



Courtesy Climate Solutions Road Tour

Solar Punch, a solar-powered band, tours Indian cities to show that solutions to climate change are here, and now.

Green Melodies

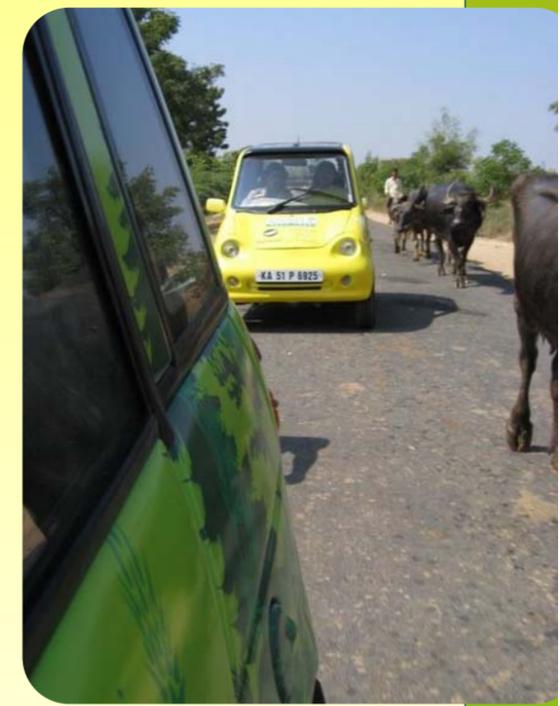
By RICHA VARMA

Making a movie about trash pickers might not be everyone's idea of a perfect honeymoon, but that is what James Dean Conklin and his wife, Elisa Zazerra, did in Cairo, Egypt in January 2008. Conklin, an American animation designer and musician, says the film, *Environmental Circus*, was the couple's way of sharing their passion for the environment at possibly the most important time in their lives.

"We are passionate environmentalists and are just now coming into our own as far as how to commit to the action. By sacrificing a nice hotel and a sweet spot in Europe in exchange for an experience with the *zabaleen*, that was as enriching to us as a new couple as anything else in the world," Conklin says. The *zabaleen*, an Egyptian Arabic word used for "garbage collectors," recycle whatever is usable and have been part of Cairo's waste management system for decades.

This January, Conklin was in India spreading the same zeal for the environment in the month-long 2009 Climate Solutions Road Tour with Solar Punch. They believe they are the world's first exclusively solar-powered band, co-founded in 2007 by Conklin and Alan Bigelow in New York. Bigelow is a full-time research scientist at Columbia University in New York.

Sponsored by grants from the U.S. State Department and more than 50 American and Indian companies, groups and individuals, the eco-friendly tour kicked off on January 3 in Chennai and



Above: Members of Indian Youth Climate Network, who teamed with Solar Punch for the road tour, in a REVA car.

ended on February 5 in New Delhi. Art, dance, music and workshops conveyed the message of climate change.

Solar Punch teamed up with young Indian and American entrepreneurs and environment students of the New Delhi-based Indian Youth Climate Network for the 3,500-kilometer, "low-carbon" expedition to 15 cities. They traveled in three solar-powered, electric plug-in REVA cars and a bio-fuel bus run on vegetable oil and jatropha, oilseed plant.

Top: Some of the stops on the Climate Solutions Road Tour of India. Above: Alan Bigelow (from left), James Dean Conklin, Frank Marino and Andy Mattina of Solar Punch perform at the Bandra Fort in Mumbai during a music festival to celebrate the completion of 2,000 kilometers of their 3,500-kilometer road tour.



Photographs courtesy Climate Solutions Road Tour



Courtesy Climate Solutions Road Tour



AJIT KUMAR



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Above: T.H. Culhane inspects a solar reflector dish in Valsad, Gujarat.
Top right: Drummer Frank Marino at the India Habitat Centre in New Delhi.
Right: Culhane (left) and James Dean Conklin at the India Habitat Centre.

But behind the fun and entertainment was the grave issue of climate change. “Along with the music and the dance, the serious message must also be available,” says Kabir Khan, a Climate Network member on the tour.

“Everybody is aware that environmental issues are very important but people don’t make that connect between their own behavior and the greater good. When it comes to being personally inconvenienced, or having to give up something, I think there are very few people out there who would be willing to make that change. That is what we were planning to change,” Khan says.

So instead of being a regular tourist, staying at a nice hotel and checking out the Taj Mahal, Conklin says they went to villages and witnessed how cow dung was the central part of agriculture in many rural communities. Among their memorable experiences was seeing how mixtures of cow dung, cow urine and sugarcane extract were used as pesticide. “The crop yield seemed as vibrant and bountiful as any I’ve witnessed,” says Conklin.

Solar Punch is doing its part to save electricity by using the sun to power its instruments. Any energy they need to amplify their instruments—guitars, bass, keyboards, microphones—comes directly from solar power via their portable solar energy station. With a full solar-charge, they can perform six hours at a stretch—at night, indoors and even when it’s cloudy.

“We have an overall large battery that we try to keep charged,” says the guitarist, Paul Lincoln. “We use a foldable solar panel that right now is available only in the U.S. but we hope will be widespread soon. It’s a little more costly than the fixed, crystal solar panels you usually see, the blue ones. What you get when you pay a little extra is portability and we can take our show anywhere.”

He explains that they use simple, off-the-shelf electronic devices to “take the energy from the panel and shove it into a battery. So we can take the sunshine and play during the day directly from the sun with our panels or if we are going to play in the evening, store the sun and play it later.”

Besides performing original numbers such as *Plastic* and *Spinning Around*, Solar Punch bonded with the audience by performing hit A.R. Rahman numbers *Yun hi chala chal* from the movie *Swades* and *Ghanan ghanan* from *Lagaan*, which had environmental references.

“The sun is the simplest way for us to connect and demonstrate that there are some immediate solutions to the environ-

ment,” says Conklin. “We hope that Solar Punch gives inspiration, but we really hope we are not unique. We hope there are other musicians and entertainers that are going to use green methods to celebrate and communicate their art.”

According to the United Nations Framework Convention on Climate Change the

First U.S. Solar Energy Trade Mission to India

The Barack Obama administration’s first trade mission to India targeted trade in solar energy technologies during a late March tour to New Delhi, Jaipur and Ahmedabad.

The delegation included solar photovoltaic and solar project developers, who met with government and industry representatives in search of potential Indian business partners. The meetings focused on using solar energy for utilities, that is, production of consumer power on a large scale.

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average Arctic temperatures have increased at almost twice the global rate in the past 100 years. The Intergovernmental Panel on Climate Change says warming of the climate system is clear from the rise in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level. The panel also predicts that by the 2050s, freshwa-

Energy Saving at the U.S. Embassy and Consulates in India

President Barack Obama’s different approach to climate change has kindled new hope among environmentalists. The Obama administration is already off to a green start with a pledge in his first State of the Union address to invest \$15 billion a year in technologies like solar, wind, advanced bio-fuels and more efficient vehicles.

Obama’s American Recovery and Reinvestment Plan aims at modernizing more than 75 percent of federal buildings and improving energy efficiency through methods such as installing solar panels on roofs to thicker windows and reducing the need for heating in winter and cooling in the summer.

At the U.S. Embassy in New Delhi and its consulates in Mumbai, Kolkata and Chennai, saving energy is already a priority.

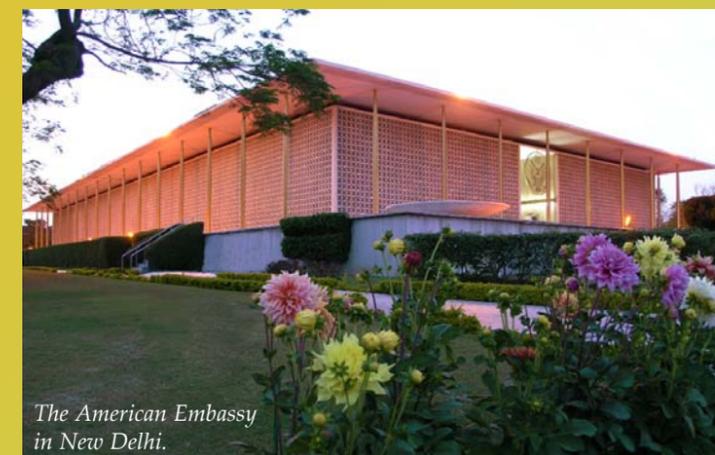
Starting with the easiest tasks—like replacing incandescent bulbs with long-life fluorescents and electric water heaters with solar heaters—the embassy has identified practical ways to cut energy use since 1995. More can be done; those who manage the U.S. government owned and leased buildings in India are committed to move forward on conserving energy and water, limiting pollution, and recycling where possible, in accordance with the president’s plan.

Now, instead of running constantly, air conditioning operates about 10 hours per day, five days a week at the embassy. Electric air-conditioning chillers have been replaced with environment-friendly chillers that run on natural gas and diesel, the latter being used only in the case of emergencies. They are free of chlorofluorocarbon, which is connected with thinning of the protective ozone layer.

In 2005, a project to dig eight pits to harvest rainwater was completed at the embassy in New Delhi. The local Central Ground Water Board says that about 9.1 million liters of water are being collected in the pits each year. This represents about 40 days of the embassy’s water needs.

The embassy has also replaced outdated thermostats with a new digitally controlled network that allows building temperatures to be programmed. Motion sensors switch off lights when rooms are empty.

Other measures are low-tech, but effective. Windows are caulked, or made airtight, to keep rooms cooler. Sprinklers water the landscape only



The American Embassy in New Delhi.

at dusk and dawn—when evaporation losses are lowest.

Nearly 120 solar heaters have been installed in U.S. diplomatic residences, reducing carbon dioxide emission by 6.15 tons every year.

The U.S. Consulates in Chennai, Kolkata and Mumbai echo similar green stories.

Chennai

- Chennai installed 97 solar water heaters in 2000.
- More than 400 incandescent bulbs have been replaced with energy saving bulbs.
- Chilled water pumps, tower fans, roof lights and split air conditioners are switched off during non-occupancy hours.
- Rainwater harvesting has been provided in most staff residences.

Kolkata

- In Kolkata, conventional lighting systems have been replaced with hi-tech sensor lighting.
- Electric water heaters have been replaced with solar water heaters in diplomats’ residences.
- Conventional ballasts, the devices used to stabilize the flow of current in lamps, have been replaced by electronic, energy-saving ballasts.
- Old, underground aluminum cables have been replaced with copper cables to save energy.
- The combined measures have saved the consulate 12 percent of its energy consumption annually.

Mumbai

- The consulate in Mumbai turns off electrical units during non-occupancy hours.
- The central water heating system was turned off after installing of solar water heaters.
- 500 electronic ballasts have been installed in offices.
- Incandescent bulbs have been replaced with compact fluorescent lights in many residences.

—R.V.

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ter availability across much of Asia, particularly in large river basins, is projected to decrease.

The good news, suggests the United Nations report, is that the technology that could stabilize and even reduce greenhouse gas levels within a few decades already exists. The problem is installing and paying for more efficient procedures

for burning fossil fuels and for using renewable energy sources. This is often politically and economically difficult.

“Climate solutions are ancient and a lot of times we just have to rediscover this stuff,” says Conklin, as he recalled the band’s tour of an old area of Ahmedabad, in Gujarat. The inner city, built in the 1600s, with narrow streets,

but open roofs and balconies, had natural air, Conklin observes. “So even on the hottest days they had these cool rooms that were open to the sky. We shared dinner in one of these dwellings looking up at the stars.... It was amazing to see that that idea of working with the environment had been in place for 400 to 500 years.”



For more information:

- Solar Punch
http://www.solarpunch.org/solar_home/climate_solutions_road_trip.html
- United Nations Framework Convention on Climate Change
<http://www.un.org/climatechange/background/ataglance.shtml>
- The Intergovernmental Panel on Climate Change
<http://www.ipcc.ch/>