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# Nepal Clean Transport Employment Alliance (NCTEA)

Cooperative Agreement No. 367-A-00-06-00118-00

## Final Report

December 2007

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## Final Report

submitted to

**USAID**

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**Under the Kathmandu Electric Vehicle Alliance (KEVA) with:**

Winrock International

Electric Drive Transportation Association

San Francisco Clean Cities Coalition

### **DISCLAIMER**

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## List of Acronyms

ABC/Nepal	Agro-Forestry, Basic Health and Cooperatives/Nepal
CTSMP	Comprehensive Transportation System Management Plan
DFID	UK Department of International Development
EDTA	Electric Drive Transportation Association
EV	Electric Vehicle
EVAN	Electric Vehicle Association of Nepal
EU	European Union
FNCCI	Federation of Nepalese Chamber of Commerce and Industries
GEF	Global Environmental Facility (Fund)
IDP	Internally Displaced Persons
IOE	Institute of Engineering of Tribhuvan University in Pulchowk.
KEEP	Kathmandu Environmental Education Project
KEVA	Kathmandu Electric Vehicle Alliance
Hulas	Hulas Motors is a vehicle manufacturing, Golchha Organization
MOLTM	Ministry of Labor and Transport Management
NCTEA	Nepal Clean Transport Employment Alliance
NGO	Non-Government Organization
NTB	Nepal Tourism Board
OEA	Overseas Employment Agencies for job placements
PADCO	Planning and Development Collaborative International, Inc.
SFCCC	San Francisco Clean Cities Coalition
WI	Winrock International
UNDP	United Nations Development Program
Vibor	Nepalese Management and Financial Consulting Company

## I. Objectives and Approaches of NCTEA

**Objective** of Nepal Clean Technology Employment Alliance (NCTEA) was to:

- Demonstrate an approach which can mitigate the impacts of conflict through increased job and entrepreneurial opportunities for internally displaced persons (IDPs) by introducing clean transport options in suitable areas.

The NCTEA used a partnership approach to train IDPs and create employment by expanding EV operations and supporting industries. NCTEA partners included government, industry, civil society, and donor organizations.

The three components of NCTEA were:

- Skills Training in the Transport Sector: The NCTEA worked with government and non-governmental organizations (NGOs) to identify IDPs to be selected for the training program. The Alliance worked with partners to design training programs for men and women who had taken refuge in the cities. The program provided driving, auto mechanic, for those selected. In addition, there was also driver and electric vehicle maintenance training programs organized in coordination with the electric vehicle industry in Kathmandu. NCTEA work with the training centers and industry groups to facilitate arrangements for the participants and assisted in finding employment for those who successfully passed the training courses. The NTCEA worked to build on the owner-driver promotion program, with efforts that were focused on those affected by conflict.
- Collaboration for Transport Sector Employment and Growth: The Alliance established a strategy to provide employment opportunities for Nepali people at home and abroad. The program worked with Ministry of Labor and Transport Management (MoLTM) and overseas employment agencies to assess the current need of the skilled laborers. This assessment exercise helped to identify possibilities of training Nepali youth for industries in Nepal and for those who were aspiring to go abroad for employment. The Alliance conducted planning and management studies to create more employment for IDPs in the clean transport sector. Examples include the identification of the best cities and approaches for introducing three-wheeled EVs (*safa tempos*), and the implementation of an expanded Comprehensive Transportation System Management Plan, which was initiated by KEVA, and is currently under consideration by the UNDP/GEF for funding.
- Clean Transport Technology Expansion for Economic Growth and Employment: The Alliance worked to identify the most appropriate ways to further expand IDP employment in industries that support clean urban transport. Clean electric vehicles are well accepted in Kathmandu and have proven to be financially competitive with traditional Diesel transport. Several new electric vehicles recently came onto the market, particularly a four-wheel electric van manufactured in Nepal by Hulas Motors and a new three-wheel tourist vehicle being manufactured in Kathmandu. Several automobile dealers are also planning to import other electric vehicles from India and China to take advantage of new low import taxes. The use of electric transport can lower local transportation costs and stimulate economic productivity by using electricity from local hydropower, and thus offers a good tool for USAID to use to complement its agriculture, rural works, electrification, and other activities for employment and local development to mitigate conflict in key areas.

The following are the key organizations or persons responsible for actions:

PADCO – (Planning and Development Collaborative International) the personnel included: Program Manager, Ben Stoner; In-Country Coordinator, Bibek Chapagain; Technical Specialist Surendra Bhatta; and Project Manager Harsha Bajracharya.

WI – (Winrock International) the personnel include Nepal Director, Suman Basnet; technical support staff, Megesh Tiwari and Anil Raut.

SF – (San Francisco Clean Cities Coalition) the personnel are Rick Ruvolo, Chair Person.

EDTA – (Electric Drive Transportation Association) Brian Wynne, Executive Director.

KEVA Secretariat – Bibek Chapagain (PADCO), Megesh Tiwari (WI) and other support staff.

EVAN – (Electric Vehicle Association of Nepal) Umesh Shrestha is the Chairman.

## II. Results of NCTEA

### A. Skills Training and Employment in Transport Sector

NCTEA trained 172 persons for new jobs in the clean transport industry, particularly for women and persons displaced by conflict. These involved:

- EV Driver Training (received Driving License) - 73 persons (58 women)
- EV Technician Training – 46 persons
- Auto Mechanics Training - 26 persons
- General Mechanics Training – 27 persons (6 women)

Over 50% of the persons trained by NCTEA have been employed. There are 119 EV drivers and technicians in the EVAN pool, and they are being placed for employment.

### B. Collaboration in Transport Sector

KEVA worked effectively in partnerships with the Nepal Government Department of Labor, private banks, and the private sector to implement NCTEA.

- NCTEA expanded the KEVA-initiated Innovation Fund with private banks to permit 20 more drivers to buy and operate their own EVs. NCTEA also facilitated other private bank financing of clean vehicles
- NCTEA improved the Nepal Department of Labor transport training programs at the Itahari and Biratnagar Training Centers.
- NCTEA identified job and placed trainees in cooperation with transport sector private companies.

### C. Clean Transport Technology Expansion

NCTEA continued the expansion of EV technology initiated by KEVA.

- New EV models were designed and tested in Dharan and Waling (10 are being introduced in each site).
- Bank financing was arranged for new vehicles in Dharan and Waling.

- Tourism vehicles were manufactured and service was started on Tourism Day, Sept. 27, 2007.

#### D. NCTEA Management

The most notable management aspects of NCTEA included:

- KEVA Secretariat functioned as Secretariat for NCTE (same alliance partners)
- PADCO and WI provided staff and logistic support to NCTE Secretariat.
- NCTE maximized stakeholder inputs, utilizing transparent annual planning and implementation process.
- NCTE sought and welcomed both programmatic and funding partnerships to further its objectives.

### III. Comparison of Targets and Accomplishments

#### A. Coordination by KEVA Secretariat

**Objective:** Improve the impacts of NCTEA program by coordinating and focusing the efforts of multiple partners and donors that support the skills training and employment generation for IDPs.

#### Activity A.1: Work Plan Preparation

##### **Indicators:**

- (1) Wide participation in a planning process involving international partners, representatives from Nepali stakeholders in government, NGOs and EV industry, and representatives from donors.
- (2) Wide acceptance of the NCTEA Work Plan as a guide to actions.

##### **Targets:**

- (1) 20 participants in Kathmandu Planning Workshop including representatives from all local stakeholders.
- (2) Key stakeholders in government, NGOs and EV industry participate and contribute to implementation in accordance with the Work Plan.

##### **Performance Measures:**

- (1) Planning inputs of international and local partners are integrated into a Work Plan that is completed and approved by December 15, 2006.
- (2) Government, NGOs, EV industry, and other donors provide matching funds and/or support as required for successful implementation of work plan activities.

##### **Summary of Performance:**

*Status: Complete*

##### *NCTEA Planning Workshop*

The planning workshop was held on October 13<sup>th</sup>, 2006 at Yak & Yeti Hotel. The workshop was attended by 25 participants representing 18 different organizations. Mr. Ben Stoner of PADCO made a presentation on the NCTEA program and its objectives. There were presentations by local partners on the work that is being



done in skills training, gainful employment and the role of financing institutions to support gainful employment programs targeted to cater to socially and economically marginalized population, especially those that have been displaced by the conflict. Mrs. Durga Ghimire of ABC/Nepal presented on the training and social support being provided by her organization to rehabilitate the lives of those that have been the victim of conflict. Mr. Umesh Raj Shrestha and Mr. Ashok Raj Pandey presented on the job growth opportunities in the EV industry and potential areas of cooperation with KEVA Secretariat during the implementation of NCTEA program. Mr. L.B. Ghising represented Nepal Association of Foreign Employment Agencies (NAFEA) and discussed the potential tie up with skills training program of NCTEA with the placement of skilled labors in overseas market. Mr. Ayush Man Sherchan from Bank of Kathmandu presented the promotion of owner driver concept in the EV industry. Mr. Sherchan also talked to about the possibility of further expanding the concept to support the NCTEA effort.

The presentations were followed by a discussion session where issues such as minimizing the drop out rate of training, job placement, reviewing and improving current insurance policies of EVs, and the need to expand the EV industry to other cities in Nepal to expand the job market were discussed by the stakeholders present during the workshop. Some concerns such as lack of citizenship papers that would cause problems in employment process would be beyond the scope of NCTEA program. KEVA Secretariat made note of all the suggestions to incorporate in the work plan of the NCTEA program.

The NCTEA Work Plan was completed with the involvement of NGOs, government training centers, EV industry stakeholders, financial institutions, tourism industry and Power Company. NGOs helped implement the training programs while private sector, financial institutions and tourism industry contributed towards the geographical and market segment diversification of electric vehicles.

### ***NCTEA Work Planning***

The KEVA Secretariat used inputs from the NCTEA Planning Workshop to prepare a draft work plan, which was submitted to USAID on Oct 18, 2006. The final approval was provided by USAID on November 14, 2006.

## **Activity A.2: NCTEA Monitoring**

### **Indicator:**

- (1) Reports to USAID are accurate and punctual.

### **Targets:**

- (1) Financial reports are completed and submitted quarterly.
- (2) Progress reports are completed and submitted quarterly.
- (3) An annual evaluation is completed in the last month of the first year.
- (4) The progress reports and annual evaluation are effectively used to prepare lessons learned documentation.

### **Performance Measures:**

- (1) Quarterly financial reports meet USAID requirements and are submitted before the end of the month following the quarter.
- (2) An Annual Progress Report meets USAID requirements and is submitted by the end of the first year of the program.

## **Summary of Performance:**

*NCTEA Reports* (all submitted on time and accepted by USAID)

Annual Work Plan and Monitoring and the Monitoring and Evaluation Plan were prepared and submitted to USAID on time as per the Cooperative Agreement. Both of the documents were approved by USAID. Implementation of the NCTEA program activities was based on the two documents.

The KEVA Secretariat monitored the progress of the activities as per the work plan and monitoring and evaluation plan. Trainings for auto and general mechanics were held in Itahari and Biratnagar respectively. The local partner for these trainings was ABC/Nepal. ABC/Nepal has a field office in Biratnagar which made it easier for them to monitor the trainings regularly. The progress of these trainings was monitored by meetings with partners as well as visiting the training facilities.

The NCTEA program also included trainings for Safa Tempo (EV) drivers and EV technicians. These trainings were conducted in Kalimati, Kathmandu and managed by Electric Vehicle Association of Nepal (EVAN). KEVA Secretariat worked closely to develop training material, and prepare logistics to implement the training program for the EV industry.

Quarterly Financial and Quarterly Program Performance Reports were submitted on time as per the Cooperative Agreement.

### ***Final Workshop***

The closing workshop of the NCTEA program was held on September 21, 2007 in Hotel Singi. The program was attended by more than 25 participants more than 10 different organizations. The participants were local and international NGO partners, USAID representative and the beneficiaries from the training assistance program. Those that benefited from the trainings shared their experience on the trainings and their future prospective in finding jobs. The ones that received EV driving and EV technician training were confident that they would find jobs in the EV industry because most of the trainees in the first session of trainings were already employed. The participants that received general mechanics training in Itahari said that that on-the-job training assignment was not as productive as it could have been. They felt that they did not receive the kind of supervision and training that would have been helpful in future jobs. However the participants were confident that the training they received would lead to new jobs.

The workshop included a presentation by Mr. Ben Stoner of PADCO|AECOM on the NCTEA program and the achievements. Mr. Gopal Raj Joshi of Clean Air Network Nepal made a presentation on the progress of GEF Small Grants Project that is starting activities to diversify the use of EV and starting EVs outside Kathmandu. Ms. Protsha Katuwall of ABC Nepal and Mr. Umesh Raj Shrestha made a presentation on the trainings coordinated by ABC Nepal and EVAN respectively.

## **B. Skills Training in the Transport Sector**

**Objective:** NCTEA will coordinate activities that will provide vocational training and explore employment opportunities for IDPs. The focus is to expand skilled employment opportunities for IDPs.

### **Activity B.1: Identify and Select IDPs for training**

#### **Indicator:**

- (1) Total number of IDPs trained in skills training
- (2) Total number of training centers and NGOs supported to improve their training capacities

#### **Targets:**

- (1) 150 IDPs receive skills training with a minimum of 30% inclusion from either gender.
- (2) 3 training centers or NGOs are supported to improve their training capacity.

#### **Performance Measures:**

- (1) Counting of Internally displaced persons completing skill training
- (2) Counting of number of institutions providing skill trainings to IDPs and receiving support from project

#### **Summary of Performance:**

##### ***Auto Mechanic & General Mechanic Training***

In-Country Coordinator of the NCTEA project, Bibek Chapagain, visited the training center in Itahari (Sunsari District) and Biratnagar (Morang District) in East Nepal. The training facilities provide general mechanic training courses at both locations and auto mechanic training was provided at the training center in Itahari. The training centers also offer trainings for beauticians, electricians, tailoring etc. The NCTEA program focused on general and auto mechanic training. NCTEA worked in partnership with the local NGO to initiate and monitor the auto mechanic and the general mechanic trainings in Itahari and Biratnagar.



The Scope of Work (SOW) for implementation and monitoring of the training programs was prepared after consultation with the local partners, the training center staff and international partners. Bibek Chapagain and Anil Raut of NCTEA met with Ms. Durga Ghimire, President of ABC Nepal and Ms. Prema Regmi, program coordinator of ABC-Nepal on December 7, 2006 to discuss the scope of work and the proposed grant amount to implement and monitor trainings in Morang, Sunsari. Based on the outcome of the meeting and the SOW, Letter of Agreement were prepared to provide grant to ABC Nepal to implement the selection and monitoring training of IDPs.



The agreement was signed between Agro-forestry, Basic Health and Cooperatives/Nepal (ABC/Nepal) and Winrock International on 28 December 2006 to implement activities mentioned in the SOW.

KEVA Secretariat worked with ABC-Nepal to establish criteria to identify IDPs. The criteria also took into consideration the prerequisites of the training center. These criteria were used to select training candidates from the applicants that applied as IDPs. The IDP and trainee selection criteria were the following:

1. A person would be considered Internally Displaced Persons; if s/he:
  - Was displaced by conflict;
  - Was displaced by natural disasters such as victims of flood, landslide;
  - Was displaced by domestic violence; and,
  - Was a victim of trafficking and was currently rehabilitating
2. Trainee should be Nepali citizen who are below the age of 35.
3. At least 8 class pass.

KEVA Secretariat and ABC-Nepal team agreed to be cognizant of the need to have at least 30% represented from both genders. ABC-Nepal also prepared an incentive package to insure high attendance and high graduation rate among the trainees. The candidates were briefed on training program and the incentive package during an interaction program on 12 and 13 January 2007.

ABC-Nepal has worked with the training center to identify candidates for the auto mechanics and general mechanic training. ABC-Nepal mobilized their volunteers to identify IDPs, collected applications, and coordinated with the training center to select participants for the training. Both of these training courses started on January 15, 2007.

### ***Electric Vehicle Driving and Technician Training***

KEVA Secretariat developed a training program for EV drivers and technicians. The Secretariat worked with the EV industry to prepare training manual and logistics required for the training program. A Letter of Agreement (LoA) was signed between EVAN and KEVA Secretariat to carry out trainings for aspirant EV drivers and EV technicians.

The criteria used to select IDPs for the EV technician and driver's training was the same as the one used for the Auto and General Mechanic trainings in Biratnagar and Itahari.



The participants were recommended by the owners of EV battery charging stations and fleet owners of electric vehicles. The trainings were announced in one of the newspapers. The owners of the charging stations and electric vehicles also agreed to provide jobs to trainees for one year after their successful completion of the training program.

The instructors for the EV trainings prepared the training curriculum, presentations and hand-outs. The training was conducted in two sessions. Each session included a group of driver and technician trainees.

The technician training was for 25 days. This training included 15-days of EV battery and charger care training and 10-days of electrical maintenance training. The training included theory and practical sessions.

The driver training was for 35 days. This included a 5-day session each on electrical maintenance, mechanical maintenance, and traffic. These sessions were followed by a 20-day practical electric vehicle driving training. The training program was designed so that the trainees would be prepared for written and driving examinations to obtain driving license.

For the IDPs, NCTEA provided assistance in obtaining a driving license. The successful trainees will be provided jobs by the EV industry.

The NCTEA program trained 172 participants in the area of auto mechanic, general mechanic, EV driving and EV technician training. 37% of the participants were women. KEVA Secretariat worked with two training centers in Biratnagar and Itahari and helped establish a training program by EVAN, a local NGO working to promote EVs.



## **Activity B.2: Facilitation & Implementation of Training Programs in major cities in Nepal**

### **Indicator:**

- (1) Number of skill training sessions conducted
- (2) Number and percentage of successful trainees employed in the industry
- (3) Percentage of trainees satisfied with the training program.

### **Targets:**

- (1) At least 5 training sessions are conducted in the area of auto and general mechanic, EV mechanics and EV driver training.
- (2) 75 IDPs with training or 50 % of the graduated trainees are employed after the completion of the training.
- (3) 75 percent of trainees are satisfied with the training program

### **Performance Measures:**

- (1) Count the number of training sessions completed during the program year.
- (2) Count the number and percentage of persons employed out of the total number of people completing training.
- (3) Exit survey analysis.

### **Summary of Performance:**

#### ***Training Facilitation***

KEVA Secretariat met with representatives of the Nepal Association of Foreign Employment Agencies (NAFEA) on October 6, 2006 to discuss collaboration possibilities with the NCTEA

program. The discussion focused on the possibility of placement in suitable overseas employment opportunities for those trainees who aspire to go abroad to work. The meeting was attended by Mr. L.P. Sanwan Limbu, President of NAFEA, Mr. Bhaskar Raj Pant, Treasurer of NAFEA and Mr. Lal Bahadur Ghising, Advisor of NAFEA. The planning work shop was attended by NAFEA representatives Mr. Ghising & Mr. Pant. Mr. Ghising made a presentation during the NCTEA planning meeting to provide the status of foreign employment sector in Nepal. KEVA Secretariat was looking at foreign employment as possible placement option if the Nepali job market was not enough to meet NCTEA program targets.

KEVA reached out to NAFEA, Electric Vehicle Association on Nepal (EVAN), to discuss on the job training and placement of trained IDPs.

Two trainings on General Mechanics and Auto Mechanics in Biratnagar and Itahari were supported by NCTEA program. The trainings were coordinated in partnership with the government training centers and a local NGO partner (ABC/Nepal). NGO partner monitored the progress of the training. There were 26 participants receiving training in auto mechanics in Itahari training center and 27 participants receiving general mechanics training in Biratnagar. For the first time in the history of the training center 7 women trainees benefiting from general mechanics training.

The political unrest in the Terai area had an affect on the training program during the initial period in Biratnagar training center. Both of these trainings were scheduled to start from January 15, 2007 but were delayed by one week due to curfew during the starting period. Motivation training was also organized on 12-13 January 2007 for the training applicants to reduce the drop out rates, and to share the potential benefit from training.

KEVA Secretariat also organized training programs in EV driving and EV technician in Kathmandu. These trainings started in mid April, 2007 and were completed during the first week of September 2007.

Two trainings on General Mechanics and Auto Mechanics in Biratnagar and Itahari were completed by the first week of July. The political unrest in the Terai area had some effect on the attendance of the participants on the beginning of the training program, but overall attendance has been satisfactory.

The addition the training in Biratnagar and Itahari, the EV driver and EV technician training were completed in Kathmandu. There were 73 IDPs who received EV driving training. After the completion of the training, all but one did not pass the driving license test.

NCTEA program also provided EV technician training for 46 IDPs. The training was a provided in two different sessions. The first session included 25 trainees. All of the 25 trainees were provided jobs by the EV industry. The second session was completed just before the end of the NCTEA program. Therefore the placement for these candidates was ongoing at the completion of the NCTEA program. As per the agreement with EVAN, the candidates will either be placed on an assignment or they will be part of a job roster. EVAN will use the roster to provide jobs within the EV industry.

There are 63 trainees who have received employment after the training. Another 61 of the trainees are part of an employment pool that EVAN will continue to place in jobs as per their

skills. Another 28 of the trainees who received general mechanic training had on-the-job training after the completion of their training program. About 53% have had employment

opportunities. The 35% who are in the employment pool have a good chance of receiving job placements because the EV industry has a high turnover.

### **Activity B.3: Employment Opportunities as Owner-Drivers**

#### **Indicator:**

- (1) Number of owner drivers operating vehicles in the street of Kathmandu
- (2) Number and amount of loans facilitated for owner driver from formal financial institution

#### **Targets:**

- (1) 10 additional owner drivers operating vehicles in the streets of Kathmandu.
- (2) Additional 2 million rupees or 10 additional loans dispersed for owner drivers.

#### **Performance Measures:**

- (1) Industry survey to count the number of owner drivers of Safa Tempo
- (2) Partner's reporting and survey of the industry and financial institutes.

#### **Summary of Performance:**

##### ***EV Expansion Outside Kathmandu Valley***

KEVA Secretariat initiated activities that can potentially expand electric vehicle operations and owner driver programs outside Kathmandu Valley. The Secretariat assisted an EV entrepreneur to submit a proposal to UNDP Small Grant program. The Secretariat was instrumental in putting together the concept of the proposal and developing partnership with other organization that will participate in the program of diversifying geographic and market segment of electric vehicles.

The KEVA Secretariat worked with Shree Eco Visionary (SEV), an EV manufacturing company to submit a proposal to UNDP Small Grant program. The proposal included the introduction of EV fleets as public transport vehicles in Waling and in Dharan, which are towns outside Kathmandu Valley. The proposed expansion will follow the owner driver concept promoted by the KEVA Secretariat. The UNDP Small Grant proposal includes the participation of Clean Energy Development Bank and Butwal Power Company in the expansion of the EV industry outside the capital. SEV was awarded the UNDP Small Grant program. KEVA Secretariat assisted Shree Eco Visionary to develop management plans to implement the project activities. The target was to have a fleet of 10 EVs in Dharan and Syanja. The project also targeted Pokhara and Hetauda. This could create 40-50 owner driver opportunities in these cities. Based on the current price of electric vehicles, the total investment leverage by NCTEA could reach more than Rs 50 million.

KEVA Secretariat initiated a bank financing program to women owner drivers of EVs. The Bank of Kathmandu reported that 24 women drivers received loans from the bank. Based on the average size of the loan the total loan disbursed is approximately Rs 6.7 million. The women have paid more than 18 out of the 36 monthly installments.

Bank of Kathmandu has been very pleased with the program and has expanded the owner driver program to include 20 more drivers. Nine of the drivers have received loans so far. Bank of Kathmandu has reported that the average loan size of the second owner driver program is Rs

350,000, which is Rs. 70,000 higher than the first batch of drivers. This increase is due to the rise in EV price in the last couple 18 months. Based on the average loan size the estimated total loan disbursed would be approximately Rs. 7 million.

### **C. Collaboration for Transport Sector Employment and Growth**

**Objective:** NCTEA program will help increase collaboration among EV industry, training institutes, employment agencies and financial institutes to increase employment opportunities to IDPs.

#### **Activity C.1: Coordination with the Department of Labor in the Ministry of Labor and Transport Management**

**Indicator:**

- (1) Number of activities implemented jointly by partner institutions
- (2) Number and amount of loan provided to IDPs to establish business and for foreign employment.

**Targets:**

- (1) 5 joint activities conducted by partner institutions.
- (2) 45 loans amounting to 3 million rupees approved by financial and partner institutions.

**Performance Measures:**

- (1) Interview and analysis of NCTEA progress reports.
- (2) Counting number of activities that have some contribution from partner institutions.

**Summary of Performance:**

***Ministry of Labor Training Centers***

Bibek Chapagain, Coordinator of NCTEA program met with Mr. Mohan Acharya who is the chief of the training centers in Itahari and Biratnagar during the first week of October, 2006. Mr. Acharya was briefed on the NCTEA program and KEVA Secretariat's implementation strategy. The selection of candidates from IDPs, monitoring of the training program and assistance to IDPs were discussed. It was agreed that any assistance provided by NCTEA program to the IDPs should be done so as to not cause any disharmony among other training program candidates in the institution. Mr. Acharya was informed that KEVA Secretariat would manage the NCTEA program with the assistance of a local NGO partner. Mr. Acharya suggested that Mr. Rohini KC, Executive Director of Vocational and Skills Development Center (located in Kathmandu) should be briefed about the NCTEA program.

Bibek Chapagain met with Mr. Rohini KC in Kathmandu on October 9, 2006 to brief him on the NCTEA program. The need to identify market demand of local industry and overseas employment opportunities was discussed during the meeting. Mr. KC was supportive of the initiative taken by NCTEA program.

***Nepal Association of Overseas Employment Agencies - NAFEA***

KEVA Secretariat has also reached out to Nepal Association of Overseas Employment Agencies (NAFEA), which was represented in the planning workshop. The Secretariat wanted to explore the option of overseas placement opportunities if it was necessary to look beyond the domestic job market to meet the program targets.

***Electric Vehicle Association of Nepal - EVAN***

The Secretariat also worked with Electric Vehicle Association of Nepal (EVAN) to conduct four sessions of training programs. Two sessions were driver's training and the other two sessions were the EV technician training. All of the four training sessions were conducted in close coordination with the EVAN, which is a local NGO partner.

***Private Sector - Shree Eco Visionary***

The Secretariat has established a team of local partners such as Shree Eco Visionary which is an EV manufacturing and fleet management company, Butwal Power Company which is an electric power generation company, Clean Energy Development Bank and The Explore Nepal group, which is a tourism sector group, to help diversify the use of EVs. Each partner brings their own strength to help achieve the EV expansion and spur growth of jobs in the clean transport sector. This expansion of EVs is based on the inclusion of owner driver concept to further promote the income generation through entrepreneur development program.

The KEVA Secretariat organized seven different activities with government, NGOs and the private sector. The activities included training programs, proposal development and expansion of EVs outside Kathmandu valley. The continued conflict in the Biratnagar made it difficult to coordinate with the training centers, the local partner and the trainees. Although there would have been opportunities to help develop business enterprise for the trainees, the conflict and the lack of time available was a major constraint in pursuing this further. However, the over all bank loans to IDPs during the NCTEA program exceeds the target.

**Activity C.2: Planning and Management Studies****Indicator:**

- (1) Number of Studies Conducted

**Targets:**

- (1) 3 studies conducted during the course of the program

**Performance Measures:**

- (1) Number of studies commissioned and completed to further NCTEA objectives.

**Summary of Performance:*****EV Resource Center and Website Updated***

Separate web pages for NCTEA activities were added to the KEVA website. The index page for NCTEA activities can also be accessed directly by typing following in the browser's address box: [www.keva.org.np/NCTEA.html](http://www.keva.org.np/NCTEA.html). Apart from the index page, pages have also been included for NCTEA program description, activities, events, and resources.

***Comprehensive Transport System Management Plan Study***

The KEVA Secretariat followed up with Mr. Tek Gurung at UNDP Nepal office for the progress on the Comprehensive Transport System Management Plan Study (KTRAMS) proposal. Mr. Gurung said that the UNDP-GEF had not yet made any final decision on the proposal and he also was not sure on the reason for delay. However, even though he assured to find out the status of the proposal KEVA Secretariat has yet to hear from him. It has been a

long time since the project proposal was submitted. After numerous follow ups and meeting, this proposal is unlikely to materialize into anything substantial.

Winrock International, alliance partner for NCTEA, has submitted an EOI for the “Sustainable Urban Transport” Technical Assistance issued by the ADB. The TA activities are similar to those envisaged by KTRAMS proposal. The TA looks to improve traffic management in Kathmandu using non-technology driven approaches like traffic demand management, public rapid transits, non-motorized transportation, capacity building, better financing mechanisms, etc. The findings of the TA can support the preparation of KTRAMS mid-size GEF project proposal. Based on the EOI submitted by WI, ADB has launched a transport management program in Nepal. However, ADB is working directly with the government and therefore KEVA Secretariat does not have a role in this project.

### ***Concept Study on Dharan Biratnagar Trolley Bus***

A concept study on Dharan and Biratnagar Trolley Bus System was completed by the KEVA Secretariat. The study looks at a concept of developing a trolley bus service between two major cities of Nepal situated in the eastern part of the country. Biratnagar is the industrial hub of the country while Dharan is an important trade center as well as a gateway to important hilly districts in the region. This concept study on operating electric trolley bus service along the 44km Dharan-Biratnagar road corridor assumes that it will take two years to complete the installation process. The study is available in the KEVA Resource Center.

### ***Supply and Demand of Labor for Domestic and Overseas Market***

A concept study on the labor market in Nepal and over seas was conducted by the Secretariat. The study included a literature review, interview key stakeholders in minister, labor department, training center, and overseas employment placement agencies and their association officials. It looked at government capacity of private operated training centers in the country. The study also has information on the current annual estimated number of Nepali workers entering the job market and the official number of Nepalis entering the overseas job market in the last 5-10 years. The requirement of the domestic labor market in the past 5-10 years including the types of jobs, salary scale and benefits were documented in the study. The study should help document the current status of the Nepali labor market, the training facilities and recommend future intervention to improve the lives of the semi skilled and skilled labor.

### ***Electric Vehicle Battery Charger Operation and Maintenance Training Manual***

KEVA Secretariat and EVAN developed an operation and maintenance training manual for the EV industry. This manual was developed to assist in the trainings supported by the NCTEA program. The training manual was based on input from technicians affiliated to the EV industry. The manual can be used by EVAN for their future trainings as well.

## **D. Clean Transport Technology Expansion for Growth and Employment**

**Objective:** Vehicular Pollution is reduced through growth in cleaner transport.

### **Activity D.1: Clean Urban Transport**

#### **Indicator:**

- (1) Number of in-use electric vehicles
- (2) Number of activities jointly implemented with EVAN and government of Nepal

**Targets:**

- (1) 650 electric vehicles (3 and/or 4 wheelers) will be operational in Nepal
- (2) 4 activities are jointly initiated implemented between EVAN and GoN

**Performance Measures:**

- (1) Status report or registration records from Department of Transport Management (DoTM)
- (2) Report of activities implemented with EVAN and GON from the progress report.

**Summary of Performance:*****Business plan for a start-up project outside Kathmandu Valley***

NCTEA supported Shree Eco Visionary (SEV) to develop a proposal on “Reducing Transport Sector CO2 emissions through Market Segment and Geographical Diversification of Electric vehicles”. This proposal was submitted to Small Grants Program (SGP) of UNDP-GEF.

The idea was to develop pilot operation of Improved Safa Tempos in Waling (Syangja) and Dharan. SEV will develop 20 new and improved Safa Tempos (10 each for Waling and Dharan) with financing support from banks. These electric vehicles will be operated with strong involvement of local entrepreneurs. Owner-driver concepts will be promoted and the local conflict-displaced persons will be trained as electric vehicle drivers and technicians. Support from GEF will be used for workshops, trainings, studies, travel, publications, etc. In Dharan, there is genuine interest within the local government and the community to see the operation of electric vehicles to reduce the environmental impact of fossil fueled vehicles. Dharan residents have been complaining about the deteriorating air quality due to the increase in the number of vehicles.



NCTEA team initiated meetings with key potential stakeholders to build partnerships to operate electric vehicles outside Kathmandu. These meetings were held with financial institutions like CEDB, BoK and with electricity generating company such as Butwal Power Company (BPC). (BPC) will partially support development of charging infrastructure in Waling and will also provide electricity at low tariff for charging batteries

NCTEA supported SEV in setting up the coordinating team and providing technical support during the initial social mobilization efforts.

Bibek Chapagain, In-Country Coordinator of KEVA Secretariat, traveled to Dharan, Pokhara in June 2007 and to Waling in September with Umesh Raj Shrestha and Sachendra Dhakwa of SEV. The purpose of the trip was to survey the public transportation services and to initiate dialogue with local stakeholders. KEVA and SEV team met transport entrepreneurs, community leaders and consumer groups to understand the public transport needs. Based on the evaluation of the trip, SEV is redesigning



the Safa EV to suit the needs of Dharan. The redesigned vehicle is smaller than the current Safa Tempos plying in the streets of Kathmandu.

### ***Dharan Program***

The NCTEA team conducted an exploratory survey in Dharan. The major routes in Dharan were found to be of short distance which is very ideal for EVs. At the moment nearly 500 three wheelers are serving as public transport in Dharan.

On the basis of the findings of the survey, a new model of EVs was designed and produced to meet the market need in Dharan. The ridership numbers in Dharan are less than Kathmandu's so the passenger hauling capacity of EVs has been reduced from 11 persons to nine persons.

Half day stakeholder workshop was conducted in association with Dharan Municipality. The team received an overwhelming support from Dharan municipality during the program. The diverse groups of stakeholders were invited for the workshop. The aim of the workshop was to inform all the relevant stakeholders on feasibility of operation of EVs in Dharan. The workshop also intended for building support from all the relevant stakeholders in this regard. The major conclusions of the workshop were:



- EVs may be an important mean to keep Dharan as a clean and pollution free city in the days to come by replacing existing polluting three wheelers.
- Local entrepreneurs, municipality and civil society are found to be very supportive for EVs.
- The major issue was how to manage existing three wheelers. The entrepreneurs provided two options – either transform existing three wheelers into EVs or provide some incentives or facilities to exchange with EVs.
- The entrepreneurs also demanded for investment schemes for EVs as they claimed that upfront cost of EVs is beyond their capacity. They said local banks and financial institutions should come forward to help local entrepreneurs.
- The eight political parties, municipality, entrepreneurs must sit together to find possible solutions.

The local entrepreneurs and other stakeholders were showing their concern over the technical performance of EVs in Dharan. Dharan being a hilly region, they were assuming that EVs can not perform well in compare to other three wheelers. For this reason, a test drive and technical operation of EVs was carried out in various routes. During the test drive it is found that EVs can be operated in the route without any technical problem. It is better to have AC drive system with regenerative braking mechanism for operations in Dharan.

Journalists are important for mass communication. Awareness and education programs through can reach the mass population through the media. Keeping this in mind the team organized a press meeting in Dharan for local journalist in coordination with Federation of Nepal Journalist, Sunsari Chapter. Nearly 15 journalists were present in the press meet and discussed issues of clean air, fuel crisis and importance of EVs.

Celebrities are other important sector which can help to build positive attitude in community towards EVs by disseminating message and information. The NCTEA team organized an interaction program for participants of Nepali Tara, a famous musical reality show in Nepal Television. During the program participants were informed on causes, impacts and solutions of air pollution. They were requested to relay message on importance of EVs to reduce air pollution and fuel crisis to the local people. The Nepali Tara team was in town to perform in live musical concert. The team arranged EVs for the transportation of participants to the concert site.

The project team also visited local branches of three national banks namely – Nepal Bangladesh Bank, Nabil Bank and NIC bank. The purpose of the meeting was to build up rapport with Banks and assess their perception and interest over investment in EVs sector. Officials from Banks were found to be curious and interested as this was a new sector for them. All of them requested to forward a detail concept paper including financial model and cost benefit analysis. They also requested to approach with central office in Kathmandu in this regard.

### ***Waling Program***

The project team conducted an exploratory visit on August 23 at Waling municipality in Syanga District. The visit basically aimed on assessing feasibility of operation of EVs in Waling. For this purpose, the team surveyed all the possible routes in city, interacted with local transport entrepreneurs and other key persons and organized stakeholders' consultation meeting.

The route survey at Waling indicated that Waling- Jagatbhanjyang and Waling – Helu are the potential routes suitable for EVs operation. These routes are of short distance (15- 25 Km per loop) and low gradient where as other routes are found to be of long distance and roads having high gradient. There is no specific public transport system targeted for these short distances. So there is a possibility to establish a route for EVs that covers inner parts of the city to nearby area.

The team carried out meeting with local transport entrepreneurs on possibility of EVs operation. The meeting concluded that EVs can be operated in inner city and short distance route. They requested for detail financial and technical performance testing of EVs in this area.

Half day workshop was conducted on the theme of “Clean Air: Clean Vehicle”. The main objective of the workshop was to bring all the relevant stakeholders at a common forum to discuss over the possibility of EVs operation in Waling. The workshop also aimed to inform all the relevant stakeholders on issues of air pollution and clean vehicles. Mr. Gopal Raj Joshi, Mr Umesh Raj Shrestha and Mr. Bibek Chapagain presented their papers to facilitate the discussion in workshop.

### ***Pokhara Program***

Being one of the renowned tourist destinations in Nepal, Pokhara was chosen as another potential location for EV expansion. The NCTEA team held meetings with various key persons from Pokhara to assess the possibility of EVs operation. Such persons included ex-mayor, municipality head, and tourisms entrepreneurs to political leader. The meetings also aimed to build rapport with local stakeholders. Mr. Bibek Chapagain made a presentation for members of Public Private Partnership Program of Pokhara Municipality. Pokhara municipality and representatives of Nepal Tourism board were very positive about the idea of introducing EVs in Pokahra. Bibek Chapagain also took part in live radio discussion program aired by Himchuli FM station. The half an hour discussion program was about the issues of air pollution, increasing fuel crisis, and need of EVs for Pokhara municipality.

***Hetauda Program***

Hetauda is another of the potential cities where EVs can be operated. The project team conducted half day stakeholder workshop in association with Hetauda municipality. The participants for the workshop included representatives from association of three wheelers entrepreneurs, environment coordination committee, political parties, civil society, and local journalist. The major conclusions of meeting were:

- EVs are very ideal for Hetauda to cover short distance within city area.
- Hetauda municipality and local entrepreneurs are looking for options to replace existing three wheelers. In this context, EVs can be introduced to replace and displace polluting three wheelers.
- Local entrepreneurs demanded some incentive or facilities for the replacement of existing three wheelers.
- Local entrepreneurs also expressed their interest to operate EVs if they are comparable to exiting vehicles in terms of technical and financial performance. They also suggested that a detail technical and financial analysis of EVs operations in the existing routes of Hetauda.
- They also put forward the option of converting existing three wheelers into electric vehicles.

**Activity D.2: Tourism Industry****Indicator:**

- (1) Number of enterprises-associations facilitated with NCTEA activities such as TA/training
- (2) Number of tourism EVs manufacturer ad commercially used in tourism industry

**Targets:**

- (1) 5 enterprises-associations facilitated with NCTEA activities such as technical assistance-training
- (2) 5 tourism EVs manufactured and commercially used in tourism industry.

**Performance Measures:**

- (1) Counting enterprises and association supported and documented in progress reports.
- (2) Count of modified Safa tempos and other EVs used by tourism tour operators and hotels.

**Summary of Performance:*****Dialogue with NTB, Tourism industry, EVAN, Shree Eco Visionary and Hulas Motors***

NCTEA worked with SEV to pursue the introduction of tourism EVs in Kathmandu and Pokhara. SEV has already completed several vehicles including an electric bus that can be



used by the EV industry. The tourism EV has received the Road Worthiness Certificate from the Department of Labor and Transport Management. NCTEA team facilitated meetings with tourism entrepreneurs like Bharat Basnet and Kathmandu Guest House to pilot electric vehicle operations for escorting tourists. Pilot operation of tourism electric vehicles with The Explore Nepal, demonstration operations in coordination with hotels, development of eco-tour packages and brochures, etc. are some of the activities envisaged by the proposal submitted to GEF-SGP. Partners like NTB, KEEP and Tribhuvan Airport will be used to widely disseminate the initiatives to promote electric vehicles in tourism.

KEVA Secretariat helped formalize a partnership between SEV and Clean Air Network Nepal (CANN) that will help implement the GEF Small Grant Program. KEVA Secretariat suggested that CANN provide project management assistance, policy advocacy and awareness activities to SEV. CANN, which works in air pollution issues, will work on disseminating information to promote EV use in tourism industry, schools and other business.

### *Introduction of Tourism EVs*

With an aim to promote environment friendly transport system in tourism sector of Nepal, electric vehicles designed to cater to various services for tourists were officially launched on the occasion of World Tourism Day, Sep 27, 2007. On this occasion, a free ride on electric vehicles was organized for tourists who arrived at Tribhuvan International Airport. The program was conducted in coordination with Ministry of Tourism and Culture, Nepal Tourism board and the Explore Nepal. Prior to this event, tourism EVs were displayed for journalists during press meet organized by Nepal tourism board on Sep 24, 2007. Because of this some news reports were published in leading national dailies such as the Himalayan Times (Sep 25 Issue) and the Annapurna Post, and the Rising Nepal. Similarly Artha ko Artha, a famous business show on Nepal Television, aired special report on launching of clean vehicles for tourism.



## **IV. USAID Funding and Leveraged Funding of NCTEA**

Under PADCO's Cooperative Agreement for NCTEA, USAID made available \$149,946 in funding and established a leveraged funding requirement of \$155,950.

NCTEA far surpassed the leveraged funding requirement by mobilizing a total of \$233,752. This included contributions from the following sources:

- Private Sector      \$167,693 (PADCO, Local Banks, Nepal Electric Vehicle Industry)
- Government         \$ 2,800 (Nepal Ministry of Transportation and Labor)
- NGOs                 \$ 14,733 (Winrock International)
- Other Donors        \$ 48,526 (UNDP/Global Environmental Facility – GEF)

## V. Management and Administration of NCTEA

The management and administration of NCTEA by PADCO via the KEVA Secretariat was very effective and cost efficient. The conclusions of the final evaluation were the following:

- The KEVA Secretariat was staffed by PADCO and WI and was located in WI Offices in Baneswhor. The staff was high caliber and provided efficient project administration and effective coordination.
- PADCO management maximized stakeholder inputs, utilized transparent annual planning, and leveraged partner funds well about the amount required by USAID.
- Procurement, small grant and financial management were good. WI effectively managed small grants to NGOs and other local organizations to support the implementation of NCTEA activities.
- NCTEA use of workshops to get inputs from stakeholders, to review studies, and to disseminate results was effective. The media coverage of NCTREA events was good. Public acceptance and support for EVs is growing.

## VI. Lessons Learned for Future Programming

### A. Need for Implementation Flexibility Because of Political Turmoil

The NCTEA program activities included training programs in southern plains of the Terai. Political unrest in the Terai has continued even after the peace agreement was reached. The general strikes and shut down of day-to-day activities in the Terai made it very difficult for NCTEA to pursue job placement in industries in the Terai.

Other impacts of this situation included:

- NCTEA training programs were conducted at training centers in Biratnagar and Itahari. The continuous political disturbance in the Terai had an impact on regular training and monitoring of the program.
- The factories in the industrial base of the Terai, which are still recovering from years of conflict faced more than two months of shut downs by strikes and curfews. This effected job placement goals of the program. Continuous disturbances and lack of confidence in potential expansion of industry had a negative impact on the new hires.
- NCTEA program budget had not planned for travel allowance for trainees. After strong persuasion from our local partners we agreed to accommodate the request. This raised unrealistic expectation among the trainees, which can be a challenge when overseas employment placement will be pursued. The trainees most likely will expect assistance in covering the expenses required to cover travel and other prep placement examinations.
- Transportation syndicates are a big challenge to effort of expansion of EV operations in other cities, the transport syndicate control the route permit and do not allow operation of other vehicles in city routes. Even if local government is positive and wants to see the operation of zero emission vehicles the actions of local transport entrepreneurs can be a major impediment.
- Government's subsidy to fossil fuel hurts the further expansion of EV industry because realistic fuel pricing based on the internal process would make EVs even more attractive to a customer.

## **B. Opportunities for Future Programming Based on KEVA-NCTEA Programs**

Since the NCTEA program was funded for only one year, it acted like a pilot project to identify IDPs, organize skills training program, and initiate job placement in coordination with government and local partners. Based on the one-year experience, there is a large opportunity for USAID to continue and expand this type of program on a larger scale to address youth unemployment in urban and rural Nepal.

Relevant information for further work includes the following:

- The training programs made available by government training centers and private training centers do not necessarily cater to the socially and economically marginalized groups. They either lack information on the training program schedules or simply cannot afford to attend. Therefore support like that provided by NCTEA to facilitate access to the training programs and to stimulate job placement needs to be continued. USAID can have an impact by designing one program that supports training and charts the progress of individuals over a 2-3 year period.
- The quality of the training programs run by government need to be improved. Current syllabus and training equipment need to be updated to accommodate the market demand. An example is that welding training classes could be much better if they had Tungsten Inert Gas Welding (TIG) and Metallic Inert Gas Welding (MIG) equipment. Trained welders who are familiar with TIG and MIG welding will be highly sought out technicians in overseas placement agencies.
- In auto mechanics training, operation and maintenance of heavy duty diesel engines are highly desirable. This could be another area of focused investment for USAID. The program would seek out eligible individuals from marginalized groups. Provide them with one or two specific type of training and provide job placement support. This sort of a program would set an example of providing the complete value chain assistance to the beneficiaries.
- KEVA secretariat has assisted an EV company to receive GEF-Small Grant funding to promote EVs in other cities in Nepal and to approach other market segments such as tourism industry, school and business houses. However, more assistance in targeting product development assistance as per the demand of the various market segments (e.g. tourism industry would like to see four wheeler with air conditioning and better handling) is necessary to further build on the good assistance from USAID.
- There is excellent opportunity and demand from several cities outside of Kathmandu Valley (Dharan, Waling, Hetauda, Pokhara) for expanding the EV industry. NCTEA was able to conduct demonstrations in these cities, but the timeframe of the program was much too short to accomplish the establishment of EVs in these cities.

## Annex 1

### **NCTEA Program Success Stories**

The USAID and alliance partner supported Nepal Clean Transport Employment Alliance program surpassed training targets and objectives. The program trained 22 more IDPs than the initial target and exceeded the percentage of women candidates to be trained during the program. The success of the program was partly because of good partnership with government and local non government institutions. Coordinating training and job placement programs with Electric Vehicle Association of Nepal (EVAN) helped in organizing focused training programs and immediately providing jobs to the newly trained candidates. In addition to the general success of the program there are two specific success stories that need mentioning when discussing NCTEA programs success.

#### **1. The Expansion of Bank Financing for Drivers to Buy Electric Vehicles**

Kathmandu Electric Vehicle Alliance project, which was supported by USAID and alliance partners, initiated a promotion of women owner-drivers of Safa Tempos (electric vehicles that provide public transportation in Kathmandu) through affordable bank financing. Although this initiative came to being during the last two quarters of the KEVA project, some of the NCTEA project goals designed to take advantage of the bank financing available to Safa tempo drivers. NCTEA program trained more than 70 Safa tempo drivers who are now can qualify for bank financing to own the vehicles they drive.



The bank financing program was initiated by KEVA project with Bank of Kathmandu, a commercial bank, and provided 20 women drivers with bank loans through lease purchase agreement. The initiative included a guaranty fund to mitigate default risks. The bank has confirmed that it has now provided loans to 24 women drivers and the repayment of these loans has exceeded the banks expectations. Furthermore, the bank's loan service has been extended to cover the financing of the Safa Tempo batteries. In addition, the bank has extended loans to cover 20 more drivers who are aspiring to be owners of the vehicles. The expansion does not include any guaranty fund as in the previous program. This is an example of an initiative by a development project that has been accepted by the bank as a sustainable business model that can be further expanded and replicated. The total investment and financing revenue has already exceeded USD 200,000.

#### **2. Sustaining Work to Expand Electric Vehicles Outside of Kathmandu Valley**

NCTEA supported Shree Eco Visionary (SEV) to develop a proposal on “Reducing Transport Sector CO2 emissions through Market Segment and Geographical Diversification of Electric Vehicles”. This proposal was submitted to Small Grants Program (SGP) of UNDP-GEF. SGP approved the project and signed an agreement to provide US\$48,526 to help implement the program. The total project implementation cost exceeds US\$382,000.

The project plan included the development of pilot operation of improved Safa Tempos in Waling (Syangja) and Dharan, which are towns in the eastern and western part of the country respectively. SEV is developing 20 new and improved Safa Tempos (10 each for Waling and Dharan) with financing support from banks. These electric vehicles will be operated with strong involvement of local entrepreneurs. Owner-driver concepts will be promoted and the local conflict-displaced persons will be trained as electric vehicle drivers and technicians.



The project also has demonstration plans to promote clean transport in schools, offices and tourism industry. Support from GEF is being used for workshops, trainings, studies, travel, publications, etc.

NCTEA supported SEV in setting up the coordinating team and providing technical support during the initial social mobilization efforts. This is a success story because NCTEA project was able to develop a project concept, which was consistent with the work plan, and mobilize diverse local partners to attract donor funding. The partners in the project include Shree Eco Visionary, Clean Energy Development Bank, The Explore Nepal, and the Clean Air Network Nepal (CANN). After the completion of the NCTEA program, SEV and CANN have continued working to implement the geographic and market segment expansion of electric vehicles.

**Annex 2** NCTEA Performance Monitoring Indicators and Targets (October 1, 2006- September 30, 2007)

Performance Indicator	Unit of Measurement	Data Source	Baseline and Targets	Achieved Target	Comments
Total number of IDPs trained in skills training (completing /graduating)	Number of IDPs	NCTEA reports, training progress / graduation reports,	Baseline: 0 Target: 150 persons (30% women)	- 172 trained - 64 women (37%) - most were selected based on categories, displaced by internal conflict, flood displaced, domestic violence victims, human trafficking victims.	Exceeded target and emphasize women participation. Six women completed gen. mechanical training for the first time in training center history.
Total number of training centers / NGOs supported to improve their training capacities.	Number of institutes	NCTEA and partners progress reports	Baseline: 0 Target: 3	3 training centers were supported during this program	- Biratnagar General Mechanic Training center - Itahari Auto Mechanic Training Center - EVAN training program
Number of skill training session conducted	Number of training	Partners progress reports	Baseline: 0 Target: 5	- Supported 7 skill training sessions during the project period	- General mechanic training - Auto mechanic training -Driving training -EV drivers training session 1&2 -EV technician training 1&2
Number and Percentage of successful trainees	Number and percentage	Field surveys and partner discussion.	Baseline: 0 Target: Number: 75	- 63 trainees are already employed - Another 61 are in	- 37% employed - 35% in employment pool

employed in the industry.			Percent: 50 % trainees	an employment pool with EVAN - 28 general mechanic trainees received OJT - ABC/Nepal is following up with job placement for Biratnagar training	- 16% received OJT opportunity - Follow up with ABC/Nepal planned
Number of owner drivers operating vehicles in streets of Kathmandu.	Number	Industry survey, EVAN reports	Baseline: 15 being financed by BOK  Target: 10 additional	- 9 owner driver received financing from BoK - BoK and NEVI have agreement for 20 more.	Bank financing to owner drivers has been adopted by BoK. If the EV industry approaches BoK or other banks with a good business plan this coverage will grow further.
Number and amount of loans facilitated for owner driver form formal financial institution	Number of loans and amount of loans	Partner's training / financial progress reports	Baseline: loan-15, amount.-.....  Target: loan -25 Amount- additional 20, 00,000. Rupees.	- 9 loans approved - Additional amount more than 2,500,000 - Agreement for 20 more loans with Estimated loan amount 7,000,000	number are based on confidential information provided by Bank of Kathmandu (Bok)
Percentage of trainees satisfied with training program	Percentage	Exit surveys	Baseline: 0  Target: 75%	- has exceeded target	- Results from EVAN training is yet to come of the response was very positive. - The auto mechanic trainees suggested training should have

					included better equipment and latest engine designs.
Number of activities implemented jointly.	Number of joint activities	NCTEA progress reports	Baseline: 0 Target: 5	- 7 joint activities with multiple partner organizations	<ul style="list-style-type: none"> <li>- Auto mechanic training</li> <li>- General mechanic training</li> <li>- EV driver training session 1</li> <li>- EV technician training session 1</li> <li>- EV driver training session 2</li> <li>- EV technician training session 2</li> <li>- GEF small grant proposal</li> </ul>
Number of studies conducted.	Number of enterprises receiving TA and/Or training from NCTEA	NCTEA implementing partners progress report	Baseline: 0 Target: 3	- 3 studies were initiated.	<ul style="list-style-type: none"> <li>- EV battery charger and battery maintenance training manual</li> <li>- Concept study on Biratnagar-Dharan Trolley bus</li> <li>- Study on oversea employment opportunities for Nepali workers</li> </ul>
Number and amount of loan provided to IDPs to establish business and for foreign employment	Number of loans and amount of loans	Partner's financial progress reports	Baseline: loan-15, amount-..... Target: loan -45 Amount- additional	- bank financing available to IDP owner drivers after 1 year of driving experience	- Banks and EV industry prefer at least 1 yr experience before including in owner driver program

			30,00,000. Rupees.	- ABC/Nepal following up with trainees on enterprise set up	- Terai disturbance through the year was a challenge to develop the placement in foreign employment opportunities
Number of in-use electric vehicles)	Number	EVAN status report and DOTM registration records	Baseline: 630 Target: 650	- 14-15 increased - NCTEA program initiated EV expansion will add 20-30 more vehicles	-government policies and transport syndicates are obstacles to expansion of EVs - government focused more on transitional politically issues
Number of activities jointly implemented with EVAN and GoN	Number	NCTEA and partner progress reports.	Baseline: 0 Target: 4	- 4 trainings with EVAN -2 trainings with GoN -Joint meeting between EVAN & Nepal Electric Authority	- EV driver trainings 1 & 2 with EVAN - EV technician trainings 1&2 with EVAN - General mechanic training with government training center -Auto mechanic training with government training center
Number of enterprises/ associations facilitated with NCTEA activities such as TA / training.	Number	NCTEA progress and activity report, business association report	Baseline: 0 Target: 5	NCTEA program worked 9 different organization during the project implementation	- ABC/Nepal - Vocational Skills Training and Development Center - EVAN - Shree Eco Visionary - The Explorer Nepal - Bank of Kathmandu

					<ul style="list-style-type: none"> <li>- Butwal Power Company</li> <li>- Clean Air Network-Nepal</li> <li>- Clean Energy Development</li> </ul>
Number of tourism EVs manufactured and commercially used in tourism industry.	Number	Partner reports and field observation	Baseline: 0 Target: 5	<ul style="list-style-type: none"> <li>- 5 vehicle are being initiated for the tourism industry</li> <li>- service launched on Sept 27<sup>th</sup> on world tourism day</li> </ul>	<ul style="list-style-type: none"> <li>- Converted Mitsubishi van</li> <li>- EV for Dharan</li> <li>- 2-3 new EVs for the tourism industry</li> </ul>