



MT
12/17/2007

Garam hawa

'FOOD PRICES set to rise as floods ruin crops'. 'Prime Minister promises aid to flood victims'. Does that sound like a recent edition of the *Hindustan Times*? Wait a minute. These headlines are from a British newspaper. A week ago, I was walking through a huge tropical downpour — thunder, lightning, pelting rain. Singapore? No, London. It wasn't just Rafael Nadal getting hot under his collar about the stop-and-start tennis at Wimbledon. It was the wettest tournament at the All England Lawn Tennis and Croquet Club in a quarter century. A few weeks ago, the temperature in Athens, Greece, hit 47° Celsius. "A lot of the ruins were closed because of the heat, and there weren't much (sic) people on the streets, except for wandering sweaty tourists like us," read a limp blog entry.

Climate change is becoming more fashionable by the minute, as Al Gore can testify as he shuffles on the edge of the US presidential campaign touting his Oscar-winning documentary, *An Inconvenient Truth*. Even George W. Bush, who once thought 'climate' was a new species of monkey, is starting to get interested. The much-anticipated Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), which has issued three working group reports, will be finalised this November.

In May, India set up the Expert Committee on Impacts of Climate Change chaired by R. Chidambaram, Scientific Advisor to the government, followed in short order in June by the Prime Minister's Council on Climate Change. R.K. Pachauri, Director-General of The Energy and Resources Institute (Teri) and chairman of the IPCC, is on both panels and is an extremely busy man, travelling incessantly with his message that it is not too late to wake up to global warming.

The trouble with global warming, of course, is that it is difficult to comprehend for the average man waiting for his BlueLine bus in Delhi. Yes, the summers in Delhi seem warmer than they have ever been. And yes, the electricity and water shortages in our cities are now endemic and accepted with very little protest. Up in the concrete canyons of Gurgaon and Noida, you think an apartment is worth buying because it promises "24-hour electricity backup". Somewhere at the back of your mind, you know that the weather is getting more and more unpredictable, that you can't dream of living without air-conditioning, and that it is passé to joke about frying an egg on the street outside.

But think of the fact that 11 of the 12 hottest years since global surface temperatures started to be recorded in 1850 fell between 1995 and 2006. The twelfth was in 1990. Earlier this week, farmers in China were busy fighting more than two billion rats displaced by a flooded lake (by the way, half a million people were also left homeless). And let's not forget our wannabe global financial centre Mumbai, which last month came within a whisker of the flood catastrophe that struck it two years ago.

Pachauri says the good news is that people are finally waking up to the reality of climate change. But are we? With more and more vehicles on our streets emitting more and more carbon dioxide (which a few of our agricultural scientists actually believe benefits our crops), we are starting to choke on our own breath. "I'd like to see Mr Ratan Tata spending more on public transport systems than on the one-lakh-rupee car," says Pachauri.

Small cars are just a tiny part of the problem. India and China both won reprieves from the Kyoto Protocol's emission reduction targets, but we will not be able to continue to bury our heads in the sand. Some Indian experts argue that we account for only 6 per cent of global emissions although we have a fifth of the world's population, while the United States, with only 5 per cent of the world's population, accounts for nearly a quarter of emis-

UPON MY WORD



CHAITANYA
KALBAG

sions. But these experts privately admit that we will not be able to sustain that argument beyond 2012, when we agree to Kyoto's second commitment period.

We are proud of the fact that a huge chunk of India's population is young, below the age of 25, but we forget that this generation will grow older — and likely age faster — breathing air that is a hundred times more poisonous than today's. Experts now predict that countries like India will suffer far more frequent cycles of drought and flood. Pachauri warns that climate change will affect South Asia more adversely, affecting its agriculture, human health, coastal zones on account of rising sea levels, water availability and 'extreme precipitation' as in Mumbai.

Does all of this sound like armchair doomsaying? I began to get really worried about climate change after reading a brilliant, three-part global investigation of climate change by Elizabeth Kolbert in the *New Yorker* a couple of years ago. There I read about how members of the Iceland Glaciological Society, who have been keeping tabs on about 300 glaciers over the past century and a half, have seen their rapid retreat over the past couple of decades. Arctic permafrost that has lasted for 120,000 years is melting, and carbon dioxide levels are higher today than they ever have been over the last 420,000 years.

Let's move much closer home. Haryana accounts for a mere 3.4 per cent of India's foodgrain area, but contributes 6.3 per cent of total food-grain output. It accounts for 12.7 per cent of India's wheat production, and its (2003-04) productivity of 3,997 kg of wheat per hectare was far higher than the country's average of 2,713 kg. But J.C. Katyal, Vice-Chancellor of the Haryana Agricultural University, says in a recent paper that yields have been progressively falling over the past few years. Simultaneously, maximum temperatures have risen by about 3° Celsius over the last seven years in the crucial months of February and March. Down south in Coorg, there is evidence that coffee crops, which can tolerate a maximum of 150 days of dry weather, are starting to suffer



WEATHERING THE STORM: A flooded street in Mumbai this monsoon

because of up to 180 days of dry weather.

Three of the world's most eminent climate scientists are Indians based in the United States — Jagadish Shukla, distinguished professor of climate dynamics at George Mason University in Maryland; V. Ramanathan, Victor Alderson Professor of Applied Ocean Sciences and Professor of Climate and Atmospheric Sciences at the University of California, San Diego, and Tiruvalam N. Krishnamurti, Lawton Distinguished Professor, Department of Meteorology at Florida State University. And Jairam Ramesh, Minister of State for Commerce, says it should not take too much trouble to get super-brains like these to help India construct a climate change policy that is among the most enlightened.

None of the three scientists was alarmist in interpreting the effects of warming. Krishnamurti said that although the oceans are about 0.3° Celsius warmer than they were 25 years ago, it is still too early to draw too many inferences. "We need to wait another few decades before we start to see the effects of global change, but preparing and thinking now is wise," he wrote in an e-mail. Ramanathan said that emissions of atmospheric brown clouds is rising and could affect rice crop yields because the drought frequency will increase. "But I must caution you that our climate models are not an accurate predictor of future events.... However (they) provide an early warning." And Shukla said existing models could not accurately predict which area will have floods and which area will have droughts. "Now that we all agree that human activities are producing global warming, we face a real challenge of predicting changes in... weather events," he said.