (MTF)”, the access to electricity must be measured in multidimensional way, expanding beyond the traditional the binary approach of connections. The experience of TA 6526 NEP shows that engaging with the poorest communities and helping them gain access and benefit fully from electrification needs efforts as well as skills that NEA is not fully equipped for.

It is clear that the present capacities and existing workloads with local DCSs are unlikely to allow them the time and resources to invest in last mile electrification. For NEA to institutionalize these within its system, it can consider building a cadre of people who will focus on last mile electrification and beyond that, including a concrete awareness campaign as a core component of electrification that includes direct engagement with communities. So far, the TA team has taken the lead in mapping the unelectrified clusters, engaging with local communities, understanding their problems, as well as coordinating with the local governments. Moving forward, all these roles will have to be built into NEA's functioning, and this may best be done through dedicated staff, tangible targets allocated to DCSs for last mile electrification (based on the current ground situation).

The following actions are recommended for NEA, which emerge from the TA project 's experience as well as discussions with NEA staff at different levels.

- **Infrastructure:** Strengthen distribution networks for reliability.
- **Affordability:** Develop financial mechanisms to enhance affordability for easy meter connection, wiring and usage.
- **Beyond access:** Support households to progress beyond basic electricity access by integrating modern and affordable technologies and appliances and productive, efficient and safe use of energy.
- **Dedicated staff:** Assign one staff member in each DCS dedicated to last mile electrification.
- **Community outreach:** Conduct regular awareness raising activities in electrified areas, with special emphasis on newly electrified clusters
- **Partnerships:** Collaborate with local institutions having the capacity to support communities in utilizing electricity for livelihoods.
- **Local engagement:** Raise the awareness of the local authorities, including the ward offices and municipalities, regarding their role in extending electricity to the disadvantaged communities.
- **Facilitation:** Deploy trained local facilitators to assist ultra-poor and landless households with connections and tariff literacy.

## 9.2 Recommendations for ADB and other development partners

- All electrification projects require incorporating GESI components, and this aligns with ADB's Strategy 2030, particularly operational priority 1 on addressing remaining poverty and reducing inequalities and operational, and operational priority 2 on accelerating progress in gender equality. These priorities serve as key drivers of inclusive and sustainable development. Electrification projects have direct social and economic impacts, so integrating GESI ensures equitable access to benefits and addresses systemic barriers faced by women and disadvantaged groups.

- For all electrification projects, include a 100% electrification as a conditionality for electrification loans. The TA project has shown that the final unelectrified communities and households can be reached if sufficient resources are set aside.
- Provide sustained technical and financial support to scale GESI-responsive practices.
- Strengthen outcome tracking to measure medium- and long-term organizational and community impacts
- Widely share lessons learnt and experiences gained under TA 6526 NEP so that other organizations, governments and projects - both within Nepal and beyond - can benefit from these lessons and experiences.

### 9.3 Lessons for electrification projects

In addition to mapping the way ahead for NEA, the TA project also yielded lessons for electrification projects in general. These can be summarized as below.

1. All electrification projects should include GESI objectives, targets and interventions in their design and implementation and should implement a GESI-responsive budgeting strategy. In addition to implementing activities on the ground, a critical component of TA projects like these must be the institutionalization of such processes with partner organizations and utilities, such as the Nepal Electricity Authority, and the integration of GESI approaches and strategies in energy sector policies and plans.
2. All electrification projects should include a TA component. These are “soft” inputs like those provided through TA 6526 NEP project. Inputs such as local coordination, capacity building, skill training support, awareness raising, etc. provide huge gains and enhance the quality and effectiveness of electrification programs visibly. However, these require sufficient investments and resources such as time and resources (human and financial).
3. The activities required for last mile electrification, including local level coordination, hand-holding support to disadvantaged communities, raising their awareness and demonstrating productive use of energy need to be integrated within the overall mandate and operations of utilities and not remain project-specific.

### 9.4 Conclusion

This report shows how TA 6526 NEP has assisted NEA to implement the GESI Action Plan of the PTDSSP and strengthen the institutionalization of GESI in its operations and to support women and the disadvantaged group to productively use energy with safety and efficiency. By doing so, TA 6526 NEP has supported the South Asia Subregional Economic Cooperation (SASEC) Power Transmission and Distribution System Strengthening Project to reinforce and modernize power supply system in and around Kathmandu Valley and in Madhesh Province. It has complemented the ADB financed loan for the above-mentioned project and contributed to the Government of Nepal's goal of “energy for all”, supporting the electrification efforts in poor and disadvantaged areas. The project has improved the lives of many living in the Madhesh Province by giving access to electricity, by increasing the awareness on safe electricity usage, by lighting up the streets, supporting income-generating activities, creating jobs, and improving collaboration between different stakeholders.

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