

**Press Clippings**

**(1 - 15 July 2007)**

**Foundation for Ecological Security  
Anand**

## Press Clippings

(1-15 July 2007)

### Contents

SL.#	Category	Title	Newspaper	Pg #
1.	<b>Wildlife &amp; Forests</b>	Tiger numbers grow in Mudumalai sanctuary: Preliminary analysis of census data reveals it has 22 tigers	Hindu	1
		Tiger tourism revenue must help locals: Use money on those shifted from reserves: Forest Officials	Times of India (M)	1
		China's tiger wine threatens Gir lions	Times of India (A)	2
		Complete tiger census by end of year: PM	Indian Express	3
		Dead cows can help bring your farm to life	Times of India (A)	3
		Flash floods kill 85 black bucks in Bhavnagar	Indian Express	4
		New way for individuals to save rainforests: Saving the rainforests is an effective and cheap way of cutting emissions	Hindu	5
		Green India soon says Manmohan: One of the largest afforestation efforts	Hindu	6
2.	<b>Water</b>	Averting water crisis	Hindu	6
		Manmohan Singh calls for water conservation: Asks states to transfer management of systems to district level institutions	Hindu	7
		Heavy rains: Gujarat gets more power, water	Business Line	8
		Use conservation law to protect dam, says panel: To counter Tamil Nadu's demand for raising the height of the reservoir	Hindu	8
		Rural water supply: Bharat Nirman targets remain largely unachieved	Indian Express	9
		Unprecedented rains in last 5 years reverse state's fortunes	Indian Express	9
3.	<b>Development Issues</b>	Nabard mulls arm for micro-finance	Business Line	10
		Education, the key to inclusive growth	Business Line	11
		Employment guarantee: Unfinished agenda - Rajasthan is far of other states in providing employment under NREGA.	Hindu	12

This is a selection from a cross section of the print media compiled fortnightly for internal circulation. News, articles and other features are reproduced as they appeared.

In ward No. 344  
Date 4/8/07

SL.#	Category	Title	Newspaper	Pg #
		India, Japan to firm up plans for energy ties: Teri signs pact with institute of energy economics of Japan	Business Line	13
		Govt will lead by example on energy conservation effort: Framework for procurement of energy efficient products on the anvil	Business Lines	13
	Environment	Environment: Time is running out	Business Line	14
	Climate Change	Climate change: Such a domestic matter	Indian Express	15
		Emissionary position	Indian Express	16
	WTO	Break WTO deadlock: Developed countries must make deep subsidy costs	Times of India (A)	17
		WTO talk structure needs change	Business Line	18

Articles of the fortnight	Title	Newspaper	Pg #
	Polavaram: Rehabilitation via forced consensus	Economic and Political Weekly	19
	A defining moment for forests?	Economic and Political Weekly	21
	Is it a forest: How difference agencies see it	Down to Earth	26
	Heat must be on all: With global warming concerns peaking, China and India are made villains. Historically climate profligate nations are being let off the hook.	Down to Earth	31
	Going green: Getting credit for saving trees. Forest cover a natural defense against global warming. Lets pay to preserve it	Time	33

HINDU 21.6.07

# Tiger numbers grow in Mudumalai sanctuary

Preliminary analysis of census data reveals it has 22 tigers

P. Oppili

CHENNAI: Tiger population data recorded at the Mudumalai sanctuary in the Nilgiris is very encouraging, according to K. Sankar, Professor and Research Co-coordinator, Wildlife Institute of India (WII), Dehradun.

During the census this time, Dr. Sankar, along with a team, set camera traps in the sanctuary, which was declared a tiger reserve in April this year. Normally the census of tigers is conducted through identification of individual pug marks, before a rough estimate of the population is arrived at.

Dr. Sankar said preliminary analysis of the data revealed that, excluding cubs, more than 22 tigers were found in a 110-sqkm area. In the 2005 census, the authorities recorded the presence of 22 tigers in 350 sqkm, he said.

Thirty pairs of camera traps were set up in the area. The preparatory works began in January this year, and the data was collected in the next two months. "Every two sqkm, a pair of cameras was fixed to monitor the movement of big cats," Dr. Sankar said. Usually one camera was used. But, this time a pair was fixed on either side of the identified location.

The traps were set up far away from human habitations, as the officials apprehended that illegal entrants could steal the instruments to avoid being caught. They faced a similar challenge in some other States. Another observation made by the team was that the elephants in Mudumalai were not as agitated as their cousins in the Periyar Tiger Reserve in Kerala. They were not accustomed to human presence or light. So, they damaged several camera traps, he said.

The census data from Tamil Nadu had been sent to the WII for consolidation. The final results would be released

by this year-end.

The WII authorities are now radio-collaring tigers in the wild. Dr. Sankar's team has already radio-collared nine tigers in central India, eight in Kanha and one in Pench.

Dr. Sankar said: "We will take up radio-collaring of tigers in Kaziranga in the northeast and Sundarbans in the eastern region. Similarly Perambikulam and Mudumalai or Top Slip will be selected in the southern region for the work. We need an elephant camp while radio-collaring the tigers, as we need to track the collared animals on a regular basis."

TIMES OF INDIA (M) 6.9.07

## Tiger tourism revenue must help locals

Use Money On Those Shifted From Reserves: Forest Officials

Nitin Sethi | TNM

New Delhi: Field directors of 27 of the 28 tiger reserves and eight proposed tiger reserves have demanded that a part of the revenue generated from tourism activities — hotels, lodges and tour operators depending on tiger reserves —

be ploughed back to the local villages, especially those which have been relocated from such reserves.

This and other recommendations came after a two-day meeting of field directors with the National Tiger Conservation Authority (NTCA) and officials of the environment ministry. An agenda was

drawn up, which will be discussed by the National Board of Wildlife — the apex body on wildlife conservation headed by the prime minister — at the end of the month.

Drafting the agenda for the tiger reserves, endorsed by the two ministers of state present at the meeting, officials have also suggested that special

Tiger tourism...

Chiefs of the tiger reserves also mooted setting up of special committees to address the situation in Naxal-impacted reserves and a rehab package for traditional hunting communities near the sanctuaries

committees be set up to address the situation in the Naxal-impacted tiger reserves of Simlipal in Orissa, Indravati in Chhattisgarh and Palamau in Jharkhand. The committees will comprise two well-known, accepted leaders of the area, a local NGO of repute, a sociologist and the deputy director of the tiger reserve. They will facilitate dialogue with operating groups in the region to save the situation.

Directors of the reserves have also suggested that besides increasing incentives to field staff, the government should also look at a rehabilitation package for traditional hunting communities in the vicinity of the parks and sanctuaries.

To make up for the lack of staff strength to undertake protection measures, the directors, along with the NTCA, have suggested hiring ex-servicemen and villagers from habitations around the parks. They have also recommended a time-frame of two years to demarcate inviolate spaces for the tiger (with no human habitation) and to settle rights of those displaced in the process.

While these ideas had been earlier suggested in the PM's Tiger Task Force report, this is the first time senior forest

ON THE AGENDA



officials have endorsed and moved them as firm action points.

The move comes at a time when the NTCA is on schedule to get greater independence from the mother ministry which is finalising the creation of an administrative and technical committee to support the working of the authority. Once cleared, tiger authority officials will work along the lines of the Central Zoo Authority.

INDIAN EXPRESS 13-7-07

Complete tiger census by end of year: PM

AMITABH SINHA  
NEW DELHI, JULY 12

NEARLY two months after a study indicated that India has far fewer tigers than what was earlier believed, Prime Minister Manmohan Singh on Wednesday said all the recommendations of the Tiger Task Force should be implemented at the earliest.

At a meeting to review the

Tiger Task Force report, the Prime Minister took stock of the work being done on tiger conservation and asked concerned officials to expedite efforts. "The Prime Minister emphasised that all the recommendations made by the Tiger Task Force be implemented in a time-bound manner," the Prime Minister's media advisor Sanjaya Baru told *The Indian Express*.

"He also stressed that the tiger census that is being carried out be completed by the end of the year," Baru said, referring to a study being conducted by the Wildlife Institute of India (WII), which was

expected to reveal the correct number of tigers in the country.

WII had come out with its provisional findings in May based on the estimated tiger population in six states, which indicated that the number of tigers in India was not likely to be more than 2,000-2,200. The last tiger census had put the number at more than 3,500.

The final findings of the WII study were expected in December. But, the Ministry of Environment and Forests on Wednesday said it would ask the WII to try and finish the study before December.



Not too many around

"Everyone felt that we need to get it out (census figures) as soon as possible. There has to

be a clear assessment of the numbers," said Sunita Narain, head of the Tiger Task Force.

"Besides the numbers, we also need to know exactly the

areas where the tigers are and where they aren't. Both will be important lessons for conservation efforts," she said.

The Prime Minister also noted with concern the large number of vacancies in front-line forest staff and a ban on recruitment by some state

Governments. Some proposals to provide Central assistance to states to meet their financial crunch were also discussed. Singh was informed about the efforts being made to reinforce protection measures inside the tiger reserves and the kind of support that could be offered to the state Governments in this regard.

The relocation of families living inside the tiger reserves also came up for discussion. The Prime Minister was told a better relocation scheme was being worked out for the people staying in nearly 275 villages inside the reserves.

Based on estimated tiger population in six states, WII indicates that the number of tigers was not more than 2,000-2,200

TIMES OF INDIA (CR) 11-7-07

China's tiger wine threatens Gir lions

Robin David | TNN

Ahmedabad: Gujarat may have nabbed the gang from Madhya Pradesh that killed lions in Gir and surrounding areas. But this is not the end of poaching of the big cat in Gujarat, the only home of the Asiatic lion in the world.

Experts believe Gujarat will have to brace itself for more poaching attempts given the increasing demand for lion bones in China. A recent issue of *Cat News*, a magazine of the International Union for the Conservation of Nature (IUCN), the Chinese government had given permission to a firm to make 'bone-strengthening wine'.

Although it is known as 'tiger bone wine', its main ingredient is the African lion, parts of which can be traded in a controlled manner. The authors believe this will only fuel more demand for bones, both of the lion and the tiger. The

firm is a subsidiary of the Zhou Weisen Tiger and Bear Mountain Village, the most prominent tiger breeding centre in China.

The wine is apparently prepared by dipping lion carcasses in vats of rice wine. Zhou Weisen claims to have 200 African lions on its farm, but very few have been noticed, states *Cat News*. This has made senior officials in the Gujarat forest department wonder if remains of the poached lions had found their way to China for such preparations. "This is the first time that Gir lions have been killed and all their bones and nails have disappeared,"



A TIMES OF INDIA ENDEAVOUR

says Gujarat chief conservator of forest, Pradeep Khanna. "While there is a known domestic market

for lion nails, the bones are not consumed locally. We are almost certain that these have made it to China."

According to sources, one bottle of the wine costs \$ 120. The Chinese government has given permission to produce four lakh bottles. *Cat News* states that genetic analysis of the wine was carried out, but the DNA was too fragmented to identify the species. Sources in the Gujarat forest department add that given the profit margins and the fact that it would be easier to smuggle lion bones into China, there is every possibility of more poaching attempts in Gir.

"We definitely have not seen the end of poaching in Gir," says Y V Jhala, faculty at the Wildlife Institute of India, Dehra Dun and a member of the Gujarat government's technical committee formed after the recent poaching incidents. "I am certain that lion bones are being passed off as those of tigers in China. One can only increase the cost of poaching by being more vigilant."

TIMES OF INDIA (A) 10-7-07

Dead cows can help bring your farm to life

Kumar Manish | TNN

Kathwada (Ahmedabad district): Now, remains of dead cows can also be used to produce manure, as a cardiologist in Ahmedabad found out. Dr Dinesh Patel, who owns Sardar farm in Kathwada on the outskirts of Ahmedabad, has devised a method which uses cow horns combined with dung to create a manure that has helped boost his farm yield to a great extent.

A worker in Sardar farm, Karsan Rawal, says, "Fresh dung is kneaded and mashed manually for over an hour. This is then stuffed into the

horns of dead cows and buried in a three-foot deep pit for six months of winter." The material extracted from the horns at the end of this period is full of humus and microorganisms. About 30 grams of this compost is mixed with 12 litres of water. The mixture is first stirred clockwise and then anti-clockwise. This solution is used on one acre of land, says Rawal.

The process harnesses a combination of lunar energy and earth forces and is called bio-dynamic (BD) farming. The solution is sprinkled on moist soil before planting to stimulate soil life, and on the stems and leaves of growing plants. It also saves water and takes care of pests

and weeding problems, says Patel. Patel says, "Only 15 labourers work here but more than 15 billion microbes, honey bees, birds, earthworms and other natural agents work day and night." BD farming was first started



Dinesh Patel at his farm in Kathwada

## Dead cows can...

by Rudolf Steiner in 1924 in Germany and was introduced recently in India. BD is used as a nutrient supplement for crops, besides compost. Bio-dynamic farming also has specific days for planting, sowing and harvesting different plants, based on the lunar cycle. "Its success largely depends on the time of planting and conducting farm operations as per the movement of moon," says Patel.

He now grows papaya, banana, mango, pomegranate, chikku, amla, sweetlime, lemon, pulses, wheat, rice and cotton in his 300-acre farm. The price of this yield is about 15-20 per cent higher than that obtained using chemical manure. The horns, mostly decaying, of dead cows are got from Vidyanagar.

Kapil Shah of Jatan, an organisation promoting organic

farming in Vadodara, says. "There are farms in Anand, Vasad and Diu, which practise BD farming. It has huge potential considering the demand for quality and healthy food products and will also help in saving the decaying earth from excessive use of chemicals."

INDIAN EXPRESS 7-7-07

## Flash floods kill 85 blackbucks in Bhavnagar

BASHIR PATHAN  
GANDHINAGAR, JULY 6

FLASH floods have claimed the lives of around 85 blackbucks in areas outside the Blackbuck National Park at Velavadar in Bhavnagar district.

This has forced the state forest department to take precautionary measures in and around the Park areas. Meanwhile, in the peripheral areas of Gir National Park and Sanctuary, two lions have died in flash floods.

A senior official attached to the Blackbuck National Park said, "The forest staff has been able to recover the bodies of at least 85 animals. The possibility that more dead blackbucks can be found when the flood waters start receding, cannot be ruled out."

As the reports of death of blackbucks reached the state forest headquarters in Gandhinagar, the department directed Bharat Pathak, conservator of forest (wildlife), Junagadh, to rush to Velavadar and oversee the precautionary measures being taken at the Park and its surrounding villages.

Pathak said that no blackbuck has died in the Park

There is a possibility that more dead blackbucks would be found once flood waters start receding



Blackbuck National Park at Velavadar in Bhavnagar district. Express photo.

### Leopard dies in Gir

JUNAGADH: ONE more big cat has become victim of a parapetless well in periphery of Gir forest. On Thursday, an incident occurred at Dhavadia village near Dhavadia forest falling under Tulshishyam range of Gir-east forest division. According to deputy conservator of forest (Gir east) V G Rana, carcass of a female leopard aged about 7 to 8 years was found floating in a watery well located in an agriculture land. Panel doctor has conducted its post mortem in which confirms the death due to drowning. All 17 claws of the leopard have been found intact. Further investigation is in process, said Rana. —ENS

due to the torrential rains and that all the casualties have occurred in the villages outside the Park.

"I am camping in Velavadar at present. Fodder is being provided to a large number of blackbucks, which have taken shelter on the raised platforms created by the department in and around the Park," he

added.

Pathak further said that several villages located in the vicinity of the Park, including Nari, Ganeshgadh, Madhiya, Savainagar, Narmad and Kheta Khatli are still under water.

Around 2,000 blackbucks live in the Park and as many are reported to be living in the surrounding villages.

## HINDU 21-6-07 New way for individuals to save rainforests

Saving the rainforests is an effective and cheap way of cutting carbon emissions - but is buying trees to stop deforestation the answer?

Guy Shrubsole

Gold first lured outsiders to claim the rainforests. Later, medicines became the prize, then land for ranching cattle, soya and, more recently, biofuels. Now a different part of the Amazon is ours to buy: its massive stocks of carbon. A new scheme launched this month aims to exploit the surge in interest in saving trees to save the planet, and offers individuals the chance to pay to protect swaths of rainforest.

Called Cool Earth, and set up by entrepreneur Johan Eliasch and British Labour MP Frank Field, the scheme says it will "price deforestation out of the market" by securing forest in local trusts, and watching it "around the clock to keep the carbon where it belongs."

It might sound familiar — schemes to buy up and protect the rainforests have been around since campaigns to highlight their plight peaked in the 1980s. But climate change has brought those concerns into new focus, and the organisers of Cool Earth hope to capitalise on the recent boom in ethical consumerism, carbon labels and offsetting services.

### Global emissions

The problem is clear. Deforestation releases massive amounts of carbon. The recent Stern review into the economics of climate change said greenhouse gas released from the 150,000 sq km of tropical forest destroyed each year now accounts for 18 per cent of global emissions — more than from any single nation.

Conversely, this makes tackling deforestation a cheap way of fighting global warming. A recent report from international consultancy firm McKinsey identified forest conservation as the "single largest opportunity for cost-effective and immediate reductions of carbon."

And the most recent report from the Intergovernmental Panel on Climate Change states that "forest-related mitigation activities can considerably reduce emissions from sources, and increase CO2 removals by sinks, at low costs."

Each hectare of Amazon rainforest absorbs and stores up some 640 tonnes of CO2. To protect it, Cool Earth will charge £170 per hectare, which works out as £0.27 a tonne. As far as saving carbon goes, that is at the very cheap end of the scale. Offset companies such as Climate Care will typically charge £7.50 a tonne of CO2.

Cool Earth operates as a charity and denies it is in the offset business (although its website offers companies the chance to go "carbon neutral"). "We are not offering an offset or any guilt alleviation mechanism," says Matthew Owen, a spokesman for Cool Earth.

So who is buying? So far, Tony Blair, editor Ian Hislop, rock star Jarvis Cocker, and Mark Ellingham, founder of the Rough Guides series of travel books, number among supporters. Donors are almost entirely individuals, with donations ranging from £5 to £5,000, says Mr. Owen.

Others have tried before to sell the British public shares in the rainforest. The World Land Trust has

bought 142,000 hectares of endangered habitats with individual donations since 1989. RainforestForever.org sells "tree kits," the deluxe editions complete with a framed certificate of ownership. But certificates are seldom guarantees against chainsaws. WWF's figures for land ownership in the Brazilian Amazon show 35 per cent to be "public or private lands in dispute," which, they say, shows "why any initiatives to encourage land purchase as a strategy for conservation are likely to be limited." Cool Earth says it will place microchips in protected trees and display the location of preserved areas on the internet.

Mr. Field says Cool Earth's policy aim is to "disadvantage the west," forcing polluting nations to compensate rainforest states for the ecological services they perform. The resultant source of income has "huge potential" which, he says, "will begin to make overseas aid redundant."

### Key issue

Whether or not Cool Earth succeeds in its ambition to price deforestation out of the market, the idea of paying countries such as Brazil not to chop down their forests is gaining momentum. Negotiations continue on how rainforest nations could be compensated for such "avoided deforestation" in a successor treaty to the Kyoto Protocol, and deforestation will be a key issue on the agenda at the U.N. climate talks in Bali in December. — ©Guardian Newspapers Limited London 2007

## 'Green India' soon, says Manmohan

### "One of world's largest afforestation efforts"

Special Correspondent

NEW DELHI: Prime Minister Manmohan Singh on Friday said the Government planned to undertake a major afforestation programme for greening six million hectares of degraded forest land. It would be one of the world's largest afforestation efforts in recent times.

Details of the programme, to be called "Green India," were being worked out and would soon be brought before the Cabinet, Dr. Singh said. He hoped that the programme could be launched on August 15.

Chairing a meeting of the National Council on Climate Change, the Prime Minister emphasised on the need to prepare a comprehensive road map for energy efficiency and sustainable development in major sectors such as agriculture, forestry, industry, transport, power, housing and environment infrastructure.

Lauding innovative ways to

respond to the sectoral tasks on climate change, Dr. Singh cited the example of the Bureau of Energy Efficiency's suggestion of the "Bachat Lamp Yojana," which would provide compact fluorescent lamps at the price of normal bulbs to domestic households. "The price difference between the CFL and normal bulbs will be recovered through sales of carbon credits that accrue due to the lower energy consumption and carbon emissions of CFLs. I understand this project could reduce 240 million tonnes of carbon dioxide every year and lead to a reduction of 10,000 MW of electricity demand," he said.

Dwelling upon the need to respond to the glacial melting of the Himalayas, Dr. Singh said the Himalayas were rightly called the "Water Tower of Asia." It contained the largest body of ice outside the polar regions and provided critical dry season and long-term water storage. "There is a gap in our under-

standing of the Himalayas and we need to build a knowledge-based partnership of affected countries to manage and develop the Himalayan region to bring economic prosperity, peace, social harmony and environmental sustainability to the region."

"Evolve strategy"

The Prime Minister directed the Planning Commission to incorporate clean development strategies into the sectoral plans and proposals for the 11th Plan and to evolve a strategy to deal with climate change and make it an intrinsic part of the Plan.

The Council's meeting decided that a national strategy paper on climate change would be prepared before the year-end. The meeting emphasised on collection of reliable data, funding of research for analysing the data and implementation of practical programmes to improve energy efficiency and reduce wasteful use of natural resources.

HINDU 9.7.07

## Averting a water crisis

Prime Minister Manmohan Singh's advice to the States last week to take serious note of the growing water crisis has served to underline the low priority accorded over the past six decades to an issue of fundamental importance. The norms adopted by India to assess protected water supply coverage — 40 litres per capita daily (lpcd) within a 1.6 kilometre radius — fall short of the World Health Organisation's recommendation of 50 lpcd at the consumer end to be counted as intermediate level access. Further, there are major quality problems caused by biological and chemical contamination. Dr. Manmohan Singh's call for accelerated work on water and sanitation in the rural sector in partnership with the community is timely and relevant to urban areas as well. The States cannot afford to neglect this agenda any longer if they wish to protect valuable water sources from continued degradation. Wetlands and rivers are being polluted by industrial chemicals and domestic sewage. It is illogical to treat such a colossal loss as the inevitable consequence of economic activity because it threatens long-term prosperity. The traditional base of surface water sources has been rendered weak, encouraging indiscriminate groundwater extraction, while new ones are not being created. One well-studied example of this trend is Bangalore, which now has only 14

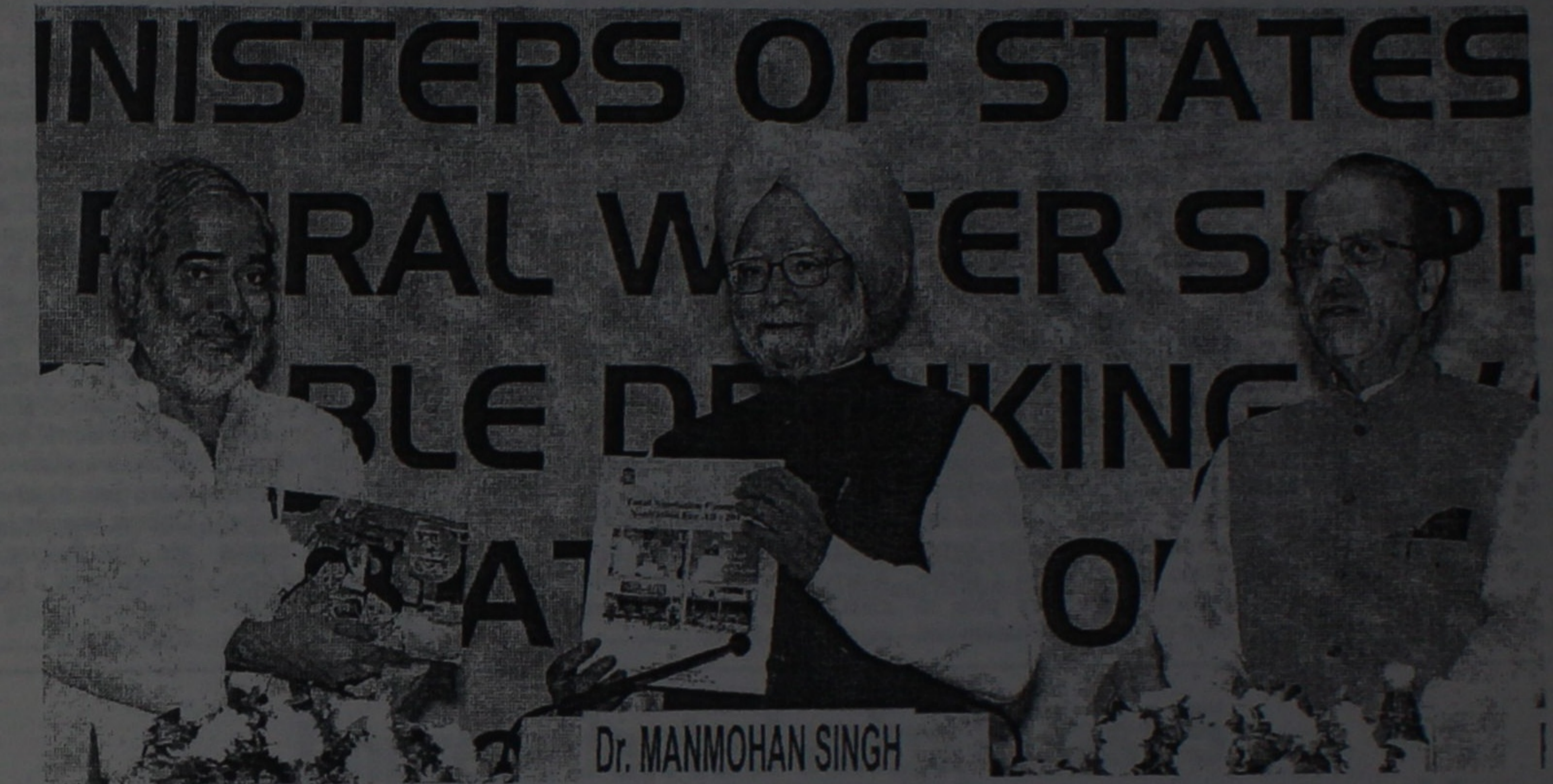
live lakes out of 51 in the 1970s. Water bodies outside many cities are tragically being turned into sewage ponds because sewerage infrastructure does not match the pace of urbanisation.

Water and sanitation have a direct linkage with health, which is a human right recognised under international covenants. Although there have been national-level missions on drinking water, Dr. Singh has acknowledged the general failure of governments to achieve targets for expanding access. State governments should worry that the flagship programme, Bharat Nirman, is losing ground as thousands of habitations listed as having water access slide back to "partly covered" or "not covered" status. This is happening because the sources dry up or are polluted, have weak technical systems, and are poorly maintained. To advance sustainability goals, the States have to involve communities in legally protecting water bodies from encroachment and degradation, develop new sources such as lakes and reservoirs, and take immediate action to curb industrial and fertiliser pollution. Such plans must be the national record of per capita water coverage of 200 litres, which is far lower than in countries like China and South Africa. But water must first become a genuine political priority.

HINDU 5.7.07

## Manmohan Singh calls for water conservation

Asks States to transfer management of systems to district-level institutions



**VITAL ISSUE:** Prime Minister Manmohan Singh flanked by Minister for Rural Development Raghuvansh Prasad Singh (left) and Minister for Water Resources Saifuddin Soz unveils a souvenir at a two-day "Conference of Ministers of States and Union Territories in charge of Rural Water Supply and Sanitation on Sustainable Drinking Water Supply, Sanitation for all 2012," in New Delhi on Wednesday. — PHOTO: RAJEEV BHATT

Special Correspondent

NEW DELHI: Prime Minister Manmohan Singh on Wednesday warned of severe water shortage in the next few decades, and called for forging partnerships between the Government and civil society to conserve and preserve water resources to meet the situation.

"We should move forward, move towards forging a partnership between the Government and citizens for conserving water. Government agencies must create a framework for collective action with NGOs and the civil society at large," he said.

**Sustainability of sources**

Inaugurating a conference of State Ministers in charge of rural drinking water supplies and sanitation, convened by the Union Ministry for Rural Development, he called for effective action to ensure the sustainability of water

sources.

Though there was considerable progress in providing safe drinking water in rural areas since the introduction of the accelerated rural water supply programme, the number of "slipped back" habitations increased every year on account of the failure of sources. There was a need for proper institutional arrangements to ensure that both scientific expertise for locating sources as well as collective action for water recharge were effectively mobilised.

**Scientific expertise**

"Institutional arrangements at the State level, such as source finding committees, have unfortunately remained largely dysfunctional. These must be revived and advanced scientific expertise now at our disposal should be fully utilised for this purpose."

Dr. Singh emphasised the need

for State Governments to transfer the management of drinking water to district level institutions. Wherever financial resources were scarce, water recharge activities could be funded through the National Rural Employment Guarantee Programme and district-based plans of the Departments of Agriculture and Irrigation.

Panchayati Raj bodies should be encouraged to manage and financially sustain the operation of water systems.

At present, officers working in the sector largely came from a civil engineering background, while groundwater-based systems called for expertise in areas such as geo-hydrology. There had to be planned capacity building for the staff of the public health engineering departments in geo-hydrology, so that they would appreciate issues of environmen-

tal sustainability more effectively.

**Proactive action needed**

The Prime Minister also called upon the Department of Drinking Water to take proactive action to sensitise the community on safe water and its use. While environment provided the backward linkage for drinking water, its forward linkage was with health. Quite often, water-borne diseases spread even in habitations where safe water had been provided.

The theme of the two-day conference is "Sustainability in rural drinking water supply schemes and sanitation for all."

Rural Development Minister Raghuvansh Prasad Singh and Water Resources Minister Saifuddin Soz emphasised the need for greater Centre-State collaboration in reaching safe drinking water and sanitation to all.

BUSINESS LINE 4-7-07

# Heavy rains: Gujarat gets more power, water

Our Bureau  
Gandhinagar, July 3

Heavy rains in the Saurashtra region and southern districts of Gujarat during the last two days have flooded many areas and claimed more than 60 lives besides destroying property, but the State has seen water in its parched landscape rise significantly, improved power production and is waiting for a bumper kharif crop.

#### RUSHING BACK

The Chief Minister, Mr Narendra Modi, who is currently in Geneva, Switzerland, heading a business delegation to woo the European investors to Gujarat, has urged the Prime Minister, Dr Manmohan Singh, to provide assistance from the Calamity Relief Fund (CRF) for the losses suffered by agriculture and livestock. Cutting short his visit, he is

rushing back to Gujarat at the earliest, an official report said.

#### ARMY ASSISTANCE

The State Government summoned Army assistance in several flood-hit areas where nearly 50,000 people were removed to safety. Rail, road and air traffic, too, have been adversely affected but there was no damage to the State's infrastructure, unlike last year when the flash flood in South Gujarat had caused losses worth thousands of crores.

#### CONTINGENCY PLAN

An ONGC spokesman from Hazira told *Business Line* over telephone that the situation in the coastal industrial town was normal. However, taking a lesson from the last year's flash floods, the Corporation has activated a three-phased contingency plan to meet any similar situation and

restore within two weeks any possible disruption in the current gas supply to the tune of 40 million cubic metres per day (mcmd) to major industrial units across Central and Western India.

#### UKAI DAM

This plan envisages steps to be taken when water level rises in the Ukai dam reservoir on the Tapi river in Surat district, and includes lifting of equipment and relocation of people to safety. ONGC was also in touch with the flood control and district officials and keeping a watch on the water level at Ukai which was currently 314 metres, against the danger mark of 345 metres, he said.

Reports from Surat and other places suggested that with a phased release of waters from different swollen rivers, officials were trying to avert dangers of flash flood.

The Sardar Sarovar dam on the River Narmada, where water level in the reservoir increased to 123.14 metres on Tuesday, has begun to generate 1,200 MW of electricity since yesterday. This will continue till the water level remains as high as it is today, the Minister of State for Energy, Mr Saurabh Patel told *Business Line*.

#### POWER DEMAND

"There is no demand for power in the agriculture sector now and no shortage of power anywhere in the State. We have no load shedding in Gujarat" he said. Electricity had been restored in all but nearly 200 of the 2,150-odd villages, which faced black-outs due to either safety reasons or because of rain-related causes during the last couple of days, which forced the Gujarat Electricity Board (GEB) to shut

down around 900 power distribution feeders.

With the increased water level in the reservoir at the Sardar Sarovar dam, all six turbine generators of 200 MW each at the River Bed Power house (RBPH) are generating power. These units can operate at a minimum reservoir level of 110.64 metres. At the Canal head Power House (CHPH), with an installed capacity of 250 MW (five units of 50 MW each), power generation was normal.

Till March this year, the Sardar Sarovar dam has generated a total of 5815.062 MU of hydro-electric power, officials sources said. Meanwhile, more than 30 reservoirs across Gujarat, mostly in Saurashtra, are overflowing, increasing prospects of a bumper kharif crop and raising water table considerably.

INDIAN EXPRESS 5-7-07

# Rural water supply: Bharat Nirman targets remain largely unachieved

Worst-off	
STATE	ADOBES
Rajasthan	30,787
Assam	28,181
Orissa	27,492
Bihar	24,714
Karnataka	18,988
West Bengal	17,743

RAVISH TIWARI  
NEW DELHI, JULY 4

HALFWAY through the UPA government's ambitious programme to provide sources of safe drinking water to all rural habitations under Bharat Nirman, very little has been done.

Of the 1.95.813 habitations identified in 2005 as having water sources contaminated by chemicals like iron, arsenic, fluoride, nitrates, sulphates,

or other salts, only 9,754 — about 5 per cent — have been provided with safe alternatives.

This is coming up for discussion at the meeting of state water supply ministers, to be inaugurated by the prime minister later this week.

In the first two years of the programme, the government set itself the modest target of 25,000 habitations.

But statistics available with the Department of Drinking Water Supply indicates that less than 40 per cent of the target was achieved.

Except for states like Gujarat, Mizoram, Tamil



Angry at contamination, villagers ransack the arsenic-free water project office at Malda on Monday. PTI

Nadu, and Puducherry, most others fail to achieve targets that were set for them.

According to the statistics, states like Assam, Bihar, Chhattisgarh, Karnataka, Maharashtra, Orissa, Rajasthan, and Uttar Pradesh have been identified as needing urgent attention.

The Department of Drinking Water Supply is planning to reset targets this year. The aim is to cover 65,000 habitations, including those left out in the last two years of the programme.

The Centre has allocated Rs 6,700 crore for the programme in 2007, of which 20 per cent will be spent on habitations whose source has been contaminated with chemicals.

However, the programme has done well in covering villages that have faced problems because of a falling water table.

Of the 3.3 lakh habitations that have slipped back from coverage owing to depletion of ground water, more than 50 per cent have received attention. Some 90,000 more are being targeted this year.

HINDU 9-7-07

# Use conservation laws to protect dam, says panel

## To counter Tamil Nadu's demand for raising the height of the reservoir

Irish Menon

**THIRUVANANTHAPURAM:** The Kerala Government-appointed National Expert Committee on Mullaperiyar Dam has recommended utilising provisions in conservation laws in order to counter Tamil Nadu's demand for raising the height of the reservoir. The provisions include recent amendments to the Wild Life Protection Act that give legal protection to areas such as Periyar sanctuary and tiger reserve.

The committee, in its report, has said that under the amended Section 29 of the Wild Life Protection Act, diversion of water into or outside the sanctuary is possible only by permit from the Chief Wild Life Warden. Such a permit will be granted only if the State Wild Life Advisory Board is satisfied that the di-

version will lead to better management of wildlife in the sanctuary.

#### Case of water diversion

Tamil Nadu's case was for diversion of excess water outside the sanctuary area. As the diversion was for a different purpose, it would not be possible for the board to grant such a permit. Section 29 would continue to govern water flow within the sanctuary even though it was yet to become a notified national park, the committee said. "The expert team strongly recommends adherence to the provision of this Act in its entirety," the report said.

The Water Resources Department had appointed the National Committee, comprising Dhrubajyoti Ghosh, Regional Vice-chairman (South Asia), Commission on Ecosystem Management,

IUCN, as chairman and H.S.A. Yahya, Professor, Department of Wild Life Sciences, Aligarh Muslim University, and Saroj Kumar Patnaik, former Orissa Additional Principal Chief Conservator of Forests, as members on March 3 this year to assess the ecological impact of water level increase in Mullaperiyar Dam. The State Government is now studying the implication of the committee's recommendation.

#### Protected area

The National Expert Committee said the State Government needed to examine Section 29 in the context of the Periyar catchment coming under protected area.

The core area of 350 sq. km. has been designated as a tiger and elephant reserve.

It is also a forest according to the interpretation of the

Supreme Court in the Godavarman Vs Union of India case.

The committee also wanted the State Government to examine a 2006 amendment to the Wild Life Protection Act that provides Tiger Reserves a legal status.

The amended sub-section 38 (O) (1) (b) prohibits diversion of tiger reserves and areas linking two reserves for ecologically unsustainable uses, except with the approval of the National Board for Wild Life and the Tiger Conservation Authority. Another section, Sub-section 38 (O) (2) makes it mandatory to comply with the directions of the Tiger Conservation Authority. According to the Forest Conservation Act 1980, no forest land can be used for non-forestry purposes without prior concurrence of the Central Government.

SREENIVAS JANYALA  
AHMEDABAD, JULY 11

FROM scarcity-prone to flood-prone, there has been a sea change in Gujarat's fortunes due to the benevolence shown by the rain gods since the last five years. From an average rainfall of 646 mm in 2002, the last low rainfall year, the state's average has increased to 1,149 mm in the last four years, delivering the state from the grip of scarcity that it faced once every two or three years since 1980. This year, the state recorded 48 per cent rainfall within two days — July 1 and 2.

Now, a state government that is used to sending grim circulars to district magistrates at the start of every

summer seeking a report on availability of drinking water and how many water tankers they would require, is seeking flood preparedness reports from the districts. It is scrambling to put together a proper flood control plan as heavy rains have been forecast and the state is expected to receive 36 per cent more than average rainfall.

Rajesh Kishore, CEO of Gujarat State Disaster Management Authority and ex-officio secretary (Relief and Rehabilitation) said disaster planning had reversed since 2003. "Till 2002, we used to prepare plans and proposals to tackle the water crisis, sometimes acute, in many parts of state at the onset of summer. Now, we are in a different mode: tackling excess rains and plenty of water and

this is the fifth consecutive year," Kishore said on Tuesday.

Although floods have become an annual phenomena since 2003, the bountiful rainfall has changed the state's water availability situation and agriculture. Cultivation has increased from 78 lakh hectares in 2003 to 86 lakh hectares in 2006, Rabi crop has jumped from an average 17 lakh hectares till 2002 to 39 lakh hectares in 2006, according to the state agriculture department. "Agriculture revenue has shot up from an annual average of Rs 9,000 crores before 2002 to Rs 34,000 crores in 2006," said Agriculture minister Bhupendrsinh Chudasma.

On the other hand, water level in dams have not gone down below the 50 per cent

storage capacity since 2003, making water trains, tankers, emergency pipelines, and drinking water once in 15 days, a distant bad dream.

This monsoon, on July 10, 41 dams were overflowing and alerts were sounded at more than 50 others. The Sardar Sarovar Dam has overflowed for the third consecutive year.

Socio-economist and director of IRMA Dr Yoginder Alagh said, five years of good rainfall has brought back paddy and wheat cultivation back to Gujarat. "More than that it has done tremendous good to improve groundwater levels, which was a problem in the state," said Dr Alagh.

Though the state's average rainfall for the period 1980-2006 now stands at an improved 873 mm mainly due to

## Unprecedented rains in...

Year	North Gujarat	Saurashtra	Central-East Gujarat	South Gujarat	State average
2002	257.5	416.14	533.17	1379.5	646.38
2003	837	724.57	959.33	1616.8	1034
2004	817.5	605.57	864.67	1799.2	946.73
2005	903.17	873	1077.3	2362.5	1304
2006	1187.33	827	1277.5	1958.83	1311

*all quantities recorded in mm*

plenty of rainfall since 2003, the period was punctuated with low or below average rainfall years like 1987 (384mm), 1991 (671mm), 1996 (645mm), 2000 (532mm) 2001 (803mm) 2002 (646 mm) due to which the state was in the grip of water scarcity almost every other year. In 2000, 17 of the 25 districts were dry after 38 per cent less rainfall, while in 2002, 13 districts faced acute deficit and 11 faced deficit. But in 2003, north Gujarat's six districts received 837 average rainfall and in 2006 the region received a record 1187.33 mm. The usually dry Saurashtra region received more than 750 mm average

rainfall since 2003. According to the Met department, rainfall in Gujarat is very variable and in a 100-year cycle, there have been as many scarcity years as normal years. Kamaljeet Ray, director (forecasting) said, "If you look at the last 100 years' rainfall in the state, it has experienced 30 years of excess rain, 40 years of deficient rainfall and 40 years of normal rain. In the past also there have been three consecutive flood years followed by three years of bad monsoon. While being optimistic about the good monsoon years since 2003 one should also keep this cycle in mind."

## Water

## Development Issues

# Education, the key to inclusive growth

BUSINESS LINE 18.7.07

**T**he Eleventh Plan Approach Paper spelt out that a key element of the strategy for inclusive growth must be "to provide the mass of our people access to basic facilities such as health, education, clean drinking water etc that they need. Governments at different levels have to ensure the provision of these services and this must be an essential part of our strategy for inclusive growth."

### LAGGING BEHIND

In this context, it may be recalled that the National Human Development Report (2002) indicated that ranked by the Human Development Index, Andhra Pradesh was eighth in 1981, ninth in 1991 and tenth in 2001. Studies show that Andhra Pradesh lags behind in 'human development' indicators particularly literacy, and infant mortality compared to other southern States. J. B. Tilak highlighted the poor performance of Andhra Pradesh and the better performance in Rajasthan in the education sector and concluded that if the trends continue in both the States, Rajasthan can come out of the infamous BiMaRU club and Andhra Pradesh may take its place.

This situation in Andhra Pradesh persists despite the measures taken by the State Government, in consonance with Central policies. Budget documents reveal the priorities of the government, and they are also an important source of information on the expenditure trends and their pattern. Here an attempt is made to highlight some of the issues that need immediate attention.

### EXPENDITURE TRENDS

The expenditure heads under budgetary classification of social services (Education, Public Health and Family Welfare, Housing, Water Supply and Sanitation, Welfare of SC, ST and BC, Labour Welfare) are crucial indicators of human development.

The proportion of expenditure on 'Social Services' in the Gross State Domestic Product (GSDP) during the 1980s was in the 6-8 per cent range but dropped in the 1990s to 5-6.5 per cent. Since 2000-01 it is in the 5.5-6.5 per cent range. The corresponding expenditure proportion on 'Health and Family Welfare' in GSDP during the 1980s was about 1 per cent and has declined thereafter. A similar trend is seen in 'Welfare of SC ST and BC' and 'Labour Welfare'.

The overall expenditure on elementary education is increasing at the aggregate level, but at the disaggregated level a different picture emerges. The expenditure trends are inconsistent both in the segregated level of Plan (MSS, CSS and NSP) or non-Plan. There are certain schemes whose expenditures keep fluctuating (DPEP,

**Effective intertwining of policy, budgetary allocations and expenditure management towards education is essential in achieving inclusive growth.**

(revenue plus capital) on education, art and culture in GSDP during the 1980s ranged between 2.78 per cent and 3.61 per cent and declined in the 1990s (2.15-3.05 per cent). During 2000-06 it ranged between 2.2 per cent and 2.7 per cent.

The revenue expenditure on primary education during 2000-06 was less than 2 per cent of GSDP, which includes such Centrally-sponsored schemes (CSS) as SSA, DPEP, KGVB and NEPGEI that are not reflected in the State budget but spent through State Implementing Authorities. Sans the CSS funds for the aforesaid schemes, the State government expenditure on elementary education would have been lower still.

The corresponding proportions for the years 2006-07 (revised estimates) and 2007-08 (budget estimates) are 2.03 per cent and 2.00 per cent respectively.

In absolute terms, the revenue expenditure on elementary education increased by 1.5 times from Rs 1,569 crore in 2000-01 to Rs 2,413 crore in 2005-06.

But the expenditure in 2005-06 fell by Rs 451 crore (around 16 per cent) and Rs 681 crore (around 22 per cent) compared to the Budget and Revised Estimates respectively. Again the Revised and Budget Estimates for 2006-07 and 2007-08 show a promising increase.

But such estimations may not help achieve the targeted goals, particularly that of inclusive growth. It is the responsibility of the government to see that estimates are more accurate - if not to the BE at least to the RE which are estimated taking eight months' actuals.

The overall expenditure on elementary education is increasing at the aggregate level, but at the disaggregated level a different picture emerges.

The expenditure trends are inconsistent both in the segregated level of Plan (MSS, CSS and NSP) or non-Plan. There are certain schemes whose expenditures keep fluctuating (DPEP,

SSA, Operation Black Board, Integrated Education for Handicapped, area Intensive Programme for Backward Communities, etc).

The relationship between MSS, CSS and NSP for the same programme for some years is in one direction (either increase or decrease) and for other years just the opposite.

Further analysis of these inconsistencies could hold the key to achieving inclusive growth.

### TARGET NOT REACHED

According to the National Policy on Education, at least 50 per cent of the total expenditure on education must be allocated to elementary education. Consequently, many State governments changed the design of allocation of resources within education.

In Andhra Pradesh the 50 per cent expenditure towards elementary education was never reached till 2005-06. Though the Revised Estimates of 2006-07 and the Budget Estimates of 2007-08 are around 53 per cent of the total education expenditure, one has to wait till the actuals are available.

### FISCAL MARKSMANSHIP

Regarding the fiscal marksmanship, while the non-Plan actual expenditure is nearer to the estimates, the Plan expenditure, under which come all the schemes meant for Universalisation of Elementary Education, are far away from the estimates - both Budget and Revised Estimates - diluting the spirit of the education policy.

The funds flow (both Central and State) and their expenditure towards the programmes of SSA shows that less than 50 per cent of the 'funds released' was spent during 2001-03 and in 2005-06 88 per cent of the funds lay unspent.

Similarly with regard to NEPGEI - 73 per cent in 2004-05 and 84 per cent in 2005-06 - and KGBV - 48 per cent in 2005-06 - of the funds released were not utilised. This is an important point to be kept in mind while formulating the Inclusive Growth Oriented Eleventh Plan.

Effective intertwining of policy, budgetary allocations and subsequently expenditure management towards education (applied to all expenditure heads under budgetary classification of general, social and economic services) is essential in achieving inclusive growth.

In the absence of this, inclusive growth is would be a dream even during Eleventh Plan Period.

*(The author is Associate Fellow, Centre for Economic and Social Studies, Hyderabad. The views are personal.)*

## Development Issues

BUSINESS LINE 5.7.07

# Nabard mulls arm for micro-finance

### Our Bureau

Hyderabad, July 4

With a view to addressing a variety of challenges faced by micro-finance institutions, National Bank for Agriculture and Rural Development (Nabard) has decided to evolve a model institution that ensures transparency in accounting disclosure and coercive-free recovery methods.

Announcing this here, Dr Y.S.P. Thorat, Chairman of Nabard, said the bank would formalise the NBFC (non-banking financial company) called Nabard Financial Services or NABFINS. The initia-

tive would be piloted in Karnataka in the next two months.

"After evaluating the model, we will then expand it to other States. The NBFC will have an authorised capital of Rs 100 crore and an issued capital of Rs 20 crore," he said.

While Nabard subscribed to 51 per cent of this, the rest would be contributed by banks and State Governments. According to him, several banks were keen to join the effort.

The idea behind launching this initiative was to address the key issues such as lack of

**While Nabard subscribed to 51 per cent of this, the rest would be contributed by banks and State Governments.**

transparency in accounting disclosure, high transaction costs, poor diversification of products and high rates of interests.

"The objective is to prepare a model that can be emulated by other players," he said. Dr Thorat was here in

connection with the national seminar on agriculture credit to mark the silver jubilee fete of the bank.

### COOPERATIVES REVAMPING

Talking on Prof. Vaidyanathan committee report on revamping of credit cooperatives, he said DCCBs (District Cooperative Central Banks) and primary agricultural cooperatives in Andhra Pradesh would get Rs 460 crore in the first tranche on complying with the set norms.

Nationally, the bank set apart Rs 15,000 crore for cooperatives that met the

benchmarks set in recovery and other parameters. As many as 12 States agreed so far to comply with the committee recommendations.

On co-financing, Dr K.G. Karmakar, Managing Director, said the bank would join banks in financing projects such as biodiesel plantation in order to offer them cushion from risks.

Stating that agricultural growth had dipped from 1.4 per cent during 1984-85 to less than two per cent in 1995-96, he said largest slumps occurred in States that were predominantly rural.

## HINDU 13.7.07 Employment guarantee: unfinished agenda

Rajasthan is far ahead of other States in providing employment under the NREGA. The bad news is that people are paid much less than the minimum wage.

Jean Drèze and Siddhartha Lal

Among all major States, Rajasthan comes first in terms of employment generation per rural household under the National Rural Employment Guarantee Act (NREGA). In 2006-07, the average rural household in Rajasthan's six "NREGA Districts" worked for as many as 77 days under this programme, earning nearly Rs.4,000 in the process. This is an unprecedented achievement in the history of social security in India.

Further, disadvantaged sections of the population are the main gainers. The share of women in NREGA employment is around two-thirds in Rajasthan, and that of Scheduled Caste and Scheduled Tribe households is as high as 80 per cent. In this and other ways, the Act contributes to social equity and economic redistribution.

These figures are based on official data released by the Ministry of Rural Development, but they are fully consistent with independent reports, as well as with our own experience from Dungarpur district in April 2006.

More recently, on July 2 and 3, 2007, we conducted a brief investigation of the NREGA in Jhalawar district. We visited three blocks (Bakani, Dag, and Sunel), verified job cards and muster rolls in half a dozen villages, and had detailed discussions with labourers, mates, sarpanchs, gram panchayat secretaries, engineers, programme officers, and block development officers, among others.

In Bakani, we selected three muster rolls at random among those available at the block office, and "verified" them with the labourers concerned. We interviewed about 20 labourers who had worked on these worksites. In each case, the muster roll details matched with the job card details, and the labourers confirmed that the details were correct. Further, there was no evidence of "fake names" having been entered in the muster rolls. This reinforces the findings of earlier investigations in Dungarpur district, suggesting that "fudging" of muster rolls is rare in Rajasthan today.

### "Transparency safeguards"

This achievement is clearly related to the enforcement of the NREGA's "transparency safeguards." For instance, the labourers we met confirmed that the muster rolls were available at the worksites, and that attendance details were written in the muster rolls on the spot. Similarly, everywhere we went we found that complete entries had been made in the job cards. These and other safeguards have made it very difficult to "siphon off" funds from the NREGA — at least from the labour component.

In this respect, Rajasthan is far ahead of other States, where there are still major lapses in the implementation of transparency guidelines.

Public awareness of various aspects of the NREGA (including the transparency provisions) was also quite high in Jhalawar, in comparison with other States. For instance, labourers were familiar with the muster rolls, and took interest in the job card entries. A culture of checking job cards is also developing, among those who are able to read.

However, there is some bad news also. NREGA labourers in Jhalawar are earning less than the minimum wage — much less in many cases. For instance, the muster rolls for village Bhumara (Gram Panchayat Dev Nagar) showed that all labourers had been paid Rs.50 a day for the most recent pakhwada (fortnight). In earlier pakhwadās, they had earned even less — as little as Rs.23 a day for one whole pakhwada. Similarly, in Khadkad (gram panchayat Salawad), labourers earned wages ranging between Rs.35 and Rs.45 a day for different pakhwadās.

Further scrutiny of muster rolls at the block office in Bakani, and discussions with the Junior Engineer and other officials, suggest that this situation is by no means unusual. In fact, we did not find a single muster roll showing full payment of minimum wages. This is a flagrant violation of the National Rural Employment Guarantee Act, which states that "under no circumstances shall the labourers be paid less than the minimum wage. The Supreme Court, for its part,

has declared that employing labourers without paying the minimum wage is "forced labour," in so far as it amounts to "[taking] advantage of the helpless condition of the affected persons" (*Sanjit Roy v. State of Rajasthan, 1983 SCC (1) 525*).

In this respect, Rajasthan is in a category of its own. Indeed, according to official data posted on the website of the Ministry of Rural Development, the average wage rate paid under the NREGA in 2006-07 was lower in Rajasthan (Rs.51 a day) than in any other state, and much below the national average of Rs.65 a day.

It is worth noting that last year, when a full-fledged "social audit" of the NREGA was conducted in Dungarpur district, low wage payments already emerged as the main problem in an area where the Act was doing quite well otherwise. One year later, this problem persists.

There are also other problems with the NREGA in Rajasthan, such as the shortage of trained staff and lack of participatory planning. But the non-payment of minimum wages is a particularly serious lacuna, which calls for urgent investigation and redress. Extracting hard labour from poor people for as little of Rs.23 a day is a serious violation of constitutional rights. This also threatens to defeat one of the basic purposes of the Employment Guarantee Act — the empowerment of labourers.

BUSINESS LINE 3.7.07

## India, Japan to firm up plans for energy ties

TERI signs pact with Institute of Energy Economics of Japan

Our Bureau  
New Delhi, July 2

India and Japan today agreed to set specific goals and firm up voluntary action plans to improve energy efficiency and increase cooperation in the development of renewable sources.

"Based on the 'Cebu Declaration on Energy Security in East Asia' adopted at the Second East Asia Summit, both sides agreed to set individual goals and formulate action plans voluntarily for improving energy efficiency," a joint statement issued at the end of the second meeting of the India-Japan energy dialogue said.

India and Japan will explore ways and means to further cooperation in the field of new and renewable energy sources, said the statement signed by Japanese Minister

of Economy, Trade and Industry Mr Akira Amari, and the Planning Commission Deputy Chairman, Mr Montek Singh Ahluwalia.

The Indo-Japan energy cooperation does not involve development of nuclear energy sources, Mr Ahluwalia clarified, while addressing the media along with Mr Amari. The two countries, however, underlined the need for increasing cooperation among private and public business operators for promoting clean development mechanism projects based on Kyoto Protocol.

At the conclusion of the energy dialogue, The Energy Research Institute (TERI) and the Institute of Energy Economics of Japan signed an MoU to undertake research and study on energy challenges in the world in

general, and India and Japan in particular.

### ENERGY MEET

Mr Amari said Indo-Japan partnership efforts would be strengthened in the East Asia Summit, the Asia-Pacific Partnership on Clean Development and Climate and an energy meet scheduled to be held in Japan in June 2008. Stating that Japan will support energy audit evaluations in specific industrial sectors (such as iron and steel and cement), which can serve as APP projects, Mr Amari said his ministry would provide training on energy efficiency and conservation policy and technology to 200 trainees over the next three years.

Both the sides also agreed to accelerate the formulation of energy efficiency and conservation policy by preparing

collaborative working plans to enhance the policy implementation, the joint statement said. Japan will specifically assist India in reducing energy consumption in 15 identified energy-intensive sectors through energy audits and adopting reduced energy consumption norms, it added.

Japan's energy ministry, New Energy and Industrial Technology Development Organisation, the energy Conservation Centre and other organisations will increase cooperation on energy issues with the Indian Power Ministry and the Bureau of Energy Efficiency, the statement said. Japan also agreed to support increased cooperation between the International Energy Agency and India in areas including oil stockpiling.

BUSINESS LINE 10.7.07

## Govt will lead by example on energy conservation effort

Framework for procurement of energy-efficient products on the anvil

Anil Sasi  
New Delhi, July 9

The Centre, in consultation with States, is working on putting in place a legal framework requiring Government departments to compulsorily go in for procurement of energy-efficient and environmental-friendly products.

A statute, ordinance, or a policy statement mandating the procurement of only energy efficient product and environmental-friendly products by Central and State-owned Government departments is in the works, Government sources said.

The Indian Government Sector, including the Centre, State and municipal bodies, present a substantial opportunity for energy savings, given that the total planned annual energy-related expenditure for the current fiscal alone is pegged at a massive \$15.75 billion, which will include expenditure on capacity addition, energy distribution,

implementation of various programmes and procurement of energy-related products.

### INTERNATIONAL WORKSHOP

As a way forward, the Centre plans to take a leaf out of similar initiatives initiated by other countries, including the US and China. These countries, besides several Asia Pacific Partnership nations, have been invited to an international workshop to be held here shortly, where sharing of experiences and lessons learned from government procurement programmes in these countries would be taken into account.

Besides the Centre, State Governments and municipal bodies have also been invited to the workshop.

According to sources, once a broad consensus with State Governments is arrived upon on the issue, the Bureau of Energy Efficiency (BEE) in the Ministry of Power is likely

to be entrusted with the task of designing a statute, ordinance, or policy statement requiring energy efficient purchasing by Central and State-owned Government departments.

"The move would basically ensure Government bodies lead by example and act as catalysts for market transformation by leveraging the substantial purchasing power to create a market for energy-efficient products. In addition to creating a market, the policy to procure energy-efficient products would bring down energy costs without compromising quality," an official involved in the exercise said.

### SAVING COST

Bulk procurement contracts with leading vendors and manufacturers of energy-efficient products can also result in cost-savings across the board, the official said.

The proposed two-day workshop, slated to kick-off

on July 13, would focus on information exchange, development of consensus on good practices and a discussion of the potential adaptation and application of these practices to support Indian partners in enhancing energy efficient government procurement.

International participants include the United States Environment Protection Agency, United States Agency for International Development, the National Development and Reform Commission of China and China Standards Certification Centre.

From the Indian side, the Office of Director General of Supplies and Distribution (DGS&D), representatives of State Public Works Department of states, including Maharashtra, Gujarat, Punjab and New Delhi and representatives from Central Ministries including Power, Railways and Defence are expected to be part of the deliberations.

BUSINESS LINE 10.7.07

## Environment: Time is running out

Bhanoji Rao

Volcanoes never give notice of their eruption so impossible to estimate the extent of destruction. The same is true of environmental degradation. We never know when we will pay the price and how much.

There is one difference though. Volcanic destruction is purely local, with some, often moderate, effects across a nation or region. Environmental degradation, however, could have global consequences and hence the responsibility for taking care of the environment is with both individual nations and global institutions.

### USEFUL MOSPI PUBLICATION

We should acknowledge the work of the Ministry of Statistics and Programme Implementation (MOSPI) in bringing out a comprehensive document, *Compendium of Environment Statistics*, though the latest available version refers to 2000. A reading

### PUBLIC POLICY NOTE

of the *Compendium* will be of great benefit to each and every elected representative, civil servant, and graduate student. At the minimum, those who count should read at least portions of the document, which has in all seven chapters and an appendix. It is, as one would expect, rich in statistics, though they are somewhat dated.

For most people, development is what counts and what must. Quite rightly, development is translated as more buildings and highways via forest clearing, industrialisation and urbanisation, extended agriculture and crop diversification, more industries, better and more furniture and fixtures via timber extraction, etc. All these, however, have significant environmental impacts, as the *Compendium* neatly indicates in a tabular statement.

Forest clearing and land resettlements could lead to direct reduction in forest cover, extinction of rare species of flora and fauna and also the creation of conditions for the growth of mosquitoes and other insects with potential health hazards. Industrialisation and urbanisation often leads to air and water pollution.

### AIR QUALITY IN CITIES

Ever increasing and polluting industries and motor vehicles have been creating unacceptable air quality in our metros and other cities. One important agent of air pollution is the Respirable Suspended Particulate Matter (RSPM). Low, moderate, high

Thanks to the 2007 deliberations of the Inter-Governmental Panel on Climate Change, there is now lot more awareness on the problem and the fact that we do not have much time to address it.

and critical levels have been specified by the environmental authorities. Data collected in 2002 for major cities indicate that the RSPM levels were critical in Ahmedabad, Delhi, Kolkata and Mumbai, while the levels were on the high side in Hyderabad and Bangalore.

Most recent information for February 2007 (from the Ministry of Environment and Forests) shows that against the national standard of concentration of 100 µg/m<sup>3</sup> for RSPM, the levels in Delhi and Mumbai averaged 175 and 291 respectively. In February 2007, addressing a legislators' conference on climate change at Washington, Sir Nicholas Stern, the author of a 2006 report on the subject, declared that India and other countries in the sub-continent stood to suffer the most from global warming.

### 'STERN' WARNING FOR ALL

As explained by Sir Nicholas to his audience, global warming will cause torrents during the wet season and dry rivers will bring drought in the dry season. Thus, both rural and urban areas of India will feel the adverse impact. In his report, Sir Nicholas notes that due to rising temperatures, the Himalayan glaciers could melt and millions in India and several million in China might be adversely affected. There could be changes in the rainfall pattern and affect the livelihood of farmers and people at large. Another 2006 report by the Commonwealth Scientific and Research Organisation of the Australian government warned of the likely rise in temperatures up to 2 degrees C by 2030 and as much as 7 degrees C by 2070.

Many reports over the years have sought substantial reductions in greenhouse gas emissions, especially in the wake of surging rates of economic growth in China and India. Despite the entry of the two populous actors on the global scene, it is well known that the major culprits are the industrialised nations. The fact is fully corroborated by all available evidence on emissions data. The UNEP's *GEO Yearbook 2007*, for instance,

provides the following per capita carbon-dioxide emissions in tonnes: 19.8 in North America, 8.3 in Europe, 7.2 in West Asia, 2.6 in rest of Asia and Pacific, 2.4 in LAC and 1.1 in Africa.

Thanks to the 2007 deliberations of the Inter-Governmental Panel on Climate Change, there is now a lot more awareness on the problem and the fact that we do not have too much time to address it.

### DEVELOPMENT AND ENVIRONMENT

All evidence undoubtedly points to the extraordinary responsibility of the industrialised nations in reducing emissions. Also, it is not fair to impose universal and common constraints on all countries, since development and poverty alleviation has top priority for developing nations such as India and China. Yet, all countries have the responsibility to work towards policies and measures that would ensure environmentally friendly developmental initiatives. Two examples would suffice to illustrate this point in the context of India.

First, we use a lot of coal for power generation and it is pointed out that the electricity extraction rate is low compared to levels achieved elsewhere. In an instructive article in *The Hindu* (June 30.), Dr M. R. Srinivasan (former Chairman and now member of the Atomic Energy Commission) notes how plant size makes the difference. Reducing coal usage is also possible with intensified use of alternative sources of power generation.

Second, there has been an explosive growth in the motor vehicle population and the high rates of growth will continue in line with expected high growth of the economy. Similarly, there is likely to be high growth of pollution prone chemical and other industries. Policing of pollution from vehicles and industries is too lax to expect major changes in emissions from those sources.

Incentives and disincentives have to be used and price mechanism galvanised to address the problem. For example, battery operated or LPG based vehicles should attract concessions and petrol vehicles should be taxed heavily. Environmental concern and actions to reduce emissions are not just national issues; they in fact define our relationship with those now growing up.

(The author, formerly with the National University of Singapore and the World Bank, is Professor Emeritus, GITAM Institute of Foreign Trade, Visakhapatnam and Visiting Faculty, Sri Sathya Sai University, Prashanti Nilayam. He can be reached at bhanoji@gmail.com)

INDIAN EXPRESS 3.7.07

## Climate change: Such a domestic matter

Debates on climate change in India get bogged down in denunciations of the West. We must not lose sight of the fact that there is no trade-off between carbon mitigation and growth



### Over the BARREL

VIKRAM S MEHTA

IN the din of the cacophonous multilateral dialogue on climate change and the actions that countries must take to mitigate global warming, I am concerned that India loses sight of one simple but important fact: measures to limit carbon and greenhouse gas emissions (GHG) have a positive correlation with economic growth and vice versa. There is no trade-off between carbon mitigation and growth.

My concern arises from the nature and content of the international dialogue. America is refusing to be bound by global targets on carbon emissions. They say that such targets would have limited impact if India and China refuse to accept them. This is because both countries are potentially the largest emitters of carbon and there would be no purpose in participating in a protocol that lacks teeth from the outset. India and China have responded in like measure. They have made clear that America's stand is self-serving and even immoral. It is

because of America (and the developed world) that the world is confronting the current problem. It is because of their pattern of growth that carbon dioxide concentrations in the atmosphere have increased from 280 ppm at the time of the industrial revolution to around 400-450 ppm today. Why should the now industrialising world bear the burden of someone else's extravagance? The polluter must pay and the West should offer a compensatory package of financial and technical support to the rest of the world. India and China have also pointed out that despite their rapid economic growth their per capita emission of carbon is still but a fraction of the emissions from the West.

India is today at an inflexion point. Growth has pushed past 8 per cent and the prospect of a double digit number is alluringly real. The perennial concerns of inflation, fiscal deficit, poor infrastructure, energy and slipshod governance remain major concerns. Amongst these the failure to provide reliable, affordable and accessible energy has to be arguably the most worrisome impediment to sustainable high growth

The Catch 22 conundrum into which this debate has collapsed is not surprising. It reflects the reality that while globalisation has converged national economies it has not dissolved competing nationalisms or parochial politics. The chances of an international consensus on "what must be done" and "who should do what" to arrest global warming are therefore slim.

The question arises: will this debate at the international level dilute domestic efforts to contain carbon emissions? Will the fact that growth (or rather the limitations on growth) is the peg on which India is hanging its objections at the international level sidetrack it from taking appropriate domestic measures to weaken the link between eco-

nomical growth and atmospheric pollution? Is it conceivable that in the noise of multilateralism India will lose sight of the fact that growth and carbon mitigation are positively correlated; that while growth has no doubt contributed to pollution — emissions in China and India have in absolute terms grown 5 times faster than the US since 1990 and this trend is not decelerating — it is the condition precedent for

building the financial resources, the technologies, the infrastructure and indeed the political will to redeem its consequences.

I raise these questions because I find that most debates on climate change in India get bogged down in denunciations of the West rather than in studied introspection of the

implications of a scientific reality. The West is of course responsible for the current situation, but the consequence of global warming is global. We cannot escape from these consequences and so irrespective of whether there is an international agreement or not, we have to have a programme of domestic remediation.

India is today at an inflexion point. Growth has pushed past 8 per cent and the prospect of a double digit number is alluringly real. The perennial concerns of inflation, fiscal deficit, poor infrastructure, energy and slipshod governance remain, however, major concerns. They hang over our macro economy like the sword of Damocles. Amongst these the failure to provide reliable, affordable and accessible energy has to be arguably the most worrisome impediment to sustainable high growth.

The government is, of course, fully cognisant of the seriousness of this issue and it has placed energy on top of its economic agenda. The PM chairs an Energy Coordination Committee of concerned ministers; the ministry of external affairs has just announced the setting up of a division on energy security; the Planning Commission is the fount of integrated energy policy and the independent energy ministries (petroleum, coal, power, non conventional and nuclear) have clearly defined sector-specific agendas. The problem is not, therefore, lack of awareness. It is in the tilt towards supply-side issues rather than de-

mand-side management. It is a skew that should be corrected for two reasons: one, there is huge potential value to be unlocked through conservation and energy efficiency. For instance, India is ranked among the most energy inefficient countries in the world. One report suggests that next to China it is the most inefficient. This report states that for every USD 1000 increment in GDP India consumes an additional 1.5 barrels of oil whereas France, Italy and the UK consume only 0.75 barrels for a comparable increment and the US 1.25 barrels. The second reason is that it will reduce appreciably carbon emissions.

This does not mean that the current efforts to develop indigenous hydrocarbon resources and secure

INDIAN EXPRESS 16.7.07

## Emissionary position

**T**HE first victims of climate change are to be found in Western politics. David Cameron, leader of a right of centre party, said the British must bear with a green air miles allowance. Youth, chubby good looks and being a nice guy are no excuse for a post-Thatcher Tory calling for state monitoring of individual behaviour.

Sensible politicians now need to keep their heads above the rising tide of intrusive activism. And on that count India's politicians, it seems, deserve nothing but praise. Last Friday, the prime minister-chaired Climate Council met for the first time. Sobriety pervaded the deliberations in Delhi. There were no fulminations against conspicuous or ostentatious carbon-emitting individual activities.

When yet another global climate change conference is held, under UN auspices, and when the George Bush-proposed meeting of the world's 10 biggest polluting nations takes place, India will take to the negotiating table the same apparent sensibleness. Yes, global warming is a problem but, no, as a poor country with low per capita emissions we can't be expected to agree to any emissions reduction protocol.

Almost all domestic rebuttals of this official position have come from the activist green/radical left, which has argued that the refusal to join an emissions protocol is part of the establishment's growth mania. Yesterday Narmada, today Nandigram and tomorrow nature will wash away the establishment's India dream. But there's also a mainstream, pro-growth argument against the official line. This says the establishment, more than being shortsighted, is selling the country short.

Consider another protocol India, in contrast, is keen on: free flow of nuclear technology. This week may see the Indo-US part of the protocol wrapped up. Multilateral negotiations will follow. Why is there so little hostility globally to the idea of India becoming an all but de jure nuclear power state? Because the world understands the aspirations of a fully functional democracy that is a trillion dollar economy and within striking distance of becoming a middle-income country. Yes, of course, the absolute number of the poor is still vast. But India is not recognised any longer as primarily a host to mass poverty. It's India's ability to tackle that poverty that impresses the world.

So India gets a nuclear break as an acknowledged economic power in the making. Yet it tells climate



A mainstream, pro-growth reason why India must agree to binding carbon cuts

SAUBHIK CHAKRABARTI

change negotiators that it is too poor to afford emission cuts. The two positions cannot be simultaneously and indefinitely maintained in global forums. There's a dangerous irony here for Indian policymakers. India and its friends in Washington argued during the earlier phase of nuclear talks that access to nuclear technology would help this country combat carbon emission problems that come from producing coal-fired electricity.

In his presentation to the US Senate committee on energy and natural resources during the nuclear deal hearings, David G. Victor — he runs a sustainable development study programme at Stanford, is adjunct fellow, science and technology, Council for Foreign Relations and a pro-deal expert — gave a remarkable estimate. Suppose India builds 20 GW (1 GW = 1 billion watts) of nuclear power capacity by 2020 — a US State Department projection — and therefore reduces coal-fired power production by an

**In any case, can't the government see that pleading poverty when India's middle class is going to be 600 million-strong is a national disservice?**

equivalent amount. Then, annual savings in CO2 emissions, at 142 million tonnes, "could be almost as large as the entire commitment of 25 EU nations to reducing emissions under the Kyoto Protocol".

Victor adds that the Indian PM is of the view that nuclear capacity can be built up faster post-deal: 40 GW of new nuclear capacity by 2015. That has even more radical emission reduction implications.

It also has radical realpolitik implications. India rapidly reduces coal dependency for power generation and therefore CO2 emissions, thanks to a US-sponsored deal that recognises its strategic-economic potential. But it also keeps insisting that it's too poor to agree to emission cuts. And, having now indicated that it no longer considers any emission protocol an anti-American conspiracy, the US's patience with India's negotiating position is likely

to wear very thin very fast.

Already, Western negotiators have started talking about India hiding behind its poor. More important, it is jeopardising its own global standing by invoking the aam aadmi version of the emissions control argument.

A McKinsey report — one of several similar studies coming to the same broad conclusion — says India's middle class will expand to 600 million over the next decade. Roughly in the middle of the next ten years — 2012 — the Kyoto Protocol will expire. The coming together of increasing mass prosperity in India and the end game of negotiating a post-Kyoto treaty will make this country look like a typical third world double talker.

There are plenty of other critical global negotiations where India will need to exert its weight as a confident middle-income power. Realpolitik demands that it be consistent. In any case, can't the government see that pleading

poverty when India's middle class is going to be 600 million-strong is a national disservice?

It is a national disservice, too, to not get your country the best deals for tackling complex problems.

Even with the best-case scenario for nuclear power capacity addition, India's growth will remain excessively carbon dependant in the near future, sans large-scale adaptation of what green jargon calls cleantech. Standard and Poor estimates that, for every dollar of GDP produced, India emits three times as much carbon as the US. You don't have to be a genius to guess what will happen to vehicular emission when 'Rs 1 lakh cars' hit the market. No Indian politician can tell the aam aadmi not to buy cars. And a carbon tax, even if it were politically acceptable, may not work.

In an EPW paper (June 16, 2007) that deserves to be widely read,

Samantak Das and others argue that Indian industry's technology absorption capacity is generally low. So a carbon tax, even one as high as 50 per cent, will tend to increase costs and lower production, not spur new, clean production techniques.

Of course, some big Indian firms are already in the game. ITC's Sonar Bangla is the world's first hotel to receive carbon emission reductions under the UN convention on climate change. But what Sonar Bangla does today isn't even thinkable for India tomorrow.

India's R&D capacity is infamously suspect. Spending is low; in purchasing power parity terms its per capita R&D spending was a shockingly meagre \$12.1 in the mid-1990s. Ambuj Sagar (EPW, September 21, 2002) analyses R&D performance in the energy sector and comes to a depressing conclusion that holds five years on: India is a laggard.

So if a carbon tax won't work because R&D capacity is low, where will India get its cleantech from? From the West, of course. But an India that's part of an emissions reduction protocol will be differently helped from an India that isn't. Suppose the country agrees to emission norms but says its precondition is getting special funding and special access to cleantech intellectual property, will the West disagree? No.

What else will India get? The chance to be at the high table and influencing policy as the second round of climate change talks begins. Remember, India's negotiators are famously tough.

Agreeing to a protocol will also speed up domestic industry's compliance record. More than half of India's big industry doesn't follow pollution norms, according to the World Bank. And these norms don't even apply to the small and medium enterprises.

A globalised world doesn't have a lot of time for such casualness. This year was the first time BSE's top 100 companies filled up questionnaires on how they would respond to climate change. The Carbon Disclosure Project is a group of 284 global institutional investors who manage \$41 trillion in assets. Its mandate is to investigate companies' green commitment.

Multilateral and global private scrutiny of India's official policy will increase if India continues to hide behind the poverty argument. It needs to come out of the closet. Take an emissary position.

saubhik.chakrabarti@expressindia.com

4.7.07 TIMES OF INDIA (A)

## Break WTO Deadlock

Developed countries must make deep subsidy cuts

Amit Mitra

The Doha Development Round of WTO received a double whammy within a short space of time. First, the G4 talks between US, EU, Brazil and India crumbled in Potsdam and then on June 30, the US Congress refused to renew the term of the Trade Promotion Authority (TPA), popularly known as the fast track. A major view is now emerging that the Doha Development Round will be on hold till a new president is elected in the US. What is at the heart of the impasse on this Round and is there a light at the end of the tunnel?

I recall an almost similar impasse in Doha nearly six years ago. The FICCI team sat on the sidelines of the green room throughout the night, as the late commerce and industry minister, Murasoli Maran, despite his ill health, refused to give in. Around 7 a.m., Robert Zoellick, then US trade representative and now World Bank president, came up to Maran in exasperation: "What do you really want?" Maran handed over a chit of paper which read "reductions of, with a view to phasing out, all forms of export subsidies; and substantial reductions in trade-distorting domestic support". This was included and thus the Doha Round was born. Two years later, one witnessed the crumbling of the negotiations in Cancun as Arun Jaitley stood firm, aided ably by his ambassador in Geneva, who is now the new cabinet secretary.

Today, the situation is grimmer, since we have already overshot the time of completion of the Doha Round by over two years. Yes, we undoubtedly need a multilateral trading regime, the WTO, to keep nations from following the policy of 'beggar thy neighbour' or crafting conflictual bilateral and regional agreements, 370 of which have already come into existence.

India has a strong case in opposing trade-distorting agricultural subsidies of the US and EU. The quantum of this subsidy is mind-boggling and therefore Kamal Nath

has been unrelenting, arm in arm with Celso Amorim of Brazil and supported strongly by the major developing countries of G-20.

The rich nations' club, OECD, provides \$280 billion of support to its farmers. WTO permits the US alone to offer \$48 billion of overall trade-distorting support (OTDS). EU is allowed 110 billion euros. Yet, they are pushing developing countries for a steep reduction in agricultural tariffs, far in excess of the 36 per cent cut offered by G-20 countries. Even more alarming is their insistence on restricting Special Products (products of developing countries that would be exempted from tariff cuts) to just five items. Is all of this fair?

There is also another ominous process at work. Developed countries are cleverly



shifting some of their actual trade-distorting subsidies to the Green Box which is supposed to contain only minimally trade-distorting support. For example, US has already placed \$50 billion into the Green Box, all of which is immune from subsidy cuts. US has also created a novel instrument called the Production Flexibility Contract Payments (PFC) and placed it into the Green Box as an escape route. Similarly, EU has created the Single Farm Payment Scheme and positioned it in the Green Box to avoid reduction commitments. How can India agree to such tactics?

In the area of non-agricultural market access, developed countries would like India to lower its bound tariffs by a hefty 64-70 per cent, while they have not made significant

commitments to address their tariff peaks, tariff escalations or non-tariff barriers. For instance, maximum duty for leather and footwear in the US is 55 per cent, while their average tariff, they claim, is only 3.5 per cent. Thus, peak tariffs are camouflaged. In fact, 2.4 per cent of US's non-agricultural tariff lines attract duties as high as 15 per cent or more.

The phenomenon of tariff escalations in developed nations continues to discourage developing countries from producing value-added products. While the US imposes zero or a rather low rate of duty on raw/tanned leather, its tariff on some categories of trunks and suitcases made of leather is as high as 20 per cent. In fact, tariff escalation explains why developing countries despite producing 90 per cent of global cocoa beans, manage to produce only 44 per cent of cocoa liquor, 30 per cent of cocoa butter, 29 per cent of cocoa powder and just 4 per cent of worldwide chocolate output.

Against such a backdrop, accepting the developed countries' proposal of deep tariff cuts on manufactured products would only imply allowing their goods to flood Indian markets, while Indian goods would still continue to face tariff peaks and tariff escalations in the West. Should we give market access without the elimination of peaks and escalations in developed countries?

Our core strength lies in delivering services to the developed world. A mechanism to make this happen still remains in a limbo. The movement of professionals requires liberal issuance of visas and work permits. This remains elusive. And those who are there pay social security taxes without the hope of ever benefiting from it.

In the absence of any concrete and matching benefits for India, it does not make sense to accept a half-baked solution for the Doha Development Round. This will satisfy no one fully, and in the process compromise the interests of developing countries. The light at the end of the tunnel is rather dim today. The developed world would have to give a big push to make multilateralism glow and thrive.

The writer is secretary general, FICCI.

BUSINESS LING & FOOT  
WTO talks structure needs change

**Ranabir Ray Choudhury**  
The latest failure in Potsdam of the G-4 countries – the US, the EU, Brazil and India – to hammer out an understanding among themselves on the subjects of discord which are holding up work on the Doha Development Round has, perhaps, come as the last straw for those who strongly feel that the World Trade Organisation 'structure' needs to be changed if it is to meet effectively the development requirements of its present-day membership.

Very briefly, the issue seems to be this: Given the diverse demand profiles of the organisation's members, is the 'single undertaking' stipulation governing the Doha Round workable today? Conversely, given the deeply entrenched differing standpoints of the leading individual member-countries, as well as important blocs of member-nations, would it not be more sensible to clinch agreements in the different sectors as and when they are finalised, leaving the intractable sectors to their own time schedules?

**THE WTO LINE**

The official WTO line is, of course, very clear. As recently as June 22 the WTO Director-General, Mr Pascal Lamy, stated unambiguously that the Doha Round was a "Single Undertaking covering a broad agenda with development at its heart." What this means is that nothing will be taken as agreed unless everything being negotiated is agreed upon. As Mr Lamy explained elsewhere, this is the best form of insurance for the poor world in that their stronger competitors will not be able to get a better deal in some sectors while appearing to make concessions in elsewhere. Seen differently, the entire canvas of liberalising multilateral trade will have to be taken as one unit, the approval of the final outcome being acquiesced in by each and every member of the organisation.

Clearly, there can be no two views on the desirability of such a scheme, especially in a situation where the economically very strong and the very weak are the principal players involved. But it is also apparent that the system will work only where the spirit of give-and-take holds sway. The problem with the WTO at the moment is that this accommodative spirit is becoming increasingly conspicuous by its absence, with both the rich economies and the developing (including the least-developed countries) world assuming inflexible

positions at the negotiating table. As events have shown over the past couple of years, this is leading to an impossible situation as far as getting the Doha Round into shape is concerned.

**HIGH STAKES**

The stakes are obviously high because if the Doha Round is scrapped it will represent a massive blow to the future prospects of multilateral trade liberalisation, if not to the existence of the WTO itself. No one can argue that such an eventuality will help the

**WIDE CANVAS**

international economy by raising growth prospects and promoting a more equitable distribution of the proceeds. This, indeed, should be reason enough for every effort to be made to get the Doha Round off the ground in a respectable enough shape.

The long and the short of it is that, as of now, under the given framework of the negotiations, the prospects of such a happy development occurring are practically non-existent. Since the finalisation of the Doha Round is so indispensable to the future shape and growth of the multilateral trading system, it stands to reason that there should be no uncompromising opposition to the idea of altering the framework of the negotiations, if that helps the member-countries of the WTO to overcome the current obstacles they are facing.

It will of course be argued that there is no point in concluding a Doha Round without an agreement on agriculture issues and on the subject of Non-Agriculture Market Access (NAMA), which form the very core of the give-and-take matrix involving the rich and poor economies.

While this is true, is it not also acceptable that a truncated Doha Round would at least have the effect of bringing the developed and developing worlds closer to each other in the sectors where agreements have been reached?

In fact, this could be a more attractive alternative than a situation where there would be no Round at all (and, therefore, no points of interfacing between the rich and the poor at the multilateral level) because of the absence of accords on agriculture and NAMA.

**RETAINING INCLUSIVITY**

To say this is not to suggest that WTO members-countries would negotiate among themselves individually or on

the basis of groups on sectoral aspects of the Doha Round corpus. Far from it. The WTO umbrella would remain intact for such negotiations, all the members being involved in equal measure in the process, thus keeping alive the principle of inclusivity.

Indeed, in recent times, there have been murmurs among the WTO membership that groups such as the G-4 have not been as transparent as they should be in their attempts to strike deals with the developed economies, a point of concern which has grown so strong in recent times that Mr Lamy himself has gone out of his way to reiterate the principle of inclusivity and transparency as being the very basis of everything that goes on in the Centre du William Rappard, the Geneva headquarters of the WTO.

If what Mr Bill Clinton told the Geneva Ministerial meeting in 1998 is anything to go by, Washington will not shy away from the idea of giving the 'single undertaking' a temporary burial.

To quote the former US President: "We should explore what new type of trade negotiating round is best suited to the new economy. We should explore whether there is a way to tear down barriers without waiting for every issue in every sector to be resolved before any issue in any sector is resolved. We should do this in a way that is fair and balanced, that takes into account the needs of nations large and small, rich and poor. But I am confident we can go about the task of negotiating trade agreements in a way that is faster and better than today."

The Commerce Minister has asked for the Doha Round negotiations to resume in Geneva, which is just what should be done now to revive the sagging fortunes of the Round. But this will certainly not be enough to effect a turnaround.

As was stated earlier, the time has come to alter the framework of the negotiations so as to make it conform to the changing ground-situation, which has principally been spurred by the new teeth which the leading lights of the developing world have grown the past few years.

Surely, there is an ample measure of confidence today among Brazilian, Chinese, Mexican, South African, Indian and other developing-world negotiators to enhance their economic welfare as a whole even if the protection and 'insurance' of the 'single undertaking' is not there. The WTO itself must change if it is to serve the cause of multilateral trade better than in the nineties.

## Polavaram: Rehabilitation via Forced Consensus

*In the Polavaram dam project of Andhra Pradesh, a rehabilitation package for tribals is being implemented through forced consensus and has led to police harassment when the government's measures are questioned.*

**R UMA MAHESHWARI**

It is a question of building consensus by using fear tactics and forced opinion-building in the implementation of the Polavaram dam project of Andhra Pradesh. Very recently headlines screamed "Polavaram will go on". Sure it will and if it must (leaving aside criticism expressed daily on the issue) then it will be at the cost of those who are opposing the project – either communities in the submergence zone villages or those suffering at the cost of "rehabilitation" in the "non-submergence" villages. More so, if they happen to be from tribal communities and small dalit farmers or are absolutely landless.

The Polavaram project is a multipurpose project that promises to transfer 80,000 million cubic feet of water to coastal Andhra Pradesh and the Rayalaseema region for irrigation and generation of electricity. However, the project will displace hundreds of mostly tribal people that live in that area and have an adverse effect on their livelihoods. The situation is further aggravated by the ambivalence of the main political parties and the inappropriate rehabilitation packages offered to the affected people.

At the time of writing this report (end-April 2007), at least three people from Chegondapally, Tellavaram and Polavaram are in the Rajahmundry central jail, and the women's prison – Kunjam Rama Rao, Muchika Suramma and Geedi Pentaiah (the last two are also members of the AP Rythu Coolie Sangham). They have been arrested under sections 143, 341, 153, 153 (A), 124 (A), 341, 447, 434, 427 of the Indian Penal Code (IPC) (with variations for each of them). For the lay person some of these sections mean – being a "member of unlawful assembly" (143), "wrongfully restraining any person/official on duty" (341), "promoting enmity between classes in places of worship" (153 (A)), "sedition" (124A). Let me make this even more specific – some time last year, Suramma and the other two (as many in their village) had

questioned the revenue divisional officer (RDO) and joint collector when the spillway work of the Polavaram project was under way. Chegondapally was one of the villages that directly faced the effects of the construction. Smoke from dynamite blasts used to envelop the village day and night. Their requisitions on this problem were of no avail. Now, every meeting in this village takes place in a temple, or 'ramalayam'. Even officials meet villagers here. Hence, the section, "creating enmity between classes (read, pro-, anti-dam) in a religious place of worship" come into play! Sedition, a legacy of the colonial times, holds the same intent today; in simple terms, opposing the powers, and that can be interpreted by those in power.

Perhaps their association with the Rythu Coolie Sangham (which has been engaged in tribal land alienation issues for a long time and is opposed to the Polavaram dam) makes things worse for Suramma and others. In Polavaram, there are others who have allegedly broken the law and are liable to be arrested any time, including a Communist Party of India (Marxist) organiser, Banerji, and two others from Chegondapally, Ravi and Sunnam Raju, among others. Things there seem to be at a political head, at least for those who are openly critical of the dam.

**Resettlement and Rehabilitation?**

Let me move on to another part of the problem where there is no ostensible "political" reason for slapping cases against anyone who opposes the dam. In these parts, the tribal communities suffer on account of the resettlement and rehabilitation (R&R) package of Polavaram dam meant for them. The charges filed against them are almost similar to the ones mentioned earlier. Take for instance, a frail old (around 70 years) Ekka Rajanna Dora who was charged for "criminal trespass" (section 353 IPC) for "obstructing officials on duty". He is a Koya dora farmer who cultivates one acre (or even less) of the

community-held tribal land in M Ravilanka in Indukur panchayat in the Devipatnam mandal of the East Godavari district. His "crime"? He had made the mistake of questioning the RDO who started digging up his land, which has now been handed over as part of the "land-for-land" package for tribal farmers of Bodigudem, Paraganapadu and D Ravilanka—among the first to "settle" in the R&R colony in Pedabhimpally in Indukur panchayat. This is 'patta' land now being handed over to the tribal community settled in the R&R colony. The said RDO, Ch Narsing Rao (against whom there are numerous reports of corrupt practices appearing in local editions of prominent Telugu newspapers) incidentally, "purchased total land of 572.91 acres situated in the scheduled areas of Addateegala, Gangavaram, Devipatnam mandal in the East Godavari district from non-tribals in the name of Polavaram project rehabilitation through 49 land transactions and paying more than Rs 2 crore in utter violation of laws, particularly the Tribal Protective Land Transfer Regulations 1 of 70 and the Panchayat Extension to the Schedule Areas (PESA) Act 40/1996 and Act 7/1998. The acquisition of land from non-tribals without even verifying physical possession of land or proper enquiry under tribal protective land transfer regulations has caused hardship to tribal communities in agency areas of the East Godavari district." [affidavit ref A5/6068/06 dated 13-12-06 collectorate, Kakinada, camp at Rampachodavaram before the enquiry officer/joint collectorate, East Godavari district, 'Illegal Land Purchases' by revenue divisional officer, Rampachodavaram].

The idea that some sacrifices have to be made for development by some communities has percolated to the officials and local representatives. Many officials are now speaking this language.

A price must be paid for development. "Tappadu mari", say a lot of people I meet these days. Democratic consent seems to be a thing of the past. As far as the Andhra Pradesh government's land acquisition for the Polavaram project R&R goes, leave alone the planning and implementing of the project itself, if the land acquisition were totally honest and transparent, why was there a need to impose cases on some people in these areas for even raising questions, which is their basic right? Pamula Veerasamy of Chinabhimpally in Devipatnam mandal (Indukur panchayat) is a frail 75-year old Koya dora elder. Like many of his tribe, he makes a supplementary livelihood by collecting cashew nuts from

the forest land that he believed to be his, like members of his community have been doing for centuries now. He was beaten up severely (just 10 days before I met him) when he went to collect some cashew nuts from this land. He was told that the land now belonged to a non-tribal (the RDO aforementioned) and had been given a compensation for the R&R package of Polavaram. Until such time as the project is completed, the non-tribal landlord would own the produce from this forest patch, until the date used "enjoyed" (in official parlance) by the tribal community of this panchayat. The tribal communities in this part of Devipatnam mandal are victims of another kind of "submergence", the R&R package that sets one tribal community against the other—not something that they desire. These tribal people stand to be displaced from their livelihood, land and forests even before the dam is built. If they are to question any of this, the officials are ready with a list of criminal allegations that they can slap on these hapless people. It is a case of "resettlement" of one section by unsettling another. Both ways, any kind of questioning is likely to result in a jail term.

"The project officer (PO), Rampachodavaram, Integrated Tribal Development Agency (ITDA), asked us not to go to the land (and forests) purchased by the RDO", says one Koya dora farmer. One of the R&R colonies is built on disputed land, belonging to Indukur people. Even as the case is in court, the colony has been built and tribal communities settled there. Midiam Singaraju of Chegodapally says, "They are simply filing the cases against us; how can we leave this village before entire process of rehabilitation is completed? We know what we have here, this we won't get anywhere else. But what do we do? They are putting up many cases. We do not understand them... Even my name is there. Midiam Singarajau. I am not even a part of the (Rythu Coolie) Sangham!"

Now that even those opposed to the project are under scrutiny, people are gradually learning to stay quieter than before. At least this is true of the majority of them. This has strengthened the government's resolve to implement the project.

Says Kosi Ramalakshmi, "The PO, ITDA, Rampachodavaram told us that the British people are responsible for giving us this land. They committed the crime. Now the present government is righting that wrong! We brought these plantations to their present shape. We looked after these forests. We lost some of this when the Musirimilli

canal was dug. They have put up cases against us for using these plantations. Our four acre (community) land was dug up by the RDO, and the sub-inspector. They did not compensate us for that. Non-tribals from Tuthikonda and Gokavaram are coming here and expressing their rights to these cashew plantations".

Pamula Veerasamy's first information report for having been beaten up was not registered. Says Rambabu, a legal coordinator with the Human Rights Centre of the organisation Laya, "When tribal people complain, the PO should recommend their cases to the mandal revenue officer. This is not being done. If non-tribals make the same complaint, cases are immediately filed against the tribal communities". Says Komaram Mulasamy (ex-sarpanch of the Indukur panchayat). "We have to spend money to file cases against this illegal land acquisition going to Rajahmundry, and Rampachodavaram [a few human rights activists do take up their cases but cannot do so for all of them]. There is no response for any of our petitions yet."

Meanwhile, Kangala Naganna Dora from Paraganapadu in Pudipally panchayat is sitting in his R&R house in Pedabhimpally. He says that for the last six months he has not got the promised the rehabilitation package. He spends Rs 30 or more per day to go to his village in Paraganapadu to his fields and back. Some of the people are still in the village. For them, at the moment, life is about living two lives—one in their original village and another in the R&R colony without any means of livelihood. They cannot yet stake claims to the land given to them by the RDO, since that land is under "enjoyment" (a term used by the British, and continues to be used) by Koya doras here. Floods in 2006 caused them to move to this colony.

Chadala Venkatreddi, a Kondareddi from Nellakota says, "If we took our bows and arrows like Aluri Sitaramaraju, will the PO (ITDA), the government still ignore us? We are all unarmed and helpless. Hence, they are filing cases against us and doing what they want."

Meanwhile, a tourist launch touring Papikondalu reminds its tourist visitors of the great act of courage of Alluri Sitaramaraju who bombed the police station at Devipatnam. That was history. But the present story goes on. [www]

Email: umamaheshwari\_1999@yahoo.com

[This article is written as part of the author's work for the Prem Bhatia Memorial Trust fellowship 2006-07.]

## A 'Defining' Moment for Forests?

The recent attempt by the ministry of environment and forests to arrive at a definition of "forests" has opened a Pandora's box with all stakeholders analysing the semantics threadbare. A deep appreciation of the complexities of the issues is required by all concerned to enable more locally specific, democratic and balanced structures of forest governance.

SHARACHCHANDRA LÉLÉ

On February 7, 2006, the ministry of environment and forests (MoEF) of the government of India invited "expressions of interest" for a study to establish the definition of "forests". This move immediately attracted controversy. Conservation-activists such as Bitu Sehgal decried this move to define forests as being a thinly veiled attempt to undermine the Supreme Court's far-reaching interpretations of the Forest Conservation Act 1980 [Anonymous 2006]. The MoEF, however, justified this move on the grounds that "a clear definition that will stand cultural, legal and international scrutiny" is required in light of the fact that the Indian Forest Act 1927 (IFA) does not define a forest and various court orders have defined it differently. After the consultancy contract was finally awarded<sup>1</sup> and the consultant in turn began widespread consultations from February 2007, a hot debate on semantics and their implications has sparked off. Ecologists weigh the unscientific use of the term against their wish to ensure forest conservation by whatever means possible. Social activists warn that sweeping definitions will antagonise local

communities. Foresters seem to be interested in ensuring that their domain does not shrink. Other ministries probably want definitions that will enable easy setting up of development projects like dams and roads. The corporate sector would like definitions that will make the leasing-in of state land for commercial forestry free of legal hassles. In this situation, it may be worth asking whether the issue itself has really been tackled from the right perspective, or is it a case of missing the woods for the trees!

### Genesis of the Problem

The genesis of this need to define a forest is a ruling by the Supreme Court in TN Godavarman Thirumulpad vs Union of India (Writ Petition 202 of 1995—commonly known as the Godavarman case). The question being debated was the scope of the Forest Conservation Act 1980 (FCA). This Act, which itself is a watershed in forest governance in the country, requires that any conversion of forest land to non-forest uses (which are defined in the Act) must be approved by the central government (i.e., MoEF). Conventionally, in the application of this act, "forest land"

was assumed to be only that land which has been legally notified as forest as per the Indian Forest Act or state forest acts, i.e., typically Reserve or Protected Forest (RF or PF).<sup>2</sup> Even this narrow interpretation of the Act had slowed down and often halted certain kinds of forest land conversions that state governments seemed to have mindlessly engaged in during the 1960s and 1970s.<sup>3</sup> But the Godavarman case highlighted the fact that significant tracts of lands that were physically forested had, due to some quirk of history or anomaly of administration, not been notified as RFs or PFs and hence were denied the "protection" of the FCA. The Supreme Court, in its landmark order of December 12, 1996, sought to rectify this anomaly by stating that the FCA applied to "all areas that are forests in the dictionary meaning of the term irrespective of the nature of ownership and classification thereof".

On the face of it, by going beyond administrative quirks and anomalies, this order furthers the spirit of the FCA. There certainly are significant areas of (currently or till recently) forested lands whose legal status for some reason was not that of RF, PF or village forests (VF). For instance, our studies in the Western Ghats districts of Karnataka have revealed that in as much as 11,000-odd sq km (~33 per cent) of the public land in these districts may fall under legal categories other than those defined in the Karnataka Forest Act [Srinidhi and Lélé 2001]. The physical status of these lands varies from close-canopy forest to open tree savannas to grasslands to barren lands. There are many cases where dense forest patches have been classified (surely mis-classified) as grazing land ('gomaal' in the Karnataka Land Revenue Act). It is also a fact that such lands were often seen as a vote bank by state politicians, and so encroachments were virtually encouraged and land grants eventually made (or regularised) to various categories of households in the decades preceding the FCA.<sup>4</sup> The post-FCA period therefore saw foresters in many states going all out to notify as many of these tracts as PF or RF, ostensibly to protect them from these arbitrary land grant policies. It is also a fact that the land records in most states are in a mess, resulting in many cases in the mis-reporting of the legal status of parcels of public lands.<sup>5</sup> The December 1996 order solves all these problems in one fell swoop, bypassing the need to re-notify any lands or even to refer

to their legal status by using a "dictionary meaning" approach.

Of course, pathbreaking judgments often need further clarification when they are operationalised. What land-use forms, other than the perhaps obvious ones, fall under the dictionary meaning of forest? Do, for instance, monocultural plantations of exotics such as Eucalyptus, Silver Oak or *Acacia auriculiformis* constitute forest? If so, would private lands on which individual farmers took up eucalyptus planting during the heyday of farm forestry fall under the ambit of the FCA (and thereby require MoEF clearance over and above all other local clearances if the farmer wants to, say, sell it to a developer)? And when should a piece of land have been physically forested in order to come under the FCA? In 1980, in 1996, or some other year? And what happens to land that was (say) grazing land earlier but has been recently planted with trees (often monocultural plantations)? Does it now come under the FCA? What about the pure natural grasslands that surround the stunted evergreen shola forests in the

Nilgiri hilltops—do they qualify as forests? It is these loose ends that, on the face of it, MoEF seems to be trying to tie up by trying to systematically define a forest.

#### Inadequacies

Focusing on the definition question assumes that moving away from a "legal forest" to a "physical forest" is the right approach. A detailed analysis, however, suggests this approach is inadequate in law and in concept. First of all, the Godavarman order is legally unsound because it seeks to replace due process by a single universal definition.<sup>7</sup> That the absence of a definition of a forest (or forest ecosystem types) leaves too much discretion to the state to notify any kinds of land has been a longstanding and valid criticism of the IFA [Singh 2000: 4]. But clarifying which kinds of lands can be notified as forests is not the same as declaring in one stroke that lands which are not currently notified but physically forested (in some manner) have to be treated on par with those that are notified. If the process of reservation carried

out under the IFA has been arbitrary or inconsistent, this arbitrariness can be questioned and rectified by asking the states to re-examine their forest settlement<sup>8</sup> and bring about more consistency. Although tedious, this procedure would ensure that the specificities of each parcel are gone into before its legal status under FCA undergoes a change. Ultimately, governance based on zoning is much more practicable than governance based on physical conditions that may easily change over time. And zoning carried out with due process within some broad guidelines is much better than zoning based on single definitions.

Indeed, a re-settlement or re-drawing of forest boundaries is necessary from both directions. The Godavarman order is inadequate also because, while trying to fix one kind of anomaly in the demarcation of forest boundaries in India, it fails to recognise the existence of anomalies of the opposite kind of greater magnitude. There are large tracts of land, particularly the tribal areas of central India, that have been legally notified as forest land (typically RF

or PF), but have in fact been under either settled agriculture or shifting cultivation for decades, even centuries—not just post-1980.<sup>9</sup> These also include the several thousand "forest villages" of central India wherein settlements of forest labourers (typically tribals whose shifting cultivation had been suppressed) were created by the British forest department on forest land and then never given permanent rights. While trying to adopt a commonsensical position vis-à-vis physically forested lands, the court failed to adopt an equally commonsensical position on the issue of historically cultivated tribal lands. It is precisely because this anomaly was not addressed by the courts, and because certain orders of the Supreme Court in the Godavarman and other cases were in fact interpreted by the MoEF as licence to evict all encroachments, that the campaign for tribal forest rights was launched in 2002 and culminated in the recent enactment of the fairly radical Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006—an Act which explicitly keeps itself out of the purview of the FCA.

#### Paradigmatic Problems

A more fundamental problem with this approach is that it subscribes to the overly simplistic and centralised paradigm of forest governance perpetuated by the FCA. Two assumptions are central to this paradigm. First, that land-use falls into two simple categories—forest and non-forest—wherein lands used as forest generate systematically much greater environmental benefits than non-forest land-uses. Second, that the environmental benefits flowing from forest land uses are national-level or global public goods, and hence the central government (as a custodian of the welfare of the nation at large) has a legitimate veto power over state-level decisions about changes in land-use, whereas the environmental benefits from non-forest land-uses, if any, are local in nature and the state governments can therefore determine their fate. The debate over the definition of what is forest then becomes a debate over where to draw the line between state control and central control, and between the apparently environmental service role of forests and the apparently non-environmental role of non-forest land-uses.

Unfortunately, this simplified paradigm does not match with either the ecological or the social complexities of Indian forests.

First, forests generate a range of benefits, some direct and tangible such as timber or firewood; some indirect but tangible such as hydrological regulation, soil conservation or carbon sequestration; and some intangible such as biodiversity conservation or aesthetic values. But certain so-called non-forest uses of land also generate many of these benefits to significant degrees. Coffee plantations, for instance, may harbour significant amounts of biodiversity [Badrinarayanan et al 2001; Elouard et al 2000; Shahabuddin 1997], sequester significant amounts of carbon and protect soils from erosion as well as many forests. On the other hand, monocultural timber plantations, although classified as forests under the FCA, provide much lower biodiversity and soil conservation or hydrological benefits [Kusumandari and Mitchell 1997; Sikka et al 2003] than coffee or cardamom plantations [Moench 1990] or even pure grasslands. But the annual rate of carbon sequestration (and hence climate change mitigation value) of timber plantations tends to be higher than that of climax natural forests. Thus, the dividing line between forests and non-forests in terms of the environmental benefits they generate is not just blurred but also contingent upon the type of benefit one is considering.

Second, from a governance perspective, it is not at all clear that the benefits generated by forest land uses are only public goods at the state or national scale and that these national beneficiaries must have veto power over the state government. On the one hand, while the direct tangible benefits from forest products flow to groups of households in individual hamlets or villages, the economic rent on many of the valuable tangible products (such as timber and certain non-timber forest products (NTFPs)) has been historically captured by the state government [Vasundhara and Vikalpa 1998]. On the other hand, soil and water conservation benefits extend to residents in the river basin downstream, not to the whole nation. Carbon sequestration and biodiversity benefits are global, not just national. Needless to say, the particularities of this relationship between forests and people vary dramatically across the country's landscape.

#### Imperfect Approach

In this situation, making the central government the representative of all non-local beneficiaries is highly imperfect at

best. And giving it veto power over local users, or to be precise, over state governments in a supposedly federal system, while ignoring the question of lower-level rights and responsibilities, and further compounds the problem. This approach assumes that the tussle is only between national-level beneficiaries of the environmental services and state-level decision-makers who would prefer to use the forest for other purposes. This helps the state-level politicians use the FCA as a convenient whipping boy, generating an anti-environmentalist rhetoric in state-level politics. Whereas in fact the tussle is at multiple levels, including in many situations between local communities who want to use forests provided they can derive significant and reliable livelihood benefits from them, and the state apparatus that is on the one hand extracting surplus in the form of timber and NTFP royalties while on the other hand leaving the rest of the forest in an open-access condition, ensuring further degradation, or wanting to give it for mining or other short-term economic activities.<sup>10</sup>

In other words, what is required is not a sharpening of binary forest/non-forest thinking, but rather a deconstruction of a forest into its varied forms that perform complex environmental and economic roles and are the product of varied socio-ecological contexts. This should lead to the creation of more nuanced and locally-specific categories that allocate rights and responsibilities across the local, state and central levels in ways that better reflect the stakes and the abilities of these actors [see e.g. Lélé 2004]. This will require not just

#### JUST PUBLISHED

##### MAOIST 'SPRING THUNDER'

The Naxalite Movement (1967-1972)

by Arun Prosad Mukherjee

2007, Pp. 320, ISBN: 81-7074-303-6 Rs. 595.00

This is an unusual account of the complexities of the entire Naxalite movement, covering the two major epicentres—the Naxalbari region during 1967-68 and the more virulent later phase of 1969-72 affecting Kolkata and its suburbs. Based entirely on a wealth of hitherto unknown government and police records of the entire period. The detailed interrogation statements of top leaders of the movement will, for the first time, reveal the strengths and weaknesses of the movement. The lessons of Naxalbari, according to the author, will ultimately decide which of the contending sides will win the battle for the hearts and minds of the oppressed people in the dark backyards of 'shining' India.

K P BAGCHI & COMPANY

286, B B Ganguli Street, Kolkata: 700 012

E-mail: kpbagchi@hotmail.com

kpbagchi@gmail.com

re-drawing the boundaries as mentioned above, but in fact replacing the existing major categories of reserve and protected forest – categories that were invented by the British to suit the purposes of colonial forestry and to which the British themselves created many exceptions that are not mentioned in the Indian Forest Act (IFA) but very much present on the ground. In the Karnataka Western Ghats region alone, there are some 30-odd legally recognised tenure regimes pertaining to public uncultivated lands [Srinidhi and Lélé 2001] – the result of inheriting forest and revenue land categories from five different administrations of the colonial period. Similar complexities exist in most other parts of the country [see, e.g., Upadhyay and Jain 2004]. While the need for some form of rationalisation is clear, collapsing them into just two or three categories (RF/PF/non-forest) would be well nigh impossible. Some changes in rights and responsibilities and re-drawing of boundaries are envisaged under the above mentioned Forest Rights Act. It is essential to widen this process.

Such deconstruction will also require revisiting other components of the Godavarman orders, viz, the assumption that it is necessary and desirable to have

a centrally approved “working plan” – a device instituted by the British to manage forests largely for commercial purposes – to ensure that a forest is being managed sustainably. Different categories of lands would have to be managed sustainably for different purposes or different mixtures of environmental benefits, and this will require more sophisticated levels and combinations of scientific and traditional knowledge on the one hand and local and non-local monitoring mechanisms on the other.

The Supreme Court has made a signal contribution to the cause of environmental conservation in India by using a simple postcard from a T N Godavarman Thirumulpad in Tamil Nadu to open up the whole question of inconsistencies in forest notification, management and conversion. The debate on the definition of forests is useful to the extent that it highlights the ecological and social complexities surrounding the condition and use of uncultivated lands in this country and the often arbitrary manner in which these lands got categorised and governed in the colonial and even post-colonial period. One hopes that the court and the policymakers will see the importance of embracing these complexities and pushing for more

locally-specific, democratic and balanced structures of forest governance in the country. [22]

Email: slele@isec.ac.in

## Notes

- 1 The contract was awarded to the Ashoka Trust for Research in Ecology and the Environment (ATREE). The Terms of Reference (rather clumsily worded) are “(a) to evolve the definition(s) of forest in Indian context keeping international commitments and different orders of the apex court of the country into consideration, and (b) to develop ecologically sound and socially desirable definition of forest.”
- 2 Note that the other two categories mentioned in the IFA, viz, village forest and private forest, cover very small land areas. Even the van panchayats of Uttarakhand, although very similar in their governing structure to village forests, have actually been notified under a different law.
- 3 That it also slowed down the process of recognition of legitimate historical non-forestry activities or legitimate small-scale demands for land conversion for local development, while not really halting the conversion in the case of big state-sponsored development projects, is the other side of the story of the FCA that we shall come to below.
- 4 Thus, Karnataka saw the repeated transfer of such “revenue” lands to and from the forest

category during the Bangarappa and Moily governments. In village-level studies in the Karnataka Western Ghats, we found that large fractions of assessed waste lands and gomaal lands that had been originally forested, had been encroached for cultivation, which was later on regularised (see XXX).

- 5 For e.g., serious anomalies have been shown to exist between the area of forest land as reported by the Forest Department and the Revenue Department. While the records of the latter show only 32 per cent of the land area of (erstwhile) Dakshina Kannada legally classified as forest land, the latter's records indicate this area to be 44 per cent [ISEC and NST 1998].
- 6 A recent order seems to suggest that such plantations, if raised on non-public lands, do not come under the FCA, which seems to negate the December 1996 order by bringing in the legal status again.
- 7 In fact, it compounds the problem by making both criteria applicable: either legally notified or physically forested.
- 8 In the archaic terminology inherited from the British, “settlement” refers to a procedure of finalising the rights over a particular piece of land.
- 9 This happened because of the same “fell swoop” approach: In Orissa, for e.g., princely states notified large areas as state forests without going through the settlement process laid down in the law, and in the post-independence period the government simply “deemed” these forests as reserve forests, again without checking the situation on the ground. Such areas could be as large as several tens of thousands of sq km (Kundan Kumar personal communication).
- 10 Note that the kind of “conservation” achieved by the application of the FCA, even post-Godavarman, has been a limited and somewhat lop-sided one – major development projects such as the Lower Subansiri hydro-electric project in Assam are still being approved, and the conditions imposed in their approval are tilted towards “biodiversity conservation” while the concerns of downstream communities are not necessarily being addressed [Vaghlikar 2007]. This points to the inherent limitations of the FCA, which introduces more procedural requirements but not clear criteria under which forest conversion may be permitted.

## References

- Anonymous (2006): ‘How Will You Define a Forest?’, *Daily News and Analysis*, February 13, also available at <http://www.dnaindia.com/report.asp?NewsID=1012733>.
- Badrinarayanan, Smitha, Jagdish Krishnaswamy, Sharachandra Lélé and K Chandrashekara (2001): ‘Consequences of Forest Conversion to Coffee Plantations on Litter Beetle and Ant Communities’ in K N Ganeshiah, R Uma Shaanker and K S Bawa (eds), *Proceedings of the International Conference on Tropical Ecosystems: Structure, Diversity and Human Welfare*, Oxford-IBH Publishing Co, New Delhi, pp 162-63.
- Elouard, Claire, M Chaumette and H de Pommery (2000): ‘Development of Coffee-based Agroforestry Systems and Biological Diversity Conservation’ in P S Ramakrishnan, C Elouard and C Z Guilmo (eds), *Conservation of*

- Biodiversity in the Context of Traditional Knowledge and Ecosystem Rehabilitation*, Oxford and IBH, Delhi.
- ISEC and NST (1998): ‘People’s Database on Land Tenure, Land-use, and Land Cover for Land Resource Management: Results of a Pilot Study in Dakshina Kannada District’, Institute for Social and Economic Change, Bangalore and Nagarika Seva Trust, Guruvayanakere, D K District.
- Kusumandari, A and A Mitchell (1997): ‘Soil Erosion and Sediment Yield in Forest and Agroforestry Areas in West Java, Indonesia’, *J Soil and Water Cons*, 52: 376-80.
- Lélé, Sharachandra (2004): ‘Beyond State-Community Polarisation and Bogus “Jointness”: Crafting Institutional Solutions for Resource Management’ in Max Spoor (ed), *Globalisation, Poverty and Conflict: A Critical “Development” Reader*, Kluwer Academic Publishers, Dordrecht, Boston and London, pp 283-303.
- Moench, Marcus (1990): ‘From Forest to Agroforest: Land-use Dynamics and Crop Succession in the Western Ghats of Kerala, South India’, PhD thesis, University of California, Berkeley.
- Shahabuddin, Ghazala (1997): ‘Preliminary Observations on the Role of Coffee Plantations as Avifaunal Refuges in the Palni Hills of the

- Western Ghats’, *Journal of the Bombay Natural History Society*, 94: 10-21.
- Sikka, A K, J S Samra, V N Sharda, P Samraj and V Lakshmanan (2003): ‘Low Flow and High Flow Responses to Converting Natural Grassland into Bluegum (*Eucalyptus globulus*) in Nilgiris Watersheds of South India’, *Journal of Hydrology*, 1/10, 270(1-2): 12-26.
- Singh, Chhatrapati (2000): *India’s Forest Policy and Forest Laws*, Natraj Publishers, Dehra Dun.
- Srinidhi, A S and Sharachandra Lélé (2001): ‘Forest Tenure Regimes in the Karnataka Western Ghats: A Compendium’, Working Paper No 90, Institute for Social and Economic Change, Bangalore.
- Upadhyay, Sanjay and Suparna Jain (2004): ‘Community Forestry and Policy in North-East India: A Historical Legal Analysis’, *Community Forestry International*, Santa Barbara.
- Vaghlikar, Neeraj (2007): ‘Downstream Impact of Dams’, *The Assam Tribune*, Guwahati, May 17, also available at <http://www.assamtribune.com/scripts/details.asp?id=may1707edit3>.
- Vasundhara and Vikalpa (1998): ‘NTFP Policy in Orissa and a Comparative Analysis of NTFP Policy and Prices with Neighbouring States’, Vasundhara, Bhubaneswar, also available at [http://www.vasundharaorissa.org/NTFP/NTFPpolicy&pricesinOrissa\\_BSP.pdf](http://www.vasundharaorissa.org/NTFP/NTFPpolicy&pricesinOrissa_BSP.pdf).

## IS IT A FOREST?

How different agencies see it

Niyamgiri hills comprise a 250-sq km massif of hill forests spread across Kalahandi, Rayagada and Koraput districts. A proposal is pending with the Kalahandi forest division's working plan (approved by MOEF in 1998) to notify the area as a wildlife sanctuary. The area was also listed as a proposed elephant reserve by the state in August 2004.

VAL's proposed mining area is situated within the Niyamgiri Reserve Forest of Kalahandi and Khambesi and Niyamgiri proposed reserve forest and jungle block (protected forest) of Rayagada forest division.

According to CEC and WII, the hills are the source of the Vamsadhara river and a major tributary of the Nagvalli river. Both rivers supply water to several districts of southern Orissa and Andhra Pradesh. Thirty-six perennial streams originating around the mining lease site provide drinking water and water to irrigate fields in the adjoining villages.

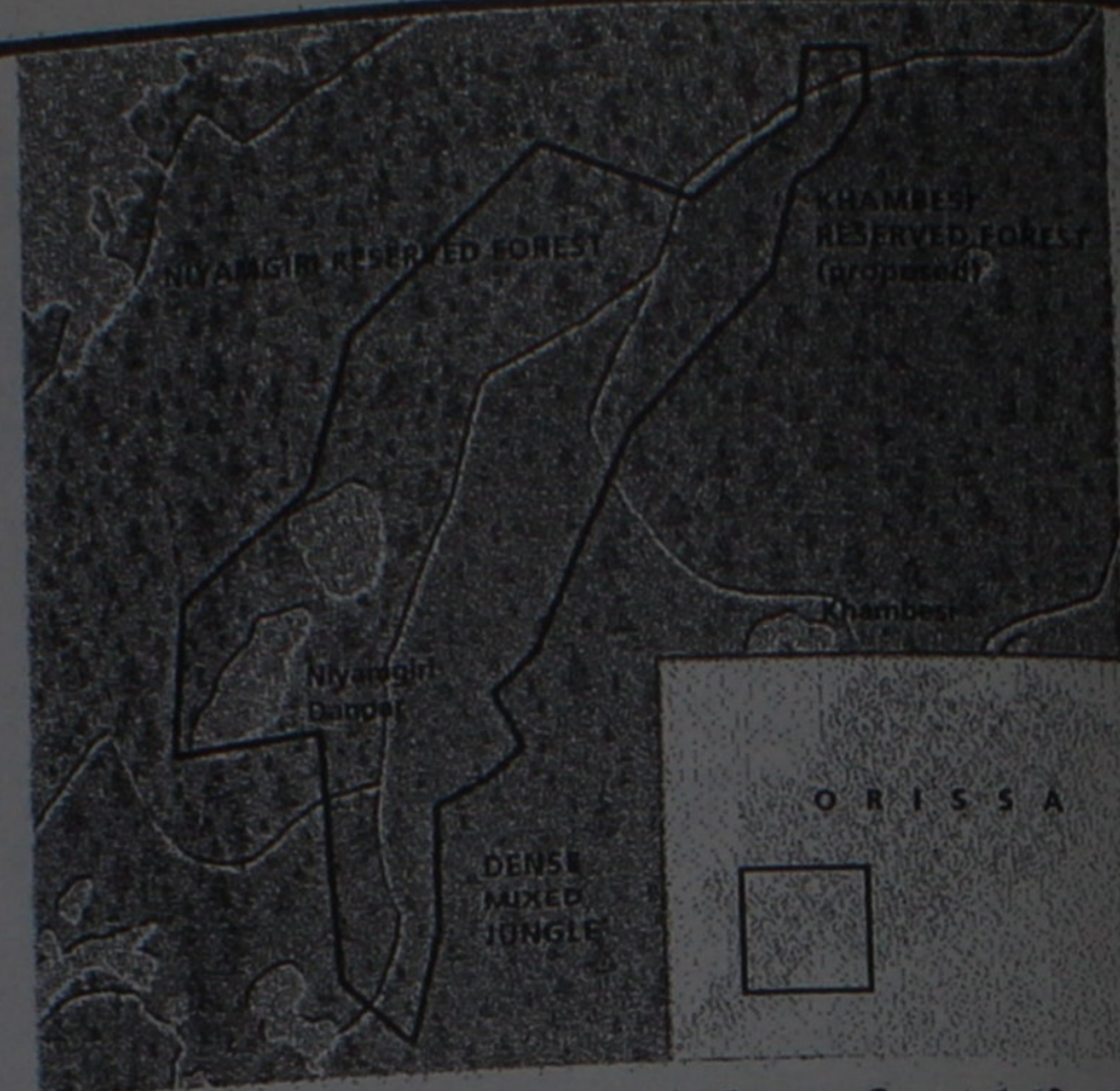
### What wildlife?

The Environmental Protection Group, Orissa, says, the dense forests on the hills shelter elephants, sambars, leopards, tigers, barking deers, giant squirrels, various birds species and have more than 300 varieties of plants and trees, including about 50 kinds of medicinal plants. Many of these animals and at least four of the plants found here are listed in IUCN's Red Data Book of endangered species, it says.

The project's EIA report by Tata AIG consultants agrees in part. It says, "The area exhibits a well-balanced ecosystem with a poised prey-predator relationship." But it goes on to add that though "the secondary data identifies a variety of faunal species under categories like endangered and vulnerable as per the Zoological Survey of India's Red Data... primary survey does not show all of the mammalian species listed". The report also describes the actual mining area on the plateau, which is open grassland, as not useful for wildlife and forests.

However, the first WII report counters this. It notes, "These plateaus are very productive with high occurrence of several herbivore and carnivore species."

Even as the presence of wildlife was being debated in Delhi's apex court, DTE secured clinching evidence of the area's wildlife. On May 17, our photojournalist captured a full-



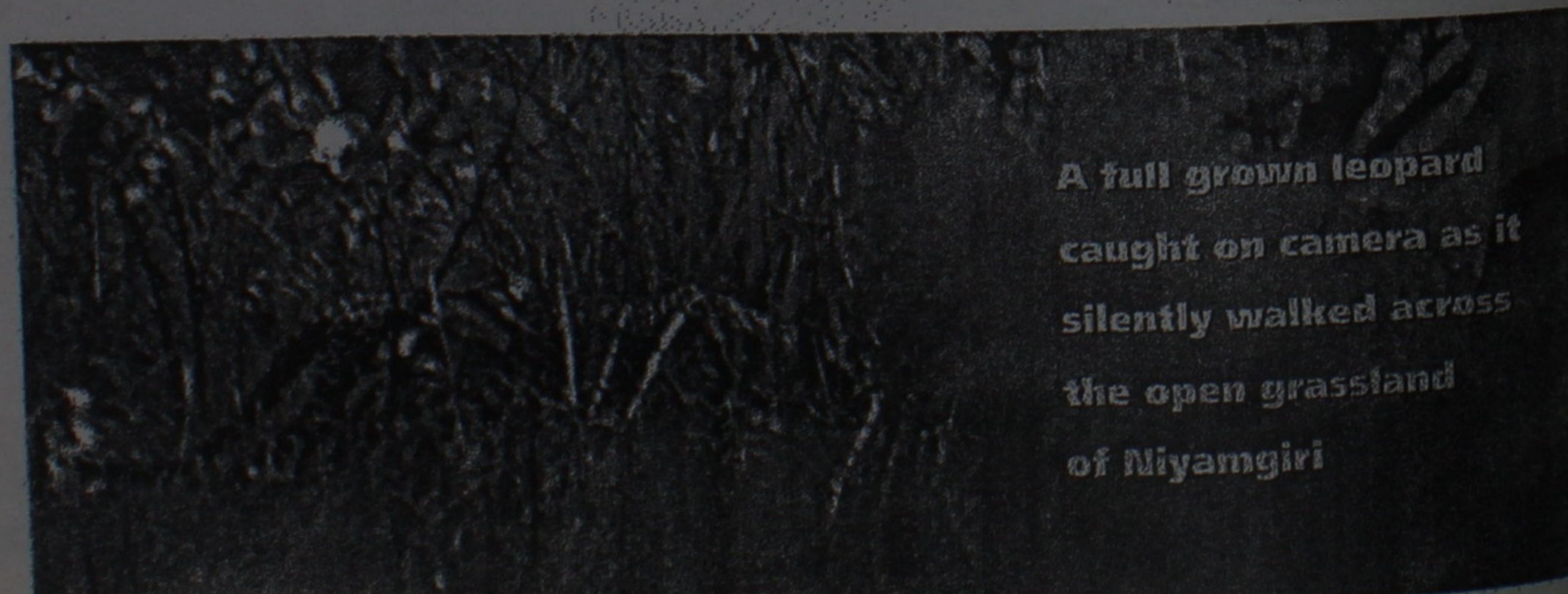
**Niyamgiri hill is 75 per cent dense forest that shelter a host of threatened species**

grown leopard on camera as it silently walked across the open grassland of Niyamgiri.

So, will mining on the hills cause irreparable harm to wildlife? The state government does not think so. Suresh Mohanty, Orissa's principal chief conservator of forests (wildlife), told DTE: "Lanjigarh forest belt is over 20,000 ha and "even if 600 or 700 ha of this is lost, animals will switch over to newer habitats. Animals can also adjust to certain interventions." He added, "Human usage and development proposals can't be wished away, so wildlife has to adjust to fulfil these requirements."

### Do hills give water?

But the value of forest is not just as habitat for wildlife but also as a catchment for water. There is again a dispute on this. The Orissa government and Vedanta claim that since all the water bodies originate much below the mining site, their flow wouldn't be affected. But environmentalists and WII say that mining will impact the water flow of the region because bauxite deposits, which are by nature porous, act as overhead aquifers. They recharge zones and improve subsurface flows, which in turn feed rivers through the year, especially during the lean season. Without the deposits, the rivers will dry up in the summer.



**A full grown leopard caught on camera as it silently walked across the open grassland of Niyamgiri**



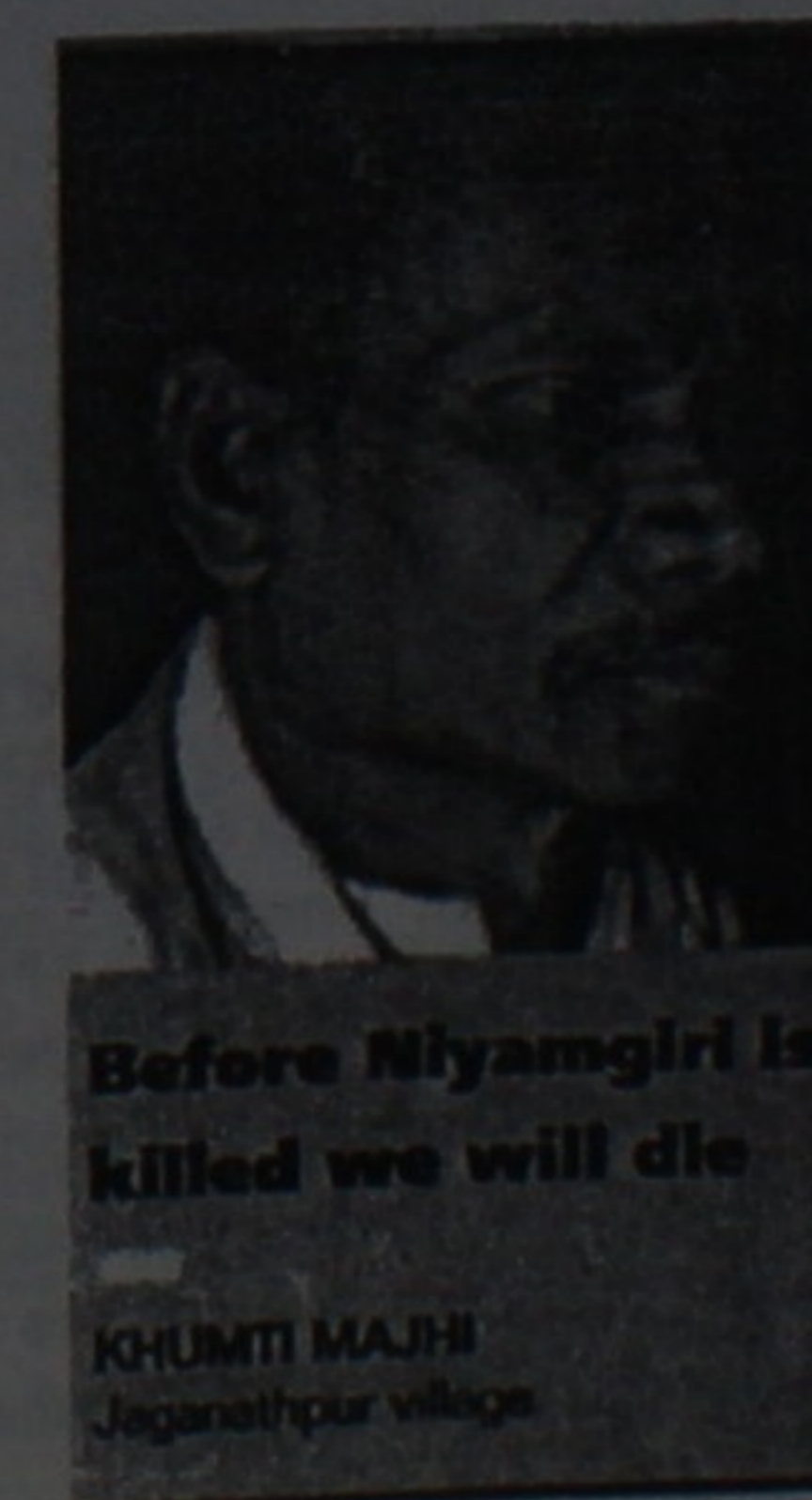
Niyamgiri hills are ancestral home to Dongria Kondhs

### What about people?

Activists allege that the hills are "a single-hill country" for the Dongria Kondhs, who have "nurtured their life and livelihood patterns around forest and wildlife forming a formidable system of mutual dependence" and are largely responsible for maintaining the dense forest cover on Niyamgiri. They believe that mining Niyamgiri and its adjacent hill ranges "will cause the cultural and social extinction of one of the most culturally unique primitive tribes of the country".

Their numbers are fast dwindling—according to the 2001 census the current population of the Dongrias is less than 8,000. The state government, however, says "the mining activities will not affect Dongria's livelihood, custom, practices and their lifestyle, because they don't live there".

In Lanjigarh, the Dongria Kondhs and rest of the tribal villages aren't buying that argument. They believe the hill is the abode of the Niyam Raja and have made a promise to him. "Before Niyamgiri is killed, we will die," Khumti Majhi told DTE. "Dongrias have been living here for generations. Niyamgiri gives us vegetables, herbs, fruits and roots, it gives us food, water, this breeze, these trees, everything, for free. Can the sarkar put all this back once it's gone?"



Before Niyamgiri is killed we will die

KHUMTI MAJHI  
Lanjigarh village

## BIG IMPACT

Mining will tax area's natural resources

The project needs more than rich forests. It requires power generation as well as roads to transport minerals. The environmental impacts of the project are linked.

According to the project's EIA report, the mines alone will consume around 33,000 tonnes of water per year. This will be sourced from the Tel river at Kesinga through a 65-km pipeline. The river is an important source of irrigation and drinking water for people in Bolangir district downstream. Researchers with the Centre for Science and Environment's (CSE's) Green Rating Project, say the daily water consumption at the mine would meet the water requirements of 600,000 people—using a conservative figure of 55 litres per day as against the 200 litres daily consumption in Delhi. If the water consumption is taken over the mines' entire life (25 years), they will use water needed by over 15 million people.

Tel is a seasonal river, which used to be dry for almost eight months in a year. Its current summer flow is based on surplus from the Indrawati multipurpose project, because its canal system has not been completed. Once the command area irrigation works are completed, the river will have no flows in summer. Also, if mining does impact the flow of Vamsadhara and Nagavali rivers and the 36 streams flowing out of Niyamgiri range, water availability of Tel will further go down.

### The refinery and the plant

No details are available on water consumption by the refinery and the captive power plant. But estimates based on water consumed in other alumina refineries and power plant show that the refinery will consume around 2-3 million tonnes of water annually. The power plant's water consumption would increase the project's water footprint considerably. If this plant of 75 MW operates for 300 days for 24 hours at an efficiency of 75 per cent, its water consumption would be roughly 35 million tonnes per annum.

The state water resources department admits that there has been no assessment of the ecological and economic impacts of the project's water needs. But water skirmishes have begun. Early this year, villagers reported that Vedanta had installed several deep bore wells along the pipeline to tap groundwater. Following these complaints Orissa's water resources department sent a team to Lanjigarh four months ago and shut most of the wells down. "We urgently need groundwater legislation that will require people to get a permit to dig borewells," says Aurobindo Behera, principal secretary, state water resources department. "But even then, we won't allow Vedanta to tap groundwater if it affects the local water supply," he asserts.

### Missing trees for mud

According to the project's EIA report, its stripping ratio is 1:13. This means a tonne of bauxite will have a by-product of around 13 tonnes of soil, rock and mud. Since the pro-

### Bad example

In court, Vedanta's lawyers repeatedly said they would emulate the "successful" land reforestation undertaken by NALCO, in its mining area on the Panchpat Mall hill range. The company has received several awards for its contributions in the field of afforestation and wasteland development. But environmentalists say its reclamation effort isn't worth emulation. A visit to the mining site in Damanjodi revealed why. The company has in some places set up the stipulated 15-metre periphery "green" barrier to stem soil and dust erosion, but the wall of trees doesn't flank the entire mining area yet.

"Most trees planted are foreign species, mainly chakunda, an oil seed plant, some acacia and eucalyptus. These don't allow other local plants to grow beside them," says William Stanley of the NGO Integrated Rural Development of Weaker Sections of India, who has studied the impacts of mining. "There's no flowering that honeybees can draw nectar from. And from the point of the community's need of fuel wood, you can't go cut trees in NALCO area or use any of the new forest resources." But K S Sreedhar, NALCO's general manager, mines, says, "Initially the objective was to provide greenery, so we planted acacia and eucalyptus. When we found they were not useful to the people we planted local fruit-bearing trees and ones that would give firewood—not only in the mining area, but also on slopes. But tribals burn slopes for cultivation. We need to educate them and plant more fruit-bearing trees."

2000 at National Alumina Corporation's (NALCO's) refinery in Damanjodi, Koraput, which devastated villages living in the vicinity of the plant.

Given that Vedanta will be transporting alumina from its refinery to its smelter in Jharsuguda about 300 km away, the smelter's environmental impact too needs to be studied. To ferry 3,630 tonnes of alumina daily (assuming 330 days of operation), about 121 trucks will have to ply the road from Lanjigarh to Brindamal in Jharsuguda. This increased traffic, apart from being a nuisance to the local community, will lead to fugitive dust and vehicle emissions and noise pollution.

The smelter will require an estimated 3.6 million tonnes of water annually (one tonne of aluminium production from alumina in a smelter requires about 7 tonne of water). The water footprint, however, will be much higher since the smelter project includes a 1,250-MW captive power plant.

The biggest concern about an aluminium smelter is fluoride emissions and waste (consisting of fluoride and cyanide) released from its smelting pot, called smelt pot lining. Considering the capacity of the proposed smelter, it would emit about 325 tonnes of fluoride every year. Moreover, short-term inhalation exposure to gaseous hydrogen fluoride can cause severe respiratory damage in humans, including severe irritation and pulmonary edema. An expert team which



NALCO's reforestation which Vedanta says it will emulate

ject will produce 3 million tonnes of bauxite, 39 million tonnes of solid waste will be dumped on the hills, annually. The EIA reports says, "The overburden and topsoil will be dumped in the identified area as per the mining plan and will be stacked separately and will be used for back-filling as and when bauxite is completely exploited from the pits." However, CSE analysts say handling such amounts of overburden would be hard, especially since the mine site is on a hilltop. The dust and run off from the dumps will affect farmlands and pollute streams.

Solid waste generated at the refineries during bauxite processing comes out as red mud and storing it is one of the biggest problems faced by alumina refineries. This highly alkaline by-product is usually stored in a tailing pond and if not contained can pollute groundwater. Vedanta's refinery will produce 1.28 million tonnes of red mud every year. All this will be stored along the Vamsadhara. Any damage or breach of red mud pond or ash pond may create disasters like the one in

visited NALCO's smelter plant in Angul in 2002, found cattle suffering from fluorosis. The team, which visited the site as part of the Norwegian Environment Cooperation Programme, also found a few incidences of fluorosis among local people.

These environmental impacts of mining and refineries can be mitigated and managed. But it will need vigilance and enforcement by the government. Local community representatives told DTE that given the companies past record they apprehend this won't happen.



## BENDING RULES

How Vedanta's refinery came up

How did Vedanta complete its refinery on schedule amid this fuss? With a little bit of help from the Orissa government and MOEF, it seems. Despite being aware since October 2004 of the company's violations of forest laws, it was only on March 23, 2005, after CEC questioned MOEF about the validity of an environmental clearance, that the ministry directed VAL to halt construction work till clearance was given for the 58.9 ha of forestland within the refinery compound.

The next day the company dashed off a letter to MOEF seeking withdrawal of its request for forest clearance for the refinery saying it didn't need the 58.9 ha after all. The state government sent MOEF a letter recommending withdrawal of the proposal on March 27, 2005, which happened to be a Sunday. The very next day, the ministry withdrew its stop work order, without bothering to look into why the company had changed its stance. Or, as the CEC report later said, "without examining its effect, propriety, linkage with environmental clearance".

Vedanta's legal gymnastics on the matter have been remarkable. At CEC hearings, it first said mining on Niyamgiri was absolutely necessary for its project, then when questioned by CEC about starting work on the refinery without having mining clearance, it came out with the statement that the mines and refinery were separate projects and if the mines weren't approved it would ship in the bauxite from elsewhere.

In response, CEC observed that if the mine wasn't absolutely necessary, approval could not be granted under FCA. Vedanta immediately performed a perfect back flip. It now insisted the Lanjigarh refinery could not function without the Niyamgiri mines.

"The expenditure by the company on the refinery reveals the certainty of their expectation to get the clearance under the Forest Conservation Act since they would be presenting a fait accompli situation before the concerned authorities. Such cavalier attitude towards the laws of the land needs to be discouraged," CEC noted in its report.

Though the project is hanging fire in the Supreme Court, at Vedanta the mood is upbeat. "We have presented plans to

address the impact on wildlife, forest and water bodies. It's all already there in the EIA, WII and CMPDIL reports. In any case, Orissa has the largest bauxite deposits in India. If not Niyamgiri we can get it from somewhere else in the state," Mehta told DTE.

The company's Jharsuguda smelter project, which received formal approval as a special economic zone on June 4, 2007, also allegedly started construction work without obtaining mandatory environmental clearances. A petition against it by Samantara is pending with the National Environment Appellate Authority.

Repeated attempts by DTE to get comments from Agarwal and senior executives of Vedanta elicited no response.

### Dreams of empire

Sterlite Industries of India Limited and Vedanta Aluminium Limited (VAL) are subsidiaries of Vedanta Resources Plc, a publicly-traded British metals and mining company owned principally by London-based industrialist Anil Agarwal. Patna-born Agarwal started out as a scrap metal merchant in the 1970s in Mumbai. In 1983, he set up a small copper cable manufacturing unit. In 1998, his company, now called Sterlite, cashed in on the telecommunications boom in India, supplying copper cables to telecom companies, and raked in Rs 20 crore in profits. Today 53-year-old Agarwal is 230th on the Forbes list of billionaires with a net worth of US \$3 billion.

Vedanta Resources owns 68.1 per cent shares in Sterlite. Though its principal operations are located in India, Vedanta also operates in Australia, Armenia and Zambia. The company is India's biggest zinc producer, its second largest copper producer, and number three in aluminium. The multinational's aluminium business currently comprises VAL (still in the project phase), BALCO, a former public sector unit in which Vedanta now owns 51 per cent stake, and Madras Aluminium Company.

Vedanta's enterprises have been dogged by controversy, starting with Sterlite's attempts to locate a copper smelter in Ratnagiri, Maharashtra, in the 1990s, which had to be shelved after opposition. It was set up in Tuticorin, Tamil Nadu, in 1994, where protests remain.

## THIN END OF WEDGE

Why Vedanta's success will be bad news

Vedanta isn't the only company eyeing Orissa's high-quality bauxite. At least two more companies—Utkal Alumina India Ltd and multinational giant BHP Billiton—have mining and refinery projects in the pipeline. NALCO, one of the companies mining bauxite in the state, is mulling expansion of its mines.

Low-priced, good quality bauxite, cheap labour and low production costs combined with proximity to ports, make mining an attractive proposition in Orissa. Only a small quantity of bauxite, as raw material for aluminium, is sold in Indian markets, because most aluminium makers have captive mines. In the international market, bauxite is priced at US \$100 per tonne (over Rs 4,000), while in India, the estimated cost to mine bauxite is Rs 225 per tonne. The price of aluminium in the global market is US \$2,680 per tonne—over Rs 1,00,000 as per June 20, 2007. Indian companies can make a killing in this market with their captive bauxite mines. This explains the gold rush to Orissa.

NALCO's balance sheet is an useful indicator of the economics of bauxite. In 2005-06, its net profit, after accounting for taxes and payments to the state, was Rs 1,562 crore. The company's balance sheet also says the state's share in this, as royalty and cess, came to Rs. 37.54 crore (or 2 per cent of the total profit).

"Royalty rates fixed by the centre are very low and state governments have been asking for a hike," says Ashok Dalwai,

Orissa's mining secretary. He says the state doesn't profit much from mining *per se*, but benefits from value addition in the state by the mining companies. "We ask companies to set up ancillary units that generate employment and income for the state through sales tax revenues," he says. Dalwai cites Vedanta's Jharsuguda smelter project as an example.

Vedanta's mines just tap 5 per cent of the 1,491 million tonnes of bauxite in Orissa. But what happens in the Vedanta case will pave the way for similar projects. The stakes, as we said in the beginning, are high. They are high for the company, which is not in the habit of brooking opposition. Once this project gets the green light, other companies hope their roadblocks will disappear. The state government is keen to push growth-at-all-cost programmes, even though it will earn little in the bargain.

The stakes are high also on the other side. People live in these lands. They know that if this project goes through, their sacred forests will go. More importantly, they know that these forests provide them livelihood, water and agricultural productivity. They also know that this project, once it goes through, will pave the way for more projects and more destruction. They say if the project is cleared they will know that the rules are for the poor and not the rich. Another powerful company would have won. Another community would have lost, they say.

The fact is, the country is waiting to intensify its use of resources. But will it be able to strike a balance? If it wants to do this, it will have to have confidence in its institutions to independently assess impact, negotiate and mitigate damage and have the strength to take on the most powerful to protect the interests of the powerless. ■



July 15, 2007 • Down To Earth | 31

## Heat must be on all

With global warming concerns peaking, China and India are being made villains. Historically climate-profligate nations are being let off the hook. Climate negotiations have struck a dead end

In our May 31, 2007, editorial, "No more kindergarten approach to climate change," we argued that inequity and bad politics mar climate change negotiations. Readers responded. Here is a cross section of views:

### GETTING OVER BLOCKS

CASPAR HENDERSON

Oxford, UK

Investments in clean technology face blocks in rich countries and those with poor capita incomes—such as China and India. But there has been some progress. The German feed in law for renewables, for example, has relevance for India. Among the things that Indian NGOs could do is to draw attention of the central and state governments to costs of not addressing the downside. Start putting together numbers of what climate change may cost (taking account of uncertainties: a 5 per cent chance of a very terrible impact from not investing in clean technology can still be factored as a very large cost). Pay attention to sensible energy use, including the massive savings from more local energy generation that does not come with high transmission losses (sometimes in excess of 70 or 80 per cent)

There's a credible case that atmospheric concentrations of greenhouse gases actually need to be reduced in order to have a good chance of keeping climate danger within 'reasonable' limits. So, it may not just be a question of reducing emissions but also reducing concentrations.

### BLINKERS ARE HERE TOO

CHRIS FARLEY

Cfarley77@yahoo.com

Your apparent disregard for the developed world's political and financial constraints is just as damaging as the developed world's disregard for developing countries' need for economic growth. As long as both sides continue to insist "we are right", we will never move beyond gridlock.

The us, European Union and Australia

will never commit to sufficient binding targets as long as their emissions reductions are likely to end up as leakages to developing country growth. Effectiveness is a real concern, and to simply dismiss those concerns about leakage will result in a stalemate.

Furthermore, fairness and equity concerns are largely a matter of perception, to which no side has a unique claim. Whether correct or wrong, an out-of-work American voter whose job has been off-shored to China is unlikely to feel that emissions his grandfather made unknowingly in 1970 should count the same as current emissions pumping out of a new Indian factory. Knowledge and intent are important in perceptions of fairness.

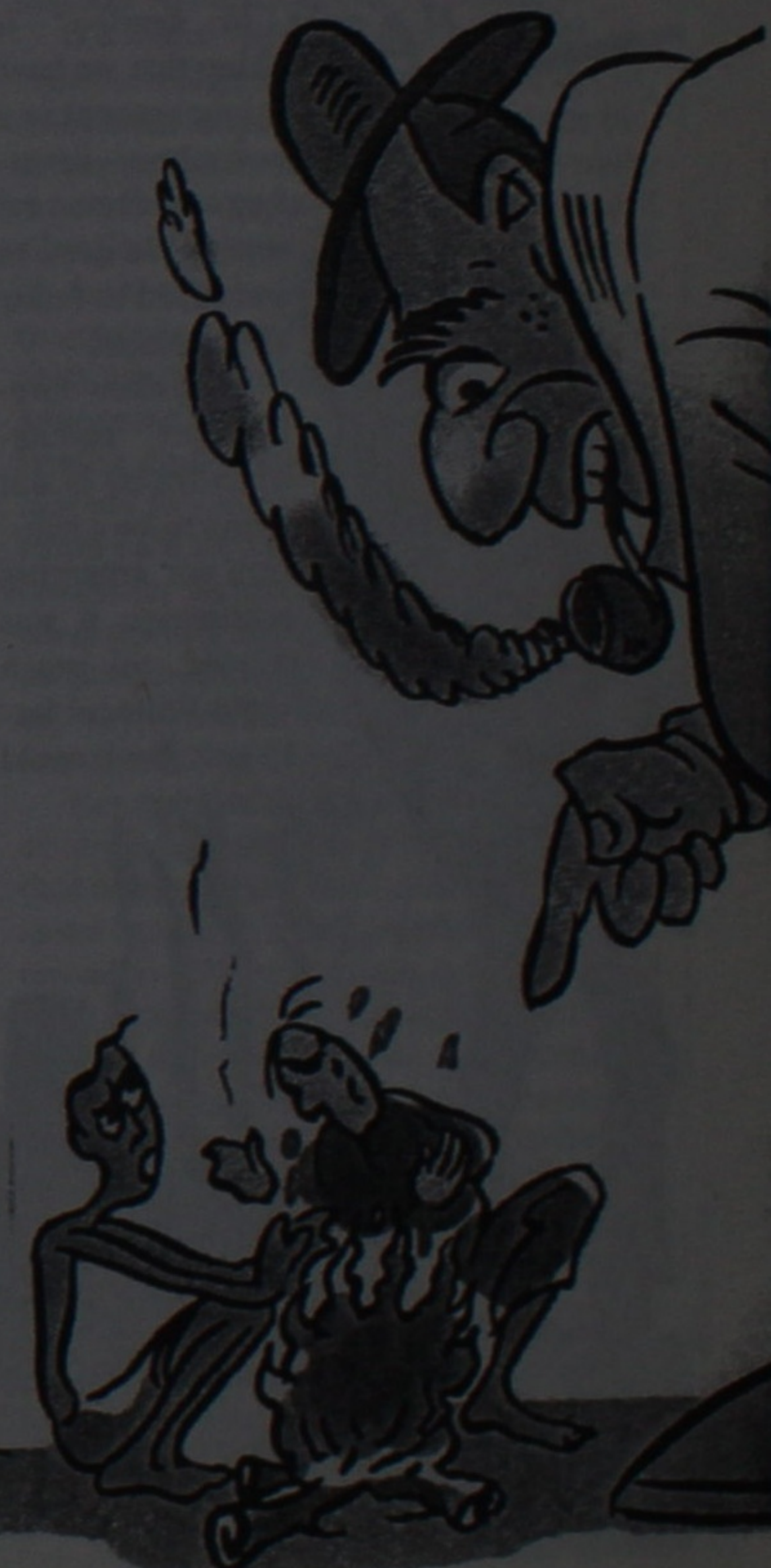
Therefore, while we shouldn't completely discount past emissions and national wealth, the developed world voters and their leadership are unlikely to feel obligated to make "climate reparations", regardless of how much better off they are compared to a typical developing country.

You correctly say, the developing world will face the brunt of the impacts of inaction. But how do we move forward? Right now the North doesn't trust the South to recognise that without some sort of commitment (or timeline/triggers locking in commitments down the road) from developing countries matters cannot improve, and the South doesn't trust the North to fund that necessary transition. Both are probably right, and no side can force the other to agree to anything.

Therefore the only real way forward is for the North to put some real significant money forward, and for the

developing world to agree to some sort of timeline or modest targets in exchange

The question is how much money the developed world should commit and how strict caps the developed world takes in return. This is exactly the sort of "kindergarten politics" in negotiation you disdain. The negotiations will not be pretty nor satisfying to anyone, and we can only hope negotiators/leaders from all countries can be practical enough to reach an agreement (as the consequences for failure are dire). But if successful, at least then we'll be moving in the right direction.



50 | Down To Earth • July 15, 2007

**GIVE CDM A CHANCE**

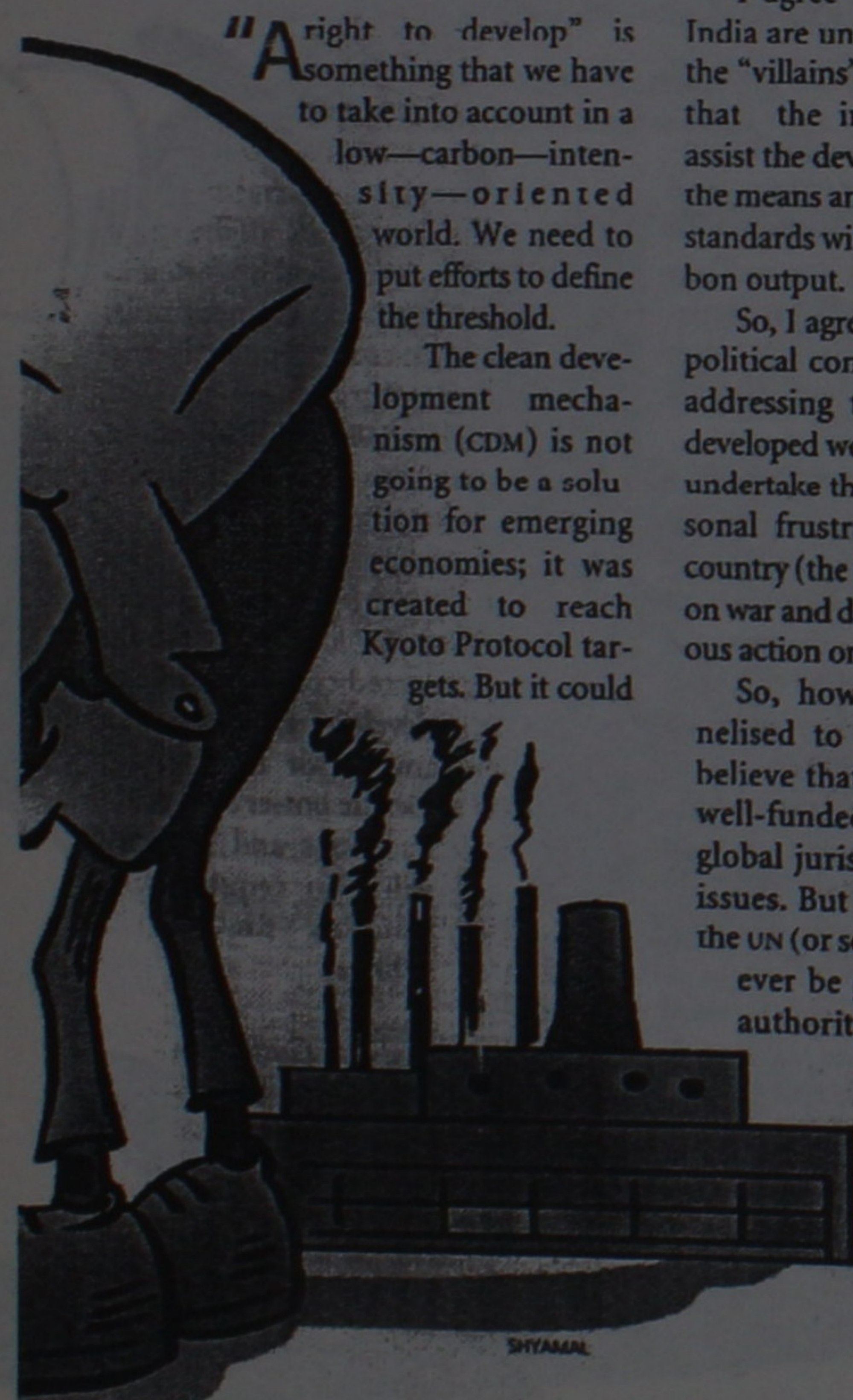
**GAUTUM DUTT**  
Bangalore, gdutt@fibertel.com.ar

I agree with some of your conclusions. But I disagree with a few others. For example you say, "Technologies exist (for mitigating climate change), but they are costly." I believe there are many low-cost options for mitigation, and indeed the clean development mechanism (CDM) favours these options.

No one gains by adopting more expensive mitigation options while discarding low cost ones. Therefore, your accusation that, "This mechanism (CDM) has been designed to get the cheapest emission reduction options for the rich world", is contradictory. On the one hand you state, (without any basis I might add) that technologies are costly. On the other hand, you accuse CDM of finding cheap mitigation options.

**WHAT AILS CDM**

**DAVID GARCIA**  
National Environmental Fund - Peru



"A right to develop" is something that we have to take into account in a low-carbon-intensity-oriented world. We need to put efforts to define the threshold.

The clean development mechanism (CDM) is not going to be a solution for emerging economies; it was created to reach Kyoto Protocol targets. But it could

teach developing world something that probably will go on: emission trading systems. Emerging countries must integrate clean energy and low carbon issues into their national and sectoral mid/long term policies.

**UNFAIR ON IPCC**

**DANIEL KURTZMAN**  
Daniel.Kurtzman@Verizon.net

Restricting cars is definitely one solution but it will not really help matters totally. There are other significant sources of carbon emissions.

I think we should prioritise on issues and then get the politicians to work on the list from top down. But that is easier said than done. It is not in the interests of politicians to make decisions which will affect them in the long-term as (a) they will be voted out of power by fickle public, and (b) most of them probably won't be around to see the cataclysmic effect of climate change. Politicians by their nature are interested in short-term change, a bit like the stock market.

I agree with you that China and India are unavoidably joining the US as the "villains". It is absolutely fair to say that the industrialised world must assist the developing world in providing the means and technology to raise living standards without much increase in carbon output.

So, I agree with you that money and political commitment are essential in addressing these issues and that the developed world has the responsibility to undertake the task. It is a source of personal frustration and anger that my country (the US) is squandering resources on war and doing its best to obstruct serious action on climate change.

So, how should funds be channelised to the developing world? I believe that only an empowered and well-funded international body with global jurisdiction can address these issues. But I have no confidence that the UN (or some alternative agency) will ever be given sufficient money or authority to effectively undertake this role.

I disagree with your views on the IPCC Fourth Assessment Report although, I know that executive summaries were subject to significant

political input (especially by the US). The IPCC reports have been perhaps the most significant contributor in creating awareness on the reality of climate change, and it is not fair to rubbish them.

**WHY RELY ON THE WEST?**

**HASSAN VIRJI**  
hvirji@agu.org>

Your article is well argued. But why should India and China depend upon the industrialised nations to supply them with more efficient technologies in order to develop responsibly? What is stopping them from being inventive, resourceful and daring enough to develop using more efficient and not-as-polluting methods on their own (exerting leadership along the way)? For example, why can't China (and perhaps India too) mandate that all cars entering the market from now on will be hybrid or fuel cell-based. With its so-called centralised planning structure, the country has the administrative wherewithal to accomplish this.

**THE JAPANESE WAY**

**ADNAN RAHMAN**  
ECORYS Transport  
Watermanweg, The Netherlands

You make the point that India and China will first add to emissions, make money and then clean up their act. Two reactions to this. The first is that it may simply be too late to clean up, in any case it is too risky to find out whether we can clean up.

Secondly, I think that both India and China can and should become world leaders in clean technology and skip a few steps along the way. I think a good example is Japan, which starting in the 1960s invested hugely in energy efficient technologies.

The accepted notion is that the Japanese economy grew by "copying" US and European products. I believe Japan grew economically because it was able to produce more at lower cost than any other country and because the Japanese were more innovative.

In fact, I think this argument should be put forward to the World Bank and other lending agencies to facilitate technology transfer more quickly than what currently takes place. ■

**GOING GREEN**

**Getting Credit for Saving Trees.** Forest cover is a natural defense against global warming. Let's pay to preserve it

**BRYAN WALSH**



POP QUIZ FOR ALL OF YOU GLOBAL-WARMING experts: After China and the U.S., which country emits the greatest quantity of greenhouse gases per year? Answer high-tech Japan or industrial Germany, and you flunk. A holographic Al Gore will be beamed over to give you remedial lessons. It's rural Indonesia, which emits 3.3 billion tons (almost 3 billion metric tons) of carbon dioxide annually—almost entirely from deforestation. Living trees absorb CO<sub>2</sub>, and as they are cut down or burned, they release their stored carbon into the air. Trees also absorb sunlight, warming the earth, but in the tropics their ability to absorb CO<sub>2</sub> and promote cloud formation has a net cooling effect. In addition, thinning forests mean fewer trees to soak up the carbon emitted by industry and transport. Deforestation is re-

sponsible for about 20% of global carbon emissions, more than from all the cars, boats and planes in the world. Plenty of programs plant trees to offset emissions, but it is even more important to save the trees we already have. "You've got to deal with forests if you're going to make any progress on climate change," says Carter Roberts, president of the World Wildlife Fund.

Despite the high emissions rate, the Kyoto Protocol gives tropical countries no incentives for protecting their forests, a process called "avoided deforestation." But that's beginning to change. The World Bank is raising \$250 million for a pilot fund to support projects that would encourage governments and companies in the developed world to pay for preserving trees in the tropics in exchange for carbon credits that grant the right to emit CO<sub>2</sub>. It is a small step, but it represents one of the first attempts to use the tools of carbon finance to save the 32 million acres (13 million hectares) of forest de-

stroyed each year. Existing carbon-credit programs focus on industrial emissions; this initiative extends carbon trading to the big chunk of CO<sub>2</sub> emissions caused by deforestation. "If deforestation is 20% of the problem, it should be 20% of the solution," says Benoit Bosquet, a biocarbon specialist with the bank, who is setting up the fund.

To reach that level, however, proponents of avoided deforestation must satisfy the skeptics who kept such projects off the Kyoto Protocol when the environmental treaty's carbon-trading program was set up in 2001. Negotiators at the time worried that the carbon released by cut or burned timber was too difficult to track accurately—just try counting the trees in the Amazon basin—so countries could have ended up receiving credit for preserving nonexistent

**'You've got to deal with forests if you're going to make any progress on climate change.'**

—CARTER ROBERTS, PRESIDENT OF THE WORLD WILDLIFE FUND

forests. But since then, scientists have vastly improved their ability to monitor deforestation through satellite technology.

If avoided deforestation takes off, the benefits will go well beyond reducing CO<sub>2</sub> emissions. Tropical forests are rich in biodiversity, but there's been no way to make money from keeping them pristine—until now. Giving tropical countries carbon credits for the greenhouse gases saved when trees are preserved puts a market price on maintaining forests as forests. And that allows conservation to compete economically with destructive logging and ranching. Instead of clearing trees, the rural poor could earn a living from the sale of carbon credits for preserving forests. "You can address poverty reduction [and] biodiversity cultivation and deal with huge carbon losses," says Marcel Silvius, senior program manager for Wetlands International.

Not every critic is convinced. Jutta Kill of the forest advocacy group FERN worries that rich countries will use forestry credits as an excuse to avoid reducing industrial emissions. What's certain is that avoided deforestation gives tropical nations a vital stake in the efforts to slow climate change by not forcing them to choose between development and the environment. Indonesia is already pushing for deforestation to be included in any post-Kyoto deal at the climate-change talks this winter. Let's hope it succeeds. It's time to save the trees, so they can save us. —WITH REPORTING BY ZAMIRA LOEBIS AND JASON TEDJASUKMAN/JAKARTA



Timberline  
A road separates burned woodlands from a forest near Riau, Indonesia.

**THE TOP 5 DEFORESTERS**

- As the world cuts its tropical forests, it also loses a potential buffer against climate change
- Brazil** The Amazon rain forest absorbs carbon naturally. Lost: 3.1 hectares annually
- Indonesia** Carbon-rich peat lands release tons of CO<sub>2</sub> when destroyed. 1 million hectares
- Sudan** Industrial fires have devastated its *Acacia senegal* trees. 597,000 hectares
- Burma** Illegal logging is rampant, in part because of China's ravenous demand. 465,000 hectares
- Zambia** Poor farmers cutting firewood cause much of the deforestation. 445,000 hectares

Source: U.N. Food and Agriculture Organization. Tropical forests (excludes) ranked by an average annual amount of forest cleared between 2000 and 2005