

## **POLLUTANTS: 6 nations tackle a far-flung and dirty array of problems** *(Friday, February 17, 2012)*

**Lisa Friedman and Lauren Morello, E&E reporters**

In India, researchers are exploring how to finance zigzag brick kilns. In Peru, policymakers are trying to put teeth into weak laws regulating landfills. And from China to Vietnam, scientists are working with farmers to aerate rice paddies.

This is what reducing methane, black carbon and hydrofluorocarbon emissions looks like on the ground, a mission that Secretary of State Hillary Rodham Clinton yesterday declared an important new element in the fight against climate change. The \$15 million Clean Air Coalition to Reduce Short-Lived Climate Pollutants, she said, will target these so-called short-lived climate pollutants that stay in the atmosphere only days or weeks but account for a third of global warming emissions.

The six-country coalition, announced with great fanfare in the State Department's opulent Benjamin Franklin Room, will hold its first meeting in Stockholm in April to discuss policy. But experts say it's the decidedly unglamorous work of automotive air conditioning, livestock manure management and pipeline tightening that will require money and sustained political support if the mission is to succeed.

"Some of this is like fixing potholes. You need to do it every day. And some of these actions are modest, but when you add them up, it makes a difference," said Durwood Zaelke, president and founder of the Institute for Governance and Sustainable Development.

Unlike carbon dioxide, which lingers in the atmosphere for decades, this group of pollutants comes and goes relatively quickly. The problem is that they are spewed -- from things like diesel generators, building air conditioners and cooking on charcoal kilns -- at a far faster rate than they evaporate. Scientists say the impact goes far beyond climate change, also harming crop yields and contributing to a variety of respiratory diseases.

"By focusing on these pollutants -- how to reduce them and, where possible, use them for energy -- we can have local and regional effects that people can see and feel," Clinton said. "There will be better health, cleaner air, more productive crops, more energy, in addition to less warming."

Clinton noted that work already is under way in several countries and said the coalition hopes to build on it. Those in the trenches say they are excited by the new attention to short-lived climate pollution but warn that change comes with challenges.

## **Delving into landfills**

Ned Helme, founder of the Center for Clean Air Policy, said a new waste management project his organization will launch in Latin America is precisely the type of measure that could lead to new gains. The group will help Chile, Peru and Mexico develop a set of plans known as Nationally Appropriate Mitigation Actions addressing landfill gas and waste management to help ensure the released methane gas is recycled, composted or recovered for energy use.

Peru, for example, has only two licensed landfills, and laws addressing solid waste go unenforced. But by working with specific communities and understanding their systems -- whether they have landfills or treat wastewater -- Helme said experts can help local leaders finance measures that will help them reduce methane, or even capture and sell it.

The funders want to see results in Peru and other countries in 15 months. "The proof is in the pudding. Can we do this on the ground?" Helme said.

Replacing wood- or dung-burning cookstoves in Asia and Africa with cleaner-burning ones has been a State Department centerpiece. Yesterday, Bangladesh Environment Minister Hasan Mahmud noted that more than 400,000 improved cookstoves already have been distributed in his country.

But at the annual meeting of the American Association for the Advancement of Science in Vancouver, British Columbia, this week, scientists presenting new research on the topic noted that the cookstove effort has been tricky. A number of clean missions have failed because of cultural mismatches between stove and chef, they said.

Take the case of one small program to introduce clean cookstoves in Uganda, which distributed an appliance modeled after the region's traditional one-burner stove -- a layer of wood covered by three stones that serve as a pot rest. The effort failed to account for families that maintained traditional stoves with two burners -- allowing them to cook two dishes at once, or put a stew on simmer, something the new clean stoves couldn't do.

"In some households, you got what you might hope for," and the new stove was welcomed and used, said Julian Marshall, an assistant professor of civil engineering at the University of Minnesota. "But in other households, typically larger households, they took the stove, said 'Thank you very much' -- and continued to cook on their old stoves, which had two burners."

## **Elusive quest for a cleaner cookstove**

Hisham Zerriffi, a University of British Columbia professor who specializes in sustainability issues, said patience is a key -- but often forgotten -- element of efforts to bring the new stoves to the developing world.

"Solutions exist, but historically we've had a very mixed record as far as helping people transition to cleaner cooking technologies with less impact," he said.

There have been major efforts to bring cleaner stoves to India, but the overall push "has not been considered much of a success," Zerriffi said. And future population growth may complicate matters.

"The current projections are that we are just going to continue to break even -- that out to 2030, we'll have the same number of people relying on these cookstoves that we do now," he said, because population growth is expected to outstrip the rate at which clean cookstoves are adopted in the regions where biomass is still a major cooking fuel.

Meanwhile, research on brick kilns -- responsible for about 30 percent of air pollution in India -- is ramping up. A recent study noted that the country's building stock is expected to multiply five times over by 2030, with solid fired clay bricks the most widely used -- and most highly polluting -- building materials. The rapid increase in production, the authors note, has resulted in increased black carbon and other emissions, even as it contributes significantly to carbon dioxide emissions.

"Despite its significance in the construction sector, importance in livelihoods of the poor, being a large coal user and causing environmental health and impacts, the brick making sector has seen very few development interventions/programmes aimed at improving the industry," the authors wrote. Cleaner kiln technologies, like one called "zigzag," could reduce 4.5 million to 9 million tons of CO2 emissions each year but would require "a concerted effort by Government of India and brick industry," the report says.

### **'Nothing sexy' about brick kilns**

Ellen Baum, a senior scientist with Clean Air Task Force, which produced the report along with Greentech Knowledge Solutions in New Delhi and other groups, described the brick kiln research and other measures like developing oil and gas regulations as the type of low-profile but important work that needs policymakers' attention.

"At the country level, there is nothing sexy about this," Baum said. "These kinds of conditions at the country level matter."

But she and others also noted that for all the challenges, lowering methane, black carbon and HFC emissions is often an easier sell in developing countries than efforts to reduce carbon dioxide emissions. Helme noted that in the U.N. climate regime, officials often refer to carbon-reduction projects that also have health benefits and curb pollution as having "co-benefits."

In developing countries, Helme said, "They call them just benefits. That's why they do this stuff. The GHG [reduction] is the co-benefit," he said adding, "It's the kind of thing that's much easier to sell in Bogota and Santiago than the traditional GHG work."

Meanwhile, some climate change activists greeted the coalition with skepticism -- seeing it as a way to shift the work of preventing global warming off the shoulders of industrialized countries and onto those of developing ones. Keya Chatterjee, director of international climate change policy at the World Wildlife Fund, said in a statement that the big CO2 emitters like the United States and

Canada have done little to reduce the emissions that are the primary cause of global warming within their own borders.

"Now they have developed a plan that shifts the focus to others -- developing countries in particular. While support for poorer countries is important, their primary responsibility should be to cut their own emissions and address the global challenges posed by climate change," she said. Arguing that the new initiative will not deliver quick results, she said, "while short-lived forcings provide a window of opportunity, it should not distract us from addressing the biggest cause of climate change: CO2 emissions."

Supporters of the coalition agreed that CO2 must remain center stage. But they said the prospect of reducing warming by as much as 0.5 degrees Celsius by 2050, preventing millions of deaths and avoiding an annual loss of 30 million tons of crops, can't afford to be ignored.

"At a time like this, we need all hands on deck," said Andrew Steer, the World Bank's climate change envoy. "It's hard to think of a better win-win."

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