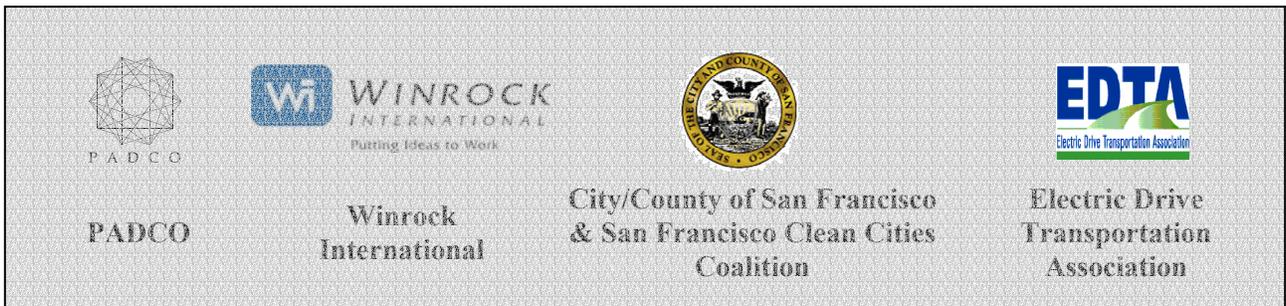




# KEVA Annual Report for 2003



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**USAID/Nepal Cooperative Agreement No. 367-A-00-02-00203-00 with PADCO**

## ***KEVA First-Year Highlights***

It has been a very eventful and exciting year for all of us associated with KEVA. Here is a brief summary of the highlights of the first year.

### **Creation of KEVA**

PADCO saw an opportunity for establishing a USAID-support development alliance in Nepal and asked USAID/Nepal if it would support a proposal to the Asia and Near East Bureau Clean Air Initiative (CAI). PADCO formed an alliance with Winrock International (WI), the San Francisco Clean Cities Coalition (SFCCC), and the World Environment Center (WEC) to prepare a proposal, which was submitted by USAID/Nepal to the CAI. CAI funding was approved and given to KEVA through a USAID/Nepal Cooperative Agreement effective October 1, 2002.

### **Planning and Interaction with Stakeholders**

With the creation of KEVA, PADCO undertook planning and interaction with stakeholders. A first meeting of the founding partners was held in Washington, DC, on October 9th, after which PADCO sent staff to Nepal to set up the KEVA office with Winrock and to meet with stakeholders in Kathmandu. A planning meeting with KEVA partners and stakeholders was held on December 4th at the Shanker Hotel. This initiated KEVA's approach of using workshop discussions as a tool for active stakeholder participation. Using the inputs of the planning workshop, KEVA developed a first-year work plan with 18 activities, which was approved by USAID in December 2002. This was followed by a Monitoring and Evaluation Plan, which was approved by USAID in February 2003.

### **Acting on Better Knowledge**

The first-year approach of KEVA was to establish a better knowledge base of major areas that affect the electric vehicle (EV) industry—government policy, public awareness, and EV technology. KEVA funded two major studies: (1) *HMG Policies Affecting the EV Industry*, undertaken by Nepal Environmental & Scientific Services (NESS) and (2) *Health Impacts of Kathmandu's Air Pollution*, undertaken by Clean Energy Nepal (CEN) and Environment and Public Health Organization (ENPHO). Second, KEVA engaged technology experts from partners—SFCCC, the Electric Drive Transportation Association (EDTA), and Ford Motor Company. Workshops were organized to discuss draft reports, get stakeholder inputs, and disseminate the results.

### **Results of the First Year**

I am proud to report that the results presented in this annual report have surpassed the targets set with USAID. The KEVA program areas have been appropriate and complementary in producing results. The KEVA role and alliance approach have been well accepted and appreciated by Nepalese organizations. The Alliance membership is active and growing. The decline of the EV industry has been stopped and prospects for new expansion are good. The Kathmandu-Bhaktapur electric trolley has been reactivated with limited service that began on September 1, 2003. Finally, USAID has provided additional funding and extended its support for KEVA through September 30, 2005.

I am satisfied to see good progress and I am excited about continuing to be able to work for at least two more years with a dedicated group of people to promote electric vehicle technologies.

Ben Stoner, KEVA Program Director



## *Catalyzing an Alliance*

### **KEVA Objectives**

- Mobilize broad support for EVs and the EV industry through KEVA with inclusion of additional national, donor agency, and U.S. partners
- Establish U.S.-Nepal partner relationships for EVs (government and private) between Nepalese and U.S. partners

KEVA is planned to be dynamic and expanding. Communications and outreach to new potential members, as well as cooperation with existing members, are important responsibilities of all the partners. The communications and outreach are to be conducted in both Nepal and the U.S. Support will be sought from many sources, including the environmentally conscious private sector and NGOs that operate in Nepal.

### **First-Year Activities**

- Inclusive broad-based work planning
- Work plan as integrative guide for action
- Coordination with partners and members
- Outreach to new potential members
- Leverage funds to support EV programs

### **KEVA Results**

The First-Year Evaluation of KEVA concluded the following.

- KEVA has provided new energy and visibility in support for the EV industry.
- Government, EV industry, and NGO members appreciate the coordination of KEVA.
- The KEVA Web site is a good tool for outreach and dissemination of KEVA publications.
- KEVA undertook 18 activities during the first year and achieved leveraging from non-U.S. government funds of approximately 100%.
- In addition to planned partner resources, KEVA has leveraged funds of members, including the Electric Vehicle Association of Nepal (EVAN), Clean Energy Nepal (CEN), Environment Sector Programme Support (ESPS) Project with Ministry of Population and Environment (MOPE), and the Himalayan Light Foundation (HLF).
- The structure of KEVA has been clarified with categories of members and criteria in order to better expand the Alliance locally and to monitor contributions of members. (See page 7 for the KEVA Framework.)

### **KEVA Promotes Partnerships between:**

- SFCCC and Kathmandu Valley Municipalities
- Pacific Gas and Electric and the Nepal Electricity Authority
- Electric Drive Transportation Association and Electric Vehicle Association of Nepal
- Winrock International and the Nepal Coalition for a Clean Environment

## *Policy and Regulatory Dialogue*

### **KEVA Objectives**

- Establish an understanding of Nepalese government policies and regulations affecting the EV industry, air pollution, and public health, and develop options for change
- Facilitate a dialogue between government and EV stakeholders on policy and regulatory changes to strengthen the EV industry, reduce pollution, and improve public health
- Support adoption of policy/regulatory changes by national government and municipalities

Because HMG policies toward the EV sector have been inconsistent, KEVA support was targeted to encourage formulation of positive regulations, strengthening of enforcement, and development of other forms of non-polluting transportation. KEVA support is needed to study the feasibility of new approaches and to stimulate the participation of EV industry associations and public interest groups in policy dialogue for clean air with HMG and municipal governments.

### **First-Year Activities**

- Analysis of HMG policies and regulations affecting EVs
- KEVA EV Policy Workshop
- Funding for Electric Trolley Expansion Study
- Proposal for Comprehensive Transportation System Management Plan
- Baseline Study of Health Impacts of Transportation
- Planning for EV Study Tour to San Francisco

### **KEVA Results**

The First-Year Evaluation of KEVA concluded the following.

- A comprehensive analysis of policies related to EVs was successfully completed for KEVA by Nepal Environmental & Scientific Services (NESS) and disseminated through a policy workshop with 50 participants and through its Web site.
- KEVA held a policy workshop on June 12th with 50 participants from the government, EV industry, and NGOs.
- KEVA's approach of baseline analysis, stakeholder workshops, and one-on-one meetings with key HMG officials has been effective in advocating policy change. HMG approved five key policy changes advocated by KEVA in the annual budget.
- For three-wheel electric vehicles (*safa tempos*) HMG agreed to remove registration restrictions and provide lower off-peak rates for electricity to charge batteries.
- For electric trolleys, HMG agreed to exempt customs duties for the coming five years on the import of electric equipment and vehicles, revive the Kathmandu-Bhaktapur trolley line with the involvement of the private sector, and study the feasibility of new electric trolley routes.
- KEVA needs to follow up to encourage implementation of these policy changes. KEVA should prepare policy recommendations to distribute to its members and the general public to advocate policy implementation.

## *Public Awareness and Advocacy*

### **KEVA Objectives**

- Establish an Electric Vehicle Information Resource Center that operates at the KEVA Secretariat
- Facilitate EV public awareness through pro-environment and public health groups, like CEN, ENPHO, university institutes, and others

Increased public awareness of the positive impacts of EVs for reducing negative health impacts and related costs of air pollution and the strengthened involvement of EV operators in public debate will promote the growth and effectiveness of the EV business.

In addition to general public awareness efforts, the Alliance forges partnerships with local NGOs to enhance the existing awareness campaigns and will initiate a process of public discussions on new regulations and policy decisions being made on the transportation sector in Nepal. The EV entrepreneurs' association will be supported through capacity building to have greater collective inputs into public policy.

### **First-Year Activities**

- Outreach to Kathmandu tourism industry
- Awareness of health benefits of zero-emissions EVs
- Resource Center for NGO public awareness activities
- Use of data from municipal air monitoring

### **KEVA Results**

The First-Year Evaluation of KEVA concluded the following.

- KEVA has supported public awareness through the Coalition for a Clean Environment (CCE), a brochure for tourists on *safa tempos*, and a public awareness and social marketing workshop.
- KEVA has established an EV Resource Center at its Secretariat Office. The center has a small library with basic information and a computer for accessing information on the Internet.
- KEVA has also established its own Web site ([www.keva.np.org](http://www.keva.np.org)) to disseminate KEVA's publications and other information on Nepal's EV industry.
- KEVA has invited NGOs, university institutes, and others to participate in KEVA-sponsored workshops and meetings.
- KEVA has distributed all its studies and papers on air pollution via its Internet Web site.
- KEVA also supports the environmental newsletter published by CEN.
- KEVA's activities for public awareness have been effective. In year two, KEVA should broaden these to include more press releases for journalists and activities for other media, such as radio, television, and billboard advertising.

## *Technology and Business Promotion*

### **KEVA Objectives**

- Increased knowledge of and access to improved technology by the EV industry
- EV businesses run in a more effective and efficient fashion
- Quality and quantity of EV support services (battery charging and vehicle maintenance) are improved/increased

KEVA encourages EV businesses and entrepreneurs to adopt the most appropriate business models for the growth of EV industry. Most of the EV businesses are run in a traditional way. KEVA strives to help reduce operating costs and consolidate the industry, as well as to make EV business more viable for institutional financing. KEVA is also exploring technological options to improve the battery life and performance and to adapt EV technology to other vehicles, for example, four-wheel mini-buses.

### **KEVA Results**

The First-Year Evaluation of KEVA concluded the following.

- KEVA provided a consultant to introduce new technologies for clean transportation and organized a workshop to discuss and disseminate information.
- KEVA assisted EVAN in writing proposals and obtaining assistance from the Clean Vehicle Promotion Fund (CVP) of ESPS/MOPE.
- KEVA organized a study tour with EDTA and San Francisco for EV industry and government representatives to travel together to attend the 20th Electric Vehicle Symposium in Long Beach and to visit the Clean Air Program in San Francisco. The KEVA Secretariat is working on completing the baseline analysis of the current business model.
- A consultant has prepared a new business model for battery financing, and KEVA is organizing a meeting to discuss the model with stakeholders.
- Approximately 2,400 two-cycle three-wheelers will be banned from Kathmandu as of September 2004. KEVA plans to work with ESPS/MOPE on a plan to market EVs to the owners of banned two-cycle three-wheelers.
- Batteries remain an important area for EVs and EVAN, both technically and financially. KEVA should follow up on the recommendations of both consultants during its second year work plan.
- The lifting of restrictions on registering new EVs has created the opportunity for developing a new generation of *safa tempos*. KEVA will work with the ESPS/MOPE proposed program for the development and production of 30 state-of-the-art *safa tempos*.

### **First-Year Activities**

- Re-Activation of Kathmandu-Bhaktapur Electric Trolley
- Demonstration of new technologies
- Analysis of batteries used by electric tempos
- Development of battery leasing systems
- Analysis of technology improvements for electric tempos
- Support to EVAN to access ESPS Clean Vehicle Fund
- Business management assistance to EV owners
- Access to off-peak loads for battery charging

## *KEVA Administration and Management*

### **Evaluation Findings**

- The KEVA Secretariat is staffed by PADCO and WI and is located in WI Offices in Baneshwar. This arrangement has provided efficient project administration and effective coordination.
- KEVA should move forward to hire an Assistant Coordinator and use more program staff time of WI to handle the large workload that success has created.
- KEVA's use of workshops to get inputs from stakeholders, to review studies, and to disseminate results has been effective. KEVA should improve the media coverage of workshops through better press releases.
- Procurement, small grant, and financial management have been good.
- Expenditures of USAID Cooperative Agreement funding and of partner matching funds are on track and expanding as the program grows and activities increase.
- KEVA matching funding has exceeded plans. However, KEVA could show even greater matching and leveraging of funds by clarifying the roles of partners and members and by accounting and reporting the contributions of each.
- KEVA has saved Cooperative Agreement funds on international travel by taking advantage of travel to Asia funded by other sources. The second-year work plan should consider how best to reprogram these savings for increased program impact.



## ***KEVA Membership Framework***

### **1. Managing Partners**

#### **Definition**

Partners are the funding and decision-making parties for KEVA. They use their resources and obtain resources from others and then work together to manage these combined resources to implement activities that support the objectives of KEVA.

#### **Organizations**

- PADCO
- Winrock International
- San Francisco Clean Cities Coalition
- Electric Drive Transportation Association
- World Environment Center - inactive

#### **Qualifying Criteria**

- Institution with mandate and resources to support the goal of reduced air pollution
- Positive record of environmental and social due diligence
- Letter of commitment to support KEVA
- Participation in annual work planning
- Resources provided to support work plan activities

### **2. Donors**

#### **Definition**

Donors are international and national development assistance agencies that provide support for the activities of KEVA. They may provide direct funding support to KEVA through KEVA partners or indirect support through other organizations and activities that contribute to KEVA's goal and objectives.

#### **Organizations**

- USAID – Cooperative Agreement for KEVA
- DANIDA – Environmental Sector Programme Support Project
- UNDP – Global Environmental Facility
- Asian Development Bank
- European Union
- British Embassy Kathmandu
- Embassy of People's Republic of China
- Royal Norwegian Embassy
- Embassy of Japan

#### **Qualifying Criteria**

- Support the objectives of KEVA
- Funding (direct or indirect) in support of KEVA activities
- Participation in some KEVA activities

### 3. Association Members

#### Definition

Association members are legally established associations that represent their member organizations for KEVA. They may obtain support under KEVA's work plan for activities that coincide with their association's mandate and activities. They also contribute matching funds to complement and extend the activities that are supported by KEVA.

#### Organizations

- Electric Vehicle Association of Nepal
- NGO Coalition for a Clean Environment

#### Qualifying Criteria

- Association or project with mandate and resources to support the goal of reduced air pollution
- Positive record of environmental and social due diligence
- Letter of commitment to associate with and support KEVA
- Participation in KEVA planning and technical workshops
- Matching resources provided for grant support received from KEVA

### 4. Members

#### Definition

Members are legally established organizations that support the objectives of KEVA and assist with some KEVA work plan activities. They may obtain support from KEVA for activities that coincide with their organization's mandate and activities. They may also contribute matching funds to complement and extend activities that are supported by KEVA.

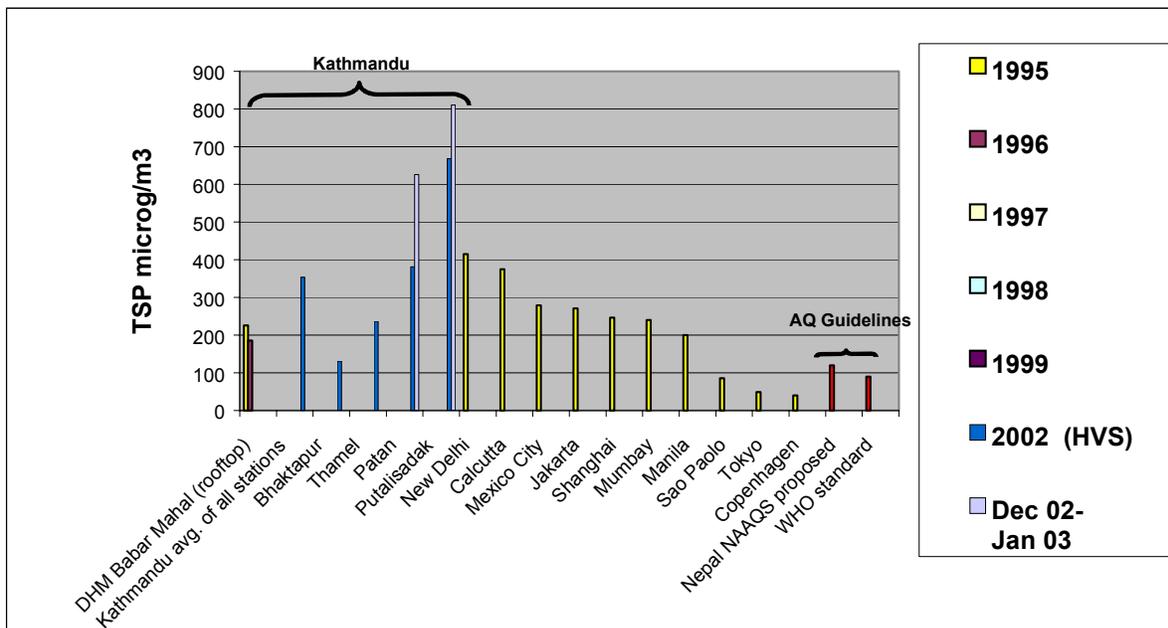
#### Organizations

- HMG – Ministry of Population and Environment, Ministry of Labor and Transportation Management, Nepal Electricity Authority
- Municipalities of Kathmandu Valley
- Environment Sector Programme Support Project, Clean Transportation Component under the Ministry of Population and Environment
- NGOs
- Private Sector

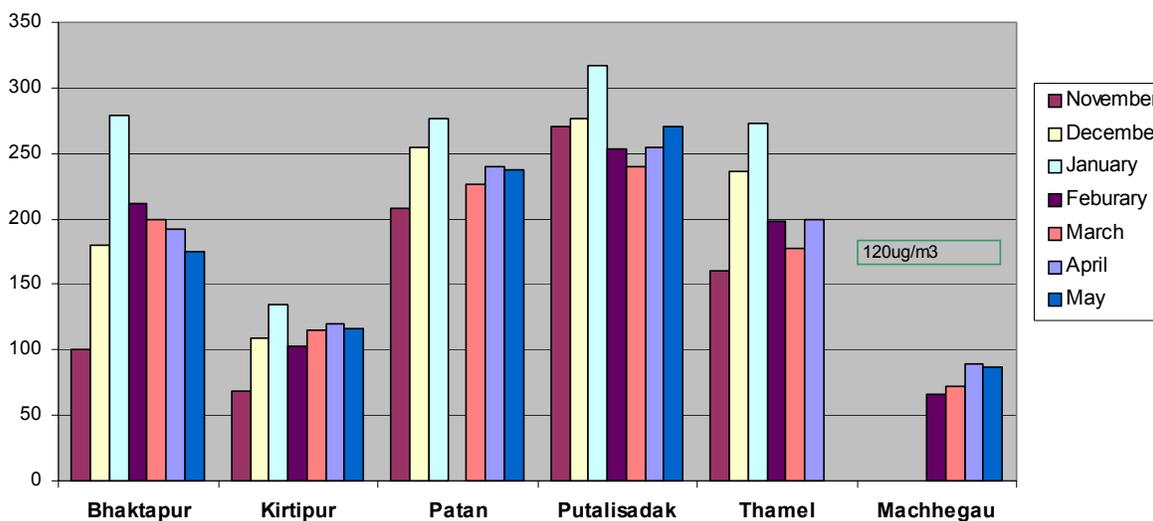
#### Qualifying Criteria

- Support the objectives of KEVA
- Positive record of environmental and social due diligence
- Participation in KEVA activities relevant to the organization
- Matching resources provided for grant support received from KEVA

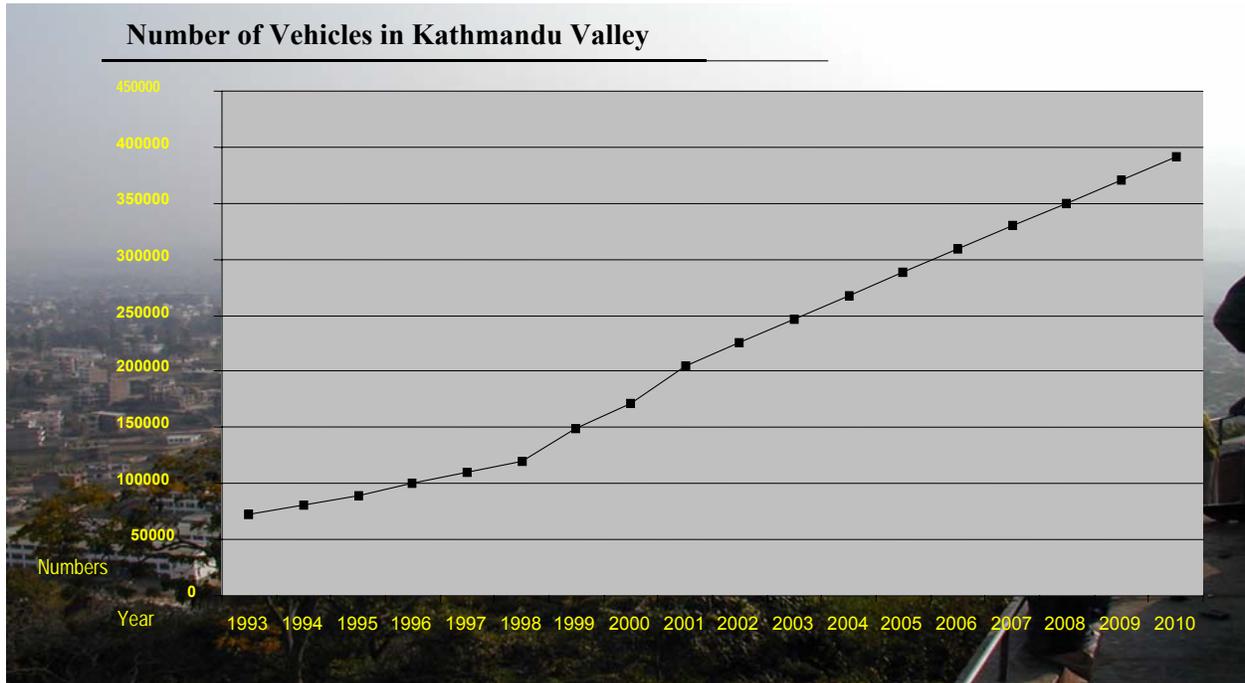
### *Air Pollution in Kathmandu Valley in Comparison to Other Major Cities*



The residents of Kathmandu Valley are now suffering from more air pollution in the form of total suspended particulate (TSP) matter than most anywhere in the world. The amount of small particulate matter (PM) 10 microns or smaller has been growing. These small particles are the worst for human health, and the major source is vehicular exhaust. Diesel vehicles are the worst polluters. The monthly average PM10 level from November 2003 through May 2003 at Kathmandu Valley monitoring stations is shown below. These levels far exceed Nepal’s ambient air quality standard for PM10 of 120 ug/m3.



## Number and Types of Vehicles in Kathmandu Valley



The number of vehicles on the streets of Kathmandu Valley has been increasing rapidly, whereas the number of EVs traveling the streets of Kathmandu increased until 2000 and then stopped due to an unfavorable policy, technology, and business environment. However, the EV industry is expected to grow in the future in face of recent improvements in policy, regulation, and business environment, thanks in part to the efforts of KEVA and its local partners in promoting the EV industry.

### EVs (*Safa Tempos*) in Relation to Other Vehicles in Mass Public Transport Service in Kathmandu Valley

Type of Public Transport	Total Routes	No of Vehicles	% Of Vehicles
Bus and Mini Bus	21	1896	46.46
Micro Bus Ring road and outside	4	207	5.07
Micro Bus Ring road and inside	18	624	15.29
EVs	39	544	13.33
Tempo/LPG	41	528	12.94
Tempo/Petrol	36	282	6.91

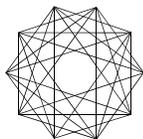
Source: Department of Transport Management, 2003



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