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(16 - 31 July 2007)

**Foundation for Ecological Security
Anand**

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.

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(16-31 July 2007)

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Corbett has highest tiger density, says study

AMITABH SINHA
NEW DELHI, JULY 25

CORBETT National Park has been one of the most well-known tiger reserves in the country. A recent study indicates that the park now might also be the area with the highest tiger density in the world.

A survey conducted by the Wildlife Institute of India across 200 sq km of the reserve yielded a count of 74 tigers — quite a high number for that small an area. Final figures of the countrywide survey are expected in October, and these will confirm whether Corbett indeed has the world's highest tiger density.

Director of the reserve Rajiv Bhartari said that the new distinction poses greater challenges for the Corbett management. "The challenge has grown manifold. Now everyone knows how big the treasure is. It becomes that much more difficult to preserve that treasure," Bhartari said in a telephonic interview with *The Indian Express*.

Bhartari said the reason for the good number of tigers in Corbett lay in good conservation efforts over the last 70 years. "We have a long history of good conservation. The staff practise the best traditions of conservation and over the last few years, there has been a marked improvement in the facilities inside the national

park," he said.

He said that the involvement of the local youth in protection efforts and the lower incidences of forest fires in the last few years were some of the areas where the management had made good progress. "Between 2005 and now, the number of forest fires have gone down considerably because of better fire protection measures in the park," he said. Less forest fires mean better ecosystems, which leads to an increase in the population of tiger preys and helps in better sustenance of tigers.

"We also involved about 200 youth from nearby villages for protection duty. That ensured better protection for the tigers and at the same time

made the locals a stakeholder in conservation efforts," Bhartari said.

Another move that contributed in making Corbett a better tiger habitat was the successful relocation of three villages on the southern boundary of the reserve, Bhartari said. "We had started relocating these three villages in 1994. The relocation of the fourth village is now being done. The real impact of that move is being known only now. The tiger sightings have become more common in that area," he said.

Bhartari said another challenge was to ensure that the tiger was safe even outside the reserve, and to ensure this, the management was trying to increase patrolling efforts.

Exclusive space for tigers soon

Nitin Sethi | TNN

New Delhi: A new rehabilitation package for people to be relocated from tiger reserves and the guidelines for government to declare 'involute areas' — an exclusive area for the tigers free of human presence — are on the anvil.

They will be hammered out at a two-day meeting organised by the National Tiger Conservation Authority (NTCA) at Dehradun with the field directors of the 28 existing tiger reserves and the eight new ones proposed.

NTCA has prepared the first draft guidelines for deciding what constitutes an 'involute area' as well as a draft proposal for relocation of people who could get displaced by the declaration of such spaces. The government has been keen to find a better rehabilitation package with much of earlier resettlement attempts failing miserably and creating friction between the local populace and the forest department. But this time, it will have to demarcate 'involute spaces' keeping in mind the recent amendment to the Wildlife Pro-



NO ENCROACHMENT: The National Tiger Conservation Authority will also finalise the proposal for creating a Tiger Protection Force

tection Act which makes a scientific demarcation of such spaces as mandatory before any further relocation is undertaken.

Besides these two draft reports, the meeting will also finalise the proposal for creation of a Tiger Protection Force, comprising servicemen and people living around the tiger reserves.

It will also go through the draft eco-tourism guidelines, which are bound to become a big issue as the field directors of the tiger reserves

and NTCA in a previous meeting had recommended that a percentage of the revenues from tour operators and hotels that depend upon tiger tourism be routed to conservation and supporting villagers that get relocated.

Besides these, the agenda also includes discussion on an economic rehabilitation package for hunting and other key tribes, who have often been blamed for playing the role of the last link in the poaching chain, very often for lack of alternative livelihood opportunities.

The meeting comes in the wake of the PM's recent review of tiger conservation status in the country and implementation of the Tiger Task Force and just before the crucial meeting of the National Wildlife Board of India, which is chaired by the PM. The areas requiring additional funding, relocation and rehab of hunting tribes will need to be taken through further government channels for final approval. The Union government is keen to also test the idea of signing MoUs with the state governments for implementation of the tiger conservation agenda.

Kutch's wild ass habitat may soon get heritage label

HERITAGE CALLING Proposal was submitted to UNESCO on March 15 last year to include Wild Ass Sanctuary in the Rann of Kutch in tentative list of World Natural Heritage list

DP BHATTACHARYA
AHMEDABAD JULY 24

The Wild Ass Sanctuary in the Rann of Kutch is all set to be enlisted as a World Natural Heritage site in UNESCO's list of World Heritage by 2009.

Along with the sanctuary, the Kanchenjunga Wildlife Park in Sikkim and Namdapha Sanctuary in Arunachal Pradesh too are expected to make it to the coveted list.

A proposal in this regard was submitted to UNESCO on March 15 last year to include these sites in the tentative list of World Natural Heritage list.

Speaking to The Indian Express from Dehradun, Director, Wildlife Institute of India (WII), Dr. V B Mathur said that a study in this regard was carried

out by Mysore-based Nature Conservation Foundation and Bangalore-based Ashoka Trust for Research in Ecology and Environment (ATREE) during December 2005. "Subsequently, we submitted the proposal in March and these three sites were included in the tentative list.

The Western Ghat region with 39 sites spread across Kerala, Karnataka and Maharashtra has also made it to the list," he said. The inclusion in the tentative list is the first step towards making it to the final list of world heritage.

For inclusion in UNESCO's list of World Heritage, the site has to contain habitat for in-situ conservation of biological diversity, including threatened species.



PRIVILEGED TAG: A wild ass in Rann of Kutch

The Rann, the last habitat of the wild ass (*Equus hemionus khur*) covering an area of 4954 sq. km is one of the most remarkable and unique landscapes of its kind in the world, which is considered as a transitional area between marine and terrestrial ecosystems. During the monsoons, while the entire area gets inundated, as many as 74 elevated plateaus stand out

in the area.

The sanctuary also houses 253 flowering plant species, 93 species of invertebrates and 33 species of mammals including the Khur subspecies of wild ass.

"These nominations from India have already been included in the tentative list and we hope that they'll be inducted in the World Heritage list in a few years," said Mathur.

He pointed out that after submitting the initial proposal a detailed dossier on the sanctuary has to be sent to UNESCO for finalisation of the process.

With the deadline for 2008 list already over, WII is trying to prepare the dossier and send it by February 2008, which is the deadline for submission of dossiers for 2009 list.

TIMES OF INDIA (M) 22.7.07

Wind up green bench: Govt

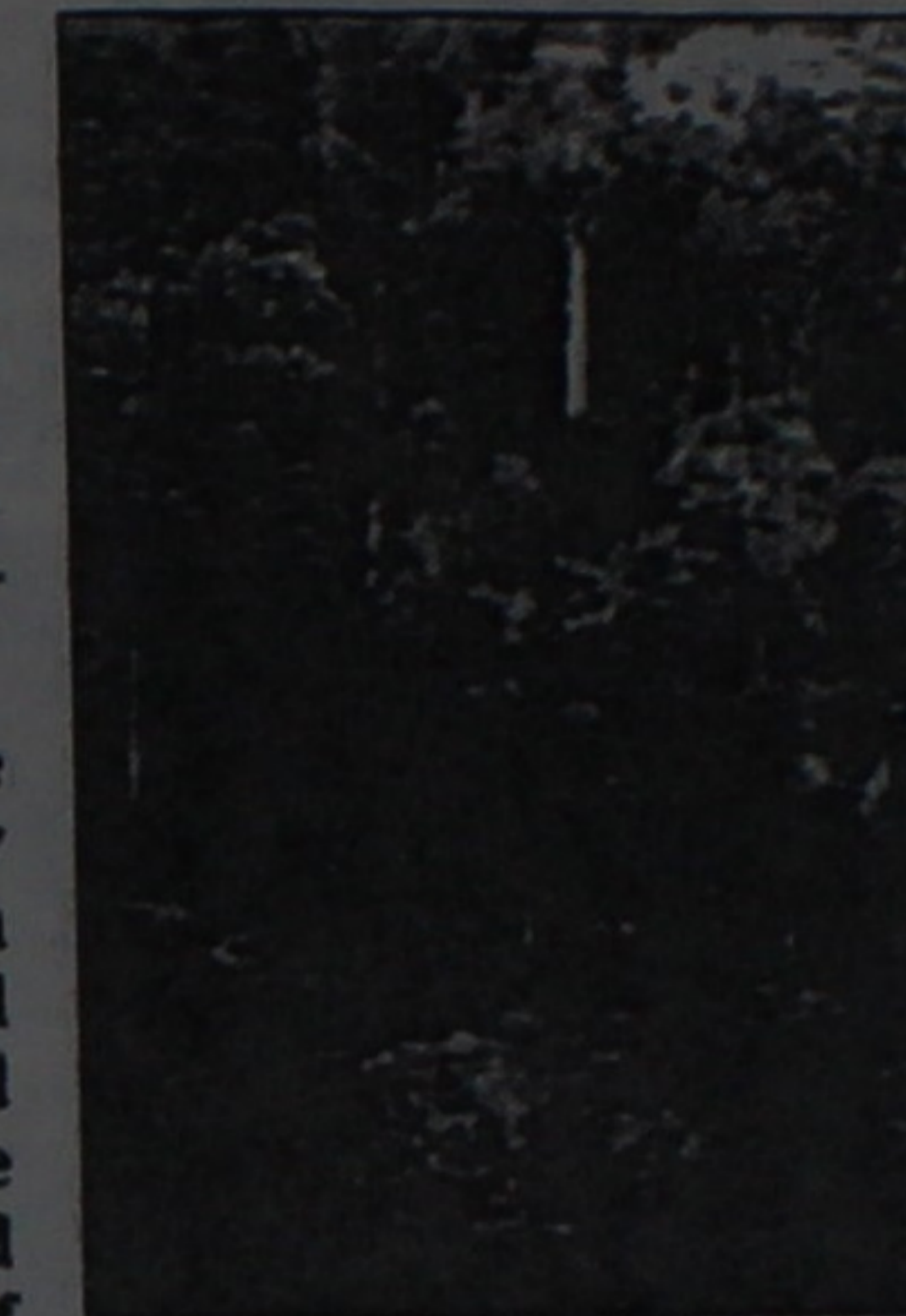
You Are Hurting Objective Of Forest Preservation, Centre Tells SC

Dhananjay Mahapatra | TNN

New Delhi: In a blunt message to the supreme court, Centre has asked it to wind up its green bench on the ground that it has outlived its utility and is hurting the objective of preservation of forests.

The bench's orders on the basis of advice given by lay persons have contributed in accentuating poverty, social unrest and a spurt in Naxal activities in major states, the Centre said in what marked an unprecedented display of belligerence.

The three-judge green bench, a significant innovation which has traditionally been headed by the Chief Justice of India (CJI), has passed several landmark judgments, orders and directions for implementation of the Forest Conservation Act in the last 12 years. But the interventions which earned its applause were resented by the executive



The bench's orders on the basis of advice given by laymen have contributed in accentuating poverty, social unrest and a spurt in Naxal activities in states, the Centre said

which saw them as intrusion.

The ministry of environment and forests (MoEF) makes no bones of its anguish, saying that the prolonged hearing on the writ petition filed

in 1996, as well as 1,700 applications attached to it, has resulted in judiciary usurping the executive's powers. "Such a large number of applications testify to the fact that the separation of powers between different organs of the government, and mutual respect, are being eroded," the MoEF said in its affidavit seeking vacation of the stay on the functioning of Forest Advisory Committee constituted by it.

The stand-off between the Centre and the apex court emanated from the disagreement over choice of independent experts to the FAC, strongly espoused by amicus curiae Harish Salve, who wanted inclusion of independent experts like Belinda Wrights and Bittoo Sehgal.

MoEF made known its scant regard for the views of lawyers and social activists assisting the court in forest matters. While referring to them as "lay persons", it even ac-

cused them of influencing the court orders that has led to social problems like spurt in naxal activities in forests.

The MoEF said the way hearings in the apex court had gone clearly showed that "advocates, who are experts in law not in forestry, and social activists, who may espouse social causes without any background of scientific issues that may have given rise to that issue, have tried to influence hearings in the cases through submissions on aspects which are in the domain of forestry science".

Such a situation may not only lead to errors of judgment but also result in accentuating poverty and social unrest, the Centre said. "Growing Naxalism in vast forest tracts of states is often directed against the disenfranchisement of forest-dependent population because of overtly centralising episodes of forestry administration," it added.

HINDU 19.7.07

Sustained campaign key to protecting biodiversity

"Greed-driven exploitation of resources will spell doom for mankind"

Special Correspondent

CHENNAI: A sustained awareness campaign is the key to protecting the country's biodiversity wealth, according to K. Venkataraman, Secretary, National Biodiversity Authority.

Inaugurating an international symposium on biodiversity and molecular evolution organised by the Vivekananda Institute of Tropical Mycology (VINSTROM) at Ramakrishna Mission Vivekananda College on Wednesday, he said crucial as legislation or international treaties were, the nation's biodiversity could be safe only if everyone realised the need to "change lifestyle or face extinction."

Mr. Venkataraman pointed out that there were 27 Central Acts, the last being the Biological Diversity Act, 2002, to protect biodiversity. This apart, the country was signatory to numerous international treaties such as the Global Plan of Action and the Cartagena Protocol on Biosafety. However, while relatively less could be done about natural causes for loss of resources, people from all walks of life need to be made aware that greed-driven commercial exploitation of resources would spell doom for mankind as a whole, he said.

The Biological Diversity



CREATING AWARENESS: (From left) K. Venkataraman, Secretary, National Biodiversity Authority; Atmaghanananda, chairman, VINSTROM; P.T. Lacava, University of Sao Paulo, Brazil; L.S.de Melo, Embrapa-Brazilian Agricultural Research Corporation; and J.L. Azevedo, department of genetics, University of Sao Paulo, at a symposium in Chennai on Wednesday. — PHOTO: S. R. RAGHUNATHAN

Act was aimed at regulating access to biological resources to secure equitable share in benefits from the use of biological resources, share benefits with local people as conservers of biological resources and engender sustainable use of biological diversity.

Intervention

Poverty, illiteracy and pop-

ulation explosion remained important challenges to countering overexploitation of resources in a country that accounted for 7.8 per cent of the global recorded species. The intervention ranged from declaring animal species as protected, fishing holidays and providing alternative employment to those dependent on natural resources for livelihood, Mr.

Venkataraman said.

J. L. Azevedo, Department of Genetics, the University of Sao Paulo, elaborated on research related to endophytic micro-organisms, the resident bacteria in plants. The losses to the Citrus Variegated Chlorosis alone were to the tune of \$200 million a year.

P. T. Lacava, also from the Brazilian university; I. S. de

Melo, the Embrapa-Brazilian Agricultural Research Corporation; and R. Geeta, State University of New York, presented papers.

G. Srinivasa Prabhu, Principal (in-charge), Vivekananda College; T. S. Suryanarayanan, director, VINSTROM; Atmaghanananda, chairman; and V. Muruganandam, associate director, participated.

INDIAN EXPRESS 26.7.07

Global study warns India of severe water shortage

PRESS TRUST OF INDIA
WASHINGTON, JULY 25

AN international study group has warned that the water shortages in India and other parts of the world will be a serious problem in days to come.

"Scores of countries are overpumping aquifers as they struggle to satisfy their growing water needs, including each of the big three grain producers — China, India, and the US. More than half the world's people live in countries where water tables are falling," Lester Brown of the Earth Policy Institute has said. In India, water shortages are particularly serious simply because the margin between actual food consumption and survival is so precarious. In a survey of India's water situation, Fred Pearce reported in *New Scientist* that the 21 mil-

water tables in most parts of the country.

"In North Gujarat, the water table is falling by 6 meters per year. In Tamil Nadu, a state with more than 62 million peo-

"In North Gujarat, the water table is falling by 6 meters per year. In Tamil Nadu, wells are going dry and falling water tables have dried up 95 per cent of the wells owned by small farmers"

ple in southern India, wells are going dry almost everywhere and falling water tables have dried up 95 per cent of the wells owned by small farmers reducing the irrigated area in the state by half over the last decade," Brown has noted. "As water tables fall, well drillers are using modified oil-drilling technology to reach water. go-

some locations. In communities where underground water sources have dried up entirely, all agriculture is rain-fed and drinking water is trucked in," Tushaar Shah, who heads the

International Water Management Institute's groundwater station in Gujarat, said of India's water situation.

The situation over water is equally serious in Pakistan whose population is growing by three millions a year and a country that is mining underground water. "In the Pakistani part of the fertile Punjab plain, the drop in water tables appears to be similar to that in India. Observation wells near the twin cities of Islamabad and Rawalpindi show a fall in the water table between 1982 and 2000 that ranges from one to nearly two meters a year," Brown has said in his latest finding.

"In the province of Balochistan, water tables around Quetta are falling by 3.5 meters per year. Richard Garstang, a water expert with the World

in a study of Pakistan's water situation, said in 2001 that within 15 years Quetta will run out of water if the current consumption rate continues," he pointed out.

HINDU 20.7.07

"Public-private partnership works better in water sector"

T. Ramakrishnan

CHENNAI: Public-private partnership, not privatisation, is workable in the water sector, according to Thierry Mallet, Chief Executive Officer, Degremont Suez, a constituent of Suez, the French multinational group working in water and wastewater treatment.

Asked whether urban water service agencies in India required institutional changes, Mr Mallet, citing his organisation's experience worldwide, said in most cases, it was public-private partnership that worked better, as

the local authorities always retained control over pricing and zones to be served, while the private partners chipped in with technology and technical know-how. But, basically, "water [supply] needs to be subsidised," he said, in an interview with *The Hindu*.

"Even in the European system, huge subsidies from the European Union are going to countries like Spain, Portugal and Greece to improve wastewater system or to do drinking water projects. For instance, we are right now working on a desalination project for Barcelona in

which investment is, up to 75 per cent, in the form of subsidy from the European Union," Mr. Mallet said.

The first stage was to invest in the water sector. But, full recovery of the cost was not possible. Only a part, or at least the operating cost, should be recovered. As the service improved, the recovery could go up.

Mr. Mallet was here on Thursday to take part in the inauguration of the Chembarampakkam water treatment plant of 530 million litres a day (MLD), designed, built and operated by Degremont

Limited, an Indian subsidiary. He and A. Vidyavathsal, Chief Operating Officer, Degremont Limited, referred to their organisation's record in wastewater treatment and drinking water supply projects. The group is operating nearly 15-16 plants in India. Asked about the Chembarampakkam treatment plant, he cited less energy consumption and chemical-free application as among its special features. The other highlights were world-class technology and the use of the technology through the local engineering team.

INDIAN EXPRESS 24.7.07

High TDS levels generally indicate hard water; in urban areas, it affects life of water transportation systems State of waterbodies murky, says GPCB report

ABHISHEK KAPOOR
GANDHINAGAR, JULY 23

MOST surface waterbodies like rivers, lakes, and ponds in the State stand poor on water quality parameters like the Biological Oxygen Demand (BOD) and Total Dissolved Solids (TDS).

In fact, even underground water sources like wells, tanks and tube-wells fair worse than rivers in developed countries, as brought out in the just released annual report of the Gujarat Pollution Control Board.

By international standards, most pristine rivers would have BOD of less than 1 milligram/litre.

In western countries, efficiently treated sewage has a BOD of 20 mg/l, says wikipedia on the parameter. The threshold of acceptable aesthetic criteria is TDS below 500 mg/litre. Now compare this: Sabarmati when it enters Ahmedabad reports a BOD of 4.3 at the Railway Bridge near Sabarmati Ashram. By the time the river leaves the city, the value stands at a massive 280 as recorded at the Vasna-Narol Bridge.

The average stands at 84 mg/l. The value of TDS for Sabarmati reaches a peak of 2,054 mg/l. In Vadodara, the meandering Vishwamitri river maintains a BOD of over 3, peaking to 5.9 in the Sayaji Baug zoo area.

It's not surprising that Amla Khadi in Ankleshwar town, that drains much of industrial effluent into the Arabian Sea, reports a daunting average BOD value of 329. The poison ravine also reports a TDS of 2,420.

The Narmada is the only saving grace reporting BOD values in the range of 0.6 to 2.2 in the two districts of Narmada and

Waterbody	Area	BOD	TDS
Sabarmati	Ahmedabad	280	2,054
Vishwamitri	Vadodara	5.9	—
Amlakhadi	Ankleshwar	329.2	420
Meshwo Dam	Sabarkantha	5.3	—
Aji-II Dam	Rajkot	4.9	—

* Unit measured: mg/l



Bharuch. Even some of the large dams supplying drinking water to cities are not free from high BOD values, the highest being reported by Meshwo dam in Sabarkantha at 5.3 mg/l followed by Aji-II dam of Rajkot at 4.9 mg/l.

Dharoi reports a BOD of 4, while Bhadar-II and Vadi (Amreli) report values of 3.3 each. TDS is an expression for combined content of all inorganic and organic substances contained in a liquid.

Though not related to health effects, TDS is an aggregate indicator of presence of a broad array of chemical contaminants. In village lakes it could just be a barometer of water's aesthetics.

High TDS levels generally indicate

hard water, and in urban areas are damaging to the life of water transportation systems.

A borewell in Padra taluka of Vadodara district reported the highest TDS value of 4804 mg/l, followed by one in Khambat taluka in Anand at 3480 mg/l.

Close to 40 per cent of the tube wells monitored by the GPCB reported TDS over 1,000 mg/l. The report has figures for the year 2006-07, and was tabled before the State Assembly last week.

INDIAN EXPRESS 23.7.07

NORTH INDIA ■ Existing sewage treatment plants inadequate to turn the tide Much filth flowing down rivers

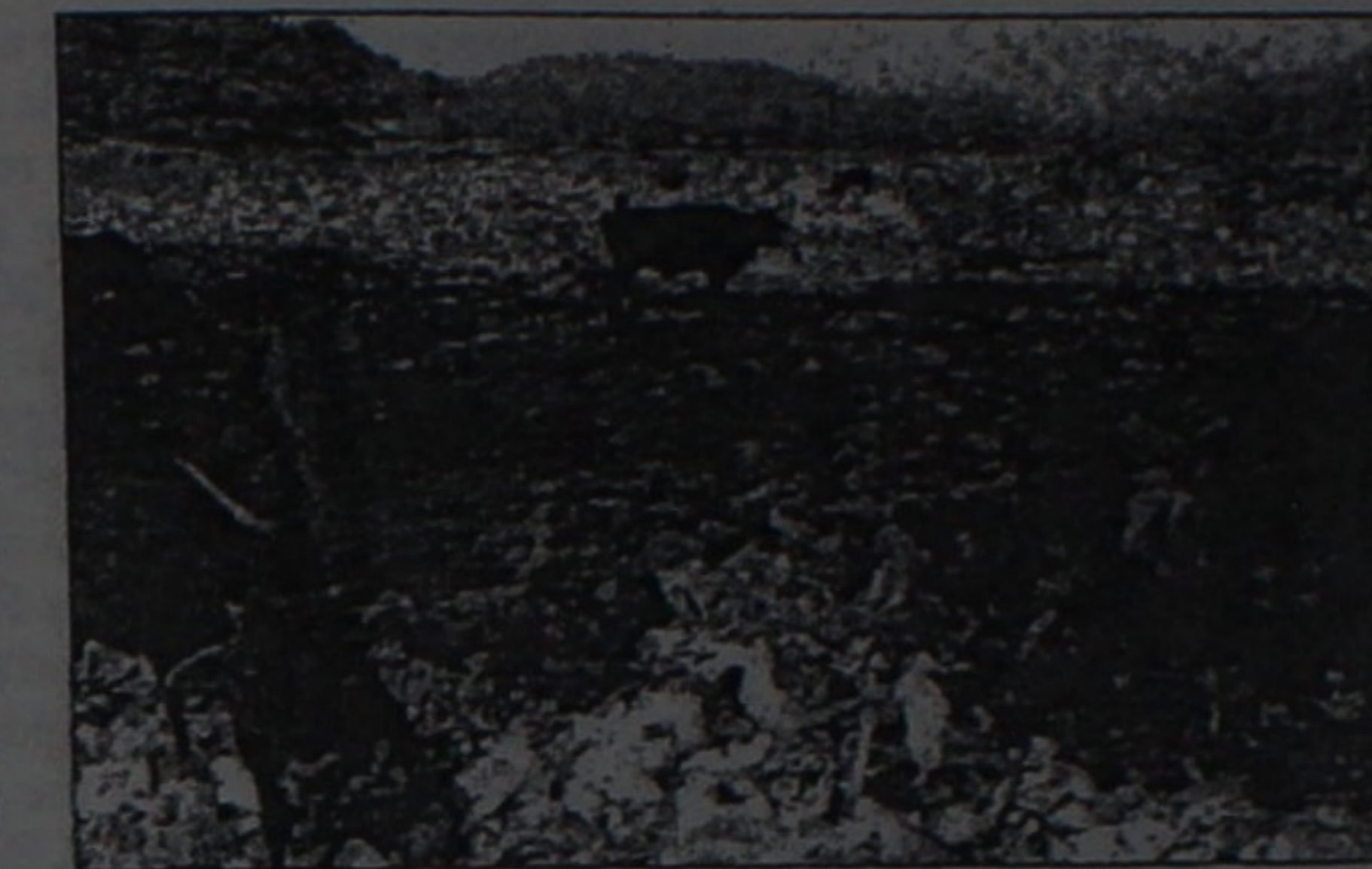
MANEESH CHHIBBER
CHANDIGARH, JULY 22

MOST major rivers of north India are dying a slow but certain death, suffocated by unchecked dumping of industrial and domestic waste.

The Indian Express accessed data compiled by the governments of India, Punjab and Haryana, all proving that the Sutlej, Ghaggar and Yamuna are a poor copy of what they were a decade ago. Pollution levels in all the three rivers have gone up tremendously, with efforts put in by Government agencies failing to yield any substantial results.

Consider this: Every day as many as 35 towns discharge many million liters of untreated waste into the Sutlej, now considered Punjab's most polluted river. More worrying is the fact that except in one or two cases, sewage treatment plants, which could bring down the pollution levels, have not been installed by the civic bodies.

The Municipal Corporations of Ludhiana and Jaland-



River Ghaggar. At many places, including Zirakpur near Chandigarh, it resembles a drain

har are among the civic bodies that are guilty of polluting the Sutlej. The two cities alone have 82 polluting industries without effluent treatment plants, but dumping their untreated industrial waste directly into the Sutlej.

Government data show 884 industries located in Ludhiana district, most of them water polluting, discharge about 60 MLD of treated and untreated waste into the Buddha Nullah, a tributary of the Sutlej. Buddha Nullah is also among the most polluted rivulets in the region. No wonder the nullah, which was home to at least 50 varieties of fish in the early '60s,

doesn't have even a single one left now.

Recently, a PIL was filed seeking directions to the governments of Punjab and Haryana to take steps to preserve and protect rivers flowing through the two states. High Court lawyer Sandeep Sharma who filed the PIL is blunt: "Unless drastic steps are taken, rivers like the Sutlej, Ghaggar and Yamuna will turn into nullahs, with no amount of treatment helping the waters of these rivers. But, unfortunately, the Government agencies and the industrialists don't understand this."

While officials claim they

are taking steps, including setting up sewage treatment plants in Ludhiana to control pollution, the steps are too little. The three proposed plants would have a total capacity of just 311 million liters per day (MLD). But by the time the plants become operational, the quantity of waste would have touched 650 MLD.

Studies carried out by the Central Pollution Control Board and the Punjab Pollution Control Board say the Ludhiana-Hariki stretch of the Sutlej is most polluted. "At many places, the Biological Oxygen Demand (BOD)—necessary for survival of flora and fauna—for the Sutlej exceeds the desired limits of 3 mg/l. But, despite our efforts and directions issued by the Punjab and Haryana High Court from time to time, the municipalities and other civic bodies refuse to act. The only way out seems to be to impose stiff penalty on officers responsible for checking discharge of polluting effluents into the river," says a senior Punjab Pollution Control Board officer. The situation is no different for two other main rivers in

the region—Ghaggar and Western Yamuna. At many places, including Zirakpur near Chandigarh, the Ghaggar resembles a drain. Of the 25-odd big industries located at Dera Bassi that discharge their waste into Ghaggar, eight have not taken any steps to install water treatment devices. As many as 17 Punjab towns, including Mohali, Patiala and Rajpura, discharge their sewage directly into the river. None of the civic bodies has taken any pollution control measures.

When the PPCB took up the matter with the Government it was informed that none of these towns would be able to install sewage treatment plants before December 31, 2009. In its report pertaining to water quality, the monitoring committee appointed by the Central Pollution Control Board found that BOD values for Ghaggar also exceeded the desired limits of 3 mg/l. At Chandrapur village on the Haryana-Rajasthan border where the Ghaggar enters Rajasthan, the BOD value was 30, while it stood at 22 at Sardulgarh on the Punjab-Haryana border.

INDIAN EXPRESS 26.7.07

India doesn't really need to choose. It needs a portfolio of several alternative energy sources

The friendliest energy of them all



LAVEESH BHANDARI

A RANGE of energy options is available, and many others will become available as technical advances take place. Which sources should India focus on? Which source would provide the best cost-benefit differential? Which would be the least harmful environmentally? Should the government decide at all what source of energy India should focus on? Or should we let national and international market forces decide?

As of now, we have several options to generate power. The most significant ones are thermal, hydel and nuclear. Within thermal, the predominant sources are coal, oil and gas. Of course, there are variations within these broad classes. Then there are the curiously labeled 'environmentally friendly' methods—that include wind-mills, solar power, and so on.

Two broad issues need to be addressed. One, which is the most environmentally friendly, and two, which ones provide the best cost-benefit differential. In the latter case, benefits and costs should ideally also build in environmental costs and benefits.

Petroleum, coal, hydel, solar or wind—each of these has a potential negative environmental impact. Fossil fuels' impact on the environment works through the carbon-dioxide route. It is most likely a very important contributor to global warming. Hydel power has limited potential, but here too, is a possible environmental implication on sub-surface stresses and consequent impact on the likelihood of earthquakes. This becomes a critical issue as the significant part of our hydel potential is in the seismically sensitive Himalayan region.

Wind power is friendly, but only on a very small scale. Solar cells also have a negative environment impact. For one, more energy is required to produce a solar cell than it will produce in its entire lifespan. Two, energy produced per unit area covered is low, and a large area would need to be covered if this were to become a significant source.

Weather dependent sources also require energy storage mechanisms—typically batteries—that in turn are bad for the environment when disposed of. Such environmental costs can be termed as high probability but low cost events. But over the long term, the low costs will add up.

Nuclear power also has well-known negative environmental impact. In fossil fuel based sources, the environmental damage is slow, sustained, and certain; in nuclear power it is not certain—what we call a very low probability but

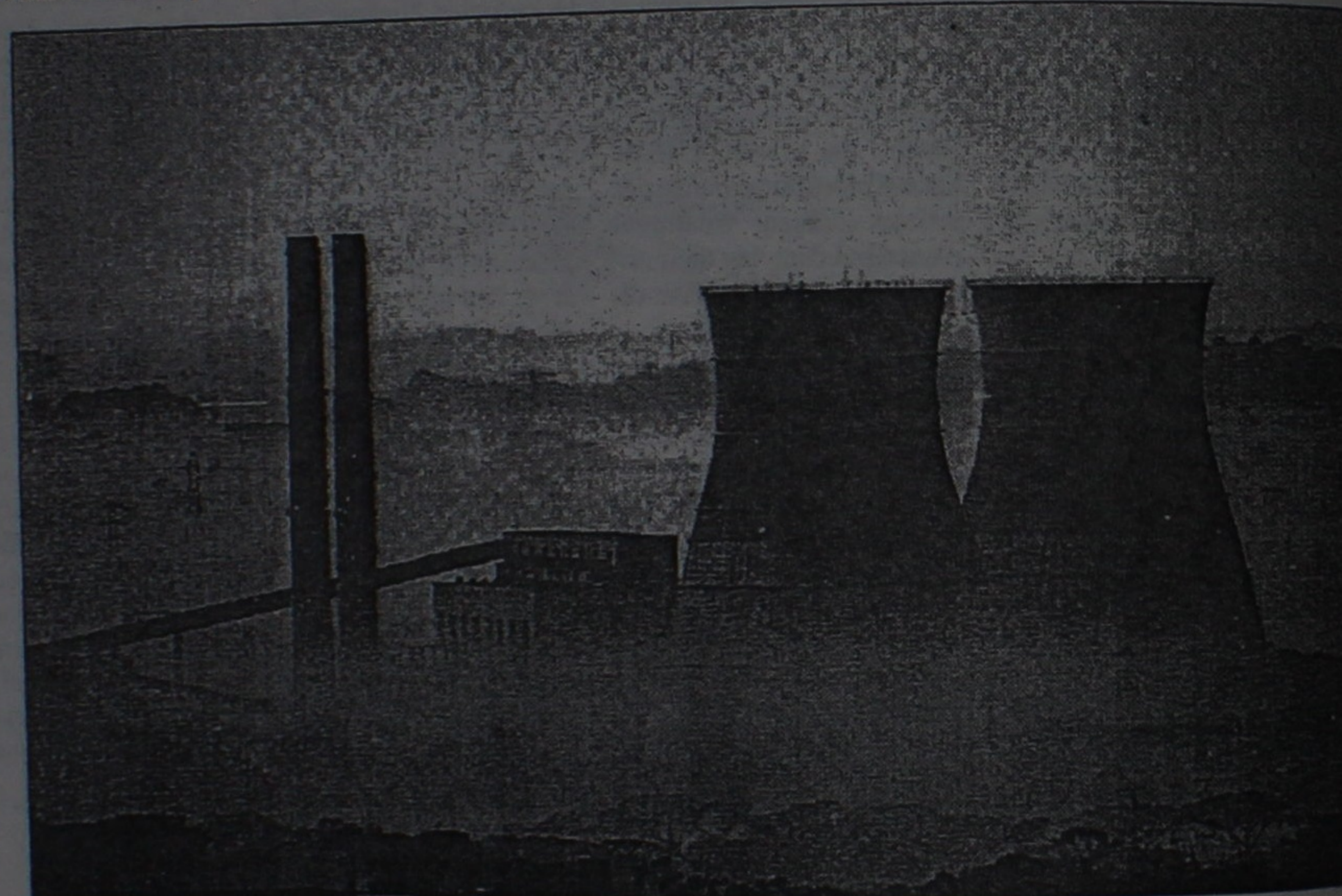
power belongs to this category.

As complex as it may sound, this issue of which energy option to choose belongs to a class of problems that have a simple and empirically decipherable solution. Ask any portfolio manager what she does when faced with many options of different kinds of securities with varying risks and returns. She will hedge the risks and try to maximise the benefits (returns) by purchasing a combination of securities—what we refer to as a portfolio.

India needs to do the same with its

clear energy. Asian countries such as China and Pakistan have 2 and 2.8 per cent respectively; India's was stated to be 2.8 per cent by IAEA for the year 2005.

The question, 'how much of India's energy should derive from nuclear power', was answered by NCAER in 2000, in a study conducted for the Nuclear Power Corporation. The study found that the share of nuclear power should not be greater than 7 per cent of the central sector energy production. But that was an era of low petro-



costly event. Each source of energy has an uncertainty and extent of damage associated with it. There is no 'environmentally friendly' energy source when the scales are large enough.

Next, consider the economic returns. Here again there is an uncertainty element and a return element. Some sources tend to be low initial cost, but have high recurrent costs—petroleum based power generation belongs to that category. Some have high initial costs, and low and less uncertain costs in the longer term—nuclear

energy sector. Nuclear power should be treated as one among many alternative energy sources. India needs to use a combination of all.

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The writer heads the economics research firm, Indicus Analytics laveesh@indicus.net

BUSINESS LINE 21.7.07

Centre taking steps to help Nabard raise funds

Fiscal management policies led to closure of funding avenues: Chidambaram

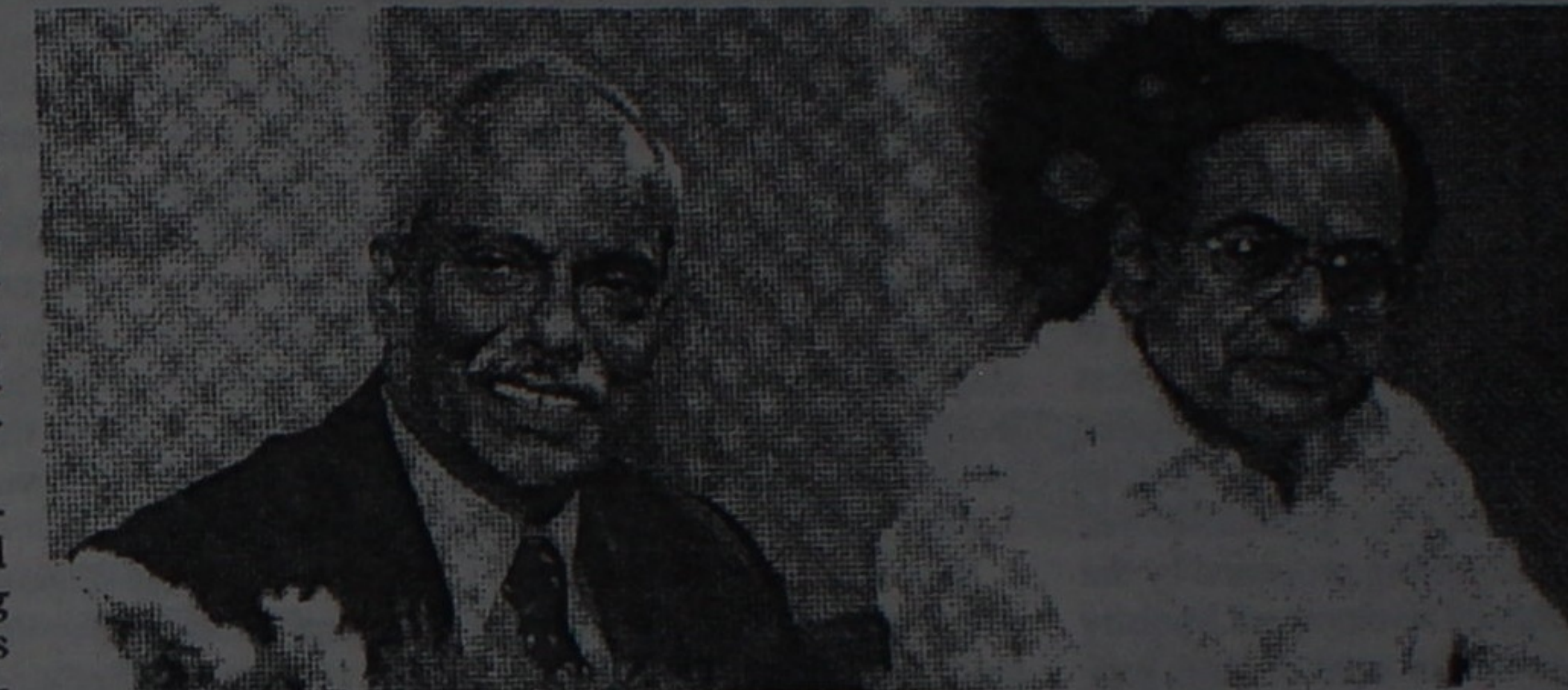
Our Bureau
Mumbai, July 20

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107 24.7.07

Transforming India

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To be "developing" is to make ritual invocations to the wretched of the earth, wallow in poverty while blaming others for one's plight, know where to plead while making occasional prickly assertions of independence, and generally set low expectations for oneself. It's an identity that India needs to grow out of. "Transforming" would be a better description for the country to internalise. Influential recent studies, such as the ones carried out by Goldman Sachs and McKinsey Global Institute, suggest that the India story in the 21st century doesn't have to be a repeat of the latter half of the 20th. Both studies see it as a giant in the making, a crucial pole of the future world economic order.

India has enormous problems and enormous prospects. It may have the makings of a superpower, but its infant mortality rate is a shocking 57 per 1,000 births; higher than Bangladesh or Namibia and about double that of Egypt. It's been left far behind by China in power, ports, roads, health and education. In the circumstances, "transforming" is an appropriate category. We have a lot of way to make up for the lost years of chronic, self-pitying underdevelopment. And we are not there yet.

INDIAN EXPRESS 24.7.07

High TDS levels generally indicate hard water; in urban areas, it affects life of water transportation systems State of waterbodies murky, says GPCB report

ABHISHEK KAPOOR
GANDHINAGAR, JULY 23

MOST surface waterbodies like rivers, lakes, and ponds in the State stand poor on water quality parameters like the Biological Oxygen Demand (BOD) and Total Dissolved Solids (TDS).

In fact, even underground water sources like wells, tanks and tube-wells fair worse than rivers in developed countries, as brought out in the just released annual report of the Gujarat Pollution Control Board.

By international standards, most pristine rivers would have BOD of less than 1 milligram/litre.

In western countries, efficiently treated sewage has a BOD of 20 mg/l, says wikipedia on the parameter. The threshold of acceptable aesthetic criteria is TDS below 500 mg/litre. Now compare this: Sabarmati when it enters Ahmedabad reports a BOD of 4.3 at the Railway Bridge near Sabarmati Ashram. By the time the river leaves the city, the value stands at a massive 280 as recorded at the Vasna-Narol Bridge.

The average stands at 84 mg/l. The value of TDS for Sabarmati reaches a peak of 2,054 mg/l. In Vadodara, the meandering Vishwamitri river maintains a BOD of over 3, peaking to 5.9 in the Sayaji Baug zoo area.

It's not surprising that Amlakhadi in Ankleshwar town, that drains much of industrial effluent into the Arabian Sea, reports a daunting average BOD value of 329. The poison ravine also reports a TDS of 2,420.

The Narmada is the only saving grace reporting BOD values in the range of 0.6 to 2.2 in the two districts of Narmada and

Waterbody	Area	BOD	TDS
Sabarmati	Ahmedabad	280	2,054
Vishwamitri	Vadodara	5.9	—
Amlakhadi	Ankleshwar	329.2	420
Meshwo Dam	Sabarkantha	5.3	—
Aji-II Dam	Rajkot	4.9	—

* Unit measured: mg/l



Bharuch. Even some of the large dams supplying drinking water to cities are not free from high BOD values, the highest being reported by Meshwo dam in Sabarkantha at 5.3 mg/l followed by Aji-II dam of Rajkot at 4.9 mg/l.

Dharoi reports a BOD of 4, while Bhadar-II and Vadi (Amreli) report values of 3.3 each. TDS is an expression for combined content of all inorganic and organic substances contained in a liquid.

Though not related to health effects, TDS is an aggregate indicator of presence of a broad array of chemical contaminants. In village lakes it could just be a barometer of water's aesthetics.

High TDS levels generally indicate

hard water, and in urban areas are damaging to the life of water transportation systems.

A borewell in Padra taluka of Vadodara district reported the highest TDS value of 4804 mg/l, followed by one in Khambat taluka in Anand at 3480 mg/l.

Close to 40 per cent of the tube wells monitored by the GPCB reported TDS over 1,000 mg/l. The report has figures for the year 2006-07, and was tabled before the State Assembly last week.

INDIAN EXPRESS 23.7.07

NORTH INDIA ■ Existing sewage treatment plants inadequate to turn the tide Much filth flowing down rivers

MANEESH CHHIBBER
CHANDIGARH, JULY 22

MOST major rivers of north India are dying a slow but certain death, suffocated by unchecked dumping of industrial and domestic waste.

The Indian Express accessed data compiled by the governments of India, Punjab and Haryana, all proving that the Sutlej, Ghaggar and Yamuna are a poor copy of what they were a decade ago. Pollution levels in all the three rivers have gone up tremendously, with efforts put in by Government agencies failing to yield any substantial results.

Consider this: Every day as many as 35 towns discharge many million liters of untreated waste into the Sutlej, now considered Punjab's most polluted river. More worrying is the fact that except in one or two cases, sewage treatment plants, which could bring down the pollution levels, have not been installed by the civic bodies.

The Municipal Corporations of Ludhiana and Jaland-



River Ghaggar. At many places, including Zirakpur near Chandigarh, it resembles a drain

har are among the civic bodies that are guilty of polluting the Sutlej. The two cities alone have 82 polluting industries without effluent treatment plants, but dumping their untreated industrial waste directly into the Sutlej.

Government data show 884 industries located in Ludhiana district, most of them water polluting, discharge about 60 MLD of treated and untreated waste into the Buddha Nullah, a tributary of the Sutlej. Buddha Nullah is also among the most polluted rivulets in the region. No wonder the nullah, which was home to at least 50 varieties of fish in the early '60s,

doesn't have even a single one left now.

Recently, a PIL was filed seeking directions to the governments of Punjab and Haryana to take steps to preserve and protect rivers flowing through the two states. High Court lawyer Sandeep Sharma who filed the PIL is blunt: "Unless drastic steps are taken, rivers like the Sutlej, Ghaggar and Yamuna will turn into nullahs, with no amount of treatment helping the waters of these rivers. But, unfortunately, the Government agencies and the industrialists don't understand this."

While officials claim they

are taking steps, including setting up sewage treatment plants in Ludhiana to control pollution, the steps are too little. The three proposed plants would have a total capacity of just 311 million liters per day (MLD). But by the time the plants become operational, the quantity of waste would have touched 650 MLD.

Studies carried out by the Central Pollution Control Board and the Punjab Pollution Control Board say the Ludhiana-Hariki stretch of the Sutlej is most polluted. "At

many places, the Biological Oxygen Demand (BOD)—necessary for survival of flora and fauna—for the Sutlej exceeds the desired limits of 3 mg/l. But, despite our efforts and directions issued by the Punjab and Haryana High Court from time to time, the municipalities and other civic bodies refuse to act. The only way out seems to be to impose stiff penalty on officers responsible for checking discharge of polluting effluents into the river," says a senior Punjab Pollution Control Board officer. The situation is no different for two other main rivers in

the region—Ghaggar and Western Yamuna. At many places, including Zirakpur near Chandigarh, the Ghaggar resembles a drain. Of the 25-odd big industries located at Dera Bassi that discharge their waste into Ghaggar, eight have not taken any steps to install water treatment devices. As many as 17 Punjab towns, including Mohali, Patiala and Rajpura, discharge their sewage directly into the river. None of the civic bodies has taken any pollution control measures.

When the PPCB took up the matter with the Government it was informed that none of these towns would be able to install sewage treatment plants before December 31, 2009. In its report pertaining to water quality, the monitoring committee appointed by the Central Pollution Control Board found that BOD values for Ghaggar also exceeded the desired limits of 3 mg/l. At Chandrapur village on the Haryana-Rajasthan border where the Ghaggar enters Rajasthan, the BOD value was 30, while it stood at 22 at Sardulgarh on the Punjab-Haryana border.

INDIAN EXPRESS 26.7.07

India doesn't really need to choose. It needs a portfolio of several alternative energy sources

The friendliest energy of them all



LAVEESH BHANDARI

A RANGE of energy options is available, and many others will become available as technical advances take place. Which sources should India focus on? Which source would provide the best cost-benefit differential? Which would be the least harmful environmentally? Should the government decide at all what source of energy India should focus on? Or should we let national and international market forces decide?

As of now, we have several options to generate power. The most significant ones are thermal, hydel and nuclear. Within thermal, the predominant sources are coal, oil and gas. Of course, there are variations within these broad classes. Then there are the curiously labeled 'environmentally friendly' methods — that include wind-mills, solar power, and so on.

Two broad issues need to be addressed. One, which is the most environmentally friendly, and two, which ones provide the best cost-benefit differential. In the latter case, benefits and costs should ideally also build in environmental costs and benefits.

Petroleum, coal, hydel, solar or wind — each of these has a potential negative environmental impact. Fossil fuels' impact on the environment works through the carbon-dioxide route. It is most likely a very important contributor to global warming. Hydel power has limited potential, but here too, is a possible environmental implication on sub-surface stresses and consequent impact on the likelihood of earthquakes. This becomes a critical issue as the significant part of our hydel potential is in the seismically sensitive Himalayan region.

Wind power is friendly, but only on a very small scale. Solar cells also have a negative environment impact. For one, more energy is required to produce a solar cell than it will produce in its entire lifespan. Two, energy produced per unit area covered is low, and a large area would need to be covered if this were to become a significant source.

Weather dependent sources also require energy storage mechanisms — typically batteries — that in turn are bad for the environment when disposed of. Such environmental costs can be termed as high probability but low cost events. But over the long term, the low costs will add up.

Nuclear power also has well-known negative environmental impact. In fossil fuel based sources, the environmental damage is slow, sustained, and certain; in nuclear power it is not certain — what we call a very low probability but

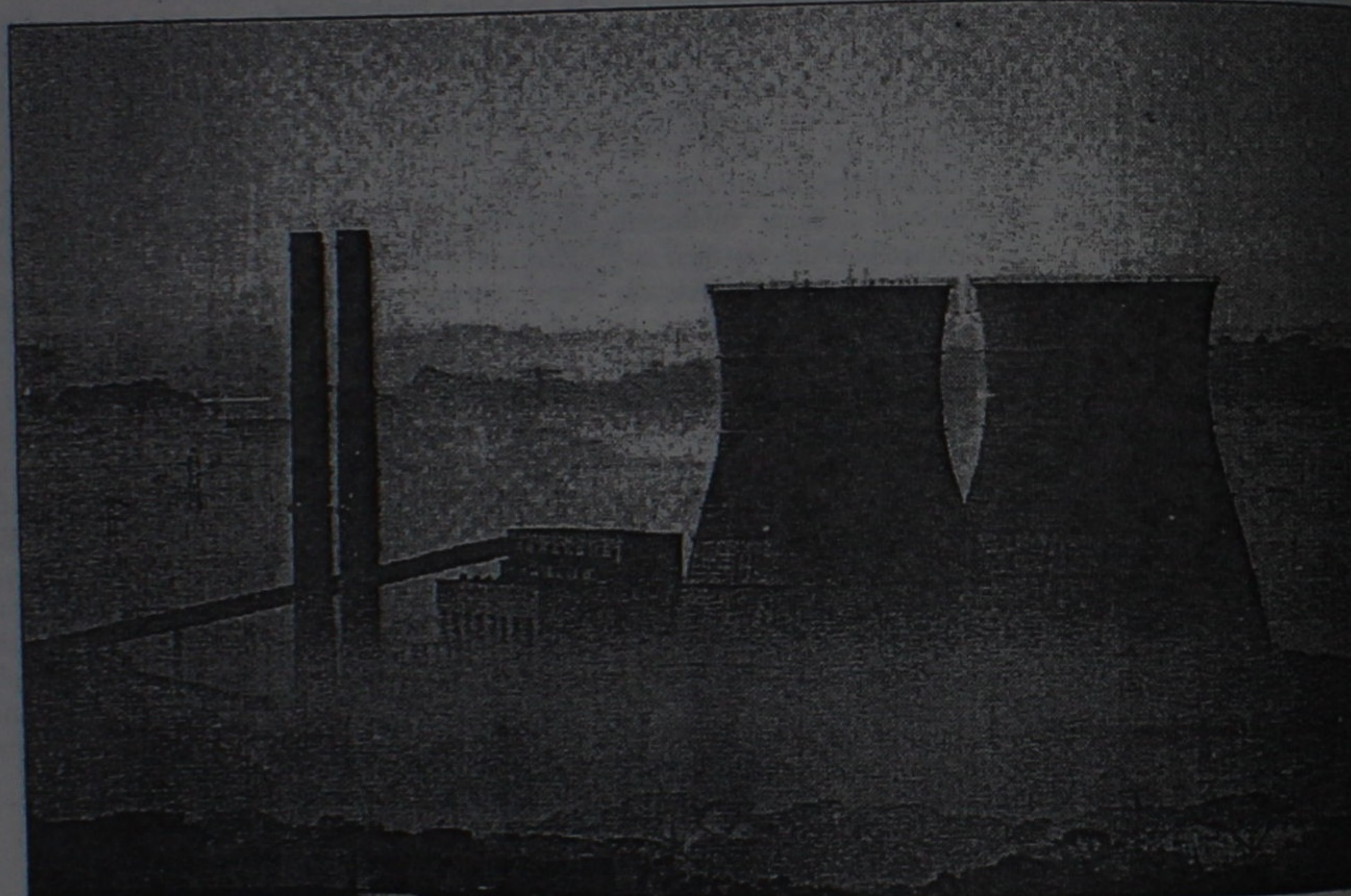
power belongs to this category.

As complex as it may sound, this issue of which energy option to choose belongs to a class of problems that have a simple and empirically decipherable solution. Ask any portfolio manager what she does when faced with many options of different kinds of securities with varying risks and returns. She will hedge the risks and try to maximise the benefits (returns) by purchasing a combination of securities — what we refer to as a portfolio

India needs to do the same with its

clear energy. Asian countries such as China and Pakistan have 2 and 2.8 per cent respectively; India's was stated to be 2.8 per cent by IAEA for the year 2005.

The question, 'how much of India's energy should derive from nuclear power', was answered by NCAER in 2000, in a study conducted for the Nuclear Power Corporation. The study found that the share of nuclear power should not be greater than 7 per cent of the central sector energy production. But that was an era of low petro-



costly event. Each source of energy has an uncertainty and extent of damage associated with it. There is no 'environmentally friendly' energy source when the scales are large enough.

Next, consider the economic returns. Here again there is an uncertainty element and a return element. Some sources tend to be low initial cost, but have high recurrent costs — petroleum based power generation belongs to that category. Some have high initial costs, and low and less uncertain costs in the longer term — nuclear

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And what should be the share of each? The answer differs according to each country's relative preferences. Typically, developed countries tend to have a higher share of their total energy from nuclear (France leads with 78 per cent); Anglo-Saxon countries are less dependent on nuclear, but still have between 15 to 20 per cent of their total energy coming from nu-

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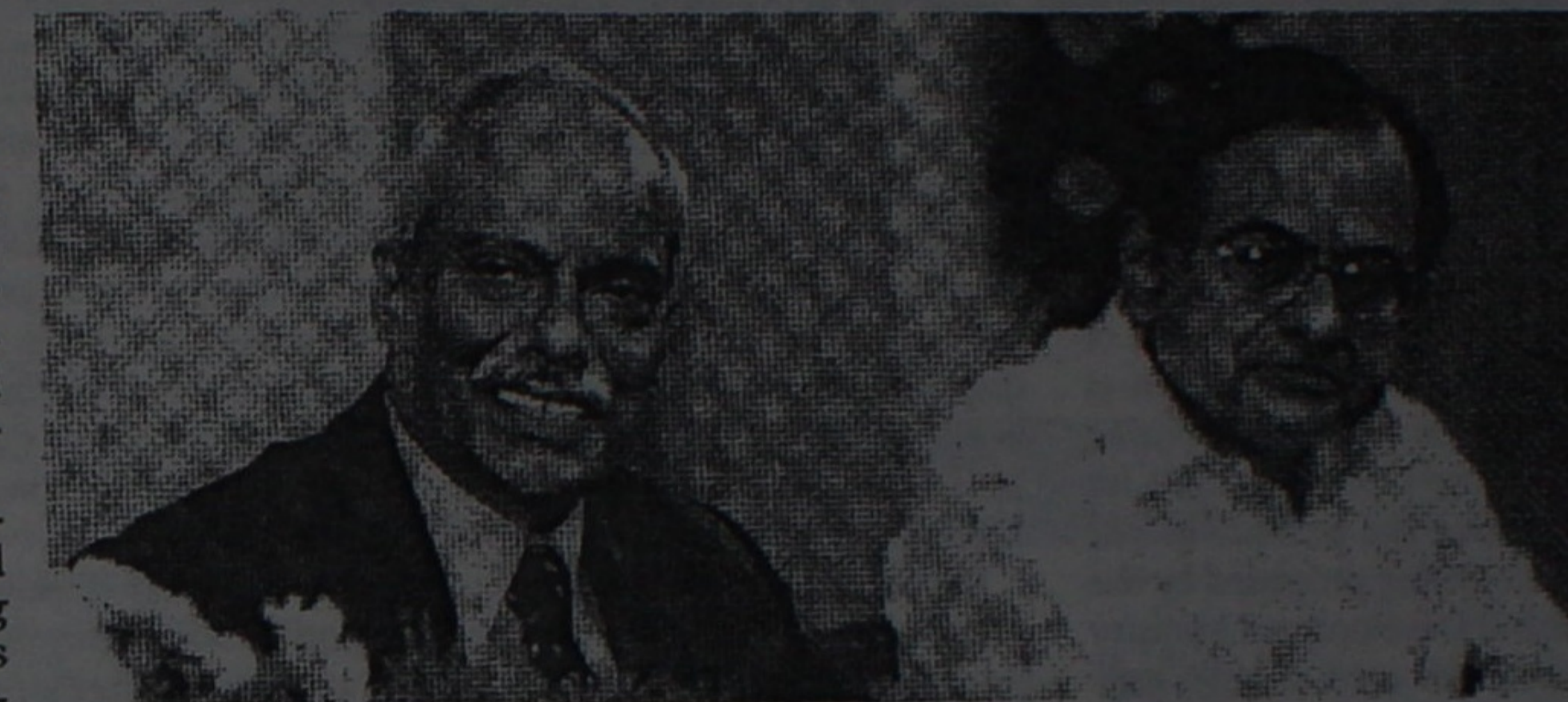
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21.7.07 Indian Express
GoM for greater Govt role in land acquisition

RAVISH TIWARI
 NEW DELHI, JULY 20

The Group of Ministers (GoM) overseeing the rehabilitation policy made further headway on the crucial issue of resettlement of people affected by land acquisition for industrial purposes. The GoM headed by Agriculture Minister Sharad Pawar, which met on Thursday, looked into the issues related to the amendment of the Land Acquisition Act to align it with Prime Minister Manmohan Singh's assurance of more "humane" rehab poli-

cies. While the GoM was not in favour of the Government acquiring the entire land required for private industrial projects, highly placed sources said the majority of GoM members favoured increasing the proportion of land that the Government should acquire to facilitate private industrial projects in case of holdouts by few land owners in the project area. Sources said the GoM favoured increasing the present 10 per cent ceiling proposed by the Rural Development Ministry to 30 per cent of land, pro-

vided the rest 70 per cent of land was already purchased by the private industry.

They also confirmed that there was in-principle agreement among all members to minimise delay in projects due to extended civil court cases at the local level.

The members agreed with the Rural Development Ministry's proposal of creating a dispute settlement authority in each state for redressal of land owners' concerns about acquisition.

However, keeping in view of the string of protests over land acquisition in Nandi-

gram, the GoM agreed with the Ministry proposal of providing compensation at market rates to land owners whose land would be acquired by the Government. It was agreed that in case of land acquisition by the Government, the compensation paid to land owners should not be less than the average of top 50 per cent of the land sale deals in last three years or the minimum floor rates fixed by the state Government, whichever was higher.

Also to avoid any dispute over future sale of land by the private companies after land

acquisition by the Government, the GoM agreed with the proposal which stipulated that the land acquired by the Government should revert back to origin land owners if the project failed to come up even five years after land acquisition.

The private parties cannot such land to other parties. Additionally, in cases of sale of land to other parties after the project has taken off, the proposal also stipulated that 80 per cent of the net profit earned by the private developers should go to the original land owner.

BUSINESS LINE 27.7.07
BARC tech turns urban waste into organic manure

Benefit to farmers practising organic farming

Benefit to farmers practising organic farming

K.V. Kurmanath
 Hyderabad, July 26

Kitchen waste, stale food, split milk, leftovers from hotels and vegetable refuse, which is becoming a huge and mounting burden on urban civic bodies, could no longer be a threat to the urban environment.

In fact, it can be a good source of well-balanced organic manure offering excellent top soil material to the farmers, thanks to a technology developed by the Bhabha Atomic Research Centre (BARC).

If segregated well, this waste could do wonders for

the farmers practising organic farming, said Mr Sharad P. Kale of Nuclear Agriculture and Biotechnology Division of BARC.

Seeing the benefits of the Nisargruna, some civic bodies in Maharashtra, Orissa and Gujarat have already installed 18 plants. "We are getting enquiries from several municipalities from across the country, including Bangalore and Hyderabad," he told *Business Line* over phone from Mumbai.

ORGANIC FOOD

Mr Kale presented a paper explaining about the bene-

fits of the technology at a national seminar here recently.

While discussing various arguments and counter arguments on the advantages of organic food, he referred to the concerns that organic food could be less safe than non-organic food as the former increased the risk of exposure to biological contaminants and food-borne diseases.

"While applying sufficient manure to meet the soil's need for one element, an organic farmer will incidentally apply an abundance of another element as the ma-

nure is not processed to balance its value as a fertiliser to the soil's needs," he pointed out.

It, then, was important to maintain a balance between what is taken out of the soil with what is returned to it without relying on outside inputs, while going for organic farming.

Though small now, the campaign in favour of organic farming could grow bigger, demanding more organic nutrients for the fields. Economic feasibility of organic farming too, could be a big challenge.

Scientists at BARC devel-

oped the Nisargruna technology that is based on the concept of maintaining elemental balance in the nature.

Asserting that organic manure is an important component of sustainable agriculture, Mr Kale felt that the technology comprises an in-built mechanism to produce biogas that ensured self-sustainability of the project, while ensuring processing of the biodegradable wastes and removing unwanted things.

Slowly, high quality manure settles down at the bottom.

BUSINESS LINE 20.7.07
Rural jobs programme successful in 8 States

Registers 99% success rate on national basis in 2006-07

Ambarish Mukherjee
 New Delhi, July 19

The National Rural Employment Guarantee (NREG) programme, designed to provide jobs on demand to one member per family in rural India, has been able to provide the requisite number of jobs in eight States during the financial year 2006-07.

The programme has been launched in 27 States. On a national basis too the programme had a success rate of more than 99 per cent, according to the official figures provided by the Ministry of Rural development.

During 2006-07, a total of 2,11,88,894 households, spread across 200 districts in the 27 States, had demanded

employment, of which the Government has been able to provide jobs to 2,10,16,099 households, thereby leaving a gap of 1,72,795 who could not be provided unskilled manual employment within the stipulated period of 15 days which works out to 0.82 per cent.

UP HAS LEAST SUCCESS

Uttar Pradesh has had the least success, where the number of households that demanded employment was 26,76,261, while the number provided was 25,73,245, leaving a gap of 1,03,016.

According to officials in the Ministry of Rural Development, the nodal Ministry in charge of the NREG

States having 100% success rate in 2006-07

State	No of jobs demanded	No of jobs provided
Arunachal Pradesh	16,926	16,926
Gujarat	2,26,269	2,26,269
Haryana	50,765	50,765
Jammu & Kashmir	1,21,328	1,21,328
Manipur	18,568	18,568
Nagaland	27,884	27,884
Rajasthan	11,75,172	11,75,172
Jharkhand	1,39,108	1,39,108

scheme, steps have already been initiated to rectify the situation during the current financial year and as of now ground level conditions have improved significantly. However, figures for the

first quarter of fiscal 2007-08 are yet to be compiled, officials said.

BACKLOG

Other States where implementation has come under

review on the last fiscal's performance are Bihar with a backlog of 19,711 jobs in 2006-07 and Orissa with a backlog of 13,082 jobs.

The States which have been able to provide the total number of jobs demanded are Arunachal Pradesh, Nagaland and Manipur in the North-East region, Jammu and Kashmir in the North and Gujarat, Rajasthan, Haryana and Jharkhand. According to Ministry officials, around 80 per cent of the work undertaken by the district authorities under this scheme is in the area of conservation and storage of water, social forestry and other construction activities.

Why it is bleak on the farm front

Dilip Kumar Roy
It is a tragic irony that the Centre, which had set 4 per cent growth for the agricultural sector in the National Agriculture Policy 2000 has to reiterate the same goal post at the recent National Development Council (NDC) meeting. The Prime Minister's announcement to spend an additional Rs. 25,000 crore over the next four years on various initiatives is a welcome recognition of the criticality of agriculture to growth and poverty reduction. According to the Prime Minister, small and marginal farming had become an unviable proposition. Owning only 33 per cent of the total cultivated land, these categories of farmers comprise 78 per cent of the farming community and produce 41 per cent of the country's foodgrains.

INVERSE RELATIONSHIP

Nobel Laureate Amartya Sen had famously highlighted the inverse relationship between farm size and productivity in Indian agriculture. The question then arises how farming at this level should be made viable to reduce rural poverty and distress. This is possible only when small and marginal farmers are empowered to access the crucial productive resources such as water, energy, credit and appropriate technologies.

It needs no repetition that small-holders cannot remain subsistence-oriented. Policies and strategies must help diversify on- and off-farm activities and thereby enhance sustainability and productivity. The contribution to food security will depend on small/marginal farmers' responsiveness to policies and to investments in agricultural research and infrastructure. The decline in public investment is due to the inability of the Centre to push the much-needed reforms in price policy and contain input subsidy. For example, prices of many inputs — fertilisers, water and power — are not market linked, while on the output side, the MSP (minimum Support Price) regime combined with *ad hoc* controls of export and import of farm products and policy flip-flops play havoc with market based incentives.

FOOD SECURITY MISSION

A time bound 'Food Security Mission' for enhancement of production of wheat, rice, pulses and edible oil has to be launched. It is recognised that agricultural diversification besides achieving food security and increased rural employment, impacts favourably on soil fertility. Food security implies not only the availability of basic foods, but also accessibility to them. However,

many other factors — of technology and policy — determine the extent and intensity of hunger and poverty in the rural areas. Such factors include irrigation and inputs supply, appropriate technologies for crops, integrated rural development programmes, and off-farm employment opportunities and the Public Distribution System.

IMPROVED TECHNOLOGIES

Improved agricultural technologies are "size-neutral", though some are not "resource-neutral". Hence, in generating improved agricultural technologies, small-holder-oriented research and extension should emphasise "cost reduction without yield reduction". There is, thus, need for enhanced and sustained investment in research, technology development, human resource development, and extension.

Improved agricultural technologies are the key to raising productivity, competitiveness, and hence nutritional and income security. For the non-irrigated areas, these improved technologies must include watershed development and water saving techniques. Rural development and rural employment generation require investments in human resource, in skills strengthening, education and other social services.

ACCOUNTABILITY

Last but not the least is the question of accountability for every rupee spent on agriculture. One of the primary focus of the Five Year Plans was to address the issue of poverty and thereby ensure food security through innovative schemes for the poor and the marginalised. Unfortunately, poor governance failed to achieve the target and hence even in Eleventh Plan, the Centre has to formulate schemes of poverty alleviation and food security. But in the absence of an effective mechanism of accountability, this only leads to drain of resources without the desired outcomes. Even where accountability systems are in place, they do not work. There are many laws but they often not enforced. Public agencies are given mandates and funds, but their performance is not assessed and no correctives taken. Public audit of accounts and Parliamentary reviews are conducted, but there is no follow-up. The mere presence of mechanisms is no guarantee for accountability. Poverty reduction has been a major causality of this process.

(The author is a Senior Under-Secretary in the Department of Agriculture and Cooperation, Ministry of Agriculture, New Delhi. The views are personal.)

HINDU 21.7.07

"Give farmers patent rights for conservation"

Workshop on agro-biodiversity held

Special Correspondent

CUDDALORE: Since much of the biodiversity in the country is in the custody of farmers and tribals, they should be given the patent rights for conservation and propagation of species, according to S. Kannaiyan, Chairman of the National Biodiversity Authority, Chennai.

He was delivering the presidential address at a national workshop on "Agro-biodiversity Hot Spots and Access and Benefit Sharing" organised under the aegis of the Faculty of Agriculture at Annamalai University in Chidambaram.

Mr. Kannaiyan said India was one of the richest centres of crop origin and plant diversity in the world. Equally magnificent was its rich diversity in livestock, poultry and fish. Of the 4,200 endemic species of

higher plants reviewed, 2,532 species were found to be located in the Himalayan region, followed by the peninsular region — 1,788 species and the Andaman and Nicobar Islands — 185 species. Certain estimates had put the number of species at 8,900 that included medicinal plants and those having the religio-ritual values, which were semi-domesticated and semi-wild.

The farming community and tribals had been propagating the species over generations either through conscious or unconscious selection process. As such, they should be viewed as preservers of genetic variability.

Seed rights

Mr. Kannaiyan said the farmers should be permitted to freely produce their requirements of seeds and

exchange seed material with fellow farmers. As long as they did not turn into large-scale commercial producers of the protected varieties, their freedom to use farm seeds or exchange them should not be affected by the plant breeders' rights.

India had taken initiatives to protect bio-diversity and bio-resources, and in this regard, the Bio-diversity Act 2002 acquired significance. Sections III and IV of the Act dealt specifically with access to genetic material, traditional knowledge and technology-transfer, Mr. Kannaiyan said.

Vice-Chancellor of Annamalai University L.B. Venkatrangan called for establishment of institutional and community gene banks, for both in-situ and ex-situ conservation. G. Kuppuswamy, Dean, Faculty of Agriculture, also spoke.

TIMES OF INDIA (A) 25.7.07

'Warming hit rain pattern'

India, Africa Get Lesser Rain Compared To N Europe, Canada & N Russia

Paris: A study has yielded the first confirmation that global warming is already affecting world's rainfall patterns, bringing more precipitation to northern Europe, Canada and northern Russia but less to swathes of sub-Saharan Africa, southern India and Southeast Asia.

The changes "may have already had significant effects on ecosystems, agriculture and human regions that are sensitive to changes in precipitation, such as the Sahel," warns the paper, released on Monday by *Nature*.

Scientists have long said that global warming is bound to interfere with snow and rainfall patterns, because air and sea temperatures and sea-level atmospheric pressure — the underlying forces behind these patterns — are

WEATHER SHIFT



Scientists have long said that global warming is bound to interfere with snow and rainfall patterns, because air and sea temperatures and sea-level atmospheric pressure are already changing

already changing. But, until now, evidence for declaring

that the interference is already happening existed anecdotally or in computer models, rather than from observation.

One problem for researchers has been a lack of accurate, long-term rainfall data from around the world that would enable them to distinguish between regional or cyclical shifts in rainfall.

Francis Zwiers, a scientist with Environment Canada, Toronto, found a way around these problems by using two data-sets of global rainfall pattern beginning, conservatively, in 1925 and ending in 1999.

They compared these figures with 14 powerful computer models that simulate the world's climate system, and found a remarkably close

fit. Over the 75-year period under study, global warming "contributed significantly" to increases in precipitation in the Northern Hemisphere's mid-latitudes, a region between 40 and 70 degrees north, they say.

In contrast, the Northern Hemisphere's tropics and subtropics, a region spanning from the equator to 30 degrees latitude north became drier.

And the Southern Hemisphere's tropics became wetter. The study looked at annual average rainfall on the land, not at sea.

It did not look at extreme weather events — episodes of drought and flooding — whose frequency and severity are also seen as likely to increase as a result of global warming. AFP

INDIAN EXPRESS 28.7.07

New supercomputer to track climate change

SONU JAIN

NEW DELHI, JULY 27

INDIA got its first supercomputer during Rajiv Gandhi's time in Mausam Bhawan for weather forecasting. Three decades later, with that becoming outdated, plans are afoot to buy another one for helping gauge

impact of climate change. This would be a machine that will simulate changes in water, temperature and rainfall for the next 100 years by solving more than 10 million equations in a few seconds.

Early this week, a meeting was organised by R Chidambaram, Principal Scientific Adviser (PSA) to the

Prime Minister, to finalise a national plan for adapting to climate change. One of the things that the PSA proposed was buying or building a supercomputer to help India make more informed decisions.

As India sets out to draw its first roadmap to combat impacts of this change, large holes in India-specific data

on impact of climate change is obvious. Current model simulations give one degree latitude and one degree longitude, which are too coarse for planning. This idea was proposed in the first meeting of the Prime Minister's Council on Climate Change held this month.

According to experts, the supercomputer will be of

New super computer...

100 teraflops, costing approximately Rs 30-35 crore. This would be a huge technological leap from the 10 teraflops of the Param series already existing in India. Though modules can be added to it, the outcome can be skewed results, explained scientists. There are 25 such computers in the world.

"Climate change" is a grand challenge. These challenges push the frontiers of the computing to a new level," said N Balakrishnan of the Indian Institute of Science who is being consulted by the PSA on this. He is confident that India has the capacity to build its own supercomputer.

For now, the Intergovernmental Panel on Climate

Change has some information on India-specific impacts: There would be increase in rainfall by 15-40 per cent by the end of the 21st century with high regional variability. The mean temperature would increase by three to six degrees by the end of the 21st century.

The policy makers want to know specifically how much water would be available in the Himalayan rivers in the next 50 years. Also, which areas of the country would be worst affected by extreme weather. Apart from helping decide its own policies to combat these effects, some of this information is vital for leveraging international funds for adaptation. Exact information would help

build a case for India in international climate change negotiations. It would illustrate how some parts of the country are vulnerable.

"China is one country that is light years ahead of us in modelling capabilities," said R K Pachauri, chairman, IPCC, making a case for ramping up India's computing facilities. China has already come up with its domestic roadmap for adapting to climate change.

Experts agree that understanding and predicting earth's climate system, particularly climate variation, presents one of the most difficult challenges in science. According to the council, a supercomputer could help shed light on this debate.

Tibet warming faster than rest of world

Beijing: Tibet, the mountainous region whose snows and glaciers give birth to several of Asia's major rivers, is warming up faster than anywhere else in the world, China's state media reported on Sunday citing a survey.

Average annual temperatures in Tibet are rising at a rate of 0.3 degrees Celsius (0.54 degrees Fahrenheit) every ten years due to global warming. Xinhua news agency said, citing a report by the Tibet Meteorological Bureau. The report, called 'Tibet's Climate Under the Global Warming Trend', said the rate is far faster than in the rest of China and the world generally.

By comparison, China's average temperatures are rising by 0.4 degrees Celsius every 100 years, while a report by the UN's Intergovernmental Panel on Climate Change has said average global surface temperatures have risen 0.74 degrees over the past 100 years.

"The Tibet climate shows a warming trend under global warming," Zhang Hezhen, a senior engineer with the bureau, was quoted as saying.

Tibet's sensitive alpine environment is seen as a key barometer of the world's climate. Average temperatures in various parts of Tibet last winter ranged from 0.5 to 2.8 degrees Celsius higher than normal, while the region as a

whole was 1.6 degrees Celsius warmer than what is considered normal.

Four of Tibet's five warmest winters of the past 35 years have occurred since 2000, the survey said. In the capital, Lhasa, average temperatures have risen from 7.7 degrees Celsius in the 1970s to 8.4 degrees in the 1990s and 8.9 degrees over the past six years.

The report is the latest sobering indication of climate change on the plateau, which scientists say could have a severe impact on the sustainability of water supplies in the region due to accelerated warming of glaciers and decreasing snow cover.

Another official study in

January said the region's glaciers have been melting at an average rate of 131.4 square kilometres (50 square miles) per year over the past 30 years, and could be reduced by half by 2090. AFP

Experts for socially inclusive technology development

Except agriculture, there are few sources of livelihood: Swaminathan

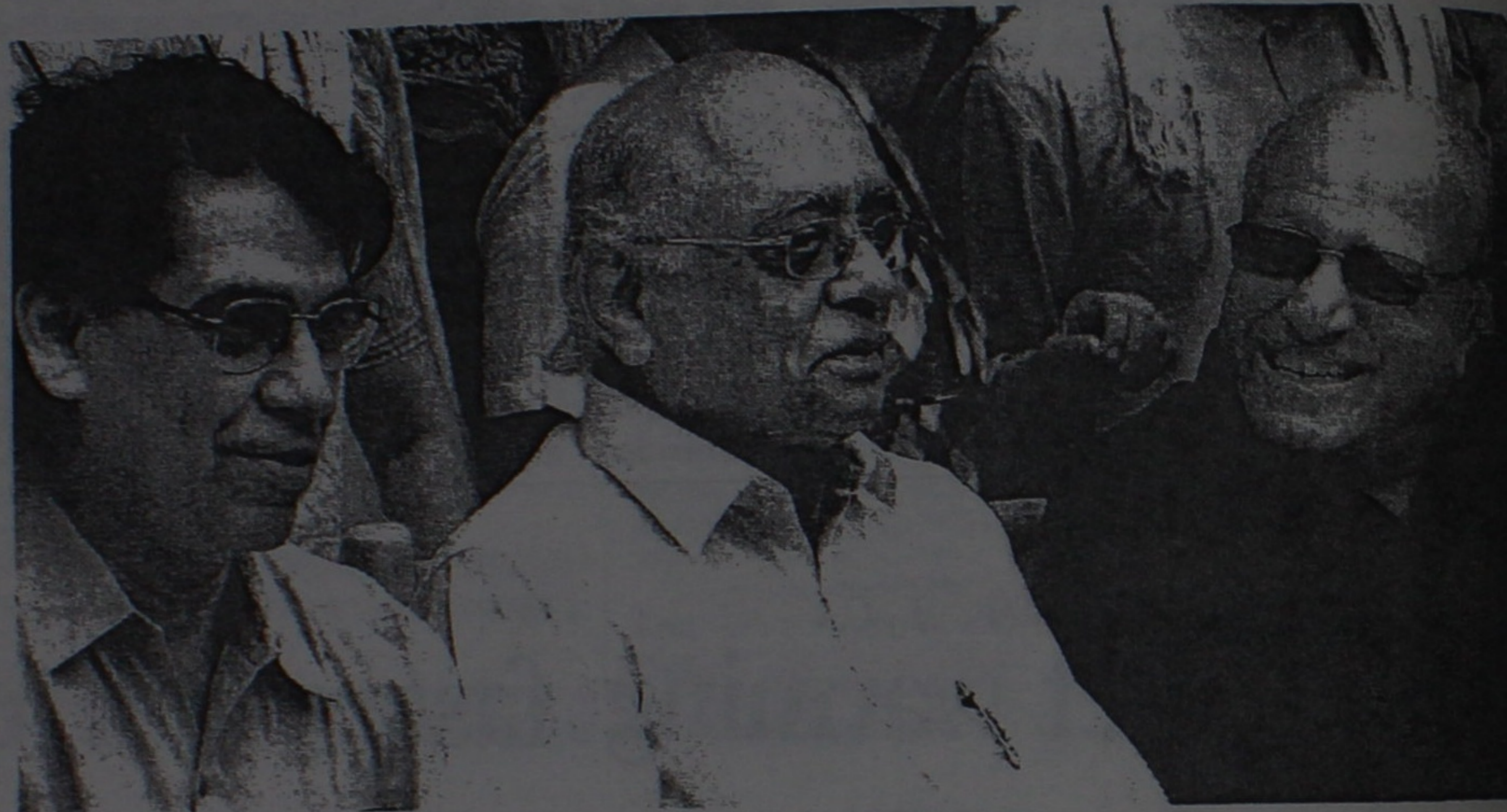
Staff Reporter

CHENNAI: The development and delivery of technology has to be more "socially inclusive" to create more diversified and sustainable livelihood for rural people dependent on agriculture, M.S. Swaminathan, chairman, M.S. Swaminathan Research Foundation, said on Thursday.

"We have not been able to diversify livelihood in rural areas," he said at the inauguration of a three-day national consultation on technology development for sustainable livelihood here.

"Sixty per cent of the population still depends on the agricultural sector. When there are no multiple channels of livelihood, problems become very acute, as was evident from the suicide of farmers in Vidarbha," he said.

The consultation, conducted by the foundation along with the Government of India, the Food and Agriculture Organisation of the United Nations (FAO) and the State Bank of India, will explore four facets of inclusive technology development: facilitating development that is responsive to diverse rural clients; technology transfer modalities that transcend social inequities; developing policies for inclusive technological development; and constructing feasible methods of delivery and adoption.



FOCUS ON LIVELIHOOD: M.S. Swaminathan, chairman, M.S. Swaminathan Research Foundation (right), having a word with R. Chidambaram, Principal Scientific Advisor to the Government of India, at a national consultation held in Chennai on Thursday. T. Ramasami, Secretary, Department of Science and Technology (left), is in the picture. — PHOTO: S.S. KUMAR

Discussions will focus on the challenges faced by agencies in implementing programmes in rural areas, and making partnerships with local communities to facilitate inclusive technological development, said Sudha Nair, Program Director of the foundation.

Based on the discussions, the foundation will make recommendations for policy makers and other stakeholders on implementing deliv-

ery models.

Technological developments, Dr. Swaminathan said, were crucial to providing multiple incomes and sustainable livelihood in rural areas.

"A paradigm shift from unskilled to skilled labour is needed. This is the challenge that technological development has to meet, otherwise people in rural areas can only expect to earn minimum wage. The productivity of

their labour needs to be enhanced," he said.

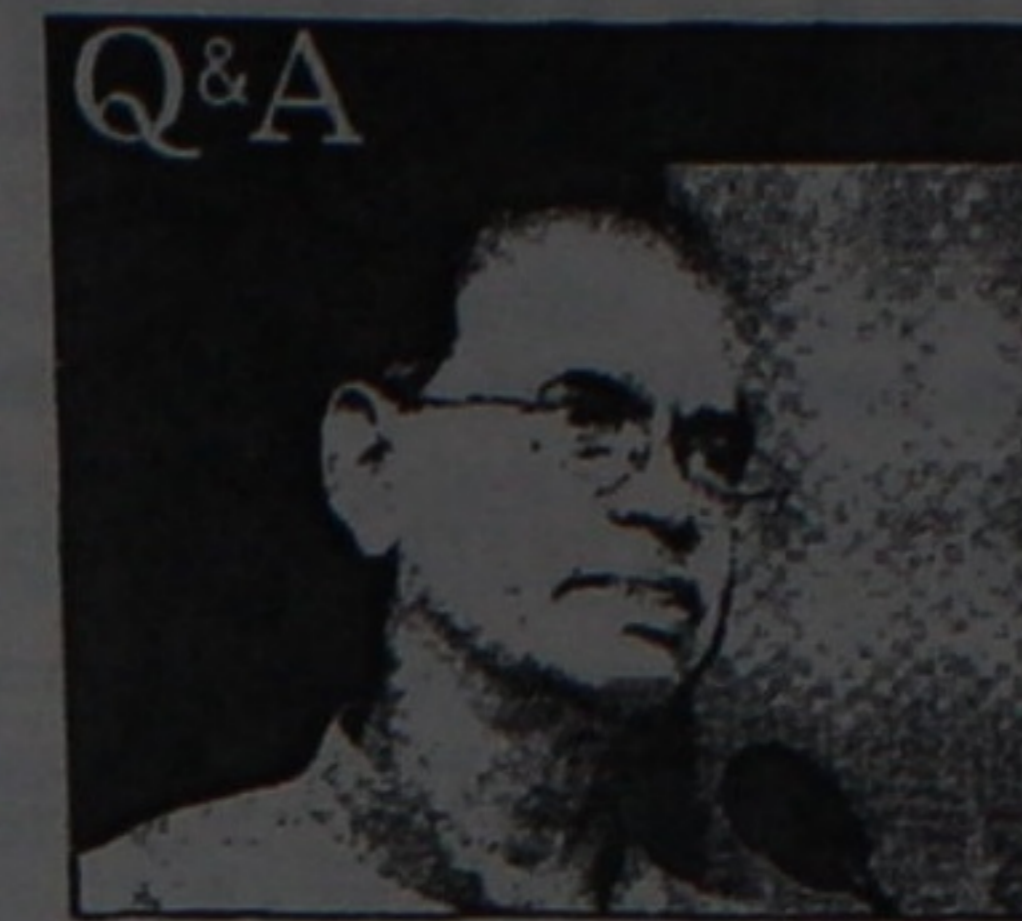
Delivery systems

Besides developing technology that is socially inclusive, adequate delivery systems were necessary to empower people in rural areas with access to this technology, said R. Chidambaram, Principal Scientific Adviser to the Government of India. "While technological innovations are crucial to industrial

development, what is important for rural development is having adequate delivery systems for new technology. Successful technology delivery requires making the right technological choices geared towards our rural development. For instance, rural food processing is an important technological choice for India, but it might not be in a developed country like the United States. So we have to make the right choice for us."

'Ensuring equity is crucial to globalisation'

Globalisation is the most talked about phenomenon these days. Nayan Chanda, former editor of *Far Eastern Economic Review* and director of publications at the Yale Center for the Study of Globalization, says it is a process as old as the human race. His book, *Bound Together*, is a narrative of the history of globalisation, how traders, preachers, adventurers and warriors shaped the process. Amrith Lal speaks to Chanda:



■ You talk about globalisation as a phenomenon that is as old as the human species. What is new about the present phase?

I identify four players who have shaped globalisation — traders, preachers, adventurers and warriors. Each had a different motivation. For the trader, it was profit; for the preacher, it was faith; for the adventurer, the desire to discover new places; for the warrior, the

desire to dominate land and people.

These desires are there but they are being expressed differently because the world is now a different place. Instead of a lone trader carrying a few bags of textile or spices on a camel, you have 63,000 multinationals using container ships and jets to carry their goods. Similarly, migrants. To gain a better life, they are leaving home and moving to new places. We also have a new kind of

warrior. People and countries, especially the US, which believe that it is a divine mission to spread democracy. In some ways, it is similar to the ambition of Alexander who wanted to spread Greek culture, which was the height of human civilisation in his view, to a large area.

The fifth actor in today's globalisation is the consumer. The rising middle class, who has great desire to consume the best product, wants best quality at cheapest price. ■ You mention profit as a crucial factor driving globalisation. Do we need to have mechanisms to ensure that profiteering doesn't lead to many people getting marginalised?

The question is how do you ensure equity in a situation where capital and technology are controlled by a small group of countries. Yet equity is important to maintain stability and peace in the

world. International institutions have to ensure that rules under which interactions and interconnections continue are not tilted in favour of one against the other.

Creating conditions for an equitable trading system is a critical one and then, within countries, the distribution of wealth that globalised capital generates also becomes important. Capitalism is very good at creating wealth but not so distributing it. The distribution part has to go to the society at large and the government in particular.

■ Every wave of globalisation sees some losers. Who will be the losers this time?

In the past, losers were out of sight. They suffered silently. In today's world of global media and instantaneous communication, losers have a much stronger say and as a result no government can ignore the losers.

Commendable act

Field reports suggest that the anticipated benefits of employment guarantee are beginning to show in the pioneer districts. BY JEAN DRÈZE AND CHRISTIAN OLDIGES

There is greater economic security, agricultural wages are rising, migration is slowing down, productive assets are being created, women have more economic independence and power equations are changing.

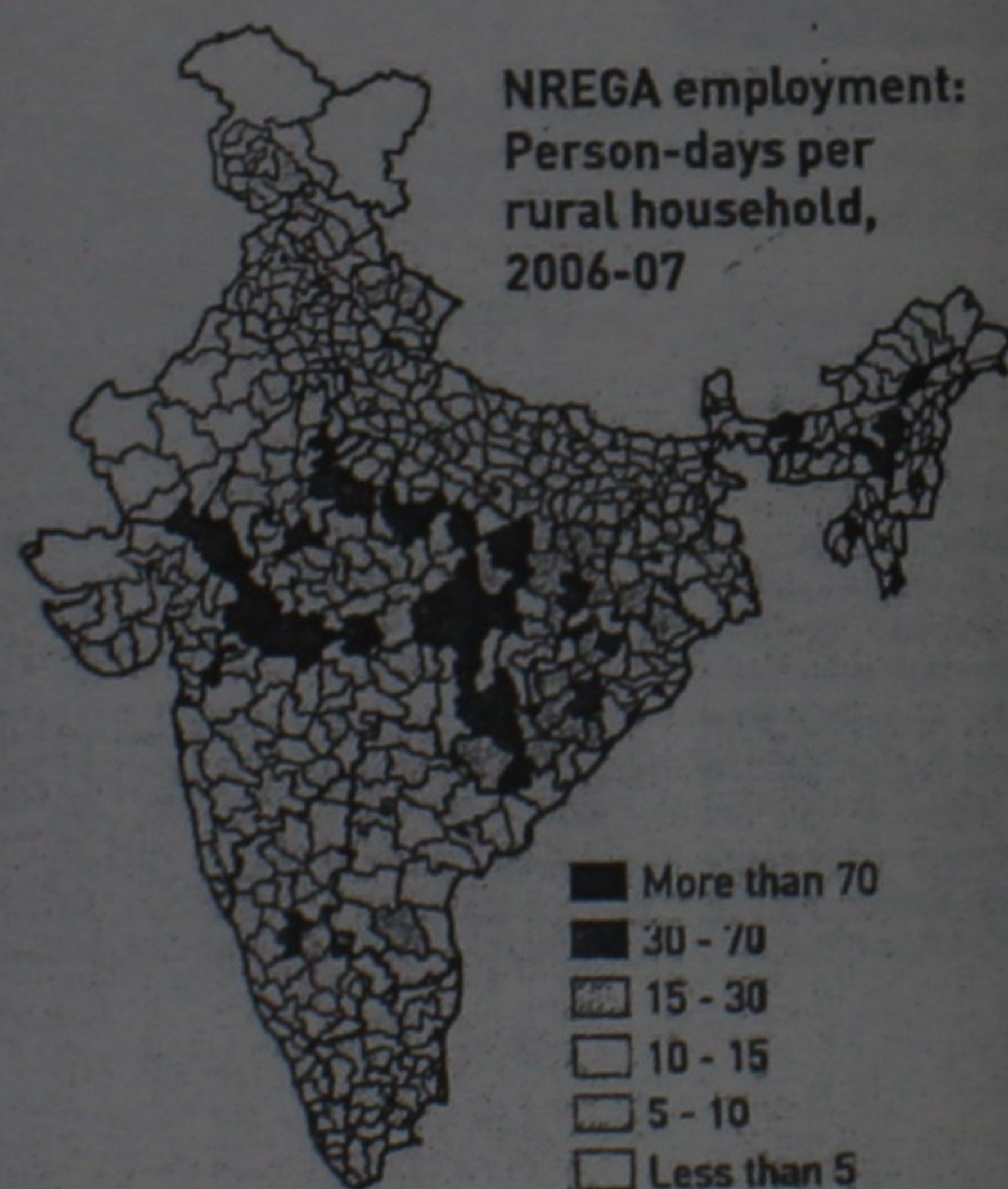
THE National Rural Employment Guarantee Act (NREGA) has been a subject of lively debate in the past two years or so. Unfortunately, the factual basis of this debate has been, so far, rather thin. This has made it possible for extremist positions to flourish without being put to the test of careful evidence. While the Act is regularly pilloried in the corporate-sponsored media as an "expensive gravy train" (as a former Chief Economic Adviser described it), the government gets away with extravagant claims of success.

Fortunately, the scope for informed analysis is rapidly growing as reports are beginning to pour in from various parts of the country. Some statistical evidence is also available, notably on the NREGA website launched by the Ministry of Rural Development (www.nrega.nic.in). This website is not exactly a model of clarity and elegance. Many of the links do not work, quite a few tables are blank, and essential facts that ought to be available at a glance tend to be oddly scattered through the site. More importantly, much of the site is a rather puzzling mix of valuable data and dubious statistics. It is hard to understand why a Ministry that spends more than Rs.10,000 crore a year on implementing the NREGA is unable to ensure that this crucial resource is up to the mark. Be that as it may, there is much to learn here for those who have the patience to find their way through the maze.

Table 1 presents a simple "fact sheet" on the NREGA based on official data from the Ministry's website. The data pertain to the financial year 2006-

07, and should be interpreted bearing in mind that this was essentially a "learning phase" for the NREGA. The Act came into force on February 2, 2006 in 200 districts. Many districts were unable to put the required systems in place before the summer months (April to June), which tend to be the period of peak demand for employment in public works. Some of these districts had much higher levels of NREGA employment this summer, but this is not captured in Table 1 since the reference period ends on March 31, 2007. Quite likely, the levels of NREGA expenditure and employment in these 200 districts will be much higher in 2007-08 than in 2006-07 (that is, if the Finance Ministry cooperates). Nevertheless, it is useful to look at the record of the NREGA in "year zero", so to speak.

As Table 1 indicates, works under the NREGA generated 90 crore (nearly one billion) person-days of employment in 2006-07, at a cost of about Rs.9,000 crore. By any reasonable analysis, this is much below the employment and expenditure levels



Source: See Table 2. Data for northeastern States are incomplete.

that would materialise if the Act were implemented in letter and spirit. For instance, based on rather conservative assumptions, the National Advisory Council estimated two years ago that fair implementation of the Act in the country's poorest 200 districts would create about 200 crore person-days of employment - more than twice the actual level of employment generation in 2006-07. Nevertheless, 90 crore person-days is a start of sorts, and certain-



FARM WORKERS RETURNING home with grain received as part of their wages, near Thrissur in Kerala. In terms of NREGA performance, Kerala is at the bottom of the table. Perhaps this is a reflection of the low demand for NREGA employment in the State rather than of a failure to provide it.

ly more - much more - than the amount of employment generated in these districts in earlier years under the National Food For Work Programme (NFFWP) and the Sampoorna Grameen Rozgar Yojana (SGRY).

Having said this, there are startling differences in the levels of the NREGA employment in different States. The point is illustrated in Table 2, where States are ranked in descending order of employment generated per rural household (in the relevant districts). Some State governments have clearly decided to "own" the NREGA and have seized this opportunity to provide large-scale employment to the rural poor at the cost of the Central government (which foots about 90 per cent of the bill). In other States, the whole programme is yet to take off.

Looking first at the top of the scale, it is perhaps not surprising to find that Rajasthan was the best performer among all major States in 2006-07 (in terms of employment generation per rural household). Indeed, employment guarantee has been a lively political issue in Rajasthan for quite a few years now, and the State also had a high level of preparedness for the Act, having organised massive public works programmes almost every year in living memory. Note, however, that the small State of Tripura in northeastern India (not shown in the table) is doing even better than Rajasthan, with 87 days of NREGA employment per rural household in 2006-07. In both States, employment generation under NREGA is already quite close to the upper limit of "100 days per rural household". This is an unprecedented achievement in the history of social security in India.

At the other end of the scale, there are some surprises. Kerala is at the rock bottom, but perhaps this is partly a reflection of the low demand for the NREGA employment in the State, rather than of a failure to provide it. The same interpretation, however, is unlikely to apply to Maharashtra and West Bengal. The fact that the NREGA is - as of now - a flop in both States may seem surprising, but it is actually

in line with recent policy priorities. Maharashtra has assiduously sabotaged its own Employment Guarantee Scheme from the early 1990s onwards. The government of West Bengal, for its part, had an ambivalent attitude towards the NREGA from the beginning.

There is another way of looking at the State ranking in Table 2. As is well known, the southern and western States (Andhra Pradesh, Gujarat, Karnataka, Kerala, Maharashtra and Tamil Nadu) routinely do better than most of the northern and eastern States when it comes to social policy and rural development programmes. The large north Indian States, for their part, tend to lag far behind. But when it comes to NREGA, the pattern is reversed; only one of the southern or western States (Karnataka) has generated more than 10 person-days of employment per rural household in 2006-07, while the eastern and northern States have done comparatively well in this respect. Of course, this pattern has to be read in the light of the fact that the need for fallback employment may be greater in the eastern and northern regions. Nevertheless, it is encouraging to find that the NREGA made an early start in these deprived regions (with the significant exceptions of Bihar and West Bengal).

Is NREGA doing better in States ruled by particular political parties? No obvious pattern emerges in this respect. Nevertheless there is a hint that, if any national political party is taking the NREGA seriously, it is the Bharatiya Janata Party (BJP). Indeed, among the major States, the four best performers in terms of employment generation under NREGA are Rajasthan, Assam, Madhya Pradesh and Chhattisgarh, all of which, except Assam, had BJP governments in 2006-07. As it happens, Assembly elections are due relatively soon in Chhattisgarh, Madhya Pradesh and Rajasthan. One wonders whether active implementation of the NREGA in these States is part of a deliberate electoral strategy of the BJP. It would be a cruel irony if the BJP were to reap the political benefits

NREGA fact-sheet, 2006-07 (financial year) Table 1

Person-days of employment generated	
Total	90 crore
Per rural household	24
Per job card	43
Per household employed in NREGA	17
Share of marginalised groups in total NREGA employment	
Women	40 per cent
Scheduled Tribes (ST)	36 per cent
Scheduled Castes (SC)	26 per cent
Number of NREGA works	
Taken up	8.3 lakh
Completed	3.8 lakh
In progress	4.5 lakh
Expenditure on NREGA	
Total expenditure	Rs. 8,813 crore
Average expenditure per district	Rs. 44 crore
Average expenditure per person-day	Rs. 98
Average wage cost per person-day ^a	Rs. 49
Share of wages in total expenditure ^b	66 per cent

^a In the relevant districts, the number of the rural households was taken from the 2001 Census.
^b Unskilled labour only.

Source: Calculated from official data posted on the NREGA website (www.nrega.nic.in). All figures pertain to the 200 districts where NREGA came into force on February 2, 2006.

NREGA: State-specific indicators, 2006-07 Table 2

State	Person-days of NREGA employment per rural household	Share of women in NREGA employment (in per cent)	Share of wages in total expenditure ^a (in per cent)	Average wage cost per person-day ^b (in rupees)
Rajasthan	77	67	73	51
Assam	70	55	65	67
Madhya Pradesh	56	43	63	59
Northeastern States ^c	45	47	63	53
Chhattisgarh	34	40	65	63
Orissa	21	36	58	53
Himachal Pradesh	20	12	52	69
Uttarakhand	20	30	61	72
Karnataka	17	51	60	67
Jharkhand	14	26	59	80
Jammu & Kashmir	13	4	65	69
Uttar Pradesh	11	17	57	64
Andhra Pradesh	10	55	86	86
Haryana	9	31	85	97
Tamil Nadu	9	81	96	80
Bihar	8	15	53	70
Gujarat	7	50	65	56
Madhya Pradesh	7	37	57	78
West Bengal	6	18	78	70
Maharashtra	4	27	95	107
Kerala	3	64	89	121
India	77	40	66	65

^a Unskilled labour only. ^b Excluding Assam (approximate figures, based on incomplete data). ^c Up to land including February 2007.

Source: Calculated from official data posted on the NREGA website (www.nrega.nic.in). All figures pertain to the districts where the NREGA came into force on February 2, 2006. The States are ranked in descending order of "person-days per rural household" (first column).

of a programme initially championed by the Congress and the Left parties.

EMPOWERING WOMEN

The last three columns of Table 2 look at other features of the implementation of the NREGA in different States and enable us, in particular, to spot some important irregularities. Consider, for instance, the participation of women in the NREGA. It is encouraging to note that women's share of NREGA employment is not far from half (40 per cent to be precise) at the all-India level, rising to a startling 81 per cent in Tamil Nadu. The economic dependence of women on men in rural India plays a major role in the subjugation of women, and in this respect the NREGA is an important tool of social change. However, many States are violating the Act by failing to ensure that the share of women in NREGA employment is at least one third: Jammu and Kashmir (4 per cent only), Himachal Pradesh (12 per cent) and Uttar Pradesh (17 per cent) among others. In this connection, it is also worth mentioning that the mandate to provide crèche facilities at NREGA worksites has been brazenly ignored so far almost everywhere. Better arrangements for child care are urgently required to facilitate the participation of women in the NREGA. Of course, it is not just a matter of child care. But the provision of crèche facilities at NREGA worksites would certainly help and would also have much value as a means of creating wider social acceptance of child care arrangements as a basic right of working women.

The labour component of the NREGA is supposed to account for at least 60 per cent of total expenditure. As Table 2 indicates, this requirement is comfortably met in most States, though some of them (Bihar, Jharkhand, Orissa and Uttar Pradesh, for instance) have marginally lower ratios, and Himachal Pradesh spends only 52 per cent of NREGA funds on the labour component. It would be interesting to know how States like Maharashtra and Tamil Nadu manage to implement NREGA works with vir-

tually no expenditure other than wages. Of course, there is a strong incentive for States to adopt labour-intensive techniques under the NREGA since the labour component is entirely funded by the Central government (unlike the material component, which is shared). The share of wages at the all-India level is 66 per cent, which seems like a satisfactory figure.

The last column in Table 2 presents average wage costs per person-day. This is, for practical purposes, the same as the average wage rate (in rupees per day). Here again, there are major inter-State variations, with (say) Kerala paying more than twice as much as Rajasthan. These large differences raise the question whether it is better to have State-specific wages or a national norm. This complex matter is yet to be adequately debated. Indeed, wage payments raise a host of interesting and complex questions that have been lost in the din of arguments for and against the Act: how NREGA wages should be determined; whether there should be a national norm; whether piece-rate payments are better than daily-wage payments; how work should be measured; whether the "schedule of rates" should be gender-specific; how to avoid long delays in the payment of wages; and so on. It is not too late to initiate an informed debate on these issues.

MINIMUM WAGE

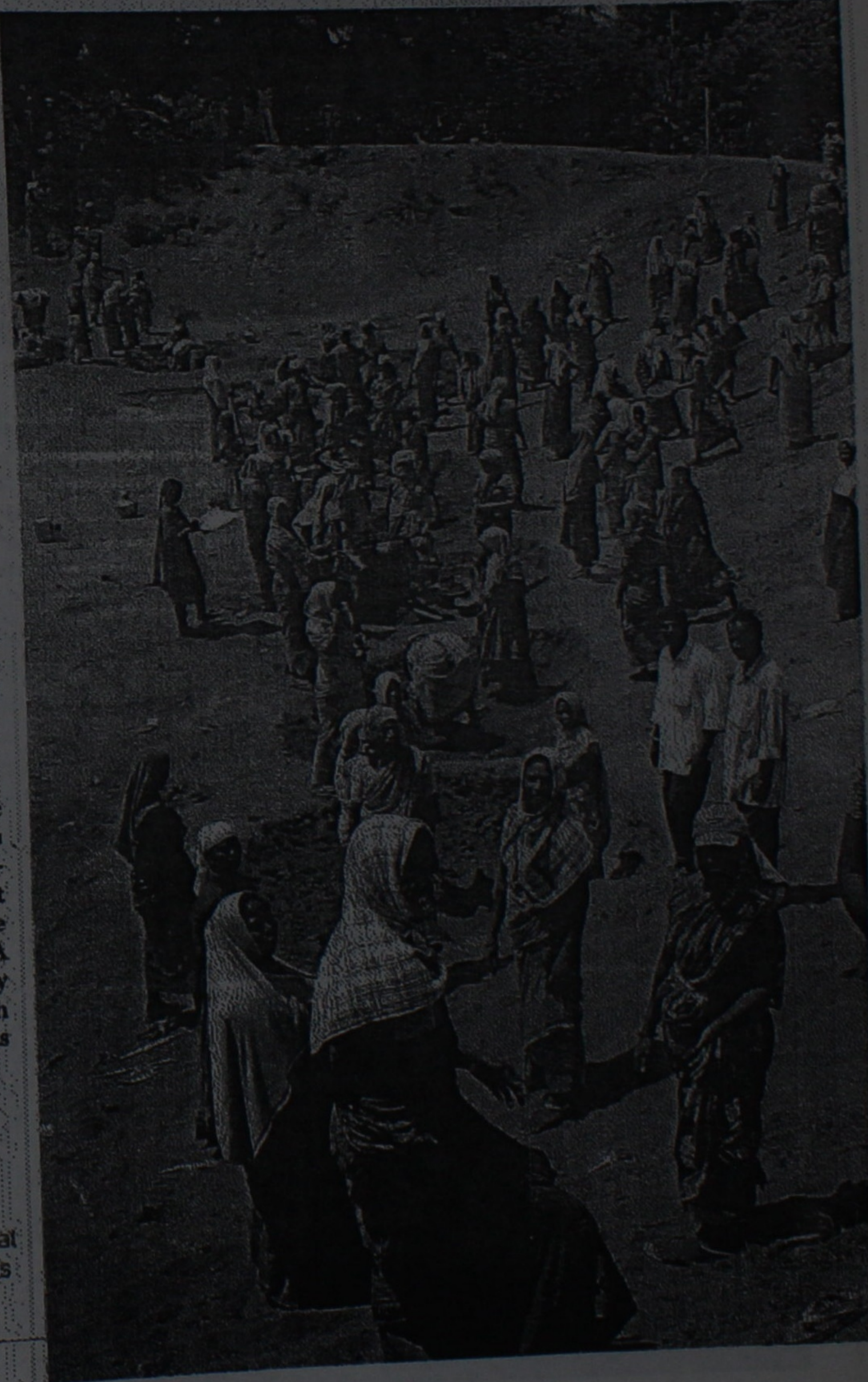
Finally, it is alarming to find that some States are evidently paying less than the statutory minimum wage, in flagrant violation of the Act. The most glaring offender in this respect is none other than Rajasthan, where NREGA workers earned a meagre Rs.51 a day on an average in 2006-07 even though the statutory minimum wage was

WOMEN ENGAGED in deepening a water source in Bommiarpalayam panchayat in Villupuram district in Tamil Nadu under the NREGA programme. Women's share of NREGA employment is 40 per cent at the all-India level; in Tamil Nadu it is a startling 81 per cent.

Rs.73 a day. This is a trifle paradoxical, since workers' organisations in Rajasthan have been at the forefront of recent struggles for minimum wages. Also, it is in the context of relief works in Rajasthan that the Supreme Court delivered a landmark judgment stating that employing labourers without paying the minimum wage is "forced labour" insofar as it amounts to "[tak-

ing] advantage of the helpless condition of the affected persons" (*Sanjit Roy vs. State of Rajasthan* 1983, SCC (1) 525). More than 20 years after this indictment, the problem persists.

As one might expect, the contrasts discussed so far are even sharper at the district level. For instance, employment generation per rural household is just about one person-day in Mad-



hubani (Bihar) but as high as 111 days in Durgapur district (Rajasthan). Similarly, while women's share of NREGA employment is above 80 per cent in most districts of Tamil Nadu, it is less than one per cent in five districts of Uttar Pradesh. The inter-district contrasts are illustrated in the graphic, with reference to the level of NREGA employment (measured, as before, in

terms of person-days per rural household).

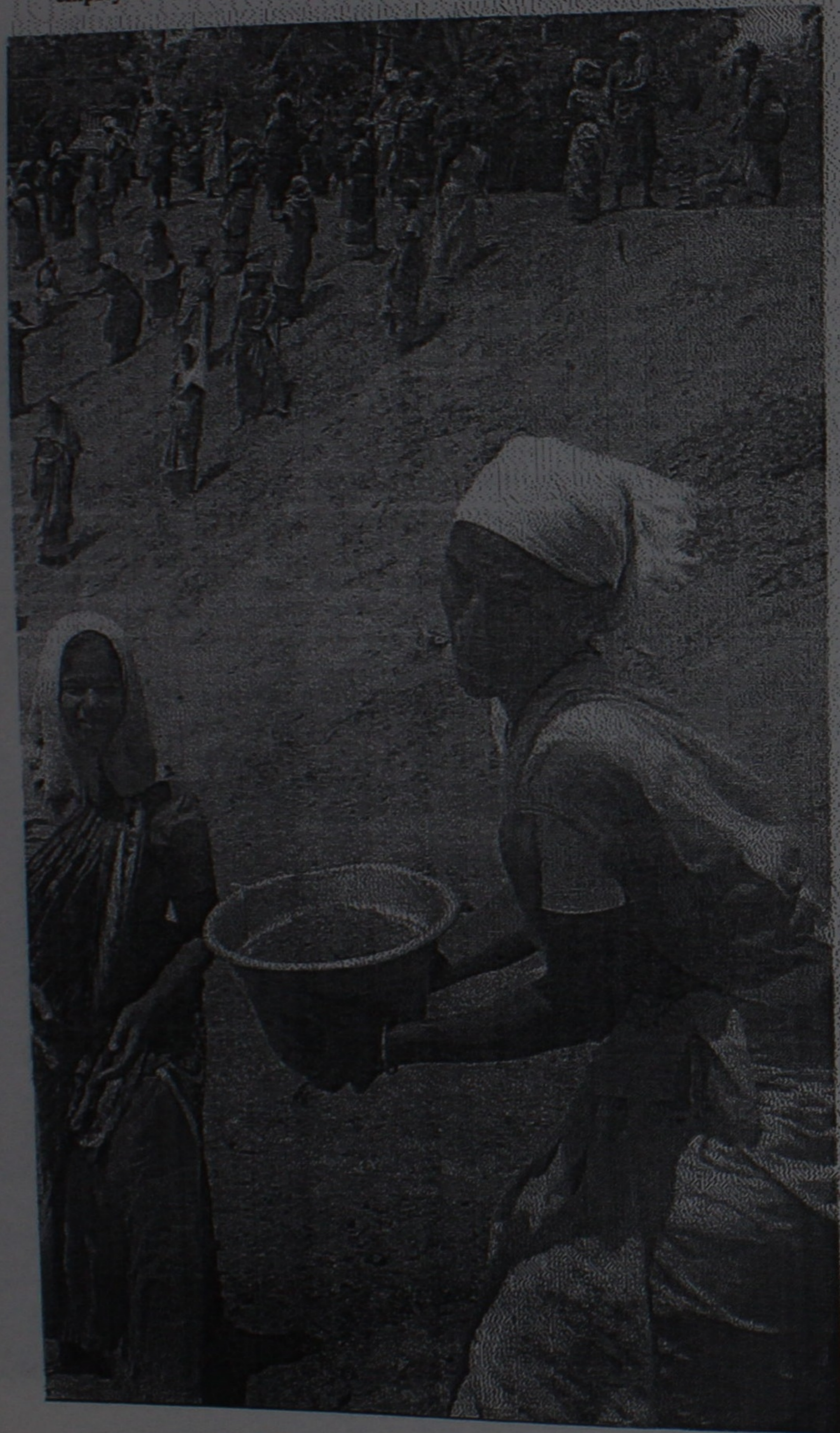
Behind these facts and figures is a simple yet powerful message about the NREGA. Within a year of the Act coming into force, the programme has been actively taken up in a small but significant number of districts (20 of them spent more than Rs.100 crore on NREGA in 2006-07). Further, field re-

ports suggest that many of the anticipated benefits of employment guarantee are beginning to show in these pioneer districts: there is greater economic security, agricultural wages are rising, migration is slowing down, productive assets are being created, women have more economic independence, power equations are changing, and so on. The need of the hour is to extend these positive experiences to other districts. If Sarguja or Mandla or Banswara are able to spend more than Rs.100 crore on this programme in a single year, there is no reason why (say) Palamu or Kalahandi should not be able to do it.

Of course, it is also important to ensure that the reported expenditure levels actually correspond to "real" work and wages. Earlier employment programmes have left a long trail of fake muster rolls and embezzled money. However, there is growing evidence that firm enforcement of NREGA's extensive transparency safeguards can go a long way in preventing corruption.

Success stories in this respect are no longer confined to Rajasthan - the stronghold of India's "right to information movement". For instance, a recent verification of muster rolls in Sarguja and Koriya districts (of Chhattisgarh) conducted by students from Delhi University and Jawaharlal Nehru University, New Delhi, found that 95 per cent of the wages paid according to the muster rolls had actually been received by the concerned labourers. This is a significant achievement, especially in contrast with the massive levels of fraud observed in the same area two years ago under the NFFWP.

It would be naive to think that the long history of fraud in public works programmes has already come to an end. But recent experience shows that it is possible to remove mass corruption from NREGA. This calls for strict implementation of the transparency safeguards, as well as firm action whenever corruption is exposed. In these simple steps lies the future of the Act, and of all those for whom it is a new ray of hope. □



Gone with the waves

Rapid sea invasion along the Gujarat coast is forcing families of fishermen to abandon the sea and their homes.

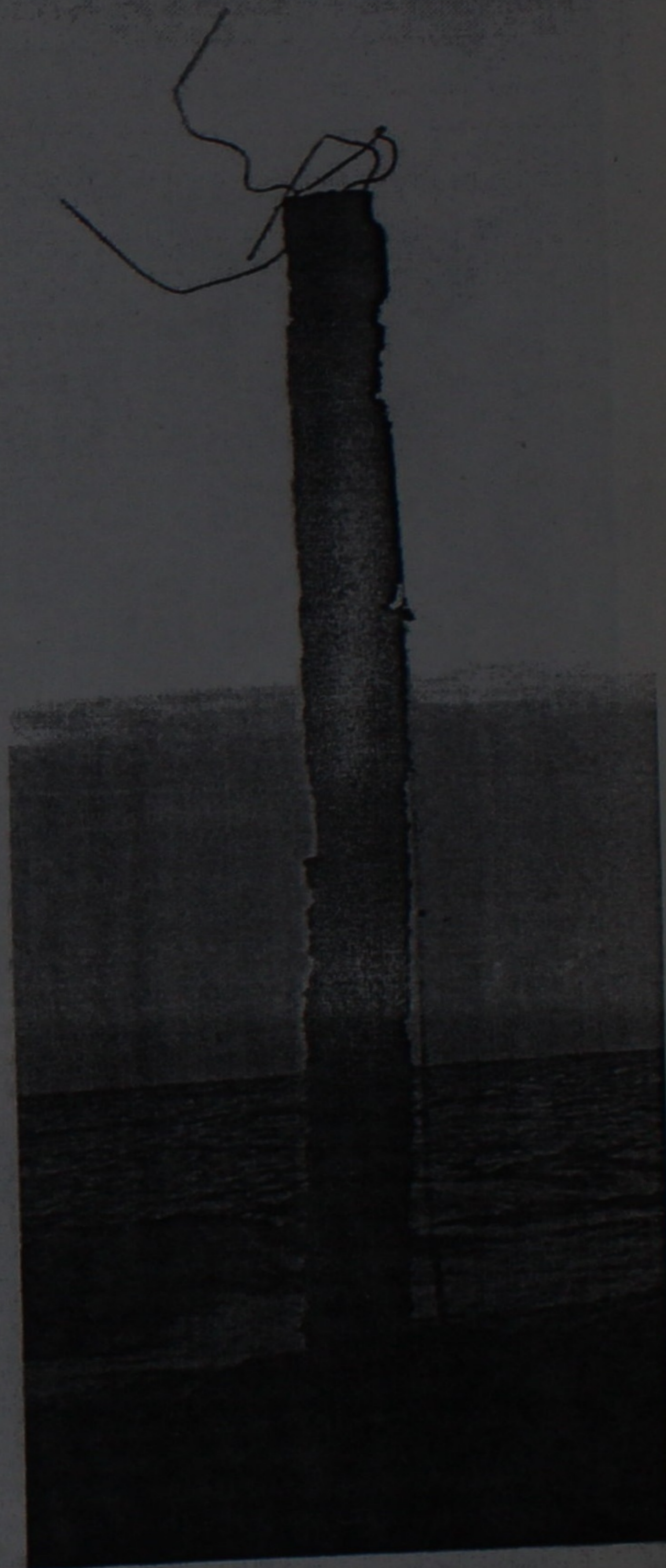
TEXT & PHOTOGRAPHS BY DIONNE BUNSHA

Many villagers have moved to other towns in the past eight years. They have no idea what global warming means but have been rendered "environmental refugees".

DANTI in Valsad district of Gujarat is being invaded. More than half the residents of this sleepy fishing village have fled already. It is not guns and troops that they are running away from. The sea they revere has swallowed up the village and is making them beat a retreat every year. Only the poorest remain on the edge of the village, with just a sea wall for protection. On one side of the wall are lashing waves. On the other are ramshackle, makeshift huts. No one here has permanent brick homes. They have to rebuild every year after the waters rush in over the wall. The sea knows no boundaries.

Govindbhai Tandel is the first to face its fury. His hut lies at the tip of the village, very close to the seafront, unprotected even by a stone wall. Govindbhai is back home after spending eight months away at sea on his fishing boat. He returns to Danti during the monsoon, when it is too rough to be out fishing. But there is no rest at home. His family is hard at work filling their porch with sand, trying to elevate the entrance to prevent the tide from coming in. There is not much they can do. Water will flood their home anyway. It is only an effort at damage control. "We have moved back three kilometres in the last 20 years. Our original village was out there. You can't even see it now," says Govindbhai. "Three village wells have been submerged. We've relocated the school thrice. I've shifted home thrice so far. Can you see out there? That's where my last house was," he says pointing to a distant spot in the sea.

The village is long gone, but lives in memory. As we walked around the village, most people pointed to various landmarks - all in the water. Nostalgia is the





A ROAD BUILT two years ago near Kaladra village has been eroded. A sea wall (in the foreground) offered little protection.

AS FRONTLINE

only thing that remains. During low tide, the beach is a hive of activity. Families are hard at work, trying to salvage bricks from the ruins of their old homes.

On the seashore is a brick wall with an arch - the remnants of Damentiben Tandel's house. "It broke three years ago. Since then, we have kept moving and rebuilding every year," she says. "When the water comes in every monsoon, it's knee-high. We have to put our kids on the roof in the pouring rain. We don't have the money to buy land and move out, so we remain here."

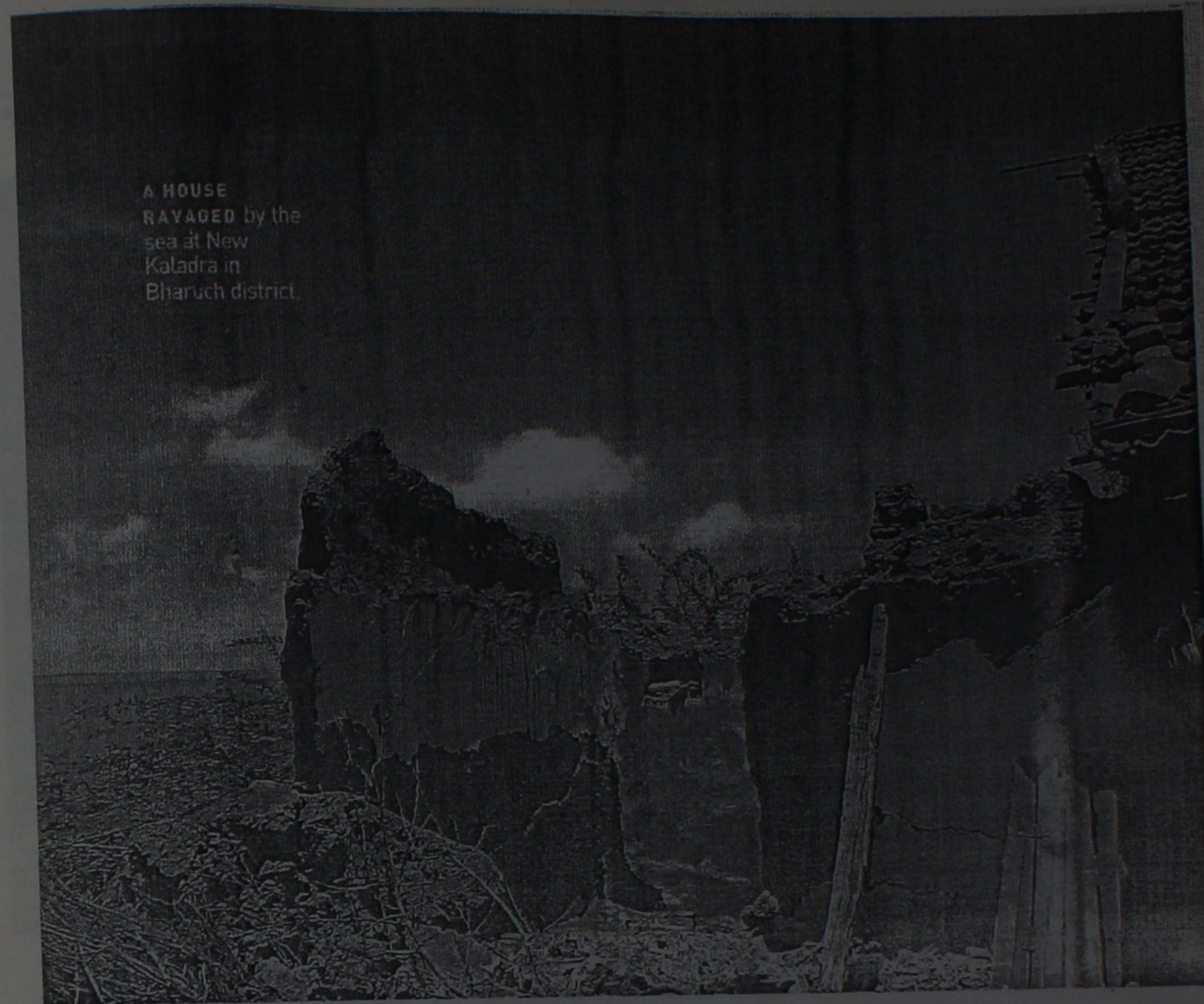
There is often a lot of water in their homes, but not a drop to drink. "Our wells are in the sea. We get drinking water from the tap once every week or in 15 days. Otherwise, we have to buy water. Tempos come and supply water. It is Rs.30 a barrel, which lasts a day," says Damentiben.

Danti is on the coast of south Gujarat, one of the most industrialised areas in the country. It is called the 'Golden Corridor', but has some of the country's worst polluted spots such as Ankleshwar and Vapi. Danti, the site of Mahatma Gandhi's historic Salt March, is 12 km from Danti.

"The fish have gone further into the sea because of [industrial] pollution. And the water has come further in; so we have suffered. We can't go very far in our tiny boats. We used to get 400 to 600 fish in one night. Now we barely get a hundred," says Shantibhai Tandel, a small fisherman. He has shifted back six times and is now in his seventh house. "I want my kids to study. The only thing is we can't afford donations for their education or bribes to get them a job. If they are lucky, they will find a job, otherwise they will have to stay here, continue fishing and face the hardships." Sandwiched as they are between the sea and the salt pans, there is not much further they can retreat.

Many from the village have moved to other towns or to Danti in the past eight years. But like Mahesh Hari Tandel, those who moved out for safety reasons still yearn for the sea. "My boat is still in Danti and I feel I have to go there every day," he says. "When my

A HOUSE RAYAGED by the sea at New Kaladra in Bharuch district.



father was alive, we shifted our house four times. After he died, our house broke twice and then we moved here. After we lost the mangroves in the last 15 to 20 years, many people had to migrate to big port towns like Mumbai, Porbandar or Veraval in search of work. Earlier, we could survive by fishing close to the shore and in the mangroves."

The villagers along the coast are not sure why the sea is advancing at such a voracious pace. Some fishermen guessed it might be "because there are more storms in the sea". One of the reasons could be a rise in sea level owing to global warming. They don't know what global warming means, but have become "environmental refugees".

Although they are barely surviving, the fisherfolk are facing the brunt of reckless consumption in more affluent

places. Ironically, most of these villages have not been provided electric metres. People tap electricity from the power cables that run above their homes.

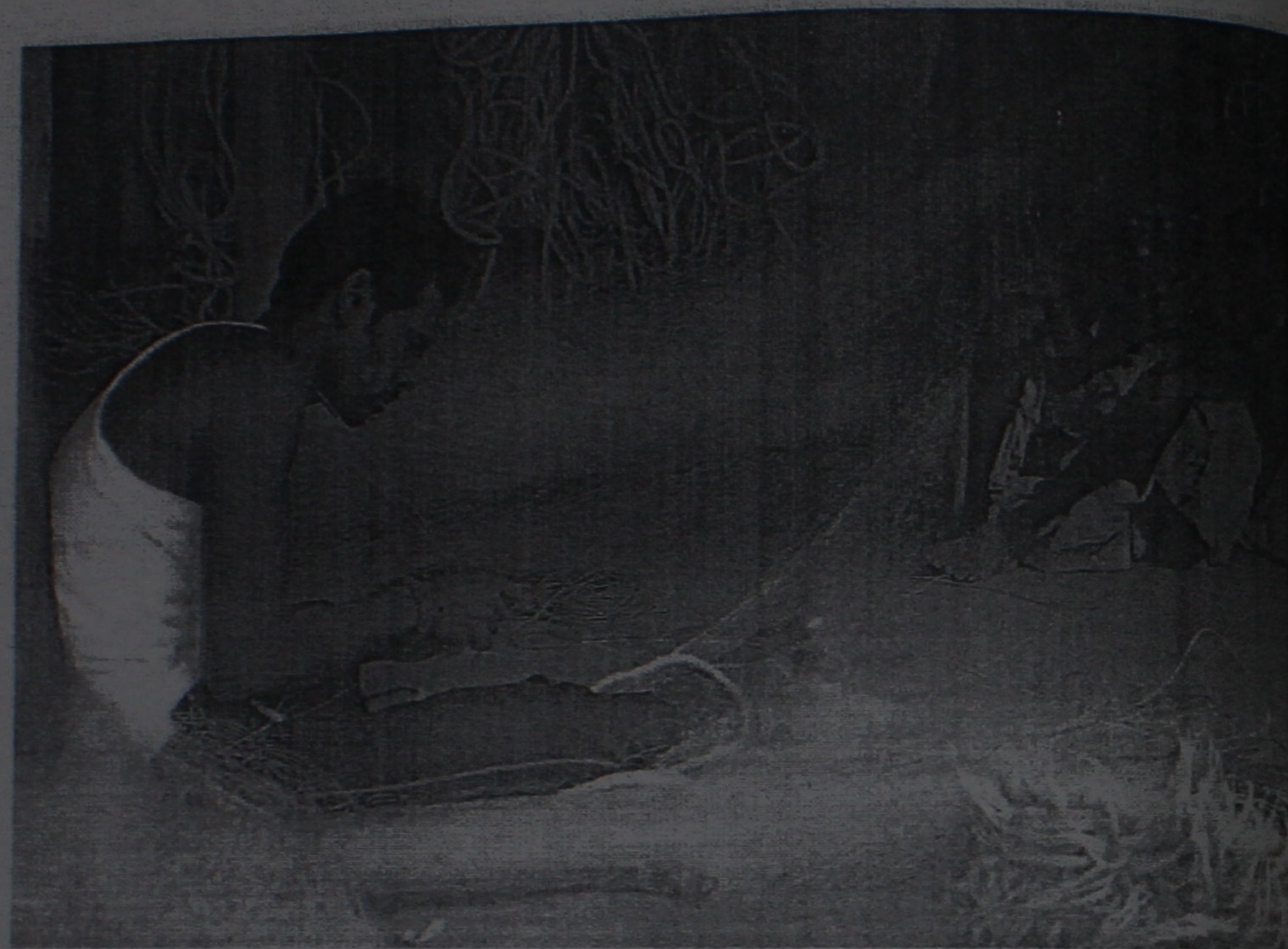
Geologists from M.S. University, Vadodara, are studying the Gujarat coastline as part of an all-India study by the Space Application Centre of the Indian Space Research Organisation (ISRO). "Our preliminary observations reveal that the seawater has shifted in by 10-15 metres in 10 years, and at places it has moved around 80 metres horizontally," says Dr. Nikhil Desai, who is heading the survey of the Gujarat coast. They are comparing recent satellite images with Survey of India maps prepared in the 1960s, and have observed that the contours of Gujarat's coast are changing.

Several places along India's 7,500 km-long coastline are experiencing

similar erosion. In the Sunderbans, two islands have already vanished from the map, displacing 7,000 people. Twelve more islands are likely to go under owing to an annual 3.14 mm sea level rise, which will make 70,000 people refugees. Five villages in Orissa's Bhitarkanika National Park, famous for the mass nesting of Olive Ridley turtles, have been submerged, and 18 others are likely to go under. India is one of 27 countries identified by the United Nations as the most vulnerable to the impact of global warming-related sea level rise.

RISING SEA LEVEL

"Observations suggest that the sea level has risen at a rate of 2.5 mm a year along the Indian coastline since the 1950s. A mean sea level rise of between 15 cm and 38 cm is projected by the middle of the century along India's



JAYANTIBHAI RATHOD REPAIRS his fishing net at New Kaladra, where he resettled after the fishing colony at Kaladra was submerged 15 years ago.

coast. Added to this, a 15 per cent projected increase in intensity of tropical cyclones would significantly enhance the vulnerability of populations in cyclone-prone coastal regions," according to Dr. Murari Lal, a renowned climatologist engaged in research related to climate change vulnerability analysis in India. Lal has been one of the lead authors of the UN's Intergo-

vernmental Panel on Climate Change (IPCC) reports for over 15 years, which collates research about climate change from scientific work across the world.

"No local studies have been done in India to measure the precise impact of global warming. But, in the last decade, several factors contributed to the loss of coastal land due to sea level rise," says Murari Lal. "Arctic ice has melted three times faster than predicted by the IPCC in 2001. The sea level has risen twice more than projected by the climate models. Stronger surface winds and storms have resulted in higher waves, which reach further inland. Human interventions, such as the removal of mangroves, reclamation and construction along the coast, have also led to faster erosion of the coast."

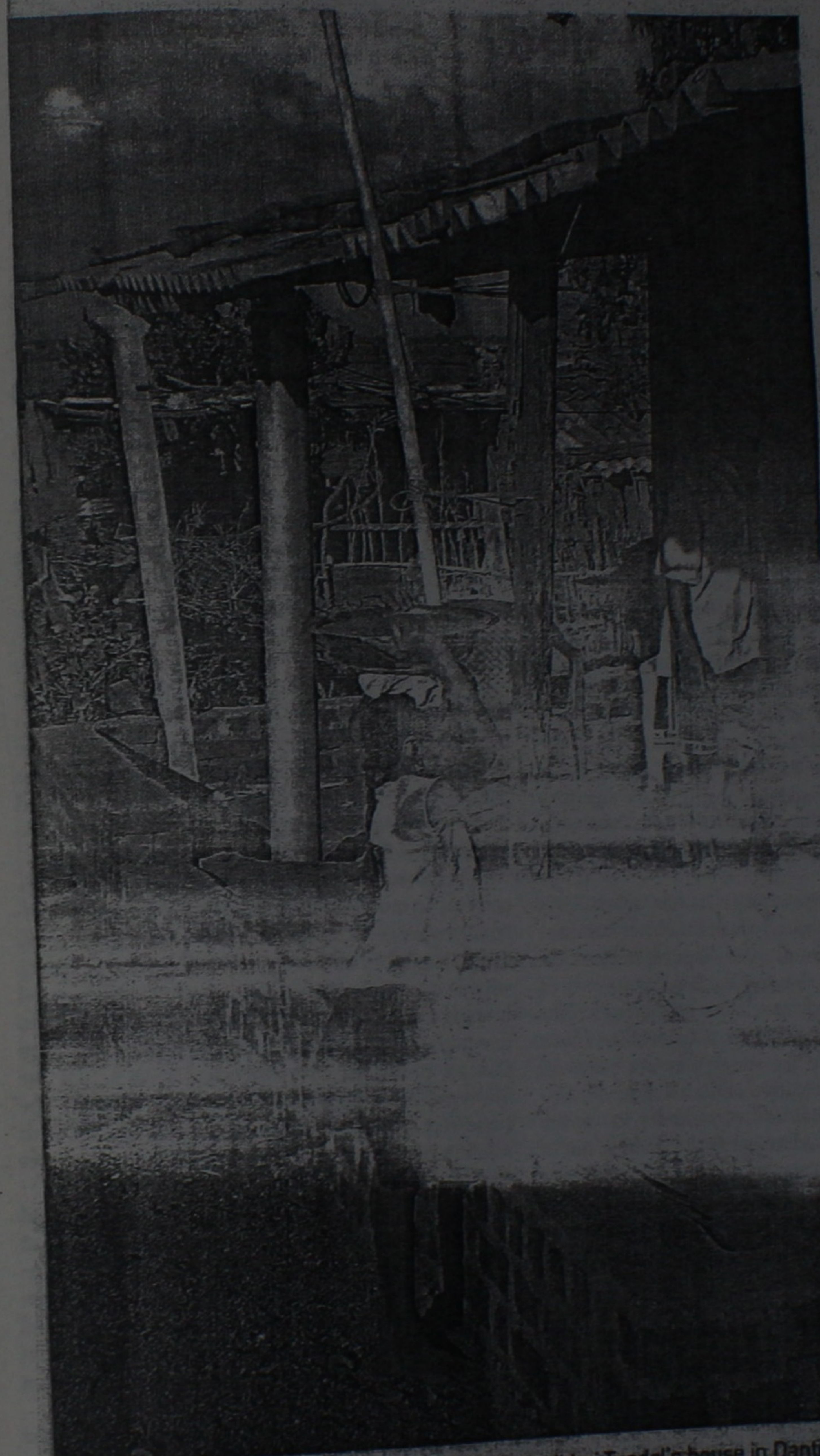
"Sea rise due to global warming could be just one of the reasons for the

erosion along the Gujarat coast," says Desai. "Local factors could also be responsible. Neo-tectonic activity - shifts in the level of the seabed - could also cause the sea level to rise. If there are disturbances in sediment budgeting along the coast, the amount of deposits from rivers, it could also affect the water level." Their study will determine which of these reasons is driving the changes along the coast.

Further north, at the estuary of the river Narmada, Kaladra village in Bharuch district is also being nibbled away by the sea. Several houses are broken and hanging on the edge of a cliff of sand that threatens to cave in at any point. A sea wall built 20 years ago is now a relic of the past. A road constructed two years ago (at a cost of Rs.30 lakh) has been cut like a cake by the lashing waves. "The poorest are the most directly affected by this. Most

ONLINE

Intergovernmental Panel on Climate Change
<http://www.ipcc.ch/>
 Reducing risks to cities from disasters and climate change by Saleemul Huq, Sari Kovats, Hannah Reid and David Satterthwaite, Environment & Urbanisation, Vol 19 No 1, April 2007.
https://www.ied.org/human/earth/documents/EUI9_editorial.pdf
 India's National Communication to the UNFCCC
<http://www.natcomindia.org>



CHILDREN HELP IN raising the level of Govindbhai Tandel's house in Danti as the family braces itself for the onslaught of the monsoon.



A VIEW OF an eroded road in Kaladra

families here are in a dilemma. They can't afford to shift but they cannot stay here either," said Desai.

Kaladra has been almost abandoned. The Kathod fishing colony here was washed away by the sea. The fishing colony in "New Kaladra", a little higher up the estuary, but their houses are still temporary. "The sea level is rising every monsoon, the water is coming in, it is a big problem," says Jayantibhai Rathod, a fisherman.

"We are not going to shift, we are staying here, we are not going to shift, we are staying here," says Govindbhai Tandel. "It is a land of no return, we are not going to shift, we are staying here, it will shift," says Shantibhai Tandel.

"We will keep moving back as far as we can. Then, it's in the hands of destiny." It is total surrender to the forces of nature. But how much of Nature's fury has been because of the recklessness of other people? The residents of Danti and Kaladra are too busy surviving the onslaught of the sea to dwell on the actions of others. It is the last thing on their minds as they sit on their rooftops in the pouring rain. □

Deepening crisis

Groundwater is getting depleted fast across India and it is time the authorities thought of making and enforcing effective laws governing its use. BY AMAN SETHI

Formulating a policy that caters to the needs of communities and simultaneously checks the indiscriminate use of water by industry is not impossible.

AS summer marks its slow retreat over the Indo-Gangetic plain, the data on the status of groundwater aquifers across the country make for grim reading. While borewells in Punjab have hit frightening depths of 120 metres below the surface, arsenic contamination in West Bengal and Jharkhand has exposed communities to dangerous levels of toxicity. In the south, in coastal States such as Tamil Nadu, experts fear, reckless mining for water may have ruptured the sedimentary rock layers that separate freshwater aquifers from the saline ingress of the sea.

What is surprising is that India has no real laws to govern the use of groundwater for either communities or industry. Groundwater disputes in India are settled according to the Indian Easements Act of 1882, in which groundwater is interpreted as a right attached to land. Hence, owners of a plot of land have unrestricted access to the water that lies below it. While such an interpretation offers a degree of independence to individual and community users, the same law has been used to justify the sucking out of millions of litres of water by giant industries every day. The growth of bottling and paper industries, distilleries and steel plants has resulted in pitched battles between communities and corporations for control over common water sources.

Punjab and Uttar Pradesh illustrate the environmental fallout of two different practices. A flawed agricultural policy has pushed parts of Punjab into drought, while in Uttar Pradesh the sugar-distillery-petrochemical complex is destroying a communal resource that the industry pays nothing for.

Of late, the Union and State governments seem to have woken up to the absence of a framework to

deal with groundwater utilisation. The Ministry of Water Resources proposed the Ground Water (Regulation and Control of Development and Management) Act in 2005. Yet, it remains just a proposal with no time frame for enactment.

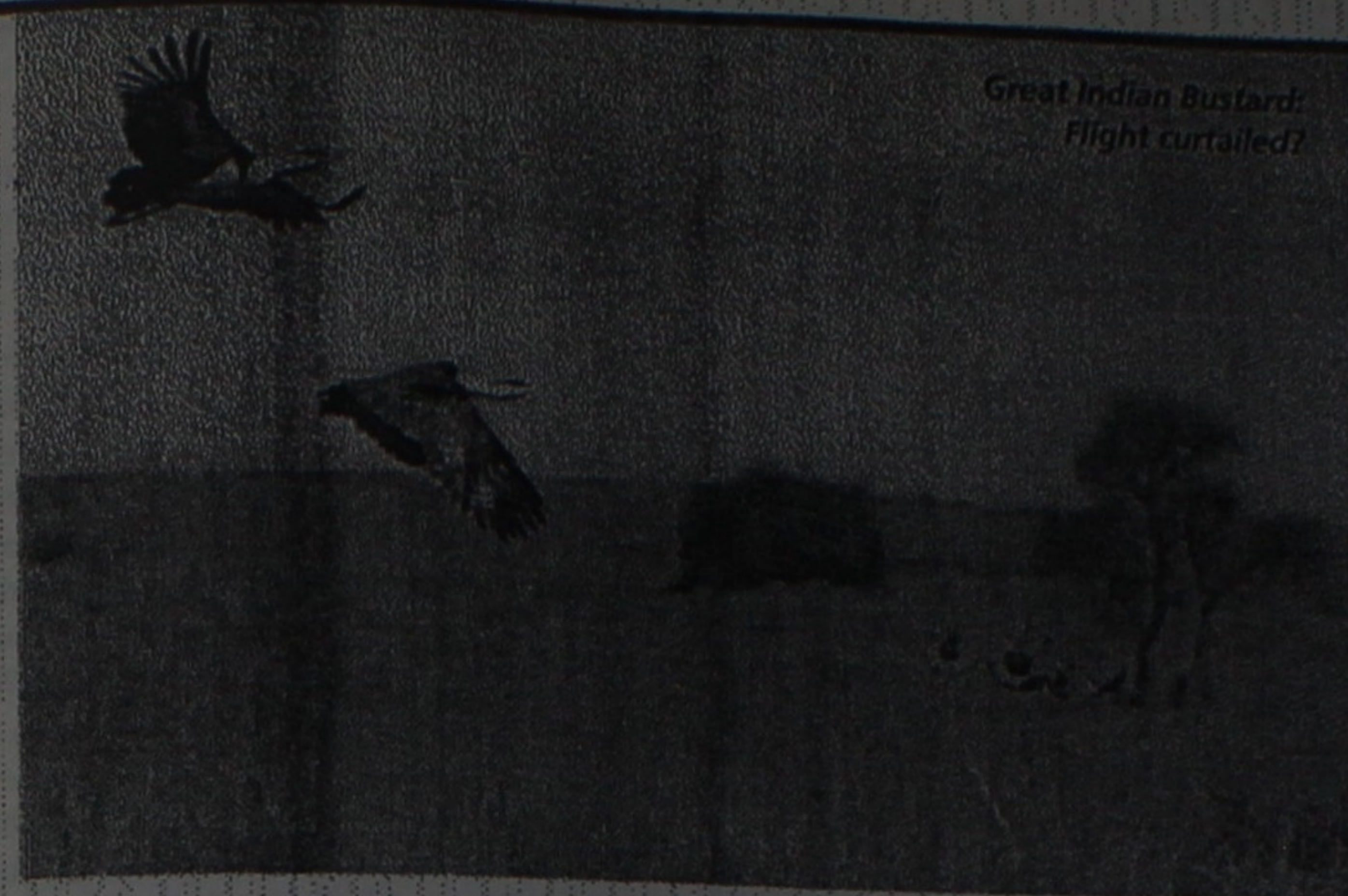
Meanwhile, India's freshwater crisis seems to have caught the eye of the Planning Commission. Recent reports suggest that an experts committee has been set up to study the implications of a groundwater cess policy and its recommendations are to be included in the 11th Plan approach paper; but neither the terms of reference nor the recommendations of this committee have been made public.

The first step towards regulation of groundwater use could be a rationalisation of water tariffs, especially for industry. At present, the Central Pollution Control Board simply collects a water cess under the Water (Prevention and Control of Pollution) Cess Act of 1977. However, the maximum cess collected under any category is 30 paise per 1,000 litres. The minimum is five paise per 1,000 litres.

Tariffs as low as these offer companies no incentives to move from existing water-hungry industrial processes to modern, less consumptive ones. They also fail to consider food and beverage plants where water is a crucial input in the final product and is exported out of the local water cycle. According to documents released by the Uttar Pradesh Pollution Control Board, in 2000-01, distilleries across the State produced 4,32,489 kilolitres of alcohol. The same report suggested that on an average, for each kilolitre of alcohol produced 125 kilolitres of water was used.

Commoditising water is always a controversial choice to make. Those in favour of it argue that commoditising implies better management and conservation. Those opposed to the idea point to scenarios where a consumer-driven management model for a fundamental need such as water shall result in economically and socially marginalised groups being priced out of the system.

However, formulating a policy that caters to the needs of communities and simultaneously checks indiscriminate use by industry is neither impossible nor inconceivable. □



Great Indian Bustard: Flight curtailed?

Sanctuary or villages?

Desert National Park in Rajasthan caught in political row

ARCHI RASTOGI, Jaisalmer

THERE is debate over whether villages, within the Desert National Park in Rajasthan, should be relocated. Park officials stress on relocation, politicians are against it and scientists say while people are required, development should not affect ecology. To resolve the issue, a meeting of political leaders of the area was held in Barmer in Rajasthan on June 18 and a committee was formed to look into the matter.

The park, which has got the status of a wildlife sanctuary, is spread over 0.3 million hectares, and sustains 73 villages, 62,000 people and 182,000 cattle. Politicians allege that park officials do not allow development activities like building walls for a school, roads or a canal within the park. They stress that since there is no wildlife in the park, development should be allowed. "There are no animals in the park. There is no point in arresting development. The management is sitting over the vast land," says Sang Singh Bhati, member of legislative assembly (MLA) from Jaisalmer. Agrees Kishan Singh Bhati, former MLA: "Over Rs 12 crore has been spent on the wildlife but without results. It is a huge area we are talking about. Development of villages is a must."

Scientists say that claims of 'no wildlife' are not completely untrue. However, it has got to do more with bad management practices, which can be

improved, says Anil K Chhangani of the JNU University, Jodhpur. Besides, he says that people are essential to the ecology of the park because their cattle support the Great Indian Bustard—the flagship species of the park. The bird feeds on insects that depend on cattle dung. And if there are no cattle, the population of the bustards may suffer, say experts. "The bustard population is concentrated in areas where grazing is still allowed. Grazing is necessary; otherwise many exotic and invasive species can come in," says Chhangani. Besides, he says, other development activities such as the canal, should be used only for drinking water and not for agriculture.

The canal's work has stopped midway outside the sanctuary because park officials want the canal to be routed around the sanctuary and not inside it. This, they say, will affect bustards negatively. "They live in areas where vegetation is 1-1.5 ft tall. With the canal, it will grow upto four feet, which will not gel with bustard habits," says Chhangani.

But the newly-formed committee wants to do away with the sanctuary completely. "We will ask the state government to dissolve the park, or at least reduce its area. We will look into the legal issues," says Bhati. Park officials disagree. They say that dissolution of the park is impossible. There is a general impression that the politicians have vested interests, given elections are due next year. ■

ATMOSPHERIC SCIENCES

Human footprints

On the carbon cycle

ARCHITA BHATTA

HUMAN activities add loads of nitrogen to forests, posing threats. Scientists at the US Oregon State University, however, say this may be helpful; but only to some extent. They found that artificial nitrogen fixation through burning of fossil fuels and industrial activities leads to increased absorption of carbon by temperate and boreal forests. They call it 'carbon sequestration'.

This does not mean the solution to global warming is to add huge volumes of nitrogen to our forests; here's a note of caution. The nitrogen emitted should be between 15 to 50 kg per hectare per year. The response of the forests is drastically reduced if the nitrogen added crosses the limit.

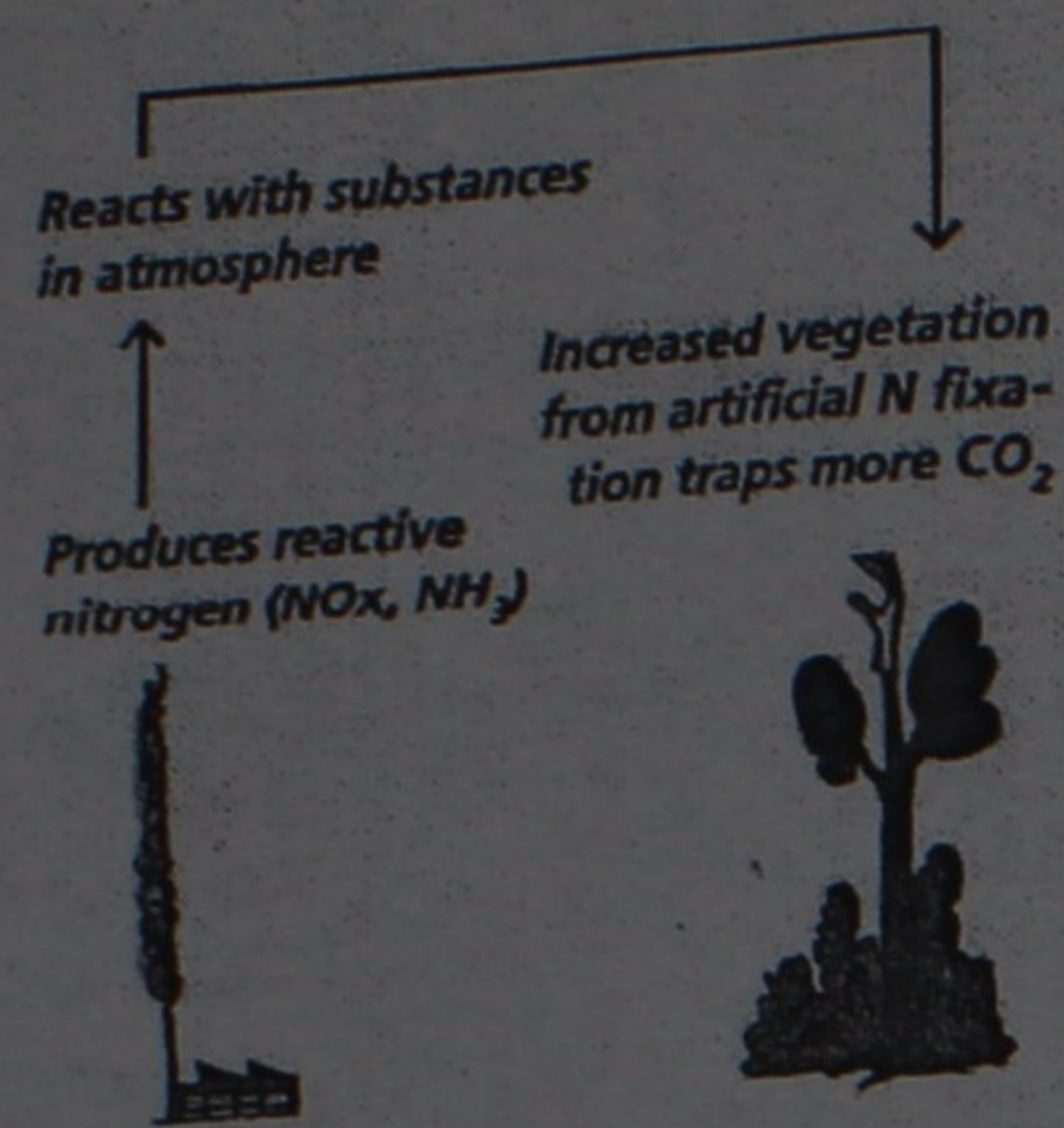
"We found that continuous deposition of relatively small amounts of nitrogen annually increased carbon uptake," says Beverly Law, a professor of forest science at the university and one of the authors of the study published in the June 14 issue of *Nature*. "This is called human fixation of nitrogen, which now is much greater than natural fixation (from lightning and nitrogen fixing plants)," he says.

"Here we are talking about the reactive nitrogen in the atmosphere, which results from human activities such as combustion and industrial processes. It is not through direct application of fertilisers to the soil," the researchers point out.

Increased nitrogen inputs result in increase of biomass of foliage and also the concentration of photosynthesising enzyme RUBISCO (ribulose-1, 5-biphosphate carboxylase), the study said.

This results in greater capture of sunlight and greater photosynthesis per unit area of forests. The researchers said that even at low levels of nitrogen addition, the carbon sequestration was significant.

Nitrogen is deposited either dry or



wet (in rain) directly on to the foliage, which then assimilate it. Some studies show that about 80-90 per cent of nitrogen deposition is captured by the canopy on top and the remaining goes to the soil.

"If nitrogen were to deposit on the soil, much of it would be used by soil microbes and returned to the atmosphere in soil respiration. The deposition on the canopy bypasses this. The results are not comparable to direct fertiliser

application to the soil because we are interested in net carbon sequestration, which is the sum total of photosynthesis and respiration," Law added.

The researchers claim that this is the first attempt to separate the effects of nitrogen deposition on forests from other variables affecting carbon release like forest age, logging, wildfires, disease or insect epidemics. Their analysis traced up to 15 kg nitrogen deposition per hectare and is representative of 90 per cent of western Europe and the US.

This study was inspired by another research by Elizabeth Holland of the Colorado-based National Centre for Atmospheric Research published in 2005, which said that increase of emissions of ammonia oxides of nitrogen over the last 150 years has accelerated nitrogen deposition in forests.

That study had expressed uncertainty on the impacts of nitrogen deposition on the carbon cycle. It had also said it was likely that forests fertilised by such nitrogen may have increased capability of sequestering carbon. ■

HORNS OF A DILEMMA



There was a time when it was said that the Indian budget was a gamble on the monsoons. That is not the case any more, with industrial production soaring and agriculture on the margins. But what is clear is that without addressing the problems of the majority of farmers in unirrigated land, we are not going to achieve food security. As the monsoon starts teasing, *Down To Earth* brings you what the forthcoming months have in store

Foodgrain production must rise by 50 per cent by 2010 > Agriculture needs to grow at 4 per cent >> Present rate of growth is less than 2 per cent >>> Foodgrain production in all irrigated areas stand stagnated >>>> Focus needed on rainfed agriculture, which constitutes two-thirds of cultivable land

The onset of the monsoon is the crucial determinant for majority of farmers in rainfed areas of the country. With no access to irrigation or state support they have developed complex yet fascinating mechanisms that sustain agriculture—whether it is a bird's nesting habit or the clouds. There is, however, a constant in their lives. That of uncertainty.

Story of a cow and a crow

Hajia Gonnaji, a 50-year-old Bhil resident of Devki village in Rajasthan's Dungarpur district, is optimistic about monsoons this year. The prologue to the agriculture season is long, a very long foreplay of hope and optimism. But Hajia's hopes have been high since Diwali last year. That was nine months ago. It is one day after Diwali when Bhils celebrate *gai-gouri*—where a number of brightly painted cows are made to run towards temple gates from a common point. There is a method in this madness. The colour of the first cow that crosses the temple gate represents peoples' fortunes the following year. It is believed that if it is a white cow then the monsoons next year would be good, if a brown cow wins it represents average rainfall and a black cow symbolises drought. And in Hajia's village, a white cow beat the others in the race.

Fast forward to January 2007. The positive message needs to be cross-checked. On the Hindu new year in mid-January, villagers catch a robin, feed the bird with milk, grain and *ghee* before releasing it. The first tree the bird perches on signifies what the year ahead would be like. If it sits on a green tree, it signifies good monsoon and a dry tree means cloudless sky. "This year the bird sat on a young tree signifying good rains and crops," says Hajia. "The rains have always been important, what has changed over time is the dependence on them," Kalu Bhil asserts. After the district's forest cover thinned, more and more people depend on agriculture now for survival than before, though with enormous constraints. With 86 per cent of its agriculture rainfed and 60 per cent of the population dependent on agriculture, monsoons script people's lives. So hopes—the most precious tool for farmers in India's rainfed areas—float whenever there is a sign of a good monsoon.

However, the constant of uncertainty comes into play again. Strongly. What if they are proved wrong? The uneasiness in the villagers' eyes is stark. "What you see around you is what there is to our lives," says Sampa, a 40-year-old resident of Gowadi village in the Saagwada block of the district. Pointing to the barren fields full of stones, she adds: "We end up migrating to Mumbai and Ahmedabad. Some men even go to Kuwait for manual labour."

Alternatives have ceased to exist. "Earlier, farmers had alternatives if rains failed. These included innovative ways of cropping, changing the crop sown to varieties that needed only a few showers to mature, like millet. But currently, due to years of stress migration, people are losing the will and the knowledge to invest in rainfed agriculture," asserts Shailendra Tiwari, head of natural resource development at Seva Mandir, an NGO based in Udaipur. "The public distribution system (PDS) distributes coarse corn and red wheat to villagers, so where can we go looking for better quality foodgrain? If the government procures only corn and wheat and even though our lands do not support wheat we have no option but to grow corn. Whatever little rice that people grow never reaches the

No tell tale

Farmers have natural indicators to predict rainfall. And researchers of Gujarat Agricultural University in an experiment found that farmers are more often than not proved correct. In an initiative, the university asked 200 farmers in Saurashtra region to predict rainfall pattern from 1990-2003 by using traditional parameters such as occurrence of rainbow, orb around moon and sun, dew etc. The farmers were to observe for 195 days from end-October to mid-April. For example, on Holi—celebrated usually in March—farmers observed the wind before and after the lighting of the Holika pyre. The observations were made on eight parameters—direction of the wind for instance. They believed if the wind blew from south-eastern region towards the fire, it would be drought and if it came from the west then they would get good rainfall. And, as it turned out, the university researchers found that seven out of the eight parameters turned true.



"We have our retirement plans ready. If our three sons don't take up farming, we will give our land for contract farming"

—LAXAMAMA RENI & ANJERIA KUMAR
Farmer-couple, Nyalkal, Medak

market," says Gumla Bhurji of Saagwada. This has given rise to monocropping, which in turn has enhanced the chances of crop failure in the face of scanty rainfall. This has laid a debt trap. More than 50 per cent of farmers in major rainfed agricultural states like Andhra Pradesh, Rajasthan and Maharashtra are indebted, according to the 59th round of survey by the National Sample Survey Organisation.

Cold comfort

The situation isn't much different down south. Laxamama Reni and her husband Anjeria Kumar from Nyalkal village of Medak district, Andhra Pradesh, are expectantly waiting for the monsoons to cultivate their 2 acres (0.8 ha) of rainfed land. In anticipation of the monsoons, they have finished tilling in March. Early tilling increases water retention capacity of the soil. Stakes are high for farmers like Laxamama as 70 per cent of Medak's agriculture is rainfed and rainfall has been drastically below average in two of the past five years.

Both Laxamama and Anjeria are worried about a decline in yield and income. "While the cost of inputs such as labour, fertiliser and seeds have increased drastically, the yield has been stagnant since the past five years," says Anjeria. With no

irrigation facilities, the couple has been growing traditional and less water-intensive rainfed crops like sorghum, red gram and green gram. Agriculture gets them Rs 6,000 per month, subject to rains, of course. Their three children are not sure of even taking up agriculture for subsistence.

"The average groundwater table in the district has gone down from 25 meters during 1996-97 to about 100 meters during 2006-07. Farmers there are following monocrop method," says K Jagannadharao, project coordinator, Centre for Environmental Concerns, a Hyderabad-based NGO.

Eastern blues

In neighbouring Orissa, the poorest state of the country, with large agricultural areas being rainfed, the uncertainty strikes hard on farmer Ladukishor Mishra of Kudapada village in Baudh district. "Earlier, we had just the monsoon to worry about. Unfriendly government policies are an additional burden," he says. The village has long forgotten the rainfed crops and has had to switch to water-intensive crops like paddy and wheat because the market favours these.

Most farmers here do not have the capacity to suffer crop loss, and are hence cautious. "We start ploughing only after monsoon arrives," says Ladukishor. The often-reliable bio-indicators for a rainfed farmer stand redundant when there is a financial crunch. This year a crow nested in a leafy tree—traditionally a good indicator of monsoons. But the residents are not excited. Every year, the village's priest addresses a gathering to talk about weather. Ladukishor dismisses the priest's visit as just another "ritual".

Fragile equation

For a rainfed farmer, preparing for agriculture is a fragile soil-water equation, where timeliness and precision decide on the returns. Even a week's delay in rains can spoil the harvest, for most of the rains is received within 100 hours, spread over five months. Thus, rainfed agriculture follows a complete cycle based on the moisture content of the soil.

As rainwater has to seep into soil through the surface, the land has to be kept open for receiving more and more moisture. It should also be free of weeds and levelled, wherever necessary, so that the maximum rainwater seeps into the soil. Therefore, land must be prepared before sowing to capitalise on the moisture available after the previous harvest and rain received during the off-season. Thus, tilling must begin in March. In April, the pre-monsoon rainfall is partly lost by bare soil evaporation and partly stored in the soil profile. In May, the soil has minimal moisture, enough to take some rainfed crops like bajra and mandia (a coarse millet). Crops are usually sown and grown during the next three months. The moisture levels in September and October make it unsuitable for any crop. This further deteriorates during November-January as the crops already planted consume water for maturing. In February, the soil-water storage is completely depleted and no crop growth is possible. Thus, for the rainfed areas the effective length of the growing season is five months. And these constraints make just one crop possible.

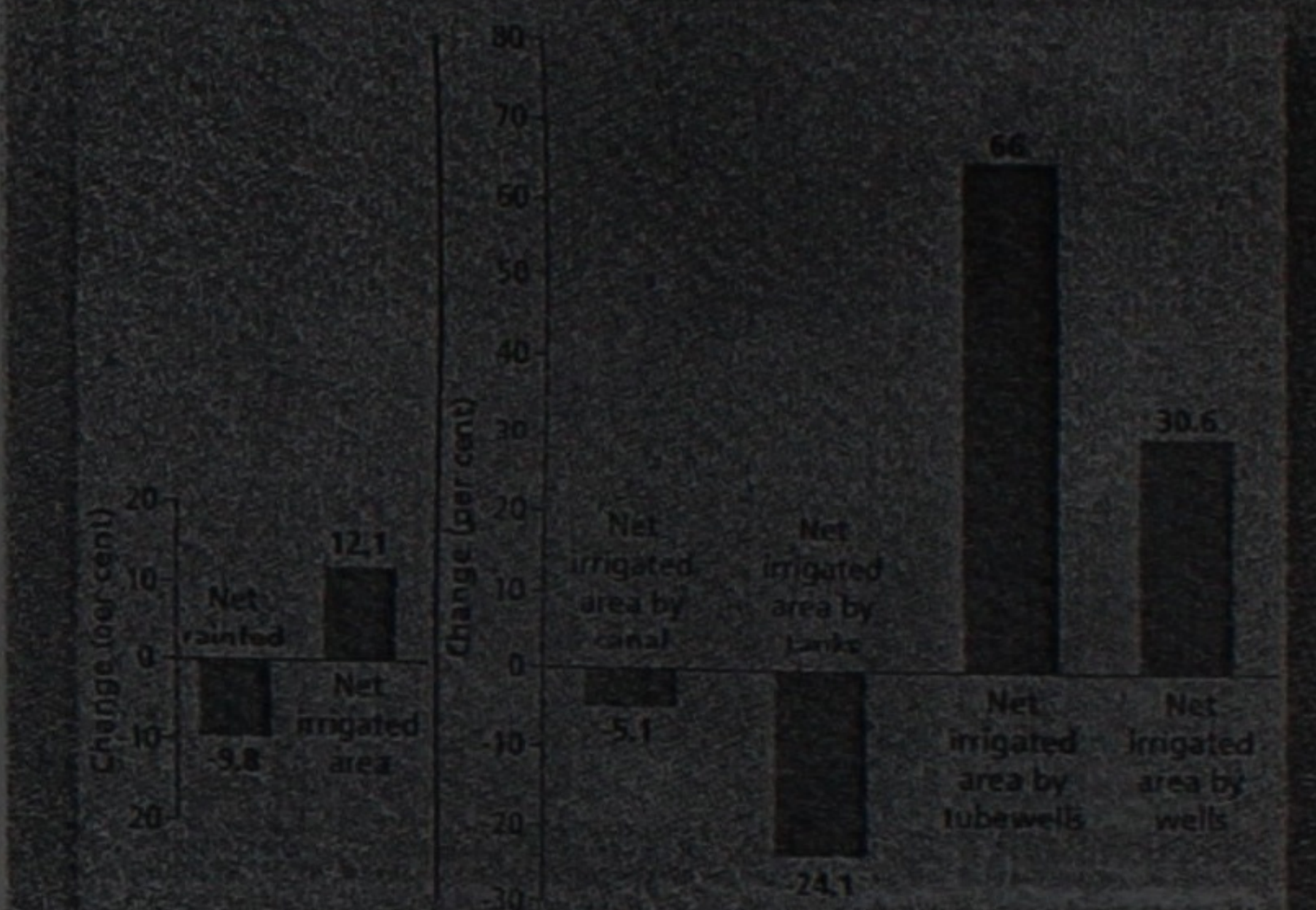
"Livelihoods in rainfed areas are complex and are marked by variability. Farmers mostly trade hunger as a coping mechanism," says Pradeep Bhargava of Institute of Development Studies, Jaipur.

Fed by rain

India's rainfed areas are agriculture intensive; 85 per cent of employed people in these areas are engaged in agriculture. Consisting mostly of arid and semi-arid areas and the country's 200 backward districts, rainfed states are concentrated in 13 states.

It's rained, anyway

The graph below shows that there has been a decline in the net rainfed area and an increase in the net irrigated area from 1994-2003. The increase has been due to a sharp rise in use of tube wells and wells, which source their water from groundwater, which in turn depends on rain. And are hence rainfed.



Source: Working Group on Rainfed Areas for Formulation of Eleventh Five-Year Plan, 2007

Crop diversification

Production and productivity of rainfed crops have shown much decline after 1995. Growth in production was found to be significant (2.37 per cent) in rainfed regions along with higher productivity (1.91 per cent) during 1991-1995. However, significant growth observed during 1990s did not sustain in the 1990s, marking a steep fall of -3.07 per cent. The growth during the 1980s was mostly due to the unprecedented growth in oil seed production post technology mission. Post 1990, the area expansion declined and accompanied by less yield gains maintaining the growth rate in rainfed regions to less than 1 per cent. The dosing of the oil seed technology mission in 1995 pre-empted this



Self-critique

Review finds ADB's policy doesn't hold water

S V SURESH BABU

A review of the implementation of the Asian Development Bank's (ADB's) water policy and water supply and sanitation (wss) projects in India has exposed its failings. In 2005, ADB funded WaterAid, international NGO, to conduct an independent review of its own water policy implementation in South Asia—India, Bangladesh and Nepal. The India report, *Water for All? Implementation of ADB's Water Policy in India: A Review*, by WaterAid India was published in 2006. The report focussed on access and affordability of wss services to the urban poor. It looked at select urban projects in Karnataka, Rajasthan and Madhya Pradesh. Since 1998, ADB has invested US \$960 million in urban projects in India.

Anti-poor

The report criticised ADB for failing to understand poverty issues. "Despite commitments and funding poverty reduction programmes, ADB appeared not to be encouraging governments to adopt pro-poor elements in policies," said the report.

ADB also drew flak for its inequitable policies in providing services in slums and for not involving communities or NGOs in projects. The ADB water policy (2001) states, "Specific needs and vulnerabilities of the poor are central to formulating sound and equitable water strategies and the poor must be enabled to influence decisions that affect their access to water." But this remained on paper. The report

suggested that ADB incorporate pro-poor elements in its loan agreements.

The ADB was criticised for backing stand-alone projects for the urban poor rather than integrated/mainstream projects. Even the slum selection process was skewed with the government list leaving out the most vulnerable settlements. In Jodhpur, 100 slums were left out while in Madhya Pradesh the project covered only 4 per cent of the poor.

Water supply and sanitation

The study found that the water supply coverage increased in the slums under the project. Fifty per cent of the households surveyed were satisfied with water quantity and quality, while about 55 per cent still depended on alternate sources of water like water vendors. Those unconnected were the poorest of the poor or living in areas classified as difficult for providing water supply. In Jodhpur, the excluded settlements had better access to municipal water supply than intervened settlements.

Less priority was given to the sanitation sector, despite the high costs of sanitation infrastructure and the sanitation gap. Sanitation services largely aimed at building systems for underground sewerage, solid waste and wastewater management. An increase in the proportion of households with individual toilets in project settlements was attributed to personal expenditure and not ADB investment. Community toilets proved to be a failure due to bad location, lack of maintenance and water. Even in areas with sewerage, people preferred to discharge their wastewater into stormwater drains due to high sewerage connection charges. Open defecation is still continued in most places. Though the review recommended enhanced funding for

sanitation, it failed to ask that even if the municipality had the capacity to treat wastewater, were entire households connected to sewerage?

Tariff-setting: Undemocratic

All ADB-supported wss projects are to be financially sustainable. Though ADB provided loans to the Indian government at low interest rates, the government burdened cities with higher rates—9 per cent (reduced in 2005 from 12.5 per cent). Ratlam turned down the loan citing the same. A surprise finding: most cities knew little about loan obligations and viewed loans as grants. ADB's practice of deducting money on account of interests from the government's account was criticised.

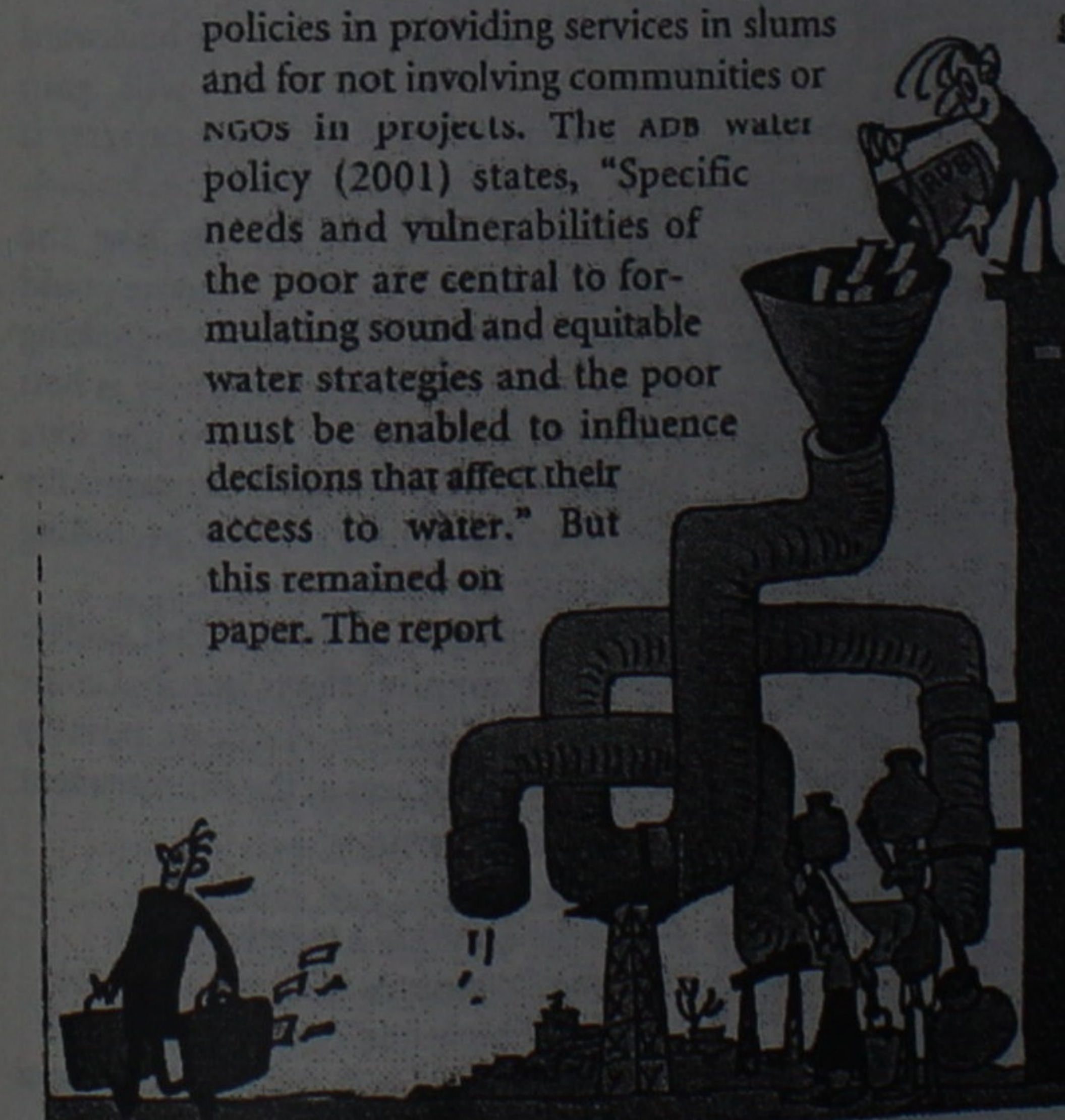
"Exercises on tariff projections for financial sustainability are carried out to satisfy ADB that the project meets the sustainability requirements so that it can go ahead with the project," said the report. Attempting cost recovery on capital costs and operation and maintenance burdened the cities, according to the report. The report cited the example of Ratlam where income from water was projected by ADB to increase 8.4 times over a 16-year period.

WaterAid recommended the use of vulnerability index to target subsidies for the poor and use 'capacity to pay' rather than 'willingness to pay' while fixing tariffs since, at present, subsidies are not reaching the poor.

Needs debate

Many crucial issues like the impact of loan conditions on local governments needs review. These conditions often controversial, especially on goods and services, have overriding consequences on project sustainability. Similarly, facilitation of privatisation of water and environmental sustainability of wss projects also needs evaluation in ADB's policy review.

Whether the ADB will follow these suggestions is yet to be seen, especially with many more ADB-backed urban projects in the offing. Every year, the ADB envisages a new urban development project with more than 50 per cent of the total project cost for wss-related activities. It will also fund 6 per cent of the total of US \$38 billion estimated for achieving 100 per cent water supply and sanitation cover in urban India. ■



Farewell to farming

Environmental degradation, reducing land holdings size, decline in agricultural production—people are deserting farming. Dominantly rainfed states like Rajasthan have registered a dramatic increase in the shift from farm to non-farm employment from a mere 19.3 per cent in 1983 to 32.7 per cent in 2000 with a higher dependence on wage income. The table below shows the share of non-agricultural employment of male workers in rural areas of select rainfed dominant states

State	1983	1993-94 (per cent)	1999-00 (per cent)
Andhra Pradesh	22.9	24.4	25.6
Karnataka	18.4	21.2	21.5
Rajasthan	19.3	30.4	32.7
Tamil Nadu	21.4	36	37.8
Gujarat	21.1	28.9	28.6
All India	22.2	25.9	32.6

Source: Study on Livelihoods in Rainfed regions, Prady, Bangalore, National Development Studies

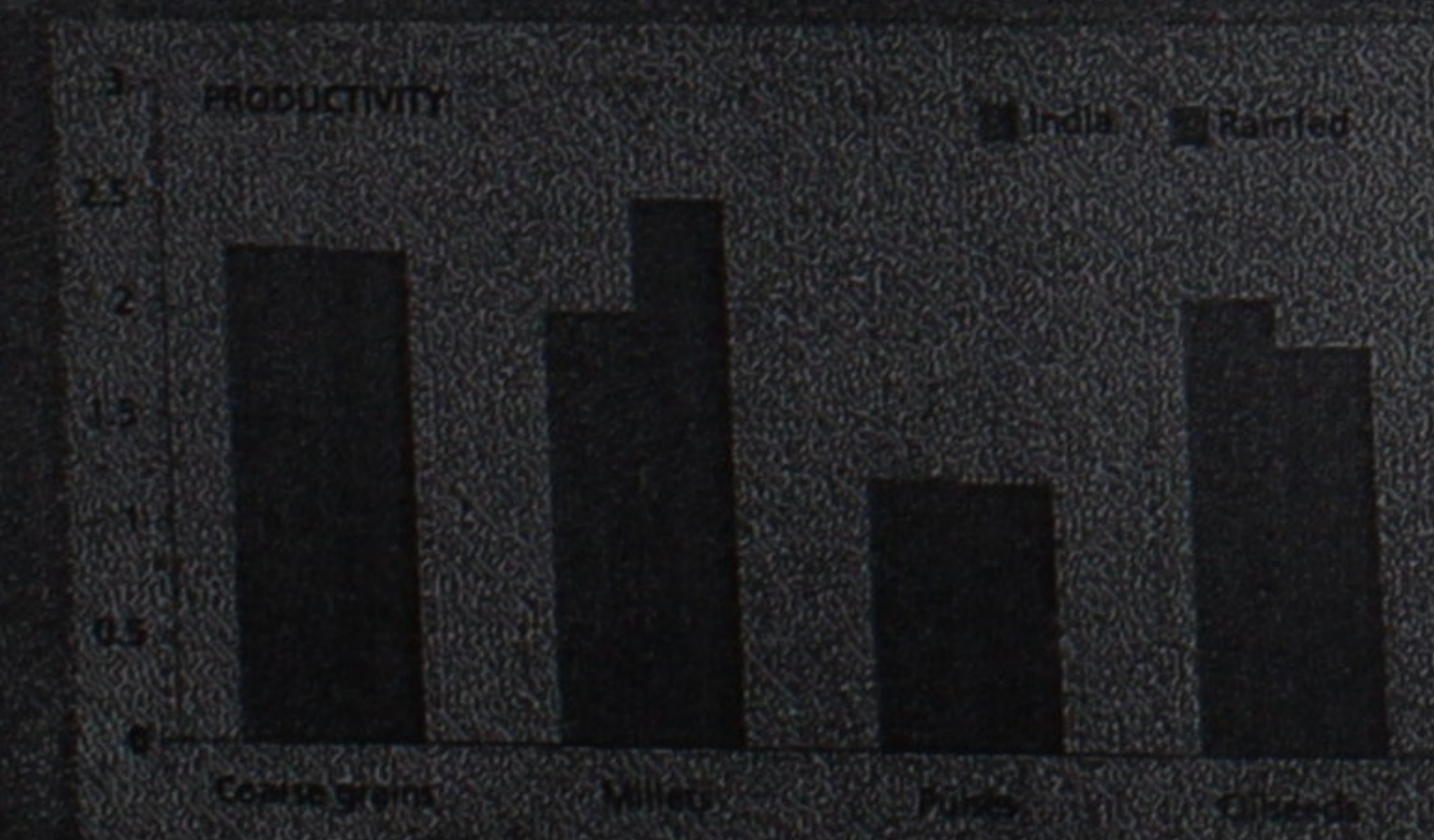
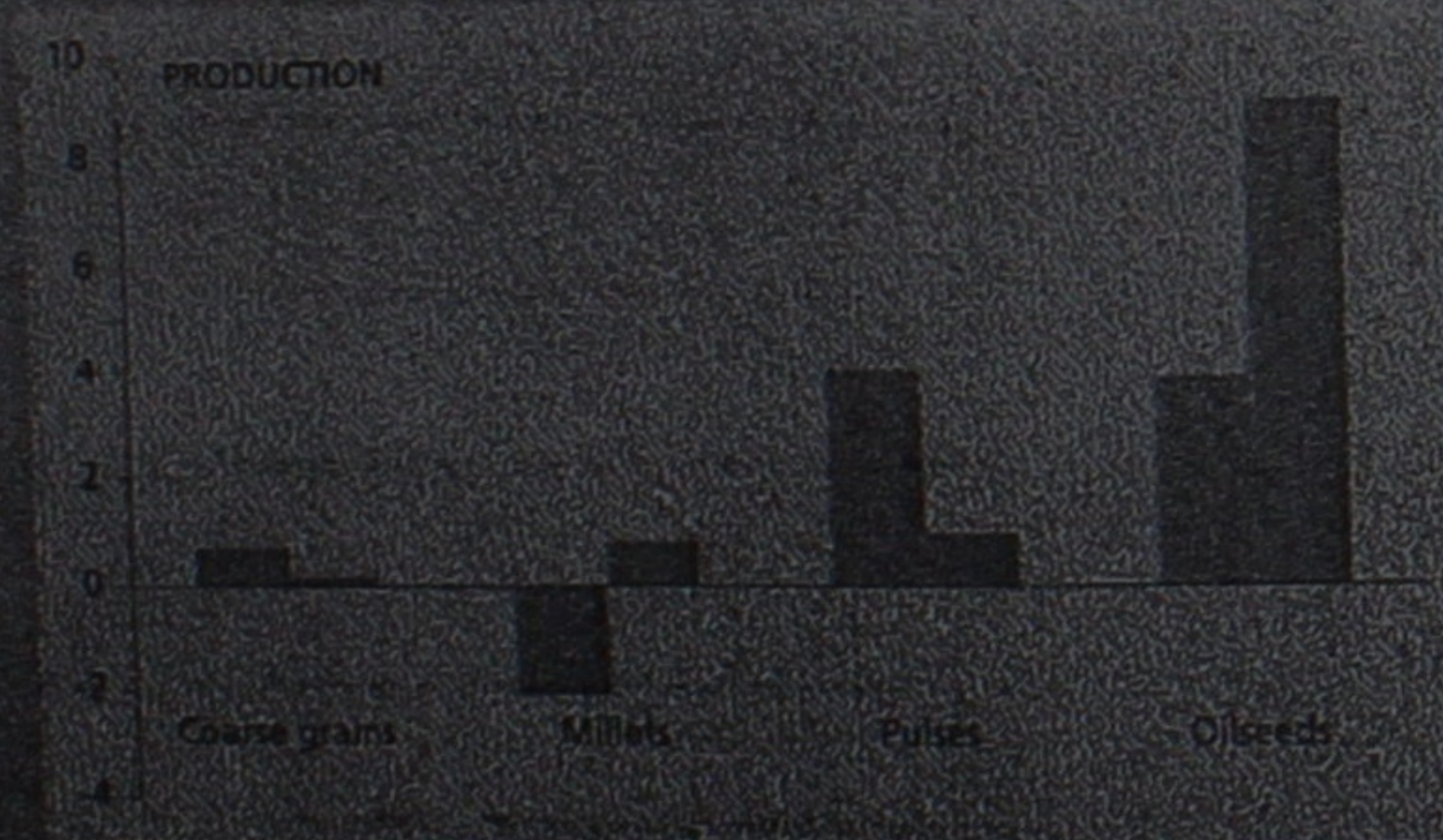
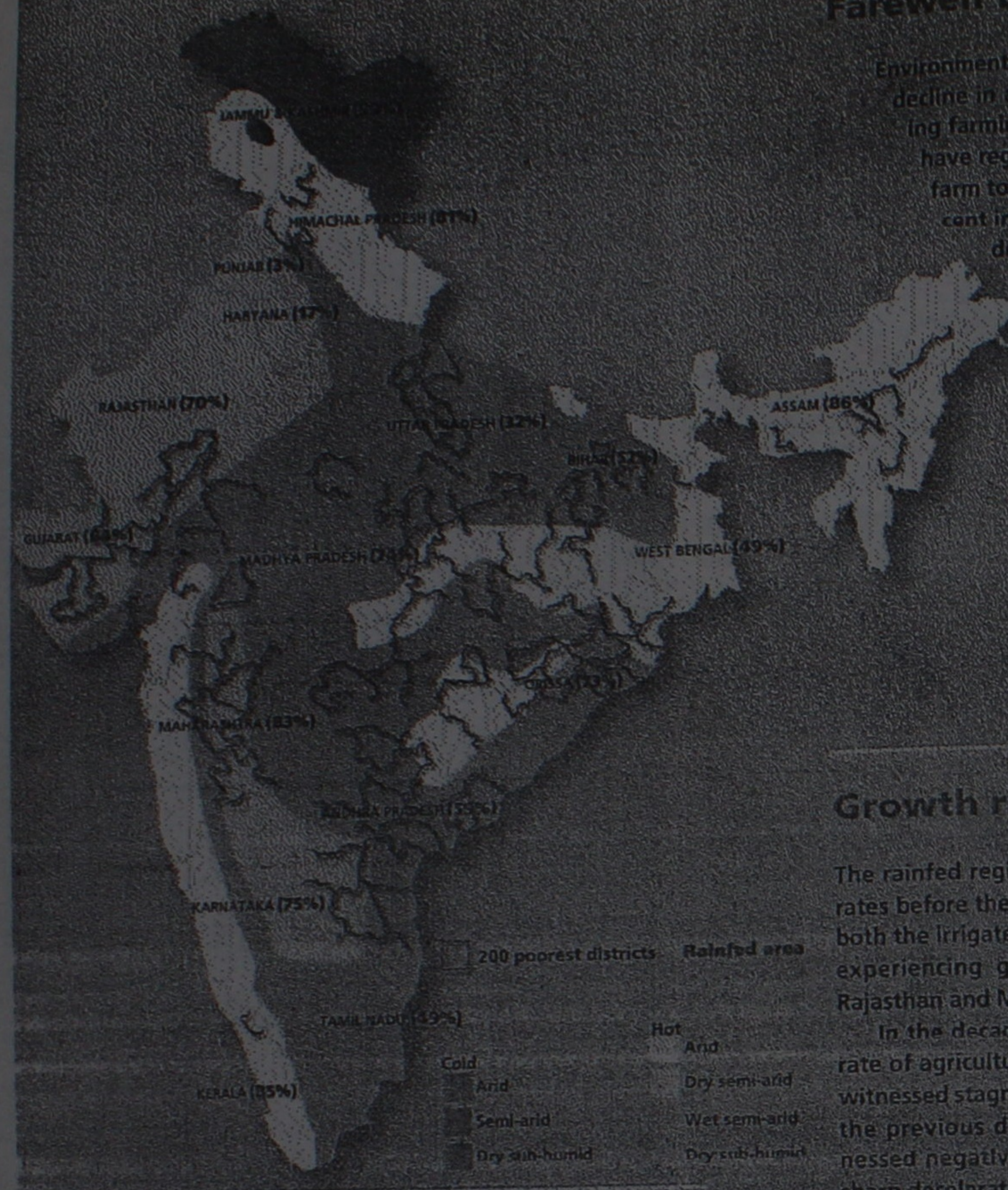
Growth rate in rainfed regions

The rainfed regions did have their tryst with higher growth rates before the 1990s. Favourable growth rates extended to both the irrigated areas and the rainfed areas, with the latter experiencing growth rates of 3.62 per cent in Gujarat, Rajasthan and Madhya Pradesh.

In the decade after 1995 till 2004-05, the overall growth rate of agricultural productivity declined. The irrigated states witnessed stagnation or very marginal growth as compared to the previous decade. In contrast, the rainfed regions witnessed negative or zero growth. States like Kerala showed sharp deceleration of growth in agriculture during 2004-05 as compared to the period before 1995

State	Growth rate in NDDP agriculture (per cent)		Per cent of rainfed area	Per cent of irrigated area
	1984-85 to 1995-96	1995-96 to 2004-05		
Punjab	4.00	2.18	3	97
Haryana	4.90	1.98	17	83
Uttar Pradesh	2.82	1.87	37	63
Tamil Nadu	4.04	1.16	48	52
West Bengal	4.63	2.67	49	51
Bihar	1.71	3.51	52	48
Andhra Pradesh	3.18	2.69	59	41
Jammu & Kashmir	2.18	3.25	59	41
Gujarat	5.09	0.48	64	36
Rajasthan	3.52	0.30	70	30
Orissa	1.18	0.73	73	27
Madhya Pradesh	3.63	0.23	74	26
Karnataka	3.92	0.03	75	25
Madhya Pradesh	6.66	0.10	84	16
Kerala	3.60	-1.44	85	15
Goa	1.65	0.95	86	14
Himachal Pradesh	1.54	3.53	81	19
Andhra Pradesh	3.62	1.89	80	20

Source: All India State Domestic Product



Wages of division

Economy created by the Employment Guarantee Act threatens a way of life



SOUPARNA LAHIRI

The National Rural Employment Guarantee Act was passed last year primarily to strengthen the livelihood resource base of the rural poor, and enhance their social security. But within the country—particularly in the districts targeted by this act—there exists a vast difference in how communities perceive livelihood and social security. Historically, most tribal communities including those from the north-east have sustained themselves on natural resources; they either owned and managed them or had usufruct rights. But today, tribal people in only a few states in the north-east own and manage natural resources. In tribal belts in the rest of the country, their sustainability and livelihood depends on government policies (read whims and fancies of the state).

This actually means that on one hand tribal communities are deprived of their rights over the natural resources they have so far protected and derived

their livelihoods from. On the other hand, governments and mainstream political parties in the country are pushing development programmes which foster an economy that is completely alien to tribal mores. The Employment Guarantee Act, for example, promotes a wage labour economy that tribals are yet to come to terms with.

Money for nothing

Promoting individual wage labour among people whose ways of life—social, cultural, political, economic—is community-centric could be dangerous and lead to severe internal conflicts. Many tribal communities in the districts of Upper Subansiri, Changlang, Lohit, North Sikkim, Bastar, West Garo Hills, Kalahandi, Koraput, Malkangiri, Bolangir and Simtaur are not fully integrated with the market and the wage labour economy. If they are poor today, it is because their natural resource-led sustainable economy is under attack and crumbling gradually.

Secondly, most of these tribal groups have historically mobilised themselves as communities whenever they needed to create social assets—in fact, socially relevant assets. The assets thus created always belonged to the community as a whole. No individual owned them. Historically, the assets

were always the products of community efforts and communal labour. Conservation and/or development schemes such as water conservation, water harvesting, afforestation, irrigation works, renovation of traditional water bodies and rural connectivity will never be successfully implemented with individual wage labour. Wage labourers will never own the process and the end product, they will only be lured by the money that their labour will bring.

Alienation

Wage labourers, in a purely capitalistic economy, are completely detached from the product—wage labour, in fact, is designed to achieve such alienation. They are never meant to own the product of their labour.

This is an important reason for the Employment Guarantee Act's failure to deliver on its promises. The community plays no role in decision-making and implementation processes. The entire process has been usurped by both the government and political bureaucracy; schemes have been changed and there are allegations of large-scale corruption and misappropriation of resources.

Tribal communities in the backward districts of our country will gain immensely and not slip into poverty if their rights to resources are acknowledged and ensured. Efforts like the Employment Guarantee Scheme could be successful if the decision-making process and its implementation is best left to the community. In turn, the state should find ways to support community efforts and that may include providing them with monetary support.

Promoting wage labour that undermines community efforts in tribal communities will neither eradicate poverty nor facilitate success of the Employment Guarantee Scheme. ■

Souparna Lahiri is a member of the Steering Committee of National Forum of Forest People and Forest Workers. He is also associated with the People's Forum against the Asian Development Bank



Insight

Microfinance Bill: Missing the Forest for the Trees

The Microfinancial Sector (Development and Regulation) Bill, 2007, which has attracted criticism on many counts, aims to ensure that NGOs use their social mediation skills to ensure financial intermediation. However, the bill's ambit is narrow and it fails to take major aspects of microfinance delivery into account.

H S SHYLENDRA

After considerable procrastination, the government of India has introduced a bill in the lower house of Parliament to regulate microfinance institutions (MFIs) in the country. The bill called The Microfinancial Sector (Development and Regulation) Bill, 2007 is the result of the demand from certain sections of the growing microfinance sector for a suitable regulatory framework. Even though Parliament is yet to take it up for discussion, the proposed bill has already generated a lot of controversies. Currently, it has been referred to the parliamentary committee on finance for an assessment.

The concerns over the bill have arisen due to the following reasons. Though it has a very broad title in reality it focuses only on a narrow set of institutions acting as MFIs. There is a view that entrusting the responsibility of regulation to the National Bank for Agricultural and Rural Development (NABARD) is not a sound idea as NABARD has many limitations as a regulator. Further, critics say that self-help groups (SHGs) may become subservient to MFIs which could siphon off their savings for their own lending needs leading to disempowerment. Doubts have been raised over the ability of NGOs to ensure safety of the deposits of the poor. Finally, there is the argument from the women's lobby that women being the major stakeholders of microfinance the bill has not made any attempt to give adequate representation to them. The manner of drafting the bill and the way it has been introduced by the government has also drawn serious flak. The entire process has left much to be desired in terms of transparency and wider consultation.

needs and peculiarities of NGOs [Shylendra 2005].

The present paper is an attempt to critically assess the overall merits and demerits of the bill and to draw relevant implications for regulation of microfinance in the country. The assessment of the bill is carried out mainly by focusing on the major issues like need for a legal framework for MFIs; scope of the regulation attempted by the bill; regulatory norms specified; role of NABARD and other agencies, and the issue of ceilings on interest rates.

Need for Legal Framework

Is there need for legislation to promote the microfinance sector in the country? As per the bill, the major goal is to ensure financial inclusion of poor who continue to face difficulties in accessing the formal banking system. To bring about financial inclusion, the bill aims at developing the microfinance sector which is faced with many constraints including absence of legal framework for its growth. The aim as stated in the bill is "to provide for promotion, development and orderly growth of the microfinance sector in rural and urban areas for providing an enabling environment for ensuring universal access to financial services, especially to women and certain disadvantaged sections of people, and thereby securing prosperity of microfinance organisations not being regulated by any law for the time being in force and for matters connected therewith or incidental thereto".

Financial inclusion of the poor continues to be a major challenge. The recent All India Debt and Investment Survey has revealed that only about 13.4 per cent of the rural households had access to institutional credit [GoI 2005]. For the households in the lower four asset holding classes, the same proportion varied from 3.6 to 10.9 per cent indicating a very low outreach of the poor by the institutional agencies. Further, though institutional credit accounted for about 57 per cent of the debt incurred by all the households, for the households in the lower four asset holding classes, it is the non-institutional agencies which accounted for the major share (ibid). Similarly, the Rural Finance Access Survey (RFAS) conducted by NCAER [Basu and Verma 2004] had also revealed the acuteness of

the financial exclusion of the poor. The RFAS had found that nearly 87 per cent of the poor households were without access to any formal credit and about 70.4 per cent of the poor did not have any deposit account. Given the enormity of the problem of financial exclusion, any attempt to reverse the trend therefore assumes importance. It is from the above angle that the relevance of the bill may be seen. However, what is more important to be assessed is in what way the bill tries to pursue its goal. For attaining the stated goal, the bill is focusing on regulating hitherto unregulated organisations delivering microfinance. But there is no clear explanation in the bill as to how the absence of a legal framework is constraining these MFIs and in what way the provision of such framework would help attain the goal of financial inclusion.

As in many other countries, NGOs in India have played a crucial role in the spread of microfinance. Their success in delivering microfinance has made many of them explore the possibility of scaling up their operations further. The success is also attracting many newer NGOs to enter the field. It is estimated that in India as of 2006 there are about 800 NGOs involved in the delivery of microfinance with an outreach of about 7.3 million households [Ghate 2006]. However, these NGOs are mainly involved in providing credit by borrowing from outside. What is constraining them in scaling up their outreach is the inability to provide integrated services (credit plus savings). Enabling NGOs to provide integrated services is likely to contribute to financial inclusion in the following ways.

Like credit, the poor need savings services to meet various contingencies they face in their livelihood. However, the poor find it difficult to save with the formal banks for many reasons. In the absence of formal savings mechanism, the bulk of the poor adopt various unsafe and inconvenient methods of savings. The bill hopes that this problem can be addressed by enabling NGOs to offer savings services to the poor and that the success achieved by NGOs in delivering credit is replicated in the case of savings too.

For the NGOs, the inability to accept savings from their clients is considered to be a major hindrance in mobilising cheaper funds needed for scaling up. This in turn is supposed to have contributed to the problem of high lending rates charged by the NGO-MFIs. Easing the restriction on savings mobilisation by NGOs is likely to help address the problem of fund constraint along with helping them in providing

affordable loan services to the poor. Moreover, with the rapid growth of their microfinance activity, NGO-MFIs are faced with the dilemma which emanates from the nature of their organisational form. Increased outreach and loan business has created scepticism about the not-for-profit nature of the NGOs. NGOs are increasingly finding that their present form is not conducive for up-scaling and attaining sustainability of microfinance operations [Shylendra 2005]. Microfinance being an activity required to be pursued on a cost recovery basis, the not-for-profit form is found to be operationally constraining and inherently contradictory by the NGOs. At the same time, the uncertainty over the tax status of the surplus generated from microfinance operations has created serious concern among NGOs. Many of them are looking for a suitable form of organisation which can help them take up microfinance in a full-fledged way with low capital requirement and without any dilemma over profit. However, due to the restrictive nature of existing regulatory norms for commercial form of organisation (like NBFCs), NGOs are finding it difficult to attain the required transformation. Though many of them have found a way out by promoting a not-for-profit company under Section 25 of the Companies Act of 1956, they are still constrained in providing integrated services to the poor. It is here that the bill is expected to help the NGOs to overcome the above constraints and dilemmas.

The bill may thus be seen as an attempt to recognise the role of NGOs in financial intermediation and help them play a more effective role. However, since it is talking about the overall development of the microfinance sector it is essential for the bill to simultaneously emphasise the role of formal financial institutions in attaining financial inclusion. Also, while the argument about absence of a legal framework appears to hold good for NGOs, the same is not true for cooperatives. The bill wrongly assumes that cooperatives lack legal framework for providing integrated services. Hence the inclusion of cooperatives can only be construed as an intrusive step.

Scope of the Bill

The bill tries to cover broadly two category of institutions, namely, NGOs and cooperatives. The institutions proposed to be regulated are called microfinance organisations (MFOs). The NGOs proposed to be regulated include both societies and

trusts established under central and state enactments. Cooperatives include all thrift and credit cooperatives except urban cooperative banks established under various cooperative acts of both the state and central governments. It excludes from its purview other institutions like NBFCs, section 25 companies and scheduled banks including RRBs. The proposed regulation therefore is more institution-based than activity-based.

In fact, the constraints identified with regard to NGOs are true of even other institutions like NBFCs and section 25 companies. Therefore, the bill takes a very narrow view. Unless it widens its scope to include other MFIs the broader objectives may not be realised. Leading MFIs in the country are in the form of either NBFC or section 25 companies and account for over 90 per cent of the total clients served by the MFIs in the country [Ghate 2006]. By focusing only on NGOs and cooperatives, the bill attempts to shift the burden of social banking away from commercial banks to civil society institutions. It is desirable to keep cooperatives out of the purview of the new regulation except for receiving any capacity building support.

All groups are kept outside the purview of regulation. These groups can continue working on the basis of their informality and autonomy. The groups linked to banks may not get affected by the bill as they would be able to continue functioning in the same way. In the case of groups coming under MFIs, there is a possibility of MFIs exercising control over their savings. Deposit mobilisation by MFIs should be largely on a voluntary basis with groups free to choose between their MFI or any nearby bank. It is also desirable that the NGOs help and encourage member-based institutions like cooperatives or SHG federations to emerge as that would help SHG members to retain ownership and control over the MFIs and their resources.

Eligible clients: In the bill only members of the groups formed for microfinance purpose can become eligible clients of the MFIs. The MFIs are therefore supposed to deal only or exclusively with their target group. To that extent the risk of any failure gets confined to a limited client base. However, MFIs working with the extreme poor or in poorer regions, may find it difficult to mobilise adequate savings from the eligible clients. With regard to type of eligible clients, the bill among others, includes small farmers owning land up to two hectares and women in general. The bill seems to have given enough scope to

MFIs to target mainly the economically better-off among the eligible groups and exclude the core poor. Outreach of core poor may suffer unless MFIs are made to proactively target such groups.

Microfinance services: The bill has made an attempt to define microfinance services. Even though the services covered by MFIs include loan, thrift insurance, pensions and any other services, the bill does not explicitly include savings/thrift under the definition of microfinance services. It is unclear as to why the term thrift has been used in the place of savings. The main reason seems to be to encourage the poor to generate thrift on a relatively long-term basis through economical ways. The bill envisages mobilisation of only savings and term deposits by MFIs. In terms of loan purpose, the bill specifies both consumption and production loan (farm and non-farm). Inclusion of grant and loan in kind under financial assistance to be provided by MFIs is confusing. An MFI can sanction loan in aggregate of Rs 50,000 per individual for various production or consumption purposes and Rs 1.5 lakh for housing purpose. While the limits seem to be well within the loans being offered by MFIs there could be difficulties in the case of

deviations in genuine cases. The bill suggests even fixing limitation on the size of savings to be mobilised. The aim appears to be to reduce the risk of failure in absolute terms. Mature groups may find the savings limitation restrictive if they mobilise large savings from the members. At the same time, while members can borrow individually from the MFI but cannot have individual savings account causing inconvenience to individual savers.

Regulatory Norms

The bill has proposed both prudential and non-prudential norms for regulating the MFIs. For core regulation purposes, the bill is considering only those MFIs which want to take up thrift services and exclude credit only MFIs. Exclusion of non-deposit taking MFIs may ease the burden of supervision. However, if there is any self-exclusion by MFIs from regulation, the poor served by those MFIs may not get access to savings services.

Deposit-taking MFIs need to obtain a certificate of registration subject to satisfying conditions like being in existence for three years with a credible management team and with a minimum net owned fund

of Rs five lakh. The existing MFIs offering thrift services too need to obtain the certificate within six months of the enactment of the bill. Among existing MFIs, mainly cooperatives may have to apply for this certificate which is an unnecessary requirement. How far will these provisions be effective in ensuring entry of only credible MFIs? While the requirement of three years of operation might become restrictive for newer MFIs, very small NGOs and cooperatives might find it difficult to mobilise the required entry capital. Many of them may remain unlicensed as is the case with many primary cooperative banks. The entry capital not being very high, the chances of entry of unscrupulous elements cannot be ruled out. The real test would lie in ascertaining the credibility and character of the management. It is here that NABARD may have to exercise due diligence by relying on district development managers and local civil society associations.

The other major prudential norm prescribed is the creation of reserve fund by the MFIs out of their net profit or surplus. MFIs are required to keep aside 15 per cent of their net profit annually to create the reserve fund. The depositors will have the first charge over the assets created out of



V.V. GIRI NATIONAL LABOUR INSTITUTE, NOIDA

(An autonomous body of Ministry of Labour & Employment, Government of India)

Call for Application/Nomination for V.V. Giri Memorial Awards in Labour and Employment

V.V. Giri National Labour Institute (VGNLI), which is an autonomous body of the Ministry of Labour & Employment, Government of India, is a premier Institute for labour research, training and education. Since its inception in 1974, the Institute has been engaged in research, training, education and publication activities to reach all those who are concerned with various aspects of labour, both in the organised and unorganised sectors.

Keeping in view of the mandated objectives of the Institute, it is proposed to introduce a special award, V.V. Giri Memorial Award in Labour and Development, which would be presented to the author of an outstanding research work in the area of labour. The award will carry a cash prize of Rs. 1 lakh and a citation. The theme for first of these awards is "Social Security Measures for Labour with special reference to India".

Scholars are encouraged to apply for consideration of the award by providing details of their contribution in the identified area, along with copies of their published work. Applications/nominations may be forwarded to Director, V.V. Giri National Labour Institute, Sector 24, NOIDA or can be e-mailed to vvgnliawards@gmail.com within 30th September 2007.

The Institute also welcomes nominations from persons other than the scholar, which would also explain the contribution of the expert, in a detailed manner (and preferably with copies of research works under consideration). If it is required, the applicant or the proposer may be requested to furnish more detailed information, regarding the application/nomination.

The Institute and the Committee of Jury hold the right to consider any nomination other than those received through this advertisement. Further, the Committee of Jury also holds the right to consider life-time contribution of experts, if it is found appropriate.

the reserve fund. Is the reserve fund adequate to protect the depositors? This will depend upon the extent of surplus or profit an MFI can generate. In case an MFI is just breaking even or incurring losses it may not be able to create or augment its reserve fund. Besides the fact that the bill has not clearly clarified the charitable nature of the microfinance activity, an MFI might come under pressure to generate profit or surplus. This might force it to shift the additional expenses on to the clients. Also, any inability to create reserve fund may affect its capacity to mobilise savings as the eligible clients may become sceptical of the MFI's ability to protect their deposits. Hence, the level and extent of protection through reserve fund may vary across MFIs. In order to give uniform protection to the deposits of poor households it is required that a suitable and affordable deposit insurance system is put in place. In addition, local monitoring mechanisms involving the clients, may also be necessary.

The bill does not provide any provision for loan losses and for maintaining risk weighted capital adequacy. It seems to be relying on the historical high recovery performance of the MFIs. Since loan default risk is integral to any lending it is necessary that the MFIs make some minimum provision for loan losses. Up to a certain level of loan business and losses, MFIs may be told to make voluntary provision for loan losses. After crossing the prescribed level, MFIs may be compulsorily required to make provisioning. Non-prescription of capital adequacy norm seems to be an appropriate measure given the constraint faced by the MFIs in raising capital on a constant basis.

The rest of the major provisions in the bill relate more to reporting, supervision and punitive measures. MFIs taking thrift are expected to prepare statements of final accounts in specified forms and get them audited by qualified auditors. NABARD may also order a special audit in case of any discrepancy. All MFIs, taking thrift or not, are supposed to file periodic returns duly certified by qualified auditors. NABARD can also order inspection of any MFI and can take action to wind up its operations.

Offences like wilfully making false statement or non-compliance with any norms can attract fine (up to Rs 20,000) as well as imprisonment (up to two years). The bill has proposed making any offence pertaining to payment of savings a cognisable offence under criminal procedure code. The bill also provides for an ombudsman for settling disputes between clients and MFIs.

The bill has designated NABARD as the regulatory agency for MFIs with the responsibility of formulating policies for the development of the microfinance sector. Many doubts have been raised over this. Since most MFIs are civil society-based organisations, their regulation may require a different approach altogether. NABARD as a conventional institution may lack the orientation needed for the purpose and may end up imposing mainstream regulatory norms on these institutions making them lose their inherent strengths. It is argued that NABARD's supervisory and institutional development role with regard to RRBs and cooperatives has not been fully satisfactory. NABARD has even overseen the transformation of RRBs which were created as "small man's banks" into regular banks during the reforms period.

As regulator of MFIs, NABARD might face some conflicts of interest. As a promoter of SHG-Bank Linkage Programme (SBLP), NABARD might face difficulties in promoting the alternate microfinance sector. There have been quite a few incidents where SBLP has entered into conflict with MFIs as both the interventions are vying for the same target group. Another basic conflict of interest relates to NABARD's role as lender v/s regulator. NABARD has launched direct financing of NGOs/MFIs recently. How far would NABARD, an apex lender, veering more towards market-based operations be able to look after the developmental concerns of MFIs? It may require a major effort on the part of NABARD to transcend these conflicts. NABARD also has to enhance its ability to deal with NGO-MFIs including changing the orientation of its personnel to deal with unconventional entities. Ideally, the government should constitute a new regulatory authority which is devoid of the above conflicts.

To guide NABARD, the bill has proposed the constitution of an advisory council called Microfinance Development Council (MFDC). The council consists of representatives from the government of India, RBI, NABARD, SIDBI and the National Housing Bank. Six representatives are to be appointed from outside. Given the fact that only a certain segment of MF sector is to be regulated, the council may find it difficult to address the overall needs of the MF sector. There is only a very limited representation of women on the MFDC.

The bill has proposed the constitution of Microfinance Development and Equity Fund (MDEF) on the lines of an existing

fund. The MDEF can mobilise resources from government and from other entities including donor agencies. The MDEF is to be utilised for the purpose of development of the microfinance sector including providing loan and equity capital for MFIs. Many commercial banks had made contributions to the existing fund with the intention of developing the SBLP. Can NABARD now utilise the fund for development of SBLP also? Available evidence suggests that NABARD so far has not been able to utilise the existing fund fully. The bill also provides for provision of loan or refinance from the fund to MFIs. This is a potential area of conflict. If the fund is meant for development of the sector, how relevant is it to allow NABARD to lend from it? It would be better if NABARD uses MDEF only for developmental and capacity-building purpose. Any loan out of MDEF for institutional developmental purpose should be provided only on soft terms. Further, MDEF can also be used for contribution of equity. However, none of the MFIs contemplated for regulation would require equity in a major way. It is the other form of MFIs, especially NBFCs, which are in need of such equity.

Ceiling on Rate of Interest

A major area of debate which the bill has not touched upon is the ceiling on lending rates of MFIs. It only mentions that NABARD should strive to create the required awareness so that clients are able to get services at affordable cost.

Though cap on lending rate has become incompatible with the current neoliberal policy environment, the issue needs to be understood from a proper perspective. The rate of interest that prevails in the MF sector is higher than that of formal rates which is partly attributable to the high cost structure faced by the MFIs. At the same time, in charging higher interest rate on their loans many MFIs have been driven by the dubious goal of attaining financial sustainability. MFIs have emerged mainly in response to market failure and cannot behave like market-based institutions. It is desirable that the bill suggests prescribing limit to lending rates at least on some reasonable basis given the reality of high cost structure of MFIs. NABARD and the MFIs need to work together in deciding the limit periodically. Simultaneously, efforts should be made to bring down the costs for the MFIs through cheaper refinance and through adoption of various

innovations. In the event of the bill failing to provide for such cap, it is likely that some state governments may take advantage of the situation to prescribe cap on interest rates.

Conclusion

Microfinance is an intervention which has emerged in response to the need to address the challenge of financial inclusion. The entry of NGOs in financial intermediation has to be seen from this angle. Using strengths of social intermediation, NGOs so far have shown considerable potential in contributing to the cause. Formal institutions have failed, and therefore it has become necessary that NGOs are helped in overcoming their constraints so that they are able to play the role of financial intermediation more effectively. The bill's relevance comes mainly from this perspective. The bill aims at creating an enabling provision for the NGOs to deliver microfinance in an integrated way and seeks to achieve this by prescribing relatively liberal prudential norms. However, the bill suffers from quite a few

limitations. The aim of financial inclusion is sought to be achieved only by regulating a narrow set of institutions. The bill fails to recognise the reality that NGOs can play only a supplementary role and that formal institutions need to contribute in a major way for the cause. Further, the bill is institution-focused in nature and leaves out a certain set of MFIs like NBFCs and section 25 companies. On both counts, the bill is a case of "missing the forest for the trees". The other major limitation is the intrusive nature of the bill. It has brought cooperatives into the fold of regulation by wrongly assuming that they lack any legal framework. Also MFIs not accepting deposits have been included for the purpose of inspection and reporting. There is a need for the bill to pay attention to safety of deposits and in ensuring affordable lending rates. Simultaneously, efforts are needed to ensure that the poor and women are able to exercise control and ownership over MFIs. Moreover, the government has to ensure that all the stakeholders are duly consulted before the bill is passed.

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DIRECTOR

Management of Protected Areas

Exploring an Alternative in Gir

Protected areas that are surrounded by a large human population within and outside the sanctuary need to be managed keeping in mind not just the ecological requirements but also the livelihood needs of local communities. While the Wildlife Protection Act 1972 does provide for people's rights within sanctuaries, policies regarding protected areas must encourage a partnership between these communities and government agencies.

AMITA SHAH

Experiences from a number of developing economies suggest that none of the pre-conceived, "blue-print" solutions may work across different protected areas (PAs), though it may have worked in the situations of wilderness [Chopra 1998]. The choice of PA-management approach therefore, has to be in tune with the location-specific situation-ecological, socio-economic-political and financial [Perrings 2000]. Time specificity is also important in this context. The present paper explores the possibility of linking conservation with people's livelihood needs in the context of Gir Protected Area in western India.

Different Approaches

The contemporary debate on PA-management in developing countries consists mainly of the two somewhat extreme positions taken by conservationists and social activists [Saberwal et al 2001]; the former pleads for protection from any kind of human interventions, the later emphasises human rights, viewing local communities as part of the ecology. The legal framework in India, largely following the conservationist approach, seeks to eliminate altogether human sources of biotic pressure. While the approach has made significant contribution towards fostering survival and also growth of wildlife population, it has brought into its fold hostility and conflicts between the "protectors" and the "people" dependent on resources within the PA [Kothari et al 1996; Saberwal et al 2001]. Owing to the "illegal" status, the resource is likely to become unregulated and haphazard thus, leading to greater damage to the PA than otherwise [Pimbert and Pretty 1995]. Increased wildlife population with simultaneous shrinkage of their habitat is yet another feature of the conflict [Kothari et al 1996; Saberwal et al 2001].

Recognising the practical difficulties of enforcement, the legal system in India does provide some space for meeting people's needs from the PA. There are provisions in the Wildlife (Protection) Act, 1972, which allow for the continuation of rights within sanctuaries, and for the activities that are not destructive to wildlife. Recently, the Tiger Task Force [TTF 2005], set up by the government of India, reinstates the inevitability of adopting an inclusive approach that has been advocated by a number of scholars [Shahbuddin and Rangarajan 2006].²

The conservation discourse, of late, has focused on the issue of linking conservation with development of the periphery, which eventually has culminated into the eco-development project (EDP). The central thrust of EDP is to reduce people's dependence on PA-resources by generating alternative sources of

income-employment-awareness towards conservation values, and partnership in development as well as protection efforts [Singh 1994].³ The project however, sidesteps the crucial issue of resource rights and thereby ignores the inequity between local communities and the state [Kothari et al 1996, p 34].

Proponents of the right based approach have suggested the possibility of joint protected area management (JPAM) with the objective of "conserving natural ecosystems and their wildlife, as well as of ensuring the livelihood security of local traditional communities, through legal and institutional mechanisms which ensure an equal partnership between these communities and government agencies".⁴ While the approach is still in the nascent stage, it may particularly be relevant in situations, where PAs have been surrounded by a large size of human population.⁵ The Gir Protected Area represents one such case, having large human population, both inside as well as outside the sanctuary area.

The policies in India have neither tried to assess nor balance, conservation with people's needs [Singh 1996]. Also, there is little recognition of the fact that the reality is generally mixed and constantly changing [Shahbuddin and Shah 2003]. The provisions for resource use are mainly in the spirit of offering concessions rather than recognising rights of the local communities [Kothari et al 1996, p 31]. This has resulted in gross underutilisation of the potential for people's participation and benefit-sharing within the preview of the Act. The two approaches thus, continue to coexist side by side, rather than getting interspersed and integrated into a holistic one. A number of studies, have gone into the issue of coexistence of PA and the people in different parts of the country. Most of these studies however either discuss ecological perspective for conservation or, look into the implementation relocation of people from the PA [Shahbuddin and Rangarajan 2006]. Also, empirical studies, focusing on people's dependence on PA and the conflicts thereof are also limited.⁶ The present paper is an attempt to bridge a part of the research gap.

The paper discusses (a) status of natural resources within as well as outside the PA, and the conflicts thereof; (b) differential dependence on the PA-resources and their perceptions about resource management; and (c) alternative management approach in the light of (a) and (b).

The study is based mainly on primary data collected from a sample survey of households from four villages in the periphery during the year 2001-02. A census was carried out covering 2,763 households in the study villages, which helped in selecting the sample households. The sample households were selected on the

basis of stratified random sampling from three categories, viz; landless, landed with irrigation, and landed without irrigation⁷ (Table 1). Two villages were selected from each east and west divisions of the PA. Whereas one of the two villages in each division is located nearer to the PA (i.e., less than two kms from the boundary), the other village is relatively far off. Supplementary information was also collected through focus group discussions (FGDs) with maldhari (herder communities) households living in four 'nesses' (settlements) within the PA.⁸

Status and Contestations over Resource Use

Located in Gujarat state in the western part of India, Gir is one of the largest compact tracts of dry deciduous forest spread over an area of 1,412.1 sq kms. The PA is surrounded by a peripheral forest of 470.5 sq kms. The area had faced severe risk of extinction of its flagship wildlife species, i.e., the Asiatic lion (*Panthera leo persica*), before it was notified as sanctuary in 1965. Subsequently, a part of the sanctuary was notified as national park in 1975.⁹ This facilitated undertaking a number of conservation measures, resulting in improved vegetation [Pathak 1996], and culminating into successful revival of wildlife within the PA [Singh and Kamboj 1995]. By the turn of the century, wildlife population had overshoot what traditionally used to be considered as "carrying capacity" of the ecosystem.¹⁰

The success could be largely attributed to effective protection and habitat development practices adopted by the forest department. A seminal study by Sharma and Johnsingh (1996) has presented detailed account of the increased vegetation in the PA, suggesting coexistence of the wildlife and the people who continued to live inside the sanctuary after the relocation of a sub-set of the maldhari families since the mid-1970s. Relocation of these families therefore, is not being seen as high priority agenda in the current thinking of PA-management. This section gives a brief account of the status of natural resources and the issues of contestation over their use.

Gir, apart from being the only home of the Asiatic lion and the largest intact stretch of natural forest in the region, assumes special significance because of its tremendous regenerating, self-supporting and sustaining capacity for the rich and diverse fauna and flora [Singh and Kamboj 1995; Pathak 1996].¹¹ Nevertheless, the PA has suffered severe degradation of resources, especially in the post-1980s, owing to natural phenomenon like frequent droughts and cyclone on the one hand, and human interventions on the other. The main features of degradation have been listed as follows:

- (i) About 33 per cent of the area inside the PA is degraded or highly degraded.
- (ii) Proportion of teak in the total timber trees has declined from 45 to 38 per cent due to a devastating cyclone that took place during the early 1980s.
- (iii) Digging of large number of bore wells (for irrigation) resulting in decline in the water table. Similarly large number of waterholes (i.e., artificial sources of water), pose risk of accidents and damage to wildlife. Scarcity of water becomes a major problem for supporting wildlife during summer months.
- (iv) Moderate to severe soil erosion in the PA-area, and water pollution due to increasing use of chemical fertiliser especially, on irrigated crops.
- (v) Encroachment of pastures in the peripheral villages thus,

reducing the availability of fodder to support livestock particularly, among land-poor households.

Degradation of resources is both - cause as well as result of conflicts between the PA-management and the people living within and outside the PA [Chaudhary 2000; Ganguly 2004]. The conflicts get manifested in terms of (a) re-entry of a number of families relocated outside the PA; and infiltration of livestock from the periphery and other regions; (b) overgrazing and selling of farmyard manure, top soil, fuel wood by households; (c) frequent attacks by wildlife resulting in loss of crops and human lives as well as livestock; (d) resentment among people especially in the 23 villages, which have lost the entire pasture land at the time of demarcation of PA-boundary; and (e) accidental as well as intentional fires more or less on a regular basis. This of course leaves out poaching of wildlife, probably by criminal gangs, that may be independent of the conservation-livelihood interface in the region. Overall, this suggests a fairly contentious situation; growth of population, human, livestock and wildlife - in the recent past seems to have aggravated the imbalance between conservation and people's needs.¹²

People's Dependence on Protected Areas and Village Pastures

Presently, about 8,000 people and 11,000 livestock inhabit 54 nesses and 14 forest settlements inside the PA. Systematic estimate of the population however, are not available in the public domain.

Table 1: Benefits and Costs to Maldharis in Gir (At 1994-95 Prices)

Economic Benefits and Costs	Rs Lakh
A Benefits	
1 Fodder	784.48
2 Fuel wood	5.93
3 Timber	4.30
4 Farmyard Manure (FYM)	156.98
5 MTFP	NA
6 Grazing of outside animals	198.12
7 Water, housing, other amenities	NA
Total economic benefits	1147.81
B Loss of livestock (750/year)	112.50
C Total net benefits (A-B)	1035.31

Notes: Based on the information obtained through FGDs with Maldhari households. The estimates are worked out by using average values. Fodder consumption of cow and buffalo was 20 and 25 kgs per day per animal respectively. Fuel consumption per household was estimated @ 6 kg per day. For timber the norm used is 10 cubic meters per household for 20 years. The FYM production per livestock was 8 tonnes per year and the net price received is Re 0.2 though, the market price is Re 0.5. The prices used for fodder, fuel wood and FYM were Rs 1, 1.25 and 0.75 per kg respectively.

Table 2: Distribution of Sample Households among Study Villages

Village	Category of Households			All
	Landed with Irrigation	Landed without Irrigation	Landless and Herder Communities	
Gir-West				
Kenedipur	18	10	15	43
Madhupur	15	10	15	40
Gir-East				
Govindpur	14	10	15	39
Dadli	15	10	15	40
All	62	40	60	162

Source: Primary Survey.

Besides these there are 99 villages in the radius of 5-7 kms from the PA-boundary, inhabiting about 0.2 million people, and about 0.1 million livestock population [Singh 2001].

According to a study by Berwick (1996), the area under Gir-PA could support a total of about 21,000 cattle, and human population of 3.8 persons per sq kms. This suggests that the present population of both human as well as livestock have far exceeded the norms for sustainable resource use. Conceding that the vegetative cover and availability of fodder plus NTFP (including fuel wood) have improved since then, the area could support larger number of human, livestock, and wildlife population as compared to the earlier norms.¹³ In this backdrop, this section presents broad estimates of resource-dependence among people within and outside the PA. The estimates are based on the primary data, extrapolated with the help of the estimates of average production/consumption of fodder, fuel, and other resources per area/cattle/households in the region.

Resource Use among Cattle Herders in Nesses

An exercise was carried out for estimating direct use of PA-resources among maldhari households living inside the sanctuary. Table 1 presents monetary value of the various resources, using average estimates obtained through focus group discussions (FGDs) with these households. As per the estimates in Table 1, value of direct use of forest resources is Rs 114.78 million per annum. Compared to this, the cost borne by the Maldharis is Rs 11.25 million. The net benefit is Rs 103.53 million. Besides the monetary costs, other disadvantages faced by these households are mainly in terms of lack of physical infrastructure, social and economic alienation, and conflicts with the forest department.

The estimates of benefits and cost to the households living inside the PA prima facie, suggests substantial scope for strengthening conservation measures by adopting consultative/participatory approaches. This is particularly important in the light of the fact that, while these people living inside the sanctuary draw upon various resources, they also contribute significantly towards sustenance of the ecology in several ways.¹⁴

Resource Use by People in the Peripheral Villages

Ascertaining the extent and nature of resource use by the people living in the periphery is difficult because the extraction is deemed as "illegal". The estimates therefore, are subject to gross under-reporting by the households residing outside the PA. To resolve this problem we have tried to (a) gauge the broad magnitude of the households reporting use of fodder/fuel wood/other resources from the PA; and (b) generate macro estimates of the resource use based on the average requirement per cattle/households. The estimates are based on the primary data collected through census as well as sample surveys in four villages in the periphery.

Results from the census survey of households provided basic profile of the study villages. It was observed that whereas 44 per cent of the households did not report ownership of land, about 32 per cent did not have any livestock. The average number of milch animals owned by the household was fairly small, i.e., 2.4. The estimate of livestock ownership excludes a large number of livestock that is brought to the region for grazing. The limited

ownership of livestock in terms of coverage of households and average size is a manifestation of the shrinking quality as well as quantity of common property land resources (CPLRs) in the peripheral villages.

Livestock and Fodder

As many as 48 per cent of the households reported that forest (including the PA) is an important source of fodder (Table 3). Of these, 21 per cent obtained less than 25 per cent of their fodder requirement from the forest whereas, 27 per cent obtained more than that. To a large extent, the extraction is likely to be from the PA rather than from the peripheral forest, which is under highly degraded conditions as noted earlier. Since a substantially large proportion of households did not own any livestock the proportion of households accessing fodder from the PA works out to be 32.6 per cent of the sample households. This is fairly substantial given the fact that extraction of fodder from forest (PA) is legally prohibited, hence likely to be underreported.

Alternatively, we tried to assess a more realistic scenario by working out total availability of fodder in the region using the norm of average productivity of 3,000 kg per hectare during a normal year [Tewari 1994].¹⁵ Accordingly the total production of fodder from the PA and the peripheral forest worked out to be around 0.4 million tonnes per year. Against this the estimated fodder requirement for livestock and other herbivores inside the PA is 0.24 million tonnes. This would leave a surplus of about 0.17 million tonnes of fodder to support livestock @ an average consumption of 7-8 kg of fodder per day per animal. The surplus fodder could support around 21,000 large animals (i.e., cow, buffalo and bullock) in the periphery.

Assuming that about 50 per cent of the estimated livestock of about one lakh in the periphery consists of cows, buffalo and

Table 3: Households Obtaining Fodder from Villages and Forest Pastures

Pastures	Proportion of Fodder Obtained			All
	<25 Per Cent	26-50 Per Cent	>50 Per Cent	
Villages	35	23	26	84
Forest**	21	14	13	48

Notes: * Per cent of households owning livestock; **Include forest inside and in the periphery of PA. However, in most cases, the extraction is from the PA, since peripheral forests have lost their productivity due to excessive growing and faulty management practices [Singh 2001:78].

Source: Primary survey.

Table 4: Status of CPLRs in Selected Villages in the Periphery

Details	Ha
Total area under pastures before PA-notification	5386.9
Area covered by PA	1585.4
Area reported as encroached	1015.4
Area under other use/transfer	576.0
Details	No of villages
Currently available for development area (Ha)	2211.0
< 15 Ha	12
16-50 Ha	8
> 50 Ha	9
Status of the village pastures	
Medium-Poor	21
Very poor	4
Not applicable	4

Source: Data collected from revenue records, triangulated through physical verification and discussions with informed persons within villages.

bullocks, there may be 50,000 such livestock in the periphery.¹⁶ This may still leave a substantially large proportion of these livestock that need to be supported through fodder available from crop residue and other biomass purchased through market, in absence of which the livestock remain underfed resulting into a vicious cycle of low quality animal-large size of the stock-overgrazing.¹⁷ Frequent droughts make the situation worse in terms of increased pressure on the PA.

The actual scenario is likely to be more discouraging for, the estimates are based on somewhat favourable assumptions regarding both - productivity as well as requirement of fodder. Overall, the estimates indicate a fairly substantial demand-supply gap for fodder, which essentially may lead to conflicts in the region. Given the fact that fodder from the PA is not legally accessible, the conflicts is likely to be stronger than what is borne out of the above estimates.

Fuel Wood and Timber

Compared to fodder, people's dependence on PA for fuel wood is much higher. It has been observed that as large as 74 per cent of the fuel wood requirement of households in the peripheral villages is being met by fuel collection from the forest or, through market purchase, which again is obtained mainly from the forest. These observations are substantiated by findings from some of the earlier study by Debnath, et al (2001), indicating that nearly 80 per cent of the households in peripheral villages depend on PA for meeting their fuel wood requirements.

Collection of fuel wood however, varies significantly across households, depending on households' capacity to shift to alternative sources like kerosene, cooking gas (LPG), and bio-gas on a long-term basis. While, most of the households in the peripheral villages use kerosene obtained from the ration shop, it provides for only a part of their fuel requirement. Accessing fuel wood, free of cost, from the forest is seen as a viable option vis-a-vis purchasing kerosene from open market.

Table 5: Expectations from PA-Management against Reduced Pressure on the PA

Expectations	Per Cent of HHs*
Collection and distribution of fodder from PA	43.8
Regeneration of CPLRs	39.5
Alternative sources of income-employment	38.8
Improvement in quality of livestock	21.6
Reduction in livestock population	30.8
Protection of village pastures by community organisation	17.9
Fencing for protection from wild life	27.7

Note: Based on multiple responses.

Source: Primary Survey.

Table 6: Support Required for Accepting Stringent Protection Measures

Expectations	Revenue villages (Per Cent)
Adequate employment + self-employment schemes	40
Access to fodder and fuel	22
Pasture development on degraded vilds	3
Measures of agricultural development	4
Allocation of land to landless	8
Settling down the issue of land lost of the PA	7
Distribution of gobar gas plants and LPG	12
Other amenities	2
All response	100

Source: Primary Survey.

As per the general norm, fuel wood requirement in the region is six kgs per household per day. For the estimated number of 33,000 households, the total requirement would work out to be about 72,270 tonnes per year. Assuming that fuel wood constitutes three-fourth of the total requirement of these households, the demand for fuel wood in the periphery would be 54,202 tonnes per year. These estimates are far below the estimated availability of fuel wood of the tune of 0.19 million tonnes per year from the sanctuary area within the PA.¹⁸ It is thus, likely that many of the poor households especially, the landless, have been involved in extraction of fuel wood for commercial purposes (perhaps, in connivance with the more powerful in the village). This phenomenon had surfaced during discussions with different communities while assessing the status of CPLRs, as noted subsequently.

Extraction of timber is strictly prohibited. However there are occasional evidences where people from the periphery indulge into illegal felling either directly or indirectly. It was reported during informal discussions with local communities, that about 5-7 per cent of households, mainly belonging to socio-economically vulnerable groups, in the nearby villages (i.e., less than <3 kms radius) are involved in such activities. At times, poor households indulge in this high risk activity at the instance of those who are resourceful and have political lineage.

Village Pastures: Status and Scope for Regeneration

Degradation of village pastures, as noted earlier, is by far the most important source of conflict in the region. It is particularly severe in the villages that have lost entire or a major part of the CPLRs due to demarcation of PA-boundary. Recognising this, the management plan has laid special emphasis on development of village pastures especially, through the eco-development project. The actual implementation however, is found to be fairly complex.

The major constraints emanate from several of the peripheral villages not having adequate area under pastures (or common property land resources-CPLRs) partly due to inclusion of village pastures in the PA-boundary. Encroachment and overgrazing have worsened the situation further.¹⁹

An attempt was made to gauge the extent of the problem by obtaining information from 29 villages in the peripheral village. It was observed that 18 out of 29 villages have registered a decline in the size of CPLRs; of these 10 villages had lost a part of their pastures due to demarcation of the PA-boundary. Besides these 14 villages had reported at least some area under encroachment; of course, the phenomenon of encroachment is likely to be underestimated due to legal implications. As a result, 12 villages have no or less than about 15 hectares of CPLRs available for development and resource use by the rest of the village community; much of the CPLRs is of poor quality (see Table 4). Shrinking size as well as quality of CPLRs thus, emerged as highly contentious issue in the region.

Management of Gir-PA

The above description highlighted a situation of continued pressure and contestations over natural resources as well as wildlife, notwithstanding the significant achievements of the PA-management in the past few decades. The conflicts often take different forms of violence, mistrust and antagonism between

the protectors and the people. This section tries to explore alternative management plan in the light of people's perceptions about resource management in the region.

Land Use Planning: People's Perceptions

The PA-management has already recognised the need for land use planning on a regional basis, which in turn, would necessitate appropriate structure of incentives and restrictions on resource use by different categories of households. In what follows we present some of the important observations on people's perceptions about PA-management and expectations thereof by focusing on three aspects of land-use viz; regeneration of CPLRs; changing crop-mix and thereby use of ground water; and shifting of maldharis from interior to areas nearer to the PA-boundary. (a) On CPLRs: Our field study indicated that whereas access to fodder resources is the most important expectation, followed by regeneration of CPLRs, collective action for protecting the CPLRs was considered the least important, given the degraded status of the pastures (see Table 5). The major challenge is to remove/reduce the encroachment on these resources. This, of course is difficult as has been widely observed in the case of similar interventions like watershed or eco-development projects in different parts of the country [Shah 1998].²⁰

There was however, a fair amount of consensus among households on the issue of conservation and ecological sustenance in Gir. We tried to ascertain what kind of support/compensation would be required by the households if, the protection mechanism is to become more stringent. In other words, we tried to capture people's willingness to accept a stricter ban on the use of PA-resources. The most important expectations, presented in Table 6 suggest that increased opportunities for income-employment topped the list (40 per cent), which is followed by assured supply of fodder and fuel wood (22 per cent), and then by access to alternative sources of fuel such as gobar gas plants, LPG etc, (12 per cent).

Though not entirely new the responses suggest two important aspects. First, people do value conservation of ecosystem and the need for conservation as well as protection measures. And second, in absence of adequate support for fodder and fuel from the village pastures, the households may continue their partial dependence on the PA, notwithstanding their awareness about need for conservation. It is in this context that a holistic, rather than a compartmental approach for regeneration of pastures within and outside the PA becomes critical, where resources within the PA may provide the requisite leverage for mobilising collective action for development of pastures in the periphery. (b) On crop-land: Another issue pertains to exploring possibilities for changing the crop-mix and at the same time increasing productivity of bio-mass, a part of which could help bridging the supply gap for fodder. An attempt was made to examine these possibilities by comparing the relative net benefits from crops and farmers' perception about willingness to shift to alternative cropping pattern (from water intensive crops such as sugarcane, cotton and wheat to the conventional crops like mango, groundnut and fodder) along with expected policy support. This was ascertained in the light of depletion of ground water table, reported by a large number of households.

The results indicate that whereas a large majority of the farmers had shown reluctance towards changing the crop-mix, mainly on the ground of loss of income, several of them were willing

to adopt technologies for improving water use efficiency (Table 7). While this is important, the need is to simultaneously address the issue of soil water conservation (SWC) in the upper catchments of seven the rivers originating from the PA. Absence of adequate measures for SWC inside the PA has led to an ironical situation wherein fields in the periphery have rich vegetation whereas land inside the sanctuary area is facing severe water shortage. The imbalance in availability of water and vegetation may give further impetus for human-wildlife conflict.²¹

(c) Shifting of maldharis: The scenario pertaining to Maldharis is somewhat fluid, as infiltration of human/livestock population had continued for long, mainly due to inadequate/inefficient policies for resettlement of maldhari households in the past. According to Choudhary (2000), 269 out of the 592 households resettled outside the PA during the seventies, had re-entered the PA. Similarly, infiltration of livestock into the PA is fairly common, especially during droughts. Also there is little by way of information on the number of households and their livestock, besides their legal status, in the public domain. All these hamper meaningful consultations and effective solutions for PA-management.

Given the fact that contemporary policies discourage involuntary relocation, the strategy in Gir-PA is to maintain the status quo. There is however, a move to shift maldharis households from more remote to areas in proximity of the PA-boundary [Singh M 2001]. This, apparently, creates a "win-win" situation where the households continue to enjoy privileges of being inside the PA, and at the same time, access benefits of markets, connectivity and other amenities available outside the PA. It is expected that these households may eventually accept the option for moving out, once they get used to the advantages of the "modern" lifestyle outside the economy. The initial response was found to be positive. Nevertheless, it could be short-lived, if the households do not find substantial improvements in access to resource outside the PA.

The need is to adopt a twofold approach whereby incentives for maldhari households resettled outside to re-enter the PA is reduced, and at the same time disincentives in terms of better compliance for regulated use of resources is increased.

Alternative Management Scenario

The foregoing analysis highlighted critical importance of improving vegetation in order to simultaneously address the twin objectives of ecological regeneration and livelihood support. The next stage of PA-management therefore, poses a new set of issues and challenges such as: (a) habitat management which is conducive for the flagship wildlife species; (b) regeneration of vegetation that could sustain wildlife and also people's needs;

Table 7: Farmers' Perceptions about Changes in the Cropping Pattern

Reasons for Not Changing the Crop-mix	Per Cent of Landed HHS
Uncertainty of income	51.9
Increase in cost	12.7
Susceptible to pest, hence increase in cost	58.8
Low forage value	16.6
Not suitable for soil or soil degradation	36.3
Other	22.5
Total no of responses	203

Note: No of respondents = 102.
Source: Primary Survey.

(c) sustainability of resource-use; (d) institutional mechanism for sharing of resources; and (e) effectiveness of the protection measures. These are closely inter-related, hence should form parts of holistic approach where the objective function should be to generate surplus resources, a part of which can be used for enhancing livelihood of the people while ensuring ecological sustainability.²²

The forest department has already worked out second phase of the management plan, envisaging special focus on regeneration of pastures, and significant expansion of the home range in order to sustain a population of about 500 lions [Singh and Pathak 2000].²³ While the need for regional planning, based on watershed development, is well recognised among policymakers, the requisite legal, administrative, and financial support is difficult to mobilise. Equally important is the issue of recognising people's stakes not only in management, but also in resources in the region. Adequate data-base in public domain also assume crucial importance in this context.

The official thinking, as noted earlier, has been to tighten legal restrictions on resource use, and at the same time expand the area for territorial and ranging requirements of wildlife in the PA.²⁴ Alternatively, approach like eco-development project may create institutional-base for negotiating incentives and reciprocal commitments for conservation by the village communities. But, an approach like this may work only if it ensures a long-term process of conservation-induced development, rather than a settling down of people's stakes against one-shot compensation. The approach may also require regulated use of the forest resources, especially from pastures, for promoting protection and regeneration of pastures in the periphery.

The following aspects may deserve special attention while moving in the direction of a comprehensive approach discussed above:

- (1) Ensuring fodder supply initially from the PA, and subsequently from peripheral forest may work as an effective strategy to kick off the process, and eventually break the vicious circle of degradation and conflicts over resource use.²⁵ This would imply treating the CPLRs within and outside the PA as integrated resource. Involvement of professional-developmental agencies for managing fodder supply within the broad framework of sustainable regeneration and use, may be explored.²⁶
- (2) A fresh look at the conditions of maldhari households that have been resettled outside the PA is of critical importance. Long-term engagement with communities within and in periphery of the PA, is inevitable. Exploring area based approach and collective action for development of land water resources, especially for management of fodder supply deserves special attention.
- (3) Appropriate measures for soil water conservation in the catchments within the PA. Coordination with watershed development projects, funded by other departments/programmes would help in overcoming financial obstacles, and at the same time, avoid duplication
- (4) Provision of subsidy and other incentives for changing the crop-mix from water intensive to water efficient crops. Since the transition involves a long gestation period, besides substantial support in terms of technology and markets, a special task force may be set up for facilitating the shift.
- (5) Setting up of community based institutions for facilitating planning, implementation, and compliance of the norms for resource use and payment of subsidies/compensation. While the EDP was to evolve an institutional mechanism for negotiating

incentives and compensatory commitments for reducing pressure on the PA, the actual experience was not so encouraging.²⁷ Involvement of civil society organisations, committed to the dual objectives of conservation and sustainable livelihood, may help especially in creating multi-stakeholder platforms for sharing of information, negotiating costs and benefits among different categories of households, and above all, promoting the cause of ecological sustainability.

A comprehensive approach suggested above is based on three basic principles: First, soil-water conservation assuming top priority. Second, a more balanced allocation of water-resource within and outside the PA. And third, using a part of the regenerated resources from PA, as incentives for reducing unregulated pressure on the forest. This suggests need for adopting area-based approach. This may provide adequate leverage for negotiating and balancing ecological and livelihood needs within the region.

Summing Up

The central argument of the paper is that participatory approaches, at best, may yield only limited results unless the management approach comes up with a holistic view of the interface between ecological and economic services emanating from the PA. This would call for going beyond the existing legal framework. Since people's livelihood dependence on forest varies across households owing to differential socio-economic and political characteristics, it may open up avenues for negotiations and, at times, cross subsidisation among different groups within the village communities. Institutional arrangements would have a central role to play while adopting an inclusive approach for PA-management.

While the present management plan has already recognised critical importance of regeneration of resources within and outside the PA, interdependence between the two and its implications for mobilising people's commitment towards protection of the PA need to be clearly spelt out. Centrality of soil-water conservation in the upper catchments of watersheds (i.e., inside the PA), as a precondition for regeneration of village pastures in the periphery, needs to be strengthened further. Similarly it is essential to acknowledge the fact that overlooking people's stakes, and being blind to their livelihood need, may perpetuate over-exploitation of resources by people, at times, in connivance with the protectors. Lack of transparency may aggravate the situation of mutual distrust.

Pooling of resources from pastures within the PA as well as in the peripheral villages is important for bridging the demand-supply gaps in fodder and fuel wood. This may provide effective leverage for renegotiating people's stakes on the one hand, and commitments for compliance to regulate resource-use, and eventually reduce pressure on the PA. Setting up appropriate legal-institutional arrangements is crucial. This would call for identification of appropriate incentives and restraints in the light of a more detailed assessment of people's livelihood base, and their dependence on the PA within a regional setting.

There cannot be any blueprint for participatory approaches nor, could it work within the stipulated time frame of four or five years. Nevertheless, one could reiterate some of the important elements of an alternative approach, which is essentially dynamic, interactive and above all, based on a minimum amount of mutual

trust between people and the PA-management. A critical missing link that needs immediate attention is creating a space in public domain for exchange of information, negotiations, and informed decisions. [27]

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Notes

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- 1 The preservationist approach has been further critiqued for perpetuating the myth of pristine areas devoid of human life. It is argued that the approach is "premised upon an equilibrium model of bio-diversity, which suggests that natural systems being finely, delicately balance, are easily destabilised by human interventions" [Bhattacharya 2001]
- 2 The TTF discusses at length the coexistence agenda, going beyond the monolithic view of relocation of people.
- 3 The underlying rationale of the eco-development project (introduced mainly by the Global Environment Facility and World Bank), is to promote development in the periphery so as to be able to protect the core of forest as well as wildlife within the PA [Munasinghe and McNeely 1997].
- 4 For further details see, Kothari et al 1996, p 26.
- 5 This however, is only a second best solution if viewed purely from the viewpoint of conservation.
- 6 For details of the studies focusing economic aspects see, Badola and Hussain (2003); Dayal (2006); Ghate (2005); Karanth (2005); Kabra (2006).
- 7 A quota of 40 households were selected using stratified random sampling from three categories, viz, landed with irrigation (15); landless without irrigation (10); landless and cattle herders (15). Whereas one household in the category of landed with irrigation had to be dropped during analysis due to incomplete information, the sample had exceeded the quota in another village, fairly close to the PA.
- 8 The paper draws upon the larger study carried out by the author under Environmental Economics Research Committee, supported by the Ministry of Environment and Forest, Government of India and The World Bank, Indira Gandhi Institute of Development Research, Mumbai. For details see Shah (2003).
- 9 The history of protecting lions from the potential risk of extinction goes back to the commendable efforts made by the princely state of Junagadh, home of a part of the Gir forest. For details see Chavada 2006.
- 10 According to the official estimates, population of lion in Gir and Baroda, another home range in the area, was around 300 in 2001. By 2005, the population seems to have increased to 500 though the estimate is subject to debate [ToI 2005]. Significant increase in the lion population has led some experts to recommend shifting a part of the lion population to alternative location, e.g. in Madhya Pradesh. Alternatively, the forest department of the Gujarat state has pleaded for obtaining "protected" status to the adjacent area, constituting extended home range of lion [Singh-2001].
- 11 Some of the important features are: highest concentration of the top carnivores, and probably single largest population of marsh crocodiles in the country of forest cover (about 900 sq kms) with crown density of over 10 per cent, which includes 17.3 millions of timber trees; catchments of seven near perennial rivers, and providing watershed services to the peripheral areas; promoting agricultural prosperity by feeding into seven medium irrigation schemes; large tracts of pastures, within (about 400 sq kms) and outside the PA (about 84 hectares per village), supporting about 50,000 MT of fodder to (partially) support over a lakh of livestock, especially, during droughts [Singh and Kamboj 1995].
- 12 See for details, Narayana (1996); Oza (2005).
- 13 The issue has surfaced in the wake of the current debate on poaching of lions in Gir. Also see, discussion in Tiger Task Force, on keeping large tracts of forest as inviolate areas, and also about large tracts

- of 'multiple - use' areas for peaceful coexistence [Karanth 2005].
- 14 Two important aspects are noteworthy in this context. First, grazing of livestock with a well laid out seasonal rotation helps sustaining bio-diversity of grasses; this may also help reducing the incidence of forest fire, which has a high probability of occurrence under the dry-hot weather in the region. Another ecological function is that of keeping up the chain of herbivorous species, in absence of which, damage to agro-ecological system may have been more severe. The issue however, has remained debatable.
- 15 There is no systematic assessment of the productivity of different categories of pastures in and around the PA. These estimates have been obtained by assuming that: (i) about 460 sq kms of area inside the PA is degraded or highly degraded with negligible fodder production; and (ii) 50 per cent of the remaining forest area within as well as in the periphery will have the stipulated level of average productivity, i.e., 3,000 kgs ha.
- 16 This is reconfirmed by the estimates obtained from the primary survey, suggesting an average of 2.4 milch animals plus bullock per household. The peripheral villages have estimated number of about 33,000 households. Assuming that 32 per cent of the households do not own any livestock, the number of livestock owning households reduces to about 22,400. The total number of large animals other (i.e., cow, buffalo, bullock) thus works out to be around 54,000 using the estimated average of 2.4 per household.
- 17 It is estimated that the crop residue may support roughly 19-20,000 large livestock, which may still leave about 10-13,000 such livestock and the remaining 46-50,000 small livestock (mainly sheep and goat) that need to be supported by the biomass resources within the region.
- 18 For details see Ali (1990).
- 19 Unfortunately, the data pertaining to encroachment as well as degradation are neither available, nor possible to generate because of the severely contentious nature of the problem especially, in the case of encroachment.
- 20 It was observed that in most of these villages Eco-development project had succeeded mainly in terms of extending financial support for development of private property such as land and irrigation, besides providing help for getting alternative devices for fuel, building material, or farm inputs.
- 21 Recognising the conflicts over use of water, Pathak (1996) noted that "during periods of scarcity, livestock assisted by more intelligent keepers, tend to use the maximum water and fodder resources, marginalising the wild ungulates" [p.231]. While the issue is debatable, increased population of lions has certainly resulted in increased incidence of straying on the side of the vegetative river bank or crop fields.
- 22 Recent literature highlights a wide range of management approaches to deal with the issues of the functional relationship between parks and agriculture on the one hand, and competition between wildlife and livestock on the other.
- 23 Regional planning will call for ecological development in the entire region. This in turn would require significant increase in fund allocation. Besides this, there are serious difficulties in seeking inter-departmental coordination for implementing pasture development plans prepared by the forest department. Linking up with the ongoing schemes for watershed and wasteland development thus becomes essential [Singh 2001].
- 24 It is contemplated that the expanded home range would spread over 16 instead of three blocks at present. This would imply impacting larger human as well as livestock population in the region.
- 25 An important apprehension among the practitioners is that participatory approaches, in absence of adequate experience, may lead to unrealistic expectations from the people. Nevertheless, recognising the need for taking care of the genuine needs of the people through initiatives like EDPs, it is recommended that participatory approaches should be tried out first in local degraded ecosystems [Pathak 1996; p.232].
- 26 This is important because depending on regulation and restrictions alone may lead to conflicts, corruption and over-exploitation. At the same time too much of emphasis on people's participation may lead to neglect of some of the basic functions of conservation, habitat management, and long-term sustainability.

- 27 In actual practice the focus was to trade-off resource extraction from the PA against one time assistance in the form of cooking gas; building material; fencing to the crop-fields; deepening of privately owned irrigation-wells; and at times, construction of check dam or plantation on community land, etc. Since most of the benefits had accrued on individual as against community basis, the larger vision for moving towards a sustainable land use - within and outside the PA - is seldom addressed.

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Global Civil Society and Global Justice

Global civil society organisations in their quest to ensure global justice for the deprived, the marginalised, and, especially, the victims of globalisation, have succeeded in drawing the world's attention to an impressive extent. However, the imperatives of global justice must configure the presence of the other essential factor that can ensure a just world: democracy. In their endeavour to seek justice and to "speak for" the victims, civil society organisations must also extend to their subjects, the voice to express and shape their own agenda.

NEERA CHANDHOKE

What would global civil society (GCS) look like if we were to conceive of it visually? It would probably appear as a gigantic marketplace in which various ideas, projects, causes, issues, campaigns and movements are on offer, the space of per chance limitless political options, and the sphere in which activists and democrats can choose which particular mast they would like to hoist their flag onto. A word of caution may be necessary at this point: like any space in which multiple projects unfold, global civil society is both plural and contested. Not all projects sit comfortably with each other, many speak past each other, others jostle with each other, and yet others are involved in struggles for hegemony. The politics of GCS is about the politics of affirmation as well as that of conflict-ridden encounters, the politics of solidarity as well as that of confrontation. Here we see protests against globalisation as well as struggles that seek to render globalisation softer. Kaldor, for instance, accepts that only a few of the protestors at the by now famous "battle for Seattle" were actually against globalisation; the others wanted to reform international trade and financial institutions as well as make them accountable.¹ And the same phenomenon is echoed at various World Social Forums. "Another world is possible", goes the slogan. However, according to one newspaper report, "delegates bristle at the

WSF being called the 'anti-globalisation meet'. They argue that they are not meeting here to register protests but to work out concrete proposals that will be superior to what will be floated at the New York meeting of the World Economic Forum (WEF).²

But this is what the generic concept of civil society is about; civil societies possess no one attribute, no one core, and no one moral disposition. Civil societies are spaces which house a mélange of different projects. This may be the strength of civil society; it is also possibly one of its major weaknesses. For if the forte of civil society is openness and accessibility, then can we assume that everything that is good makes it way into civil society, and that other not so desirable projects are barred entry? I am reluctant to believe this, much as I would like to, simply because some of the most odious and openly fascist comments against religious minorities in India, are to be found in cyber-networks which bring non-resident and resident Indians together in the politics of resentful and angry majoritarianism. And that global networks also connect patriarchal, racist, and "terrorist" groups is not unknown.

In other words, there is nothing intrinsically democratic about civil society. Civil society has to be rendered democratic in and through sustained engagement with undemocratic groups. It is this precise understanding of civil society; as a deeply contested domain that had been foregrounded by Hegel. For Hegel, the

inhabitant of civil society is the "concrete person who is a totality of wants and a mixture of caprice and physical necessity".³ Here, emancipated from familial bonds, men tend to follow their own gratification and behave selfishly. The project of civil society can easily be wrecked. Yet modern bourgeois society provides the means of its own redemption. In the course of the actual attainment of selfish ends...there is formed a system of complete interdependence, wherein the livelihood, happiness, and legal status of one man is interwoven with the livelihood, happiness, and rights of all.⁴ This countervailing tendency in civil society enables universality to moderate and prevail over rank selfishness. But this principle of universality, suggests Hegel, is implicit rather than explicit, implied rather than articulated and recognised. It, therefore, needs to be consolidated and institutionalised through a system of mediations. The space for the reconciliation between distinct and even incompatible projects of particularity and universality is civil society. For these reasons civil society is the theatre of history.⁵

Let us, for the argumentative moment at least, wish away the uncomfortable fact that "actually existing" global civil society is not only plural but also polarised and disconnected, and hoist our particular flag onto campaigns for human rights, humanitarian aid, anti-war, anti-nuclearisation, anti-poverty, and anti-authoritarianism, all of which seek to deepen democracy. These campaigns (I am reluctant to term them social movements because the groups involved in these campaigns do not politicise people or search for a mass base) can be considered to be democratic, but considering that practices often, if not invariably, deflect from the text, should democrats not be engaging with this activism from the vantage point of the concept of democracy? This of course begs the question: what exactly are we speaking of when we speak of democracy? And what is the vantage point that our preferred version of democracy brings to bear on the evaluation of global civil society? I deal with this question in the latter part of the paper, here let me hasten to add that to critically engage with the practices of global civil society from the perspective

of democracy, howsoever partial this perspective may be, is not to suggest that we would be better off without activism in this sphere and of this sphere. Much of this activism has made the world less horrid, less exploitative, and less gloomy for the inhabitants of the south.

However as Gramsci had warned us, whereas civil society is a necessary prerequisite of democracy, actually existing civil societies do not always promote democracy. Gramsci had argued that the state institutionalises invisible, intangible and subtle forms of power through multiple social practices in civil society, through educational, cultural and religious systems and other related institutions for instance. Political society disciplines the body through its penal codes and prisons, but civil society disciplines the mind and the psyche.⁶ For this reason, civil societies, particularly global civil society which exerts so much influence over us, have to be appraised from the perspective of what the basic presuppositions of democracy are. This is what this essay seeks to do.

1 Global Justice and Global Civil Society

The concept and the practices of global civil society have been in much of current literature, associated with globalisation, global governance, and cosmopolitan democracy.⁷ I would suggest that the deeper logic that informs activism in global civil society is that of global justice. Why would activists and international NGOs (INGOs) spend much of their time and physical and mental energy struggling for justice for the worse off in remote parts of the world, unless their activism was inspired by a deep sense of obligation towards the impoverished, the oppressed, and the marginalised? Certainly the rich conceptual domain of global justice cannot be reduced to the practices of agents in GCS. In any case, practices prove a poor measure for engagement with theory, simply because practitioners seldom stick to the script authored by reflective and critical philosophers. Yet engagement with these practices might conceivably aid us in adding some, perhaps significant, footnotes to these theories. Undoubtedly these footnotes might not appear all that significant to philosophers who are involved in the time-consuming and back-breaking task of trying to summon up a more just world. But as a fellow traveller, who is

simply fed up with excessive theoretical concentration on closed and claustrophobic ethnic communities as an alternative to the depredations of the nation state, and who is in search of wider horizons of human commitment, I might just have the right to add such a footnote. Let me at least try.

Though the concept of global justice has been approached from different perspectives, philosophers generally agree on the following three interrelated and overlapping propositions. One, that our commitments to others cannot be confined to members of our own national community, simply because national borders are arbitrary and therefore morally irrelevant. Besides in today's globalised world, our lives in some way or another touch the lives of people who are the unknown and perhaps the unknowable. As O'Neill argues, each of us pursues our interests and goals in full consciousness that others do the same, within the space of shared practices and specific institutions. Our pursuit of interests is, in part, based upon the actions of others insofar as we are dependent upon them, because we formulate our goals and our tasks and our expectations of beings in the context of other human beings. In a world of global interconnectedness, the scope of the actors we implicitly assume in many of our actions is global. Our actions are conditioned by and contribute to institutions that affect others, and their actions contribute to the functioning of institutions that affect us. "In our world, action and interaction at a distance are possible. Huge numbers of distant strangers may be benefited or harmed, even sustained or destroyed, by our actions, and especially by our institutionally embodied action, or inaction. Perhaps we have obligations not only to nearby but to distant strangers, or rights against them. Many people – let us call them (loosely) cosmopolitans – think that we have such rights and obligations, and that justice extends beyond borders".⁸ Because our actions assume others as conditions for our actions, we have made moral commitments to these persons.

Secondly, as Pogge⁹ in great detail and to great effect has told us, transnational social structures, which govern the multiple transactions of an interconnected world, are heavily tilted in favour of the already advantaged and against those persons who are already disadvantaged. Since the central idea of moral cosmopolitanism is "that every human being has a global stature as an ultimate unit of

moral concern," those of "us" who are committed to justice, would do well to try and rectify these wrongs. This can be done in two ways, by (a) critiquing unjust global arrangements, and (b) by recognising our obligations to those who suffer the consequences of this highly inequitable world order. Thirdly, it is time that the principles of justice, originally designed for national communities are extended to people across borders.¹⁰ In short cosmopolitan philosophers argue that there is a deep asymmetry in the global sphere inasmuch as some people are rendered more vulnerable to coercion, domination, and deprivation by structured relations. Whereas everyone in the system of structural and institutional relations stands in circumstances of justice that give them obligations with respect to all the others, those who are situated in positions that allow them to do more to ameliorate the conditions of the vulnerable, should do so.¹¹

I think these formulations have wrought a marvellous transformation in the way we conceive of our relationship to others, who might well be the unfamiliar, the unknown, and the potentially unknowable, but to whom we are connected in various ways, by globalised structures of production and reproduction of material, symbolic, and cultural goods, and by unfair structures of international institutions which favour the already fortunate and disfavour the already unfortunate. Our obligations to others stem from the fact that we are unable to conceive of ourselves, our projects, our values, in abstraction from other human beings wherever they may be situated in terms of national communities. The problem, however, is that some human beings are unable to pursue their own projects. They are condemned to, at the most, aiding other persons when they seek to realise their own projects.

Let me put this point across in another way. We value human beings, simply because human beings are capable of making their own histories, even if the history they make is not the one they chose to make in the first instance. But numerous human beings are simply not in a position to make their own histories; they are but compelled to provide support structures that enable other privileged human beings to make their histories. Think of ill-paid children and women who work in unhygienic and badly lit sweat shops in the metaphorical "Third World". Their life job is to help others – the owner of the sweatshop who wrecks a profit out of

cheap child labour, the trader who exchanges products for a profit, and the shop owner in search of profit – realise their own life plans. What do we owe these human beings, what do we owe undernourished children who work in the export-oriented carpet factories of India because the owners of these factories refuse to employ adults? What do we owe families of farmers who have committed suicide in India in the last two years because the state bound by a global contract not to subsidise farmers in the third world, has drawn back from its obligations to the rural poor? And what do we owe workers in the abusive, revolting and dehumanising informal sector, who fulfil the desires of customers at home and abroad for designer items?

There are two ways in which we can answer this question, and both these ways are not exclusive of each other. We could argue, firstly, that those who are in a position to make their own histories, or at least those who benefit from the ways in which our collective histories are made, are obliged to those who lose out because (a) the latter are unable to make their histories, and (b) because they have lost out in the collective histories that are produced and reproduced in and through a myriad of transactions, some material, others symbolic, and yet others midway between the material and the symbolic.¹² Secondly, we could believe, with some justification, that our life job is to think out the ways in which the victims of history can realise agency, so that they can speak back to a history which is not of their making. Though the two resolutions of this question are not exclusive and unconnected, I suspect that the main thrust of global civil society activism lies in the answer to the first question, and pays scant heed to the latter. There may be very good reasons for this choice, I am here more concerned with the implications of this choice. One of these implications is that a preoccupation with obligations can crowd out other dimensions of the human condition. These dimensions are best discerned through an inquiry into the practices of global civil society.

II Consolidation of Global Civil Society

Global civil society has heralded, according to many scholars, a major shift in world politics in a number of ways.¹³ For one, by mobilising against multilateral institutions in particular, and globalisation

in general, international NGOs who tend to dominate global civil society have foregrounded the tremendous imbalances of the world system. The most dramatic manifestation of global civil society was to appear in what came to be known as the "battle for Seattle". At the end of November 1999, massive protests involving some 700 organisations and about 40,000 students, workers, NGOs, religious groups, and representatives of business and finance brought the third ministerial meeting of the World Trade Organisation (WTO) at Seattle to a shuddering halt. The WTO was prepared to set in motion a new multilateral round of trade negotiations. But collective anger at the relocation of industries to the south, at the unsafe and abusive work conditions in the factories and sweatshops found there, at environmental degradation, and at widespread exploitation, which exploded in a series of angry demonstrations, brought this to a stop. These demonstrations were hailed by some scholars as "globalisation from below" or as the herald of a new internationalism.¹⁴

There were two aspects of the "battle for Seattle" that proved significant for the consolidation of global civil society. First, for the first time hitherto single-issue groups coalesced into a broad-based movement to challenge the way the world trade and financial system was being ordered by international institutions. Second, whereas in the late 1960s protest groups in the US and in western Europe had targeted the state, at Seattle they targeted global corporations and international economic institutions. The protests themselves bore the mark of collective ire and resentment at the way in which globalisation, which had been set in motion two decades earlier, had intensified inequality and injustice. And matters did not stop here. Mass protests have become a regular feature of annual meetings of the WEF, the IMF, the World Bank, and the WTO.

For instance in July 2005, angry anti-globalisation protestors fought a running battle with the police, as the G-8 or the leaders of the richest nations gathered in Gleneagles for the purpose of tackling poverty in Africa. Several activists attacked shops and businesses that they saw as symbols of unbridled globalisation; and others accused leaders of the developed world of exploiting the issue of poverty to improve their own images. Hundreds of protestors planned to lay siege to the venue of the summit, even as Bob Geldof, the pop celebrity who spearheaded the

campaign, vowed to snatch victory for the cause. The meet was presaged by concerts to focus attention on the persistence of poverty in the countries of the south particularly sub-Saharan Africa. A web site, www.g8rally, allowed people to participate in an online protest. By the first day of the meet on July 7, 2005, more than 65,000 people had signed the protest circulated on the web site.¹⁵ From June 6-8, 2007, even as the leaders of the G-8 met in Heiligendamm, Germany for the annual summit, a series of protests, which had swept the world in the months leading to the meeting, threatened to wreck the meet. The venue of the meeting was closed off to the outside world, and no one could approach it by air, sea or land. Novel methods and vocabularies of protest against unjust processes of globalisation have captured the attention of the international media, and generated considerable excitement at the idea of renewed political activism. And the phrase "global civil society" has become an integral part of political, corporate, and technical vocabularies.

The other issue that has been catapulted onto the global agenda is that of norm setting. Traditionally, states, holding aloft the banner of sovereignty and state security, have resisted any intervention by outside agencies in matters concerning their own citizens. Today global civil society actors act as guardians of a morally informed consensus on the minimum that is due to human beings, across borders. For this reason alone, global civil society agents, particularly INGOs, have acquired tremendous legitimacy and authority as upholders of a moral canon¹⁶ against power hungry states and profit-driven markets. It is not surprising that when global human rights organisations speak, the rest of us, particularly those of us who live in the south, listen. When these organisations suggest (through non-targeting) that human rights are alive and kicking in our part of the world, we are reassured. And when human rights INGOs testify that violations of rights have taken place in a particular country at a particular time, the government of that country has reason to quake. And it should quake, but that is not the issue at hand.

The issue at hand is a different one. Activists in global civil society claim to "stand in" for the inhabitants of worlds scarred by exploitation, poverty, and ill-being, and claim to speak for their interests. It would definitely be churlish to dismiss these claims, but perhaps we as democrats concerned about the moral

standing of persons in conceptual and moral frameworks, need to ask this particular question: what is the status that is accorded to persons whose needs and interests are being represented in global civil society? After all INGOs more often than not have their own ideas of what should be done and how should it be done, what constitutes a human rights violation and what does not, how environmental issues need to be tackled, and how women and other marginal sections should be empowered. INGOs more often than not have their own pre-programmed agendas, they more often than not speak a highly specialised language that may well be incomprehensible for the inhabitants of the very worlds which they "speak for", and they definitely have their own ideas of what is politically permissible and what is not. Do persons whose needs are being "represented" have any voice in the forging of these agendas?

On the contrary, human beings who have experienced injustice in their daily lives are perhaps denied the opportunity to frame their responses in their own terms, on their own ground, and in their own languages, simply because the political initiative has been hijacked by often bureaucratic and well-organised INGOs. To phrase the point starkly, associational activity at the global level tends to acquire a life of its own, a life that may well be quite distinct from the everyday lives of persons who do not speak but who are spoken for. People are arguably disempowered rather than empowered when highly specialised, professional, civil society actors tell them what is wrong with their daily existence and how they should go about resolving the problems of their collective lives.¹⁷

Admittedly, some global civil society actors have initiated novel ways of bringing the problems of everyday existence of poor and impoverished people of the third world onto international platforms, and propelling them into the glare of the media spotlight. But can all this substitute for an activity we call democratic politics? This question of course begs another question, what is democracy about? Let us briefly turn to the idea of democracy to see what is being missed out in the general euphoria of global civil society.

III The Idea of Democracy

Democracy is of course the elusive concept in the vocabulary of political theory; the veritable will o' the wisp, which

defies most endeavours to pin it down in either neat categories or definitions. Focus on minimalist conception of democracy; that democracy establishes peaceful procedures for the transfer of power from one set of elites to another, and we are confronted with the troubled question – is that all that there is to democracy? Is it enough that citizens come out of their homes, their workplaces, and their recreational spaces to vote for their preferred representatives once in five years, and then withdraw from the public realm? Or we can argue that substantive democracy is about equality and freedom, rights and justice at every site of human interaction, whether the household, the workplace, or social associations. But then, what is so distinctive about the field, the activity, and the project of politics in the democratic mode?

Though, always, the fuzzy line between politics in the public domain and politics in the private domain, has been successfully challenged by feminists, as well as those who confront social marginality in the form of race, class, or ethnicity, arguably the rules of every activity in society are set by an activity the ancient Greeks called "political".¹⁸ For unless the political sets appropriate rules, workplaces or the family might not have a whiff of a chance to achieve democracy. Correspondingly, it is at the site of the political that particular and discrete projects of a society are able to realise coherence.

Let me phrase the point this way; a given society consists of a number of distinct projects, say, the household, the economy, the public sphere of civil society, and culture. But society is not a sum of these distinct projects; it is not an additive entity, simply because the political lends unity to projects marked by different sorts of activity. This is because the political provides a broad framework for these activities. Various projects are rendered coherent because political activity seeks to (a) unearth and hold up for inspection rules that govern the social whole, (b) interrogate and engage with these rules if necessary, and (c) move towards the forging of new rules that are just, precisely because they are oriented around normative values such as freedom, equality, rights, and justice. Conversely, the process of sighting rules, interrogating them, reworking and constituting new rules grounded in justice, freedom, equality and rights, is what constitutes the political in a democratic mode. The search for new rules, which are politically feasible as well as normative, sets the

frame for other activities: social, economic, cultural, and even personal.¹⁹ Democratic rules, in other words, enable us to interrogate as well as recast practices in discrete fields of human activity.

But, rules, howsoever normative they might be, cannot be produced and reproduced once and for all. There is, in democratic politics, no notion of an original Hobbesian social contract which binds citizens in perpetuity. The terms of the contract have to be constantly renegotiated, even as new insights on what it means to be a citizen in a democratic world emerge onto political horizons. Is the right to private property an absolute good, or should it be balanced by social well being? Should a democracy promote the rights of cultural communities to maintain and replicate their distinct practices? And if so, what is the relationship between the right of the individual to freedom, and the rights of cultural communities? How do we resolve the tension between the right of society to benefit from goods such as energy and irrigation which big development projects bring in their wake, and the right of communities that are displaced, to their habitat? Should capital punishment be outlawed in civilised societies? Should a society officially sanction abortion, euthanasia, or pornography?

These are contentious questions and need to be debated at different times and places, in light of fresh perceptions, and the fashioning of new political angles on the issue. Democratic politics is not static, it is processual. Notably, it is not that important that a democratic political community arrives at a final decision on various issues, it is more important that participants keep a dialogue going. For it is precisely participation in shared discourses that is of value because it allows citizens to make their own histories, and makes for agency because it allows these citizens to speak back to a history which is not of their making. Secondly, political activity encourages citizens, who may be otherwise, far removed from each other by the exigencies of everyday life, to come together and participate in a shared discourse on what a good society is, and how it can be realised. Economies, societies, and cultures might well divide people, but democratic practices enable citizens to transcend constructed divisions and symbolic boundaries; howsoever invisible and symbolic these boundaries may be. Thirdly, participation in a shared, public, and accessible discourse, establishes the "political

competence" of ordinary men and women. This again is valuable, because the activity establishes that it is not the state that has monopoly over definitions of what is democratic, the political public can do so as well, and perhaps better. Fourthly, participation compels state accountability. It is difficult to think of modern states, possessing as they do, an inexorable "will to power", voluntarily submitting report cards to citizens, unless a strong and vigilant press, public opinions, campaigns, and movements compel them to do so.

This notion of democracy might perchance help us to answer the question raised above – what are the other dimensions of the human experience that we need to take note of? What do human beings dream of, need, and aspire for? Though there are no easy answers to these questions; it seems to me that liberal theory provides us with one answer: human beings desire to pursue projects which make their lives worthwhile. To repeat the point made above, human beings desire not only to make their own history; they wish to negotiate histories not of their own making in order to effect the transformation from subject to agent. Democracy promotes this particular end because it lays down procedures and establishes institutions, so that human beings can participate in the making of decisions that affect their individual and collective lives.

This may not always happen, and states which claim democratic credentials can prove alarmingly constricting, but then democracy is a project, which does not have a determinate end because citizens inspired by democracy are constantly in search of new possibilities, new goals, and new strategies that can help seek emancipation from all that hampers the human spirit. Like all projects, the project of democracy requires as an essential precondition intentional and purposeful action by ordinary citizens in the space of civil society. And it is this purposeful intentional action that makes for aware and self-confident human beings because these human beings acquire agency in and through politics. And thereby ordinary men and women make the transition from subject to citizen.

Of course a direct relationship between the citizens and the state, or direct participation in political activity, the way Aristotle conceived of it for instance, may well be a non-starter for three reasons. For one, most societies are too large and too complex to admit of direct participation, secondly demands/perspectives/interests are

plural as well as conflicting, and thirdly the specialised and highly inscrutable nature of modern legislation, and administration, proscribes direct control over policy. Consequently, interests need to be represented by an agent who mediates between the two basic protagonists of our democratic text, the citizen and the state. For these reasons, the representative forms the key player in democratic systems. Democracy is presumed on a triadic relationship between (a) citizens, or rather the interests citizens hold and assert in, and sometimes against, the body politic, (b) the democratic state, the legitimacy of which institution is premised upon its responsiveness to popular demands, and (c) the representative who mediates between citizens and the state. Although representation has chronologically preceded democratic participation, guilds, aristocracies, and professional groups have been represented in proto-democracies (for example in the English Parliament, before the extension of universal suffrage), ever since the establishment of full blown democracy, democracy has been seen synonymous with representative democracy.

On the other hand, the institutionalisation of representative democracy has propelled anxious questions about representation: how is the representative expected to discharge his or her mandate, as an advocate, as a mediator, or as a proxy? Since a given constituency will necessarily contain plural and oft conflicting opinions, perspectives, needs, and interests, how does our representative go about representing these plural interests in forums of decision-making? Do agents in the business of representation represent all these interests, or do they filter through the brew of interests, privilege some, downgrade others, articulate some, and leave others unarticulated? That is, do not representatives exercise an enormous degree of autonomy, and thereby power, when they select which of these interests is to be represented? Is this choice perchance dictated by party agendas? And what of the interests that remain unrepresented? Are these interests, perhaps those of the disprivileged sections of society – women, the poor, ethnic minorities, and in India the lower castes – fated to be unrepresented in and through the power equations of a particular society. For it is well nigh impossible that representatives are untouched by power equations, which constitute societies, and which thereby influence all arenas of human activity. Moreover, are representatives

capable of advocating the interests of that section of the constituency to which they do not belong? Can, for instance, a male representative put forth the interests of women? Is it possible for him to understand women's life experiences before or even as he represents her needs and interests? Can an upper class/caste representative do justice to the interests of the lower classes/castes? Can someone belonging to the majority community even comprehend the needs, desires, and aspirations, or indeed the oppression of ethnic minorities?

Whatever be the doubts expressed about the satisfactoriness and the competence of modes of representation, anxieties about questions about representation are always concerned about deepening democracy. How best can we ensure citizen participation? How best can we assure that the representative represents the multiplicity of opinions, particularly the voices of the marginalised which are articulated in the participative sphere of democratic politics? How can we make certain that citizens and their interests are best represented, and through what procedures and modalities? The constant fear among democrats is that representatives might water down democracy. Today the paradox of contemporary democracy is constituted by the fact that whereas representatives have not proven democratic, agents in global civil society particularly INGOs, which are in the business of deepening democracy, are not concerned with representation or indeed with the antecedent activity of democratic participation.

For it is precisely participation that is devalued, when global civil actors commandeer political initiatives, and constitute human beings as consumers of agendas finalised elsewhere. For we must ask this uncomfortable question of even the most well-meaning of NGOs: who was consulted in the forging of agendas? When? And how where the persons spoken for consulted: through what procedures and through what modalities? Were they consulted at all? Do, in short, global civil society actors actually represent people, particularly of the third world? Or are they self-styled spokespersons of people who do not have even a remote chance of influencing these agendas? What we, in short, see is the collapse of the idea that ordinary men and women are capable of appropriating the political initiative. What we see is the appropriation of political programmes in favour of the agenda of the global civil society actor. Frankly, it is

unclear whether INGOs strengthen or weaken the political competence of ordinary women and men.

Take the other staple of representative democracy: accountability. To whom we may ask, are the international NGOs accountable to? Witness, for instance, the response of Lori Wallach, whose organisation Public Citizen orchestrated the battle for Seattle. In an interview published in *Foreign Policy*, she was asked the following question: "You're referring to the idea of democratic deficits in multilateral organisations...Some people argue that nongovernmental organisations (NGOs) like yours also have a democratic deficit – that you also lack democracy, transparency, and accountability. Who elected you to represent the people at Seattle, and why are you more influential than the elected officials...?" Her answer was the following: "Who elected Mr Moore? Who elected Charles Barshefsky? Who elected any of them?"²⁰ This, to put it mildly, is no answer simply because it evaded the issue. In another question she was asked who the Public Citizen is responsible to. "Our members", she replied. "How do they express their oversight?" "Through their chequebooks", she replied, "they just stop paying their membership dues."²¹ Note that no longer are people expected to realise selfhood in and through associational life, their participation is confined to the payment or withdrawal of membership dues.

We have cause for unease. For much of the leadership of global civil society organisations appears to be non-accountable to their members, many of whom are passive and confine their activism to signing petitions circulated via e-mail. Also note that, whereas we see huge crowds during demonstrations against the WTO or in alternative forums such as the World Social Forum, between such episodes, activity is carried on by a core group of NGOs. It is possible that participants in demonstrations are handed a political platform and an agenda that has been finalised elsewhere. This is hardly either democratic or even political, it may even reek of bureaucratic management of participatory events. It may even render people, as suggested above, consumers of choices made elsewhere.

We also need to wonder how democratic the organisations of global civil society are given the great inequalities of resources between the north and the south. "If western civil society is the core of global civil society, just as the western state is the core

of the global state", argues Shaw, "how do non-Western voices become heard? (...) How far can non-Western voices make themselves heard directly? In what ways are they filtered by western civil society, and how is their representation affected by the specific characteristics of western civil institutions?"²² In short, since a great many of these organisations are beyond the reach of democratic representation, the idea that a definable system of authority is even notionally answerable to the democratic will has been seriously compromised. All evidence suggests on the other hand that organisations are not internally democratic or weakly so, that they promote conformity, and that they are indifferent to notions of democratic citizenship.²³

IV Wrapping Up

Though the critique of global civil society is certainly not applicable to theories of global justice, the question remains the same. According to the philosophers of global justice, the fact that we belong to a common humanity gives us enough reason to owe others who are badly off, or that living a good human life requires serving the community by helping human beings who are in need, by promoting the concept of justice and universal human rights, just political institutions, and equitable market relations. The moral commitment to helping human beings, the majority of whom belong to the postcolonial world, or the duty to help foreigners who are starving or suffering, are sharply opposed to theories which stress exclusive duties to compatriots, and reject parochial cultures. The position is unassailable, but we must, for reasons of democratic necessity, add a second string to our conceptual bow: what about the persons who have lost out? Apart from being subjects of obligations, do they have any other status in moral theory? Do they not have the right to acquire agency, to speak back to history, to make their own histories?

Certainly, the world will be a much better place if wars are prevented, if the demands of energy companies do not result in wars against oil-rich states, if human rights can be promoted, if the depredations of capitalism in eternal search of profit are held off, if poverty is abolished and the right not to be poor enacted, if the environment is made liveable for future generations, and if steady income, health, and education is provided to all in and through

formulations on the globality of obligation. The world might even become democratic if people were provided with basic goods to satisfy their basic needs, so that they do not have to beg for what is rightfully theirs. But do our democratic imaginaries stop short at this? Surely democracy is much more than owing a deep sense of obligation, though this sentiment is certainly an essential prerequisite for a democratic society based upon equal concern and respect for other human beings. This is the minimum we expect of democracy. But democracy is also about enabling people to articulate their needs, their aspirations, their desires, their interests, and their perspectives, so that they can participate in the making of a good society. Democracy is about recognising the political competence of the public to set agendas, and to put forth alternative visions of what a desirable society looks like. Democracy is about engaging with the state, it is about the right to protest, and above all it is about the right to participate in the political domain. It is this aspect that might have gone missing in all the elegant and passionate prose on global justice.

I have little to offer by way of wrapping up this argument, in any case no argument is fully wrapped up, argumentative communities are communities of fate, condemned to replay and repeat arguments that have been conducted earlier in the same space or in other times and spaces in the same or in related guises. All that I wished to do is to unravel the global civil society argument to perceive the one factor that theories of global justice ought to take into account. This observation, let me hasten to declare, is not dictated entirely by the fact that I belong to the south in which many of the unfortunate victims of history that philosophers feel so strongly about live, though it may well be. But what is the issue is that our strongest formulations on what we owe people, can, with the best of intentions, lapse into formulations that do not conceive the recipients of obligations as actors in their own right.

There is certainly no reason why philosophers based in the west should battle with anything else than their own uneasiness at the mess created by their own countries. But coming from India where a majority of people live in utmost misery, disempowerment, and hopelessness, I am more concerned about the ways people can stand up and speak back to history. Not that they do not speak back to history,

perhaps we caught up in our own vocabularies given by modernity cannot recognise these voices. But I would like to see a perfectly just world, where the inhabitants of the south can also begin to think what they also owe humanity, and when they can side by side with the inhabitants of the north engage in discussions about what is a just social contract. Is this an impossible dream? Not I hope for defenders of global justice. [97]

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Notes

- 1 Mary Kaldor, 2000, 'Civilising Globalisation: The Implications of the Battle of Seattle', *Millennium: A Journal of International Studies*, Vol 29, No 4: 105-14, p 112.
- 2 *The Hindu*, February 3, 2002, 10.
- 3 G W F Hegel, 1942, *The Philosophy of Right*, translated T M Knox, Oxford Clarendon Press, para 182.
- 4 *Ibid*, para 183.
- 5 Neera Chandhoke, 1995, *State and Civil Society: Explorations in Political Theory*, Sage, New Delhi, chapter 4.
- 6 Antonio Gramsci, 1971, *Selections from the Prison Notebooks of Antonio Gramsci*, International Publishers, New York, p 261.
- 7 Representative writings are those of R Falk, 1999, *Predatory Globalisation: A Critique*, Cambridge, Polity Press, and the collection of essays in D Archibugi and D Held, eds *Cosmopolitan Democracy: An Agenda for a New World Order*, Cambridge, Polity.
- 8 Onora O'Neill, 2000, *Bounds of Justice*, Cambridge University Press, Cambridge, p 187, chapter 10 for the full argument.
- 9 Thomas Pogge, 2002, *World Poverty and Human Rights*, Cambridge, Polity, p 169, chapters, 1, 2 and 3 for the full argument.
- 10 Pogge for instance suggests that nationality is "just one further deep contingency (like genetic endowment, race, gender, and social class) one more potential basis of institutional inequalities that are inescapable and present from birth. Within Rawls's conception, there is no reason to treat this case differently from the others. And so it would seem that we can justify our global institutional order only if we can show that the institutional inequalities it produces tend to optimise (against the backdrop of feasible alternative global regimes) the worst social position", Thomas Pogge, 1989, *Realising Rawls*, Ithaca, Cornell, p 247.
- 11 Such as Charles Beitz, 1979, *Political Theory and International Relations*, Princeton University Press, New Jersey, Princeton.
- 12 Think for instance of the global media. Today the media is the source of immense material gains from all those who stand in a relation of ownership to the media, owners, managers, advertisers, and the dissemination companies - cable networks for instance. But the media also performs a powerful symbolic function in shaping our sensibilities and the way we conceive of the world and our role in this world.
- 13 Lipschutz, Ronnie, 1992, 'Reconstructing World Politics: The Emergence of Global Civil Society', *Millennium: A Journal of International Studies*, Vol 21: 389-420; also Richard Falk, Robert Johansen, and Samuel Kim, 1993, 'Global Constitutionalism and World Order', in Richard A Falk, Robert C Johansen, and Samule S Kim eds, *The Constitutional Foundations of World Peace*, Albany, SUNY Press; Neera Chandhoke, 2002, 'The Limits of Global Civil Society' in Marlies Glasius, Helmut Annheir, and Mary Kaldor edited *Global Civil Society 2002*, Oxford University Press, Oxford, chapter 2.
- 14 See Mary Kaldor 2000, 'Civilising Globalisation: The Implications of the Battle of Seattle', p 106.
- 15 *Times of India*, July 7, 2005.
- 16 It is estimated that whereas in 1948, 41 INGOs enjoyed consultative status with the Economic and Social Council of the UN, by 1968 the number had gone up to 500. By 1992 we were to see the Economic and Social Council consulting 1,000 or more NGOs. If we add to this number NGOs that interact with other bodies of the United Nations, and which often participate directly in the proceedings, the number rises to tens of thousands. It was, however, at the turn of the 1990s that we were to witness a veritable explosion of NGOs which, networking across national borders, propelled critical issues onto international platforms. It is perhaps not surprising that global civil society has come to be dominated by NGOs, even though other actors, such as political activists networking across borders and anti-globalisation movements, play an important role in this sphere. It is indicative of the power of the non-governmental sector that civil society has come to be identified with NGO activism both in influential tomes on civil society and in policy prescriptions of international institutions today. For details on the increasing power of INGOs see William Korey, 1998, *NGOs and the Universal Declaration of Human Rights*, New York, St Martin's Press. For a critical evaluation see Makau Mutua, 2001, 'Human Rights International NGOs: A Critical Evaluation' in Claude E Welch (eds), *NGOs and Human Rights: Promise and Performance*, University of Pennsylvania Press, Philadelphia, pp 151-63.
- 17 Neera Chandhoke, 2003, *The Conceits of Civil Society*, Oxford University Press, New Delhi.
- 18 Notably, for Aristotle, political activity is always ethical; politics is the pursuit of the good life.
- 19 Arguably, the codification of democratic rules as the sine qua non of a given society provides the reason for, and the justification of struggles which seek to fight domestic violence or child abuse.
- 20 *Foreign Policy*, 2000, 'Lori's War', Spring, 29-55, p 36.
- 21 *Ibid*, p 39.
- 22 Martin Shaw, 1999, 'Global Voices: Civil Society and the Media in Global Crisis,' in *Human Rights in Global Politics*, edited by T Dunne and N J Wheeler, Cambridge University Press, Cambridge, pp 214-232, 223.
- 23 See Ann C Hudock, 1999, *NGOs and Civil Society: Democracy by Proxy?*, Polity Press, Cambridge, for a trenchant critique of NGOs.

