

Sustainable science

What Planet Earth means for Indian Science Congress

ARCHITA BHATTA *Chidambaram*

THE 94th edition of the Indian Science Congress, held January 2-7, 2007 at Annamalai University in Chidambaram, Tamil Nadu, sought to be different. Revolving around the theme of "Planet Earth", it sought to "address vital issues related to our natural habitat". The areas of deliberation included energy security, earth-ocean-atmosphere interactions, climate change and the science of forecasting monsoons. Focus also fell on crucial problems such as natural and human-made hazards and waste management. So, was it a conference devoted to tackling issues that went beyond the merely scientific, that had a decidedly political—even global-political—edge? The venue was in one of the worst tsunami-affected districts of Tamil Nadu; could it be that scientific practice in India, well-known for its political reticence, was itself ready for change?

But what was uppermost in the mind of Harsh Gupta, the general president of the congress, and a former secretary of the department of ocean development, government of India: deregulating the coal industry, to enable greater extraction. Energy security, it emerged from his inaugural speech, meant applying geophysics to a wider and more effective hunt for atomic minerals, metals and fossil fuels.

Also note the scope and tenor of discussions related to issues such as climate change, a politico-environmental problem of global proportions, or forecasting the monsoon in India, an event that triggers annual politico-scientific crisis. In a 5-day programme comprising 29 'theme sessions' (five or six papers each) and 13 'sectional sessions', climate change was the subject of merely 7 papers. Scientists were aware that climate change wasn't fiction. A paper by V N Sharda of the Central Soil and Water Conservation and Training Institute projected, for instance, a 3.4 per cent increase in annual rainfall over

the Nilgiris in Tamil Nadu, but a 2-16 per cent decrease in rainfall in the Garhwal Himalaya and Gujarat in 2071-2100 as compared to 1961-1990. Most papers were generalist; only one, by Malay Chatterjee of Jadavpur University, Kolkata, focussed on global warming's impact on humans.

Monsoon forecasting received more attention. B N Goswami of the Indian Institute of Tropical Meteorology showed that the frequency and magni-

In the theme session on energy security, the attention was more on nuclear energy. However, there was nothing on safety issues. "Nuclear energy has been there for 50 years, it still generates only 3 per cent of the energy generated in the country. On the other hand the focus on renewable energy is relatively new. But it generates 6 per cent of the country's total energy," said S K Chopra, principal advisor and special secretary of the ministry of new and renewable energy.



Flowers and dignitaries, speeches and funds, but where is basic science?

tude of extreme rain events in Central India had increased, while moderate rain events had decreased: clearly, signs of a weather system out of kilter. In his analysis of operational forecasts during the past eight decades, M Rajeevan of the National Climate Centre (affiliated to the Indian Meteorological Department) showed that despite many changes in operational models and a better understanding of monsoon variability, forecasting skills had not improved: hardly a cutting-edge conclusion. A consensus seemed to prevail: the Atlantic monsoon system was more uncertain than all other such systems; thus, monsoon forecasting would remain an eternal problem.

A real disaster

Indeed, as scientist after scientist took to reading papers in various sessions, the most vital issue that began to emerge was a mandatory, but purely token, reference to environmental matters. If the discussions on disaster management were any indication, Indian science's sustainable turn seemed to head into a cul-de-sac. "The focus is till now on natural disasters," said U C Dey, retired additional director-general of the Indian Meteorological Department. "Monsoons, tsunami, earthquakes are now receiving more focus. But we are still not concerned about human-made disasters, like those of mining, or those of waste generation." In the allocation

