

# MINE NO MORE





people can't belong here

people can't belong here

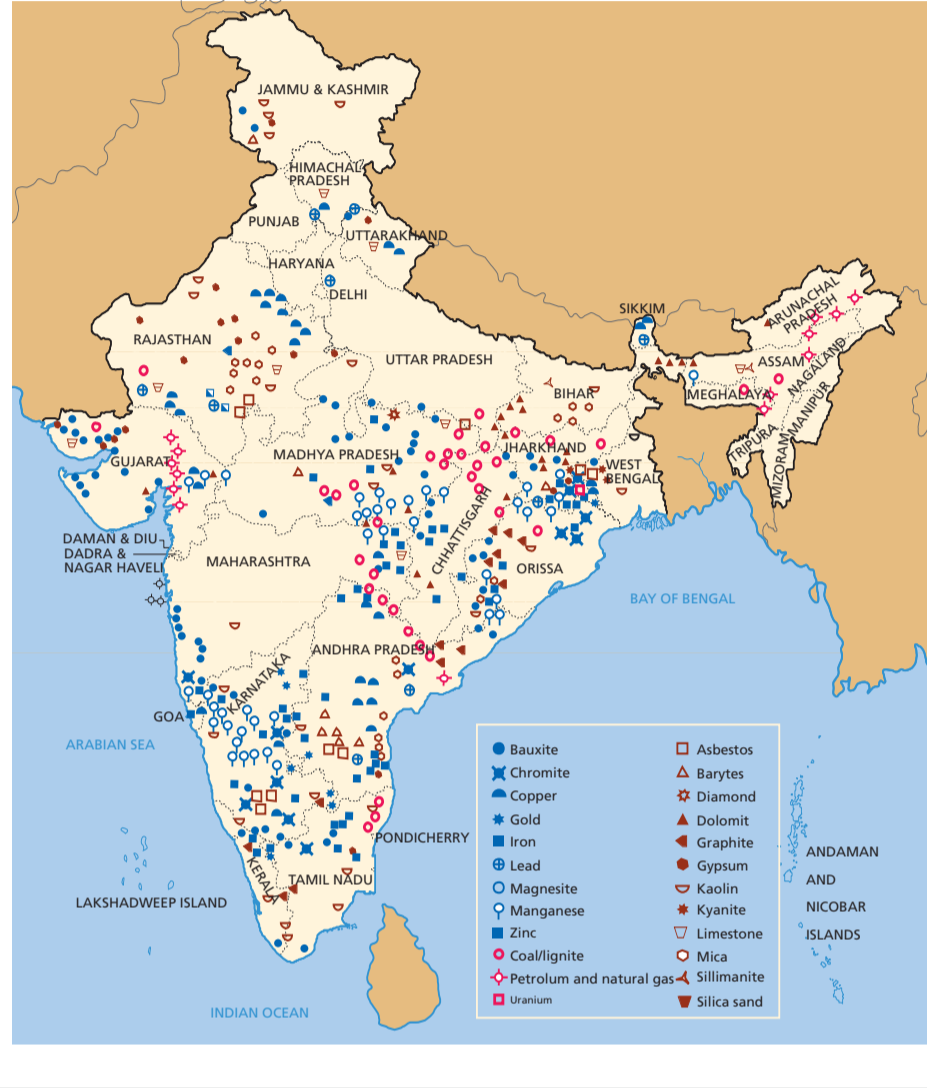
people can't belong here

people can't belong here

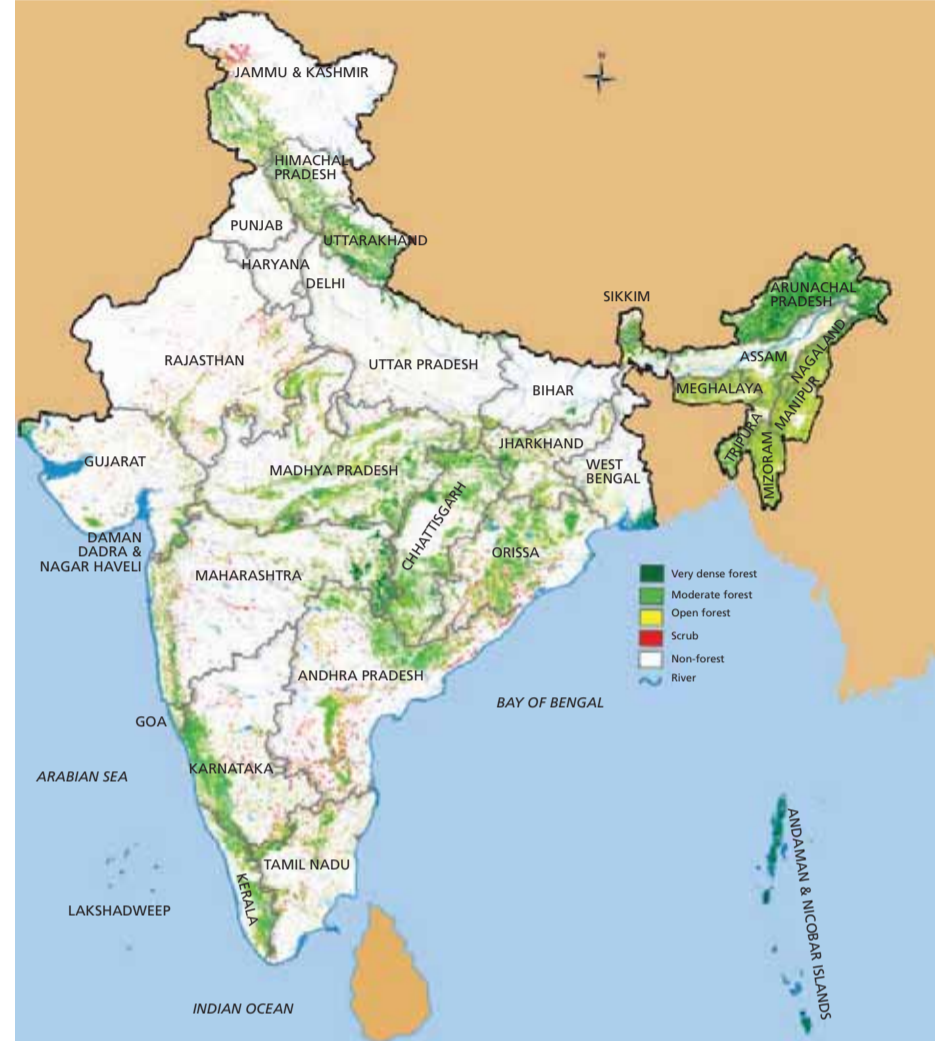


# A Cartographic Accident

Map #1: India: her mineral resources textbook geography



Map #2: India: her leftover forests a geography of fraught abundance



Map #3: India: her watersheds a geography of flow



Map #4: India: her poorest 200 districts a geography of poverty



Please note: These maps weren't planned in advance. Overlaid, they reveal historical overburden. India's richest lands are precisely where her poor tribal people live

## The numbers are telling

value of mineral production in India, 2005-06 (up from about Rs 25,000 crore in 1993-94)

**Rs 84,211 crore**

the geologically mapped land area of India, systematically (out of a total land area of 3.29 million sq km)

**3.15 million sq km**

the land area built up of hard rocks, and so potentially mineral-bearing (out of a total land area of 3.29 million sq km)

**1.82 million sq km**

area leased out for mining in India till March 2003

**6,20,372 hectares**

the land area of mine leases approved in various states, 2002-03 to 2006-07 (over and above already existing pits, legal and illegal)

**87,440 hectares**

the area for which reconnaissance permits have been granted, to mining giants of India and the world over, in the last 5 years

**3,67,882 sq km**

number of people displaced by mining projects, 1950-94, of these, 52 per cent are tribals. There are no statistics, after 1991, on the number of people displaced due to mining projects

**25.5 lakh**

## Some telling numbers

the number of districts most extensively mined in India. 30 of these are part of the most backward districts of the country, and almost half of these 50 districts are tribal-dominated. 62 per cent of these districts have forest cover more than the national average of 20.6 per cent

**50**

coal deposits in India found in tribal areas

**90%**

other mineral deposits found in tribal areas

**80%**

captive limestone mines in the country that have breached the groundwater table

**40%**

water consumed to extract iron ore in India in 2005-06, enough to meet the daily water needs of more than three million people

**77 million tonnes**

water pumped out, everyday, at the Neyveli lignite mines in Tamil Nadu, so that the mineral seam can be followed

**40 million litres**

abandoned mines in Orissa that are called 'orphaned'; they are so called because the miners simply dug and ran, leaving a pit and piles of waste

**73%**

## What the numbers tell

waste generated in mining only the major minerals in India, 2006

**1.84 billion tonnes**

mining's contribution to the nation's Gross Domestic Product in the last 10 years

**2.2-2.5%**

number of people employed in the formal mining industry in India, down 30 per cent between 1991 and 2004

**5.6 lakh**

number of people Indian mines employed to produce Rs 1 crore worth of minerals in 1994-1995. To produce the same value in 2003-2004, only 18 people were employed

**25**

Of its total revenue receipts, what Andhra Pradesh got as mining royalty in 2004-2005 mining. Andhra Pradesh contributes most to the value of mineral production in India

**3%**

The human development index of Orissa, the country's richest mineral-bearing state. Rs 5,286: per capita income, 1997-1998, of Orissa's Keonjhar district, the one most heavily mined

**0.404**

number of conflicts between miners and local populations, recorded merely in the English language media, in just 2006

**77**

**1994:** In January, government amends the Mines and Minerals (Regulation and Development) Act, 1957. It also tinkers with the 2 sets of Rules. The procedure to grant mineral concessions becomes simpler, in order to attract foreign investment through private sector participation, including FDI.

In October, government issues guidelines that loosen up the rules of exploring for mineral deposits, and enable prospecting over a large area, from (the pre-1993) 25 sq km to 5,000 sq km. A single prospector can hold exclusive rights of exploration up to an area of 10,000 sq km

**1997:** In February, the Union ministry of mines sets up a committee to find out why mining activity by the private sector hasn't picked up, despite changes in legislation and policy.

The FDI procedure is put on an automatic approval route

**1998:** In January, the committee presents its report. In 1999, following its recommendations, government amends the Mines and Minerals (Regulation and Development) Act, 1957. The next year, government amends the 2 sets of Rules.

The Act has now been tinkered with 4 times – in 1972, 1986, 1994 and 1999. The Mineral Concession Rules and the Mineral Conservation and Development Rules have also been changed. The first two amendments increased government control. The 1994 and 1999 ones do the exact opposite, also devolving considerable authority to the states, freeing them up with respect to handing out mining leases, renewing lapsed ones, granting reconnaissance permits...in short, inviting private sector investment

**2000:** In February, government allows FDI up to 74 per cent under the automatic approval route to explore for and mine diamonds and precious stones

**2002:** World prices of minerals, ores and metals begin to rise, riding on the back of an unprecedented demand from China. This is a boon for the mining industry in India, which begins to experience a boom

**2002-2005:** The index of world prices of minerals, ores and metals double in a mere 3 years. For the Indian mining industry, the boon and boom continues

**2005:** In September, the government constitutes a "high-level committee" under Anwarul Hoda, member, Planning Commission. Its brief is to review policies, acts, regulations and procedures for granting reconnaissance permits, prospecting licences and mining leases. The committee's terms of reference concentrate on investigating how procedures can be streamlined to facilitate private investment and FDI in mining

Rs 84,211 crore: the value of mineral production in India, 2005-2006, more than 3 times that a decade ago

**2006:** In February, the mining sector is opened up to 100 per cent FDI

**2006:** In December, the Hoda committee report is made public. Its recommendations are seriously industry-friendly. If accepted, there will be massive changes – more massive than the ones that have already occurred – in the relationship between mining, people and the environment

The plot is a simple one: a relentless search for seams. As the plot unfolds, it gets seamier. Entire communities and landscapes become rubble. The Right to Life isn't the only principle undermined; as an economic mission backed by State coercion chases more ore, many little wars break out. Two forces clash: forces wishing to break up complex livelihood systems to regroup them into a sector-oriented existence, and people opposed to the de-valuation of their resources and dignity.



# THE FLIP SIDES

“India is on the path to a sustained high level growth. The rapidly growing private sector and massive investments in building infrastructure across the huge country are expected to trigger considerable demand for minerals in the foreseeable future. This will provide great opportunities for increased revenues for the global mining industry”  
 – from *Mine-let the good times roll*, PricewaterhouseCoopers, June 2006

➔ High level dependence on minerals means retarded economic performance. A phenomenon so widely and commonly observed that it has been given a name:

## ‘RESOURCE CURSE’

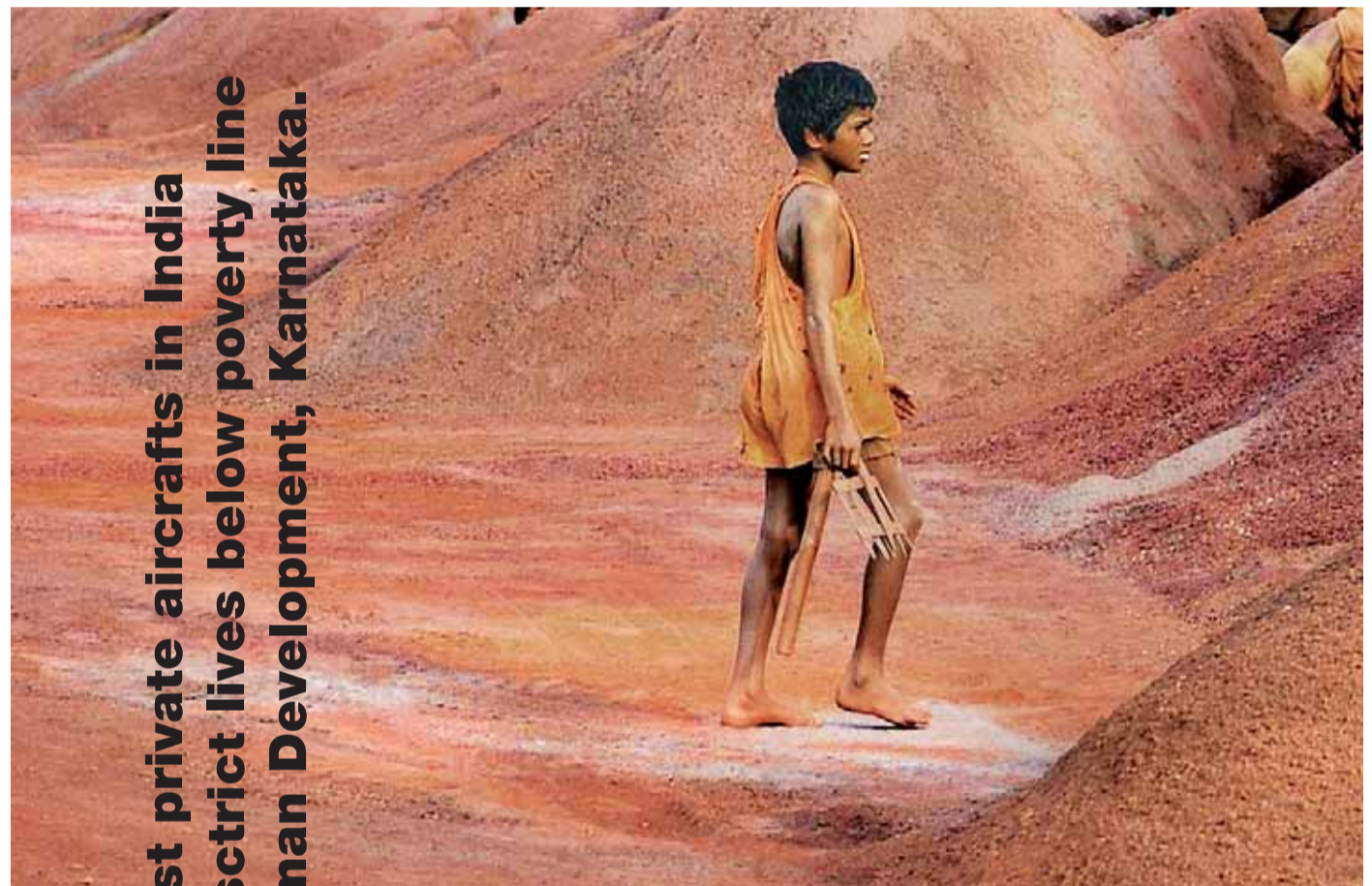
State	Contribution of minerals to GDP	Per capita net state GDP (Rs)*
Chhattisgarh	12.00%	6,692
Orissa	6.60%	5,265
Jharkhand	13.20%	6,651
Gujarat	3.00%	13,022
Tamil Nadu	0.72%	12,348
Maharashtra	0.86%	15,082

\*at 2003-04 prices

Although Chhattisgarh, Orissa and Jharkhand substantially depend on minerals, they have the maximum number of backward districts in the country: respectively, 15 out of 16, 27 out of 30 and 19 out of 22.

A study by the World Bank, *Environmental and social challenges of mineral-based growth in Orissa*, has attributed institutional weakness and political economy as some of the reasons behind the resource curse. The study found that resource-rich economies exhibit weaker institutions compared to resource-poor economies. A recent global study by the Food and Agriculture Organization finds that mineral-rich states have weaker property rights regimes and poor enforcement of the law; these, in turn, lead to retarded development.

In the case of India, with all its wealth concentrated in a few pockets, most of the political and administrative power is unleashed to promote and facilitate the extraction of this wealth, and not on developing the area mined.



**Bellary in Karnataka has the most private aircrafts in India  
 45% of the population in this district lives below poverty line  
 Ranked third from bottom in Human Development, Karnataka.**

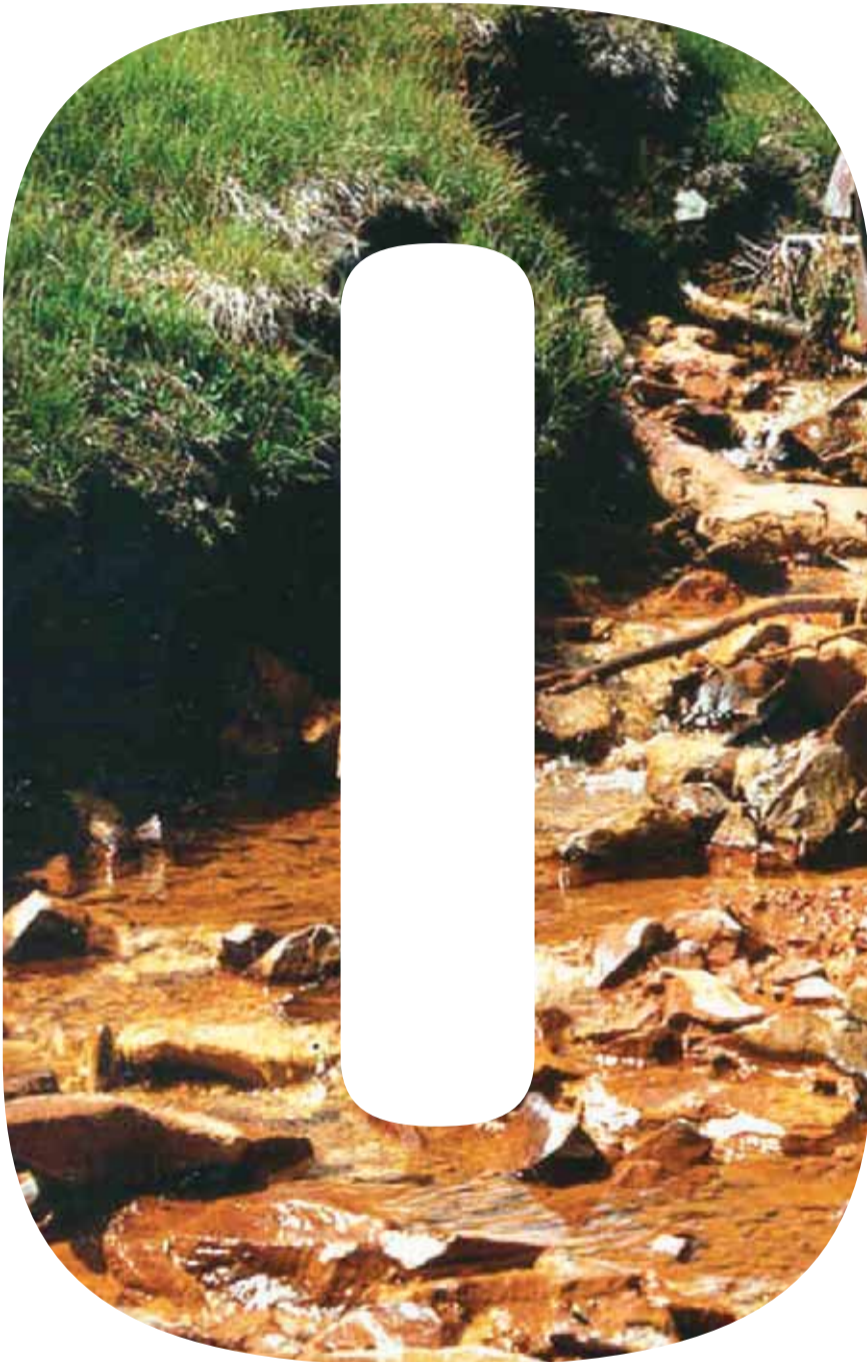


**Forest clearance is 4 times higher in this decade than earlier**

	1980-97	1997-05	1980-2005
Mine leases granted in forest areas	317	881	1198
Avg. leases granted/ year	19	126	80
Forests diverted (ha.)	34,527	60,427	95,003
Avg. forest diversion/ year (ha.)	2,031	8,639	3,800



## SHOULD WE DO AWAY WITH REGULATIONS



## SHOULD WE STRENGTHEN REGULATIONS?

- Air quality and wastewater discharge standards are not specific to mining areas and for different minerals
- No regulation for mineral transport sector
- Non-existent regulation for water – groundwater; local springs; watersheds..
- No moratorium for biodiversity rich areas
- No consideration for village forests and local impacts



# 10.7%<sup>annually</sup>

## 1993-2005: Indian mining industry grows at a stupendous

■ Iron ore production grew at a compound annual growth rate (CAGR) of 8.25 per cent. Iron ore production has increased from 59 million tonnes in 1993-94 to 154 million tonnes in 2005-06

■ Bauxite production grew at a CAGR of almost seven per cent. Bauxite production has increased from 5 million tonnes in 1993-94 to 12 million tonnes in 2005-06

■ Total coal and lignite production grew at a CAGR of four per cent. Production increased from 267 million tonnes in 1993-94 to 437 million tonnes in 2005-06

■ Chromite production grew at a CAGR of 10 per cent. Production increased from 1.06 million tonnes in 1993-94 to 3 million tonnes in 2005-06

■ Natural gas production grew at a CAGR of more than 5 per cent. Production has almost doubled from 16,340 million cubic metre in 1993-94 to 31,223 million cubic metre in 2005-06

"In spite of the economic liberalization of 1991, the mining sector has not attracted major investments. This is possibly due to the problems such as land acquisition, development of infrastructure, transportation system, social engineering and community development involved in major green field site projects. There is a need to re-look at the total management solution for attracting investment in new mines."

— Abdul Kalam, Former President, Inaugural Address at the 19th World Mining Congress & Expo, 2003

"That the growth rate of the mining industry has been slower than industry is of concern, especially given India's reserves, which have not been properly exploited. Furthermore, of the leases, less than 40 per cent are operational. Because of India's failure to explore and exploit its mineral potential, industry is suffering".

— Pradeep Kumar, special secretary, Union ministry of mines, April 27, 2007

→ The WPI, or Wholesale Price Index, is an indicator designed to measure changes in the price levels of commodities. It is used as a basis for price adjustments in business contracts and projects.

Statistically speaking, WPI for non-fuel minerals show a 3-fold increase between 1993-1995 and 2004-2005. But it isn't as if prices were steadily rising over a decade. The WPI jumped only from 2002-03 onwards. Before that, prices of such minerals were quite subdued.

The increase is due to a bullish trend, 2002 to 2006, in prices of metallic minerals (iron ore, bauxite). Prices of non-metallic minerals have hardly increased in the last 10 years. Indeed, prices of limestone, India's key non-metallic mineral, have decreased.

### Domestic prices of minerals are lower compared to that in the international market. This encourages companies to sell abroad

Prices in 2002-03 (US \$/tonne)

	Domestic price	International price
Bauxite	5.5	100.8
Chromite lumps/fines and chips	57.9	87.5
Iron ore*	13.5	77.4
Feldspar	10.0	111.8
Fluorspar	99.3	129.6
Graphite	326.7	495.8
Deadburnt magnesite	169.4	103.3
Calcined magnesite	94.8	99.0
Mica	5.6	507.3
Silica sand	1.4	11.9

Note: \*Iron ore prices are for the year 2005-06.

### A skewed royalty regime ensures mining does not have local benefits

→ Take bauxite. Only a small quantity of bauxite, as raw material for aluminium, is sold in Indian markets, because most aluminium makers have captive mines. In the international market, bauxite is priced at US \$100 per tonne (over Rs 4,000), while in India, the estimated cost to mine bauxite is Rs 225 per tonne. The price of aluminium in the global market is US \$2,680 per tonne—over Rs 1,00,000 as per June 20, 2007. Indian companies can make a killing in this market with their captive bauxite mines. This explains the aluminium rush to Orissa.

NALCO's balance sheet is an useful indicator of the economics of bauxite. In 2005-06, its net profit, after accounting for taxes and payments to the state, was Rs 1,562 crore. The company's balance sheet also says the state's share in this, as royal-

ty and cess, came to Rs. 37.54 crore (or 2 per cent of the total profit).

For states, royalty is the key source of revenue from the mining sector. Other charges and taxes on the sector contribute little to the state kitty. Yet royalties on minerals form a small proportion of the revenue receipts of the major mineral-producing states.

In heavily-mined Chhattisgarh and Jharkhand, mineral royalties contribute about 10-13 per cent of the total revenue receipts. In most-mined Orissa, a paltry 5-6 per cent. In Andhra Pradesh, which contributes most to the country's mineral value, mineral royalties contribute about 3 per cent of the total revenue receipts. In Goa, iron-ore country, mineral royalties are just 1 per cent.

In this way, the benefits of mining do not percolate to states.







## Cat on a hot aluminium roof

Some tree species found in the Niyamgiri hills of Orissa: Amba (*Mangifera indica*), Amla (*Phyllonthus emblica*), Arjun (*Terminalia arjun*), Bandhana (*Ougeinia dalbergioides*), Bel (*Aegle marmelos*), Bija (*Pterocarpus marsupium*), Dhaura (*Anogeissus latifolia*), Jamun (*Eugenia jumbolana*), Tangam (*Xylia Xylocarpa*), Kasi (*Bridelia*), Sisu (*Dalbergia Latifolia*), Kuruma (*Adina cordifolia*), Gambhari (*Gmelina arborea*), Kusum (*Schleichra trijuga*), Mohua (*Bassia latifolia*), Kendu (*Diospyros melanxylon*) Harida (*Terminalia chebula*), Karda (*Kliestanthus colinus*), Champak (*Michelia champaca*), Karanj (*Pongamia pinnata*).

The forest includes 50 species of important medicinal plants, 20 species of wild ornamental plants and more than 10 species of wild relatives of crop plants, such as 2 species of wild relatives of the common sugarcane. At least 15 species of orchids: there is *Dendrobium transparens*, an uncommon species with large and showy flowers; the dominant species is *Cymbidium aloifolium*, an indicator of mature forests since it thrives on mature trees.

Some other animals found in the Niyamgiri hills: Tiger, Elephant, Palm civet, Mouse deer, Barking deer, Sambar, Striped hyena, Chital, Wild dog, sloth bear, Bison, Nilgai, Giant squirrels, four-horned antelope. Most of these animals are in the IUCN Red List, signifying they are endangered.

**72.89 million tonnes of 42.46% Al<sub>2</sub>O<sub>3</sub> grade bauxite**

**At the time this leopard was photographed in the Niyamgiri hill in Orissa, on May 17, 2007, it was not only an animal but also an anomaly. It was a visibly annoying variable padding across the terrain of economics. One not accounted for, immaterial as a 'cost', a pure 'negative externality'.**

**The leopard was a fiscal nightmare in Orissa's, and India's, development dream. For it – the leopard, not development – required trees, preferably mature forest. The leopard was not reflected in price-terms in mining bauxite in the Niyamgiri hill, as also across the range of hills known by the same name; nor was the forest.**

**Recently, the forest department countermanded a leopard skin. Villagers in the mountain have also got acquisition notices.**

**Fauna and flora remain external to GDP.**

<law>

<unlaw>



The Mineral Conservation and Development Rules, 1988 lay guidelines to ensure mining that is scientific, and conserves the environment. There is a chapter devoted to the environment, 11 provisions.

**To begin with:** "Holder shall take all possible precautions for the protection of environment and control of pollution while prospecting, mining, beneficiation or metallurgical operations". What are these precautions?

**On storing overburden (the useless earth churned out during mining) and waste rock:** "The dumps shall be properly secured to prevent escape of material therefrom in harmful quantities which may cause degradation of environment and to prevent causation of floods". What is that harmful quantity?

**On mine restoration:** wherever possible the waste rock, overburden etc shall be backfilled into the mine excavations with a view to restoring the land to its original use as far as possible". What does that mean? "Wherever back-filling of waste rock in the area excavated during mining operations is not feasible, the waste dumps shall be suitably terraced and stabilized through vegetation or otherwise". The phrase not feasible remains undefined, as does otherwise.

**On the discharge of toxic liquids:** "Every holder of prospecting licence or a mining lease shall take all possible precautions to prevent or reduce the discharge of toxic and objectionable liquid effluents from mine, workshop, beneficiation or metallurgical plants and tailing ponds into surface water bodies, groundwater aquifer and usable lands, to a minimum. These effluents shall be suitably treated, if required, to conform to the standards laid down in this regard".

Everything is left to what the miner wishes to do. Minimum is not quantified. There are no regulations on the amount of wastewater a mine can discharge, nor are there any load-based pollution standards

**On blasting:** the rules do not specify how far from a habitation can blasting be conducted. The permissible limits for noise and ground vibration are not fixed, and vary from mine to mine

Exactly what is

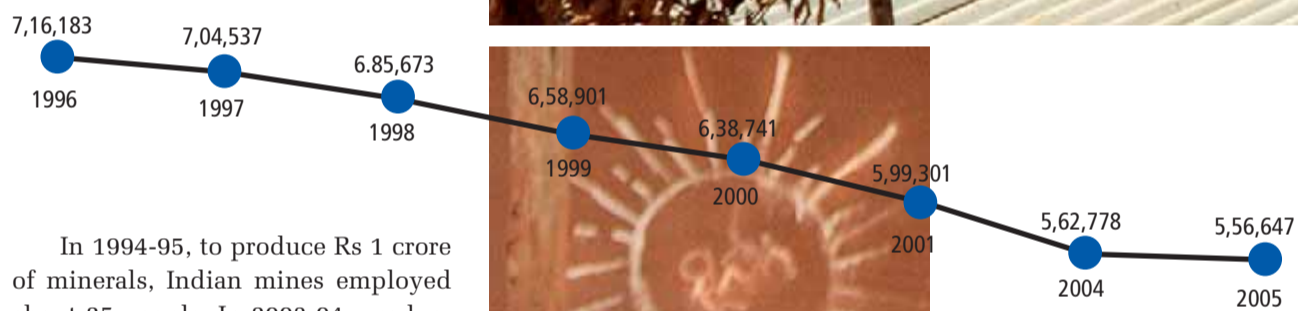
'illegal mining'?

# The **Peanut** Principle

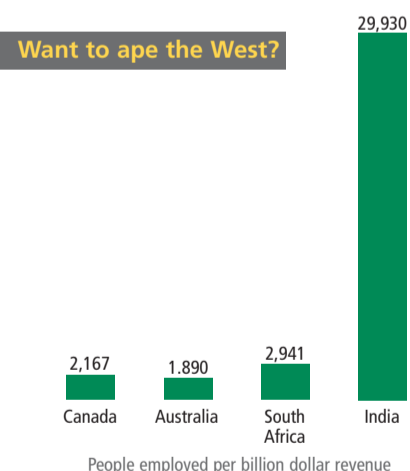
➔ Modern large-scale mining today doesn't need people, just big machines and specialized operators to work them.

Almost 75 per cent of all people employed in mining in India are on the payroll of coal companies (mainly public sector). Other minerals have hardly generated, or have the potential to generate, employment.

**Local employment is touted as an important reason to allow mining. But between 1991 and 2004-05, employment in the formal mining industry in India fell 30 per cent**



In 1994-95, to produce Rs 1 crore of minerals, Indian mines employed about 25 people. In 2003-04, producing the same value required only 8. Thus, in nine years, the employment potential of Indian mines has decreased 70 per cent.



The reduction is across the board. Take bauxite. In 1951, 18 people were employed to mine 1,000 tonnes of it. By 2002, only 0.5 people – half a worker – to dig out the same amount. By 2002, iron ore required even less. 0.3 people, one-third a worker.

That explains the rush of anger in Orissa and other states.



➔ Of all the 2.5 million people displaced by various development projects, about 41 per cent have been tribals. In the case of mining, tribals constitute 52 per cent. Mining has the worst record in rehabilitation and resettlement. Less than 25 per cent of people so displaced have been resettled. There is no data on rehabilitation of people affected by mining.

**Want to really ape the West?**

Consider population density in mining areas

Western Australia	<b>0.79</b>
Canada	<b>3.3</b>
Papua New Guinea	<b>13</b>
Brazil	<b>20.5</b>
Chile	<b>22</b>
China	<b>137</b>
India	<b>329</b> persons/ sq km

Large-scale land use change will lead to large-scale displacement.

## Often, the contest begins with a pillar placed in the middle, one day, of a field.

The laws of the land kick in. There is a tactical certainty with which notifications, clauses of Acts, notices, instructions on files, directives, instruments of policy, police are unleashed by those trained not to abuse the law of the land. Brutality against people resisting the loss of lands is called a law-and-order problem. The mentality is that land must be had, at any cost. Consultants exist who have discovered the shortest route to hectares and blatantly copy-paste environment impact assessment reports, confident that their fraud will not be challenged, least of all by the government. Given all this, is it surprising that suspicion is the first popular response to a mining project?

### → In most cases,

the first time people living in an area become aware their area could be the site of a project is when the land acquisition process starts.

When companies acquire land directly from people, it is a clear process. No other agency is involved. Theoretically, people have a right to decide whether or not they want to sell their land. The market decides compensation. However, the market price and negotiating with individual land owners act as a dampener to acquisition plans. So much for free market

Companies, as a rule, bank on the government armed with state machinery to acquire land for them. Across the political spectrum, governments in India are happily complying.

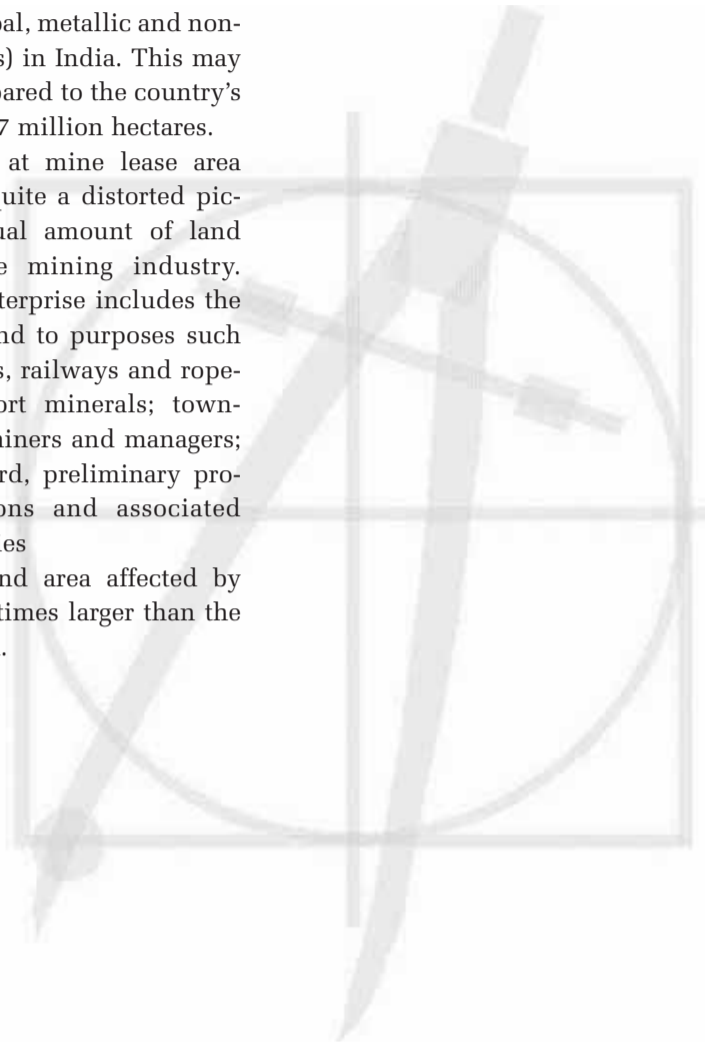
**They can. Using the juridical principles of 'eminent domain' and 'public purpose', which gives drastic powers to the states to acquire land.**

### → 7,54,861 hectares:

This is the total land area leased out for mining (for coal, metallic and non-metallic minerals) in India. This may seem small compared to the country's land area of 328.7 million hectares.

But looking at mine lease area alone provides quite a distorted picture of the actual amount of land diverted by the mining industry. Every mining enterprise includes the conversion of land to purposes such as building roads, railways and ropeways to transport minerals; townships to house miners and managers; land for stockyard, preliminary processing operations and associated economic activities

The total land area affected by mining is many times larger than the simple lease area.



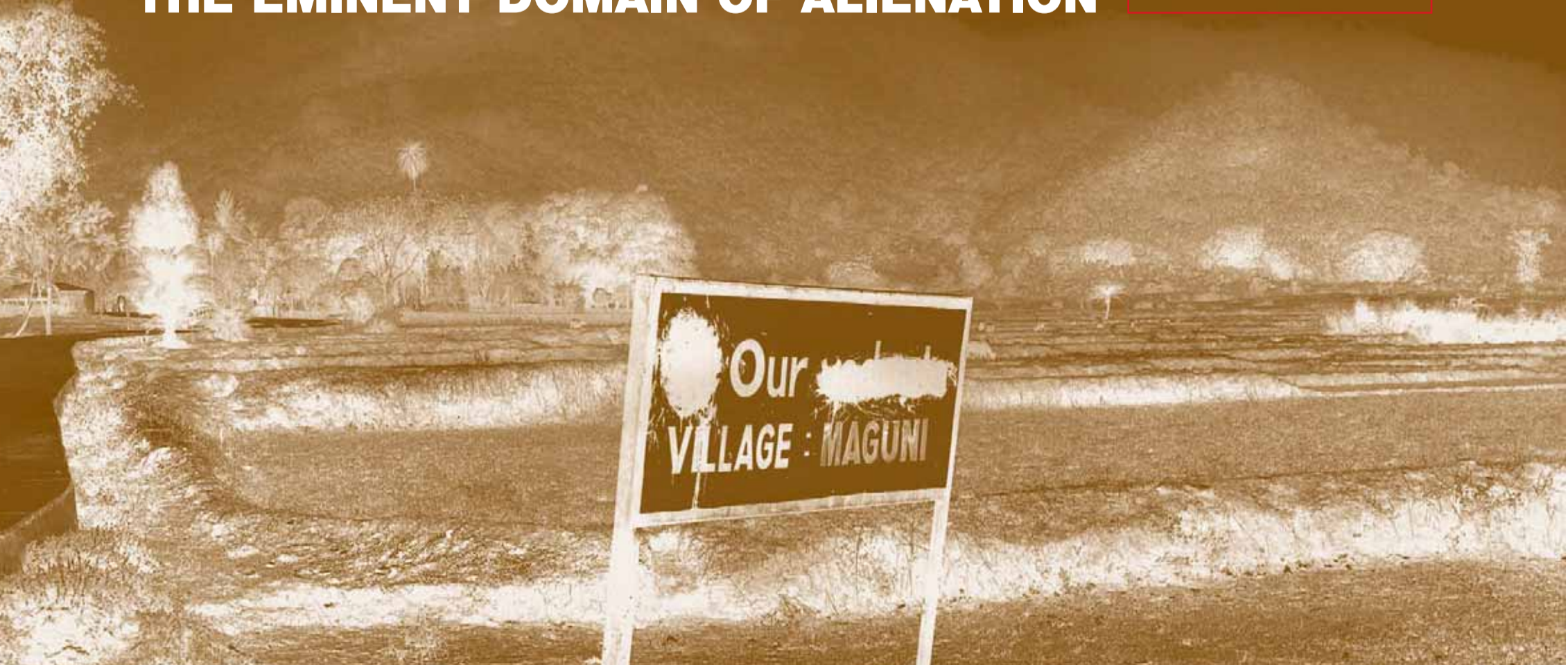
## GOING. GOING..

De Beers, the South African diamond giant, has acquired prospecting rights to large tracts of land in Orissa (over 8,500 sq km), Andhra Pradesh (679 sq km) and Chhattisgarh (9,000 sq km). Rio Tinto has diamond and gold prospecting rights in Madhya Pradesh (7,650 sq km) and diamond prospecting rights in Chhattisgarh (6,000 sq km). Broken Hill Properties of Australia has acquired nickel, gold and cobalt prospecting rights in Madhya Pradesh (2,293 sq km).

### IN THE LAST 5 YEARS

- 134 reconnaissance permits have been issued, covering an area of 3,67,882 sq km, mostly to look for copper, zinc, lead, nickel and gold
- 148 prospecting licences for major minerals, covering an area of 616 sq km, were approved
- 348 new leases, to mine only major minerals, were granted. Another 392 sq km has come under the dread grasp of the excavator. 113 of these leases are to mine iron ore alone, over a lease area of 11,526 hectares.
- 482.3 sq km was opened up for coal mining

# 329 MILLION HECTARES THE EMINENT DOMAIN OF ALIENATION



# HARD ROCK / ROCKED HARD

■ Most of India's iron reserves are found along the watersheds and courses of rivers such as the Indravati in Chhattisgarh, the Mahanadi and Baitarani in Orissa, the Tungabhadra in Karnataka and the Mandovi in Goa

**Flow dwindles. Perennial streams turn seasonal. In the monsoon, rivers swollen with rainwater and silt are apt to turn unpredictable. At present there isn't much research on how mining affects rivers and groundwater. No legislation exists on the effect of mining on water resources. Current policy is silent on this**

■ Over 80 per cent of the coal in Jharkhand and a substantial portion of the Raniganj coalfields in West Bengal are found along the banks of the river Damodar

■ Mica is distributed, in Rajasthan, between and around the rivers Sambhar, Luni and Chambal; in Orissa, around the Mahanadi

■ Chromite is found around the tributaries of the river Cauvery, and along the Tungabhadra, Baitarani and Brahmani rivers in Orissa

■ Limestone is found along the river Chambal

■ Bauxite deposits exist near the rivers Chenab and Mahi, the tributaries of the Krishna and the Cauvery, the rivers Tungabhadra and Mahanadi and near the river Sind in Madhya Pradesh.

The chromite mines in Sukinda, Orissa, were in the news in the 1990s because of high discharge of hexavalent chromium (Cr+6), a highly toxic and carcinogenic substance, into waterbodies and the Damsala river. A 1999 report showed high amounts of Cr+6 in surface and groundwater samples, the soil, solid waste and wastewater from the mines and in the food chain.

But nothing has changed. "When I reached," wrote Chandrabhusan, associate director, CSE, of his travel through Sukinda in 2006, "I checked water quality. I did not detect Cr+6 till I reached a drain flowing out of a waste dump of the TISCO mines. Thereafter, I detected Cr+6 in every water body in Sukinda."



Minerals are found in hard rocks, precisely in terrain streams originate from. What if ore is preferred to water? A quick guide to all-round destruction:

- 1 Overburden dumped into valleys, filling streams and rivers.
- 2 Run-off from deforested slopes makes rivers heavy with silt and more prone to floods.
- 3 Mine tailings (what's left after ores are processed) are often toxic; they grievously pollute rivers
- 4 Mining for sand and gravel from riverbeds
- 5 Breaching the groundwater table
- 6 Acid mine drainage: when large quantities of rocks containing sulphide minerals are excavated, they react with water and oxygen to create sulphuric acid. The acid leaches from the rocks as long as they are exposed to air and water.  
Such drainage can contaminate drinking water sources, disrupt aquatic life (plants and animals)
- 7 Heavy metal pollution: occurs when some metals – arsenic, cadmium, cobalt, copper, lead, silver, zinc – found in excavated rock or exposed in an underground mine come in contact with water
- 8 Pollution from processing chemicals: when chemical agents mining companies use to separate the target mineral from the ore spill, leak or leach from the mine site into nearby waterbodies.

The new notification has diluted the public hearing requirement. The full EIA report is no longer released, fewer people can participate. Public hearings should influence decision-making, but does it? How much of the happenings at public hearings reach the ministry? How does the ministry utilise such testimonies? The major concern today is EIAs do not fully assess impact—they are not used to say “no” to a project.

**KANCHI KOHLI** *Kalpavriksh, Pune*

How many EIAs are rejected?

**CHANDRA BHUSHAN** *CSE*

None or few.

**SK AGARWAL** *MoEF*

Public hearings today are designed to expedite projects—a travesty of its original purpose. Place EIA in the public domain so that people can see what has been considered and what the company is required to do. This will garner public trust. Why are the final EIA documents not in the public domain?

**SUNITA NARAIN** *CSE*

→ In 1994, the Union ministry of environment and forests (MoEF) made environmental impact assessment (EIA) mandatory for certain kinds of industrial and developmental activities, to minimise environmental and social damages of these activities, or mitigate effects in projects that could not be avoided.

The 1994 notification was amended 12 times in the next 11 years. Some amendments were progressive, like the one in 1997 which made a public hearing mandatory for the EIA process. But most others sought to dilute the process, for EIAs – especially the public hearing, where project proponents and government were forced to come face-to-face with the project-affected people – soon became a thorn in the side of development projects. In all, the amendments rendered the original purpose of the EIA exercise meaningless.

September 2006: A new procedure to conduct EIA was put in place, using a draft based mostly on consultations with apex industry associations. NGOs and people’s organisations were conveniently left out of the loop. The most controversial clause of the draft was on public hearing norms.

Are rumours flying in your neighbourhood about everyone becoming rich?

Do you see strangers with survey equipment?

Are there trailer trucks coming in with odd-looking machines?

Do you fear about your land, water and forest?

Want to say ‘no’ to all these



and not sure?  
**You need to ask  
the right questions**

**For good help**



# hearing impaired



→ September 10, 2006: Widespread resistance in his long-time Pulivendula assembly constituency in Kadapa district of Andhra Pradesh has come as a shock to chief minister Y S Rajasekhara Reddy. People have dug in against his pet project: a 26.79-million tonne uranium mining project.

At village Tummalpalle, a public hearing conducted by the Andhra Pradesh Pollution Control Board for the project turns out to be a farce. Hundreds of people from the four villages that oppose the project are chased away from the venue. Rapid Action Force personnel, deployed in force since the morning along all routes leading to the venue, scare away villagers. The Uranium Corporation of India Limited plans to mine uranium in Tummalpalle, Mabbu Chintalapalle, Bhoomayyagaripalle and Rachakuntapalle. Note: A year after this incident, the project is still on. Names of villages where the mining is to be done are different. Tummalpalle will now host not a mine, but a 3,000 ton per day uranium processing plant. People still resist, but now there are fears that all opposition will be swept away.



# GOA > an expanding pit

## TRAVELOGUE

We were standing between a massive mine and a stunning water reservoir. Local activists were explaining to me how this iron ore mine was located in the catchment of the Selaulim water reservoir, the only water source for South Goa. Just as I clicked this depredation with my camera, we were surrounded by a jeep-load of men. They said they were from the mine management and wanted us off the property. We explained that we had used a public path and that there were no signs to indicate that we were trespassing. But clearly, they were not in a mood to listen. They snatched the keys of our jeep, picked up stones to hit us and got abusive. Before things got out of hand, we decided to leave. They followed us till we left the area, also ensuring we could not stop and take more photographs.

I was completely baffled at these developments. After all, this was the paradise of Goa, known for its sandy beaches, lush green mountains and most of all for its peace and calm. This was also the place where industrialists with mineral interests – the families of Dempos, Salgaocars and Timblos – played key roles in education, culture and promoting the ethics of good corporate governance. Why would they allow mining to take place next to what was clearly the most important water source for the state? Why were there no signs of regulation, even signboards with names of owners, near or around the mine? Why would state regulators allow this to happen? What was happening in paradise to unleash this violence and simmering tension?

– Sunita Narain

In January 2007, China imported roughly 36 million tonnes of iron ore, of which India supplied nearly 7 million tonnes. But more importantly, India's exports to China were up 18 per cent—with Goa at the head of the supply line. What is this Chinese connection doing to Goa?

After visiting its beaches, all tourists to Goa must go on a river ride. All they will see is red water, in the Kushawati, Kalay, Uguem, Khandepar, Advoi, Bichulem Zuari and Mandovi rivers. Run-off from iron-ore mines, mine rejects simply dumped.

8 per cent of the total land area of Goa is under mining -- the highest in the country. As per government records, there are as many as 825 mining lease applications, covering an area of 67,822 hectares, in various stages of processing. If these leases are granted, more than 25 per cent of the state's land area will come under mining

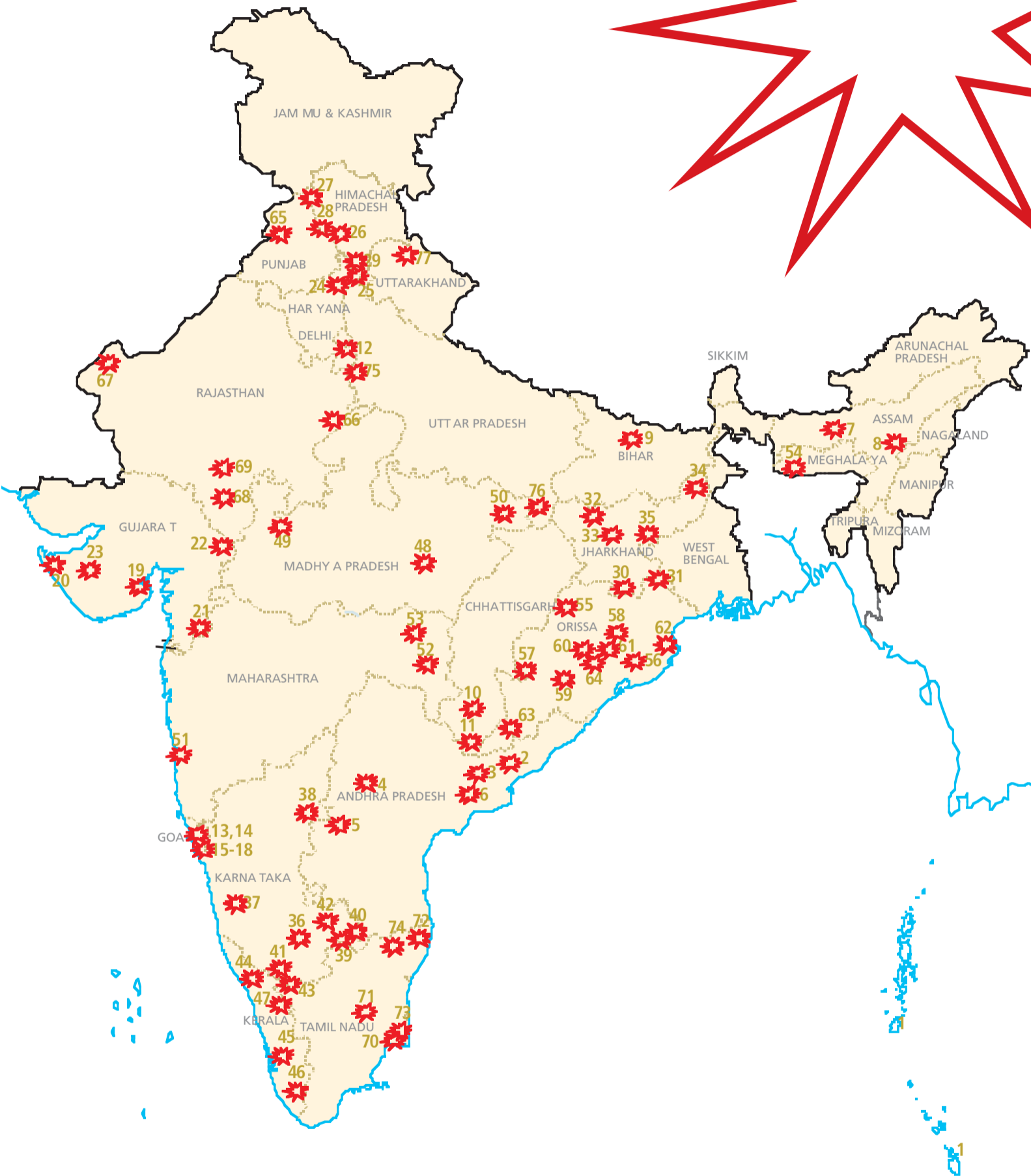
Roughly 33 million tonnes of minerals transited through Goa in 2006. 3.3 million trips, over 7,000 trucks travelling on roads, every day.

In Rivona village, people blocked the road, to stop trucks. The children cannot cross the road any more. The red dust the vehicles throw up cover their fields



*there are more pits all over...*

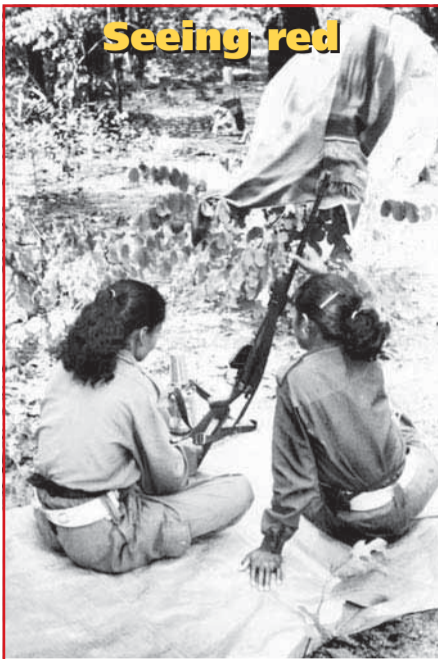
# disturbed area



1. Car Nicobar, Andaman & Nicobar, **sand**
2. Kakinada Yanam, East Godavari, Andhra Pradesh, **uranium**
3. Vishakhapatnam, Andhra Pradesh, **bauxite**
4. Nagonda, Andhra Pradesh, **uranium**
5. Nagarjunasagar, Andhra Pradesh, **uranium**
6. Nimmalapedu, Andhra Pradesh, **calcite**
7. Karbi Anglong, Assam, **coal**
8. Golaghat, Assam, **stone**
9. Sone river, Bihar, **sand**
10. Bastar, Chhattisgarh, **iron ore**
11. Dantewada, Chhattisgarh, **iron ore**
12. Jhingola and Palla villages, Delhi, **sand quarrying**
13. Bardez, Goa, **iron ore**
14. Haldankarwada-Porascadem, Goa, **iron ore**
15. Bicholim, Goa, **iron ore**
16. Tiswadi, Goa, **iron ore**
17. Ponda, Goa, **iron ore**
18. Sattari, Goa, **iron ore**
19. Amreli, Gujarat, **limestone**
20. Porbandar, Gujarat, **limestone**
21. Vastan, Gujarat, **lignite**
22. Vadodara, Gujarat, **manganese**
23. Kutchh, Gujarat, **limestone**
24. Rampur, Haryana, **quarrying**
25. Morni, Haryana, **quarrying**
26. Shimla, Himachal Pradesh, **stone**
27. Chamba, Himachal Pradesh, **slate**
28. Solan, Himachal Pradesh, **limestone**
29. Paonta, Himachal Pradesh, **illegal mining**
30. Jaduguda, Jharkhand, **uranium**
31. West Singhbun, Jharkhand, **iron ore and coal**
32. Hazaribagh, Jharkhand, **coal**
33. Jharia, Jharkhand, **coal**
34. Pakur, Jharkhand, **coal**
35. Dhanbad, Jharkhand, **coal**
36. Tumkar, Karnataka, **sand**
37. Kudremukh, Karnataka, **iron ore**
38. Bellary, Karnataka, **iron ore**
39. Bannerghata national park, Bangalore, Karnataka, **sand**
40. Tejaswininagar, Bangalore, Karnataka, **sand/stone**
41. Srirangapatna, Karnataka, **sand**
42. Rampura, Karnataka, **sand**
43. Kollegal, Chamarajanagar, Karnataka, **granite**
44. Madayipara, North Kannur, Kerala, **lignite, china clay and sand**
45. Alappuzha, Kerala, **sand**
46. Thiruvananthapuram, Kerala, **sand**
47. Periyar, Kerala, **sand**
48. Jabalpur, Madhya Pradesh, **illegal mining**
49. Shankarpur, Ujjain, Madhya Pradesh, **granite**
50. Singaruli, Sidhi, Madhya Pradesh, **coal**
51. Powai lake, Mumbai, Maharashtra, **stone**
52. Chandrapura, Maharashtra, **coal**
53. Nagpur, Maharashtra, **coal**
54. West Khasi Hills, Meghalaya, **uranium**
55. Jharsuguda, Orissa, **bauxite**
56. Kalinganagar, Jajpur, Orissa, **iron and steel**
57. Kalahandi, Orissa, **bauxite**
58. Keonjhar, Orissa, **iron ore and manganese**
59. Kashipur, Rayagada, Orissa, **bauxite**
60. Sambalpur, Orissa, **bauxite**
61. Sukinda Valley, Jajpur, Orissa, **chromite**
62. Jagatsinghpur, Orissa, **iron ore**
63. Koraput, Orissa, **bauxite**
64. Angul, Orissa, **coal**
65. Salem Tabri, Ludhiana, Punjab, **sand**
66. Karauli, Rajasthan, **sandstone**
67. Jaisalmer, Rajasthan, **granite**
68. Udaipur, Rajasthan, **marble**
69. Rajasmand, Rajasthan, **marble**
70. Nagapattinam, Tamil Nadu, **sand**
71. Tirunelveli, Tamil Nadu, **sand**
72. Thiruvallur, Tamil Nadu, **sand**
73. Ramanathapuram, Tamil Nadu, **sand**
74. Vellore, Tamil Nadu, **sand**
75. Mathura, Uttar Pradesh, **sand**
76. Sonbhadra, Uttar Pradesh, **coal and dolomite**
77. Tehri Garhwal, Uttarakhand, **stone, sand and magnesite**

clashes over mining reported in just the English language media, only in 2006





Today, 40 per cent of the top 50 mining districts in India are extremely affected by a phenomenon called Naxalism. Another 40 per cent of these districts are moderately affected

The focus of Naxalism has shifted from radical land reform to tribal self-determination and control of resources. It finds huge sympathy in the tribal-dominated forestlands of Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Maharashtra and Orissa, under which lie the major minerals.

December 19-20, 2007. In a two-day conference of chief ministers, the PM called Naxalism "the single biggest security challenge". He urged chief ministers to "choke Naxal infrastructure and cripple their activities".

All Naxalite-affected districts feature in the Planning Commission's list of 150 poorest districts. Most of them have been among the poorest over the past four to five decades. Going by the most recent poverty estimate, these districts have 35 per cent of India's poor.

The PM in his speech acknowledged Naxalites were getting more involved in "local struggles relating to land and other rights". "They feed," he said, "on the perceived lack of development. Correcting this requires a lot of effort".

Nevertheless, the Centre insists on treating Naxalism as a mere law-and-order problem. Consider the home ministry's swift response: the Centre will recruit around 37,000 personnel under the Indian Reserve battalion scheme and deploy them in Naxal-affected states. The new force will be added to the existing 43,000 central police personnel on anti-Naxal duty.

This means for every Naxalite, there will be seven armed personnel. Only compare: in Naxalite-affected areas, average landholding is less than half a hectare and there is hardly one drinking water source for every 10,000 people.

→ Salwa Judum, in the Gondi language of Dantewada district, Chhattisgarh, means 'purification hunt'. It is the name of a popular movement in which villagers are enlisted by the state in its fight against Naxalites. The state government has called it a counter-insurgency 'measure'. The Centre has called this bluff, chipping in with paramilitary battalions, minesweeping equipment and technology to help locate Naxalite camps, as part of its counter-terrorist 'strategy'.

It is whispered that Salwa Judum turns people out of villages to live in camps, so emptying the land beneath which lie rich seams, richer ores.

"Once in camps people have no choice but to support the Salwa Judum. Some are forced to work as informers against members of their own and neighbouring villages and participate in attacks against them, leading to permanent division within villages. Families are sometimes split between Judum supporters and those who wish to remain in their villages". — from report of an all-India fact finding mission, November 2005.

It began with villagers banding together to resist Naxalite bullyboys parading the right to be tyrannical. A Congress MLA held rallies, exhorting people to resist. He had done the same before; again, people responded; spontaneous bow-and-arrow militias combed jungles. Something seemed afoot, which then took on a new avatar and quickly became Salwa Judum. It was so fast the state chief minister publicly supported it.

Another group visited the district in May 2006. It included academic Ramachandra Guha, *Prabhat Khabar* editor Harivansh and sociologist

# AGAINST MY PEOPLE

Nandini Sundar. Their report, *War in the Heart of India*, found the civil administration "on the point of collapse". Salwa Judum had turned into "an unaccountable, indisciplined and amorphous group" led by "criminal elements" the administration had no control over. "There is an atmosphere of fear and a great deal of violence in which ordinary villagers, and tribals in particular, are the main sufferers".

Are industries in this mish-mash?

"After months of protests", said a September 13, 2006 report of the India Abroad New Service, villagers of Dhurli and Bansi in Dhanawada district agreed to give land to Essar Steel for a steel plant. "86 protesting families have held a meeting last week and agreed to hand over 600 hectares of land to Essar Steel," the report quoted H S Sethi, Essar's Chhattisgarh director, as saying.

The same day the *Daily Chhattisgarh*, a Hindi paper, reported thousands rallied against the proposed plant. "The villagers said that on September 9, police forced them to sign no-objection letters. Two constables were posted at each house. No outsider was allowed at the meeting place. People were not allowed to leave their homes or to talk to each other. According to villagers, they were forced into vehicles, and taken to the meeting. They were taken to a room in twos, and pistols were placed at their temples to make them sign."

There are the Naxalites. There is Salwa Judum. In this atmosphere, any protest is an insurgency. There is industry. There is the state. It is easier in this atmosphere to move people from their land. There is ore. There is development. In this mish-mash, people are losing, on all counts.



# DEEPPENETRATION

→ The Uranium Corporation of India Limited (UCIL) has been mining uranium, a radioactive mineral, in Jadugoda. For 50,000 people living in 7 villages near the mines, life has meant living with uranium.

“Of all the workers who joined the mines in the 1960s, I am the only one alive,” says Saluka Himbram, head of Chatikocha village. The 500 people of this village live next to the largest tailings pond (tailings: neutral name for often toxic mining waste). An embankment is all that saves them from a radioactive flood of 4.1 million tonnes of waste. Himbram’s son, a miner, has made 39 visits to the doctor in six months. “A pain in his abdomen keeps him down for days,” says Himbram. “When the wind blows, we feel like vomiting.”

“The generation born after uranium mining began has suffered the most,” says Ghanshyam Birouli, who is leading a movement against mining in Jadugoda. “The radiation is high and radioactive waste is disposed off carelessly,” informs Kritika Sreepakash. She, too, is against mining in Jadugoda. A researcher found, in July 2002, high uranium contamination around the tailing pond.

Gujarat-based Sampoorna Kranti Vidyalaya Vedcchi conducted a survey of two villages near a tailings pond and 2 away. In the first two villages, 60 children were born with genetic disorders; in the other 2, ten children. Of the 107 TB patients in the area, 50 were mine workers.

Everyday, 200 trucks pass through Jadugoda town laden with uranium ore. The trucks are usually not covered. In front of a school lies a heap of tailings; dried up and shovelled out of the pond, radioactive is used here as material to construct roads and buildings. Water from the main tailing pond, laced with radioactive waste, flows in an open channel through the town. Some 900 m below, miners extract the world’s poorest quality uranium while breathing radon gas.



## NO VICTORY IN JADUGODA

### COMING UP...

*India’s radioactive footprint is set to grow*

#### → MEGHALAYA

June 12, 2007. Village Wakhaji in Meghalaya. A public hearing for a proposed uranium mining project by UCIL is being held. Civil rights groups opposing the project have called for a general strike. Key protestors include 80-year-old Spillity Langrin Lyngdoh of Domiasiat, instrumental in blocking UCIL in the early 1990s. She had then refused to part with her land. “Officials say this land is ours but the country is theirs and that means they can do anything they want,” she says. “How can we support that?”

#### → ANDHRA PRADESH

UCIL wants to mine uranium in four villages — Tummalapalle, Mabbu Chintalapalle, Bhoomayyagaripalle and Rachakuntapalle — in Pulivendula assembly constituency, Andhra Pradesh. Earlier, UCIL was busy with another project, called the Paddagattu-Lambapur project, sited in Nalgonda district. So it did not pay much attention to this project. But after the state pollution control board denied clearance to the Nalgonda project, UCIL turned its sights on Pulivendula.

## What happens if you ask the right questions

August 4, 2007: Monnet Ispat and Energy Ltd's public hearing in Raigarh, Chhattisgarh is called off. The company's plans to expand its iron and steel plant has run into trouble, given irregularities in its environmental impact assessment (EIA) report.

The EIA report was also assessed by the Centre for Science and Environment, in a free consultancy service at the request of the community; it found the EIA did not take into account the environmental impacts of the existing plant. At the public hearing, therefore, people were prepared to question the data provided in the report; among others, they pointed out that information on the study area of the EIA was unclear. The consultant was unable to answer the queries.

The project has been stopped, for now.

# How to say 'no'

An EIA report is usually full of hi-fi data and fancy sentences, written to dazzle and confuse people.  
This has allowed companies to get away with murder.

No longer.

**The Centre for Science & Environment offers communities and civil society activists free consultancy on how to understand an EIA report, translate it in your language**

So if you want to fight for your land, water and forest, get in touch with us immediately

Contact: Sujit Kumar Singh, Industry & Environment Unit  
Centre for Science and Environment  
41, Tughlakabad Institutional Area, New Delhi-110062  
Ph: 91-11-2995 5124 / 6110 (Ext. 281); Fax: 91-11-2995 5879  
Website: [www.cseindia.org](http://www.cseindia.org) E-mail: [sujit@cseindia.org](mailto:sujit@cseindia.org)



CSE has also developed a hands-on five-day training programme for practical exposure to EIA reports.

You will have:

1. Exposure to all aspects of EIA
- What data is required, how to collect and interpret it, and the significance of the data
  - Effectiveness of the assessment methods
  - What issues should be addressed in the terms of reference (TOR)
    - Tools to evaluate the environmental impact of projects
2. Better understanding of the EIA process – from screening, scoping, data collection to impact assessment as well as the role of public consultation
3. Better understanding of the environmental and social impacts of the industrial and developmental projects
4. Better ability to review EIA reports and identify its strengths and weaknesses
5. Increased ability to play active role in post-EIA monitoring.

Online registration: <http://www.cseindia.org/aagc/eia.htm>



→ In September 2005, the government constituted a high-level committee under Anwarul Hoda, member, Planning Commission. It was directed to streamline the route to more investment in mining. One of its major enemies was “procedural delays in various clearances at both the Central and state government levels, especially in the case of mandatory environmental clearance”. The committee has tackled this Enemy, pinned it down.

## Stately in blindness, **appalling in insight**

“The government shall assist the Company in obtaining all clearances, including forest and environment clearance and approval of the State Pollution Control Board, and the Ministry of Environment and Forest, for opening up the mine, laying roads, constructing township **etc**”.

- At the core of the committee’s recommendations on forest clearance are proposals to change laws to assure prospectors they will get clearance if they find minerals.
- The committee wants the clearance process for mining renewals to be a mere formality.
- The committee wants public hearings to be dispensed with for mining leases over an area less than 50 hectares, and for renewal of leases attend.
- Most damagingly, the committee wants the upper limit for a single mine lease to increase from the existing 10 sq km to 50-100 sq km to develop “world-class bodies”.

### The responsibilities overlap

- Union ministry of environment and forests (MoEF): clears environment impact assessment reports, environment management plans & provides forest clearances
- Indian Bureau of Mines: Clears mine plans, closure plans but has no power to oversee environment impact assessments. Oversees monitoring and regulation under the Mineral Conservation and Development Rules, 1988, which includes looking into air pollution and discharge of toxic liquids. Like the MoEF, clears environment management plans (it demands a separate one)
- State pollution control boards: Provides consent to establish and operate mines, and

monitors – like the Indian Bureau of Mines - water and air pollution, but under the ambit of a different set of legislations: The Water (Prevention and Control of Pollution) Act, 1974 and The Air (Prevention and Control of Pollution) Act, 1984

- Directorate General of Mine Safety: Monitors health and safety. Over-regulation or bad management?

### Institutions are weak

- The pollution control boards of mineral rich states – Jharkhand, Orissa and Chattisgarh – do not have the capacity to regulate mines
- Deterrence for non-compliance – legal action – is not working



This page is sponsored by

dig&run inc



# orphaned

➔ A mining company does not belong to the place it mines in. Thus, when the ore is extracted, it simply moves out.

Mining In India has left behind a pocked land, pockmarked with craters. Officially, 500-odd orphaned mines, and thousands of abandoned mines – the mine owners dug and ran, or simply left the pit as it was.

An abandoned open-cast mine is a threat to life and property and leads to a lot of pollution.

Mining companies in the West are infamous for leaving behind ‘ghost towns’ without social or economic rehabilitation. In the West, companies often show bankruptcy and run away. Why will things be different in India?

**If you cannot close a pit, don't open one**



- DO**
- Moratorium on mining in biodiverse areas — protected forests, national parks and wildlife sanctuaries
  - Tough conditions in ecologically sensitive areas like the Himalaya and coasts
  - Specific consideration for role of forests as watersheds and local needs
  - Fix loopholes in clearances so that forest clearances for mining cannot be de-linked from such clearances for ancillary activities.

- DON'T UNDO**
- Public hearing must be mandatory
  - Final Environment Impact Assessment (EIA) report must be made public
  - EIA must be done through independent agency, paid by industry through cess, not directly
  - Environment Management Plans are very weak. Compliance is non-existent. So all monitoring reports must be made public.



## SHARE THE WEALTH

**GHANA:** 20% of royalty goes to people;

**CHINA:** 40-60% of royalty goes to local region;

**PHILIPPINES:** 40% of royalty goes to local government; 35% goes to local village

**BRAZIL:** 65% of royalty goes to municipality; separate funds created

**PERU:** 20% of royalty goes to municipality; 50% to community

**PAPUA NEW GUINEA:** 20-50% of royalty goes to private land owner; balance to state

Models include development fund for social amenities, trust funds, preferential shares, direct payments to landholders



## CRACK DOWN ON MINING

Village Colomba, Goa. The walls of the house of Devki Katu Velip are badly damaged because of the blasting in the mines nearby. When Devki Katu Velip complained to the miners, the supervisor told her they would destroy her house completely if she dared protest again.

### HOW TO USE THIS BOOKLET

1. You should obtain three copies
2. Keep one copy in your library
3. Tear pages of other two copies and paste them in nearest govt offices and mining companies
4. Use the library copy for future photocopy and use as above



CSE Occasional Tabloid based on CSE's Sixth Citizen's Report on the State of India's Environment: *Rich Lands Poor People: Is sustainable mining possible?*

Price: Rs 590 (Soft cover); Rs 790 (Hard cover)

Buy copy at <http://csestore.cse.org.in>

Download sample chapter at [http://www.cseindia.org/programme/industry/mining\\_order.asp](http://www.cseindia.org/programme/industry/mining_order.asp)