

Making mining 'work' for development

**Submission to the Group of Ministers
by the Centre for Science and
Environment, New Delhi
June 26, 2007**





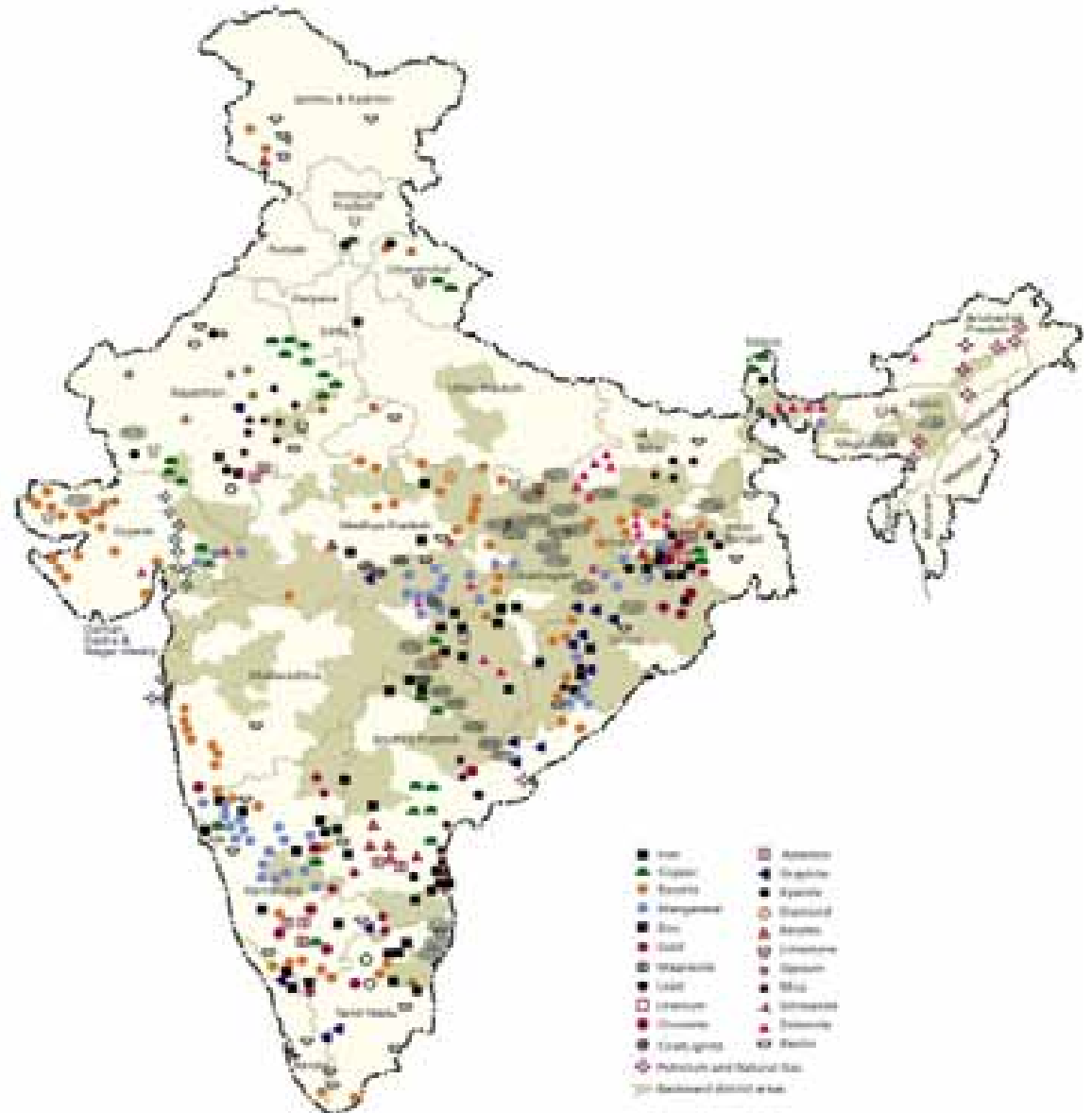
Our questions:

- **Why do India's poorest live on its richest lands?**
- **What can we do so that mining benefits communities and does not destroy the environment**



Resource curse?

Of the 50 top mineral producing districts of India, **60 per cent** fall under the 150 most backwards districts.





Rich land, Poor people

- **Three states with substantial dependence on minerals (between 8-10% of GDP) – Jharkhand, Orissa and Chhattisgarh**
- **In these states, mineral royalty only contributes 6-13% of total revenue receipt**
- **These states have maximum number of backward districts: Jharkhand (19/22), Orissa (27/30), Chhattisgarh (15/16)**



Rich Lands, Poor People

Iron ore districts

- **Keonjhar**: Produces 21% of India's iron ore; has 60% population BPL; ranked 24th out of the 30 districts of Orissa in HDI
- **Bellary**: Produces 19% of iron ore (mostly exported); largest number of private aircrafts; ranked third from the bottom in HDI in Karnataka; 50% literacy level; 45% population BPL



Rich Lands, Poor People

Limestone districts

- 10 districts that produced more than 5 MT – all ranked at the bottom half of their respective states in HDI
- **Gulbarga** – largest producing district – 2nd from the bottom in HDI in Karnataka; 45 % population BPL, 45% household have no access to power

Bauxite district

- **Koraput** produces around 40 percent of India's Bauxite; ranked 27th out of the 30 districts of Orissa in HDI. 79% population BPL



Rich Lands, Poor People

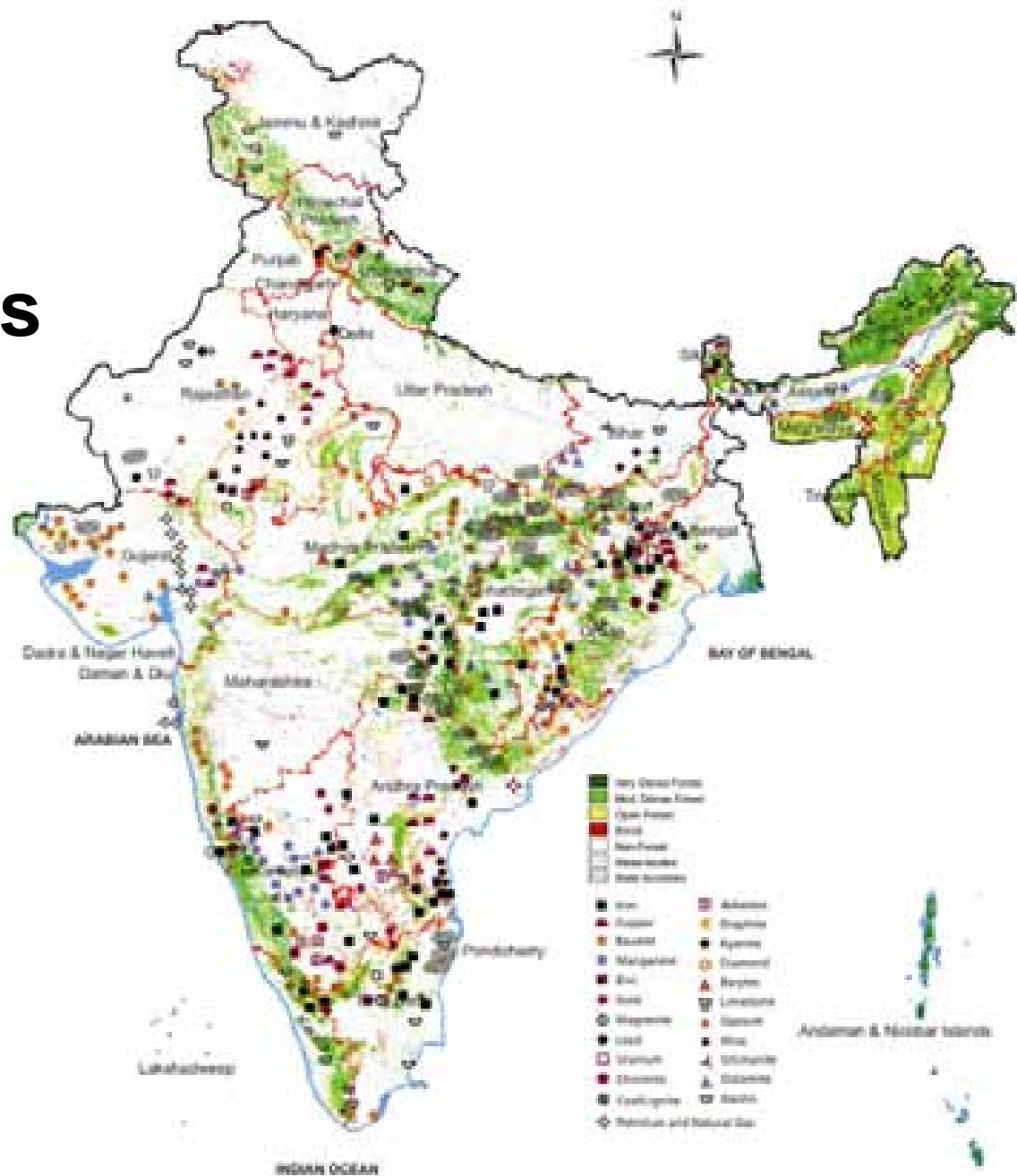
Chromite districts

- **Jajpur** produces 95% of India's chromite. Ranked 22nd out of the 30 districts of Orissa in HDI.

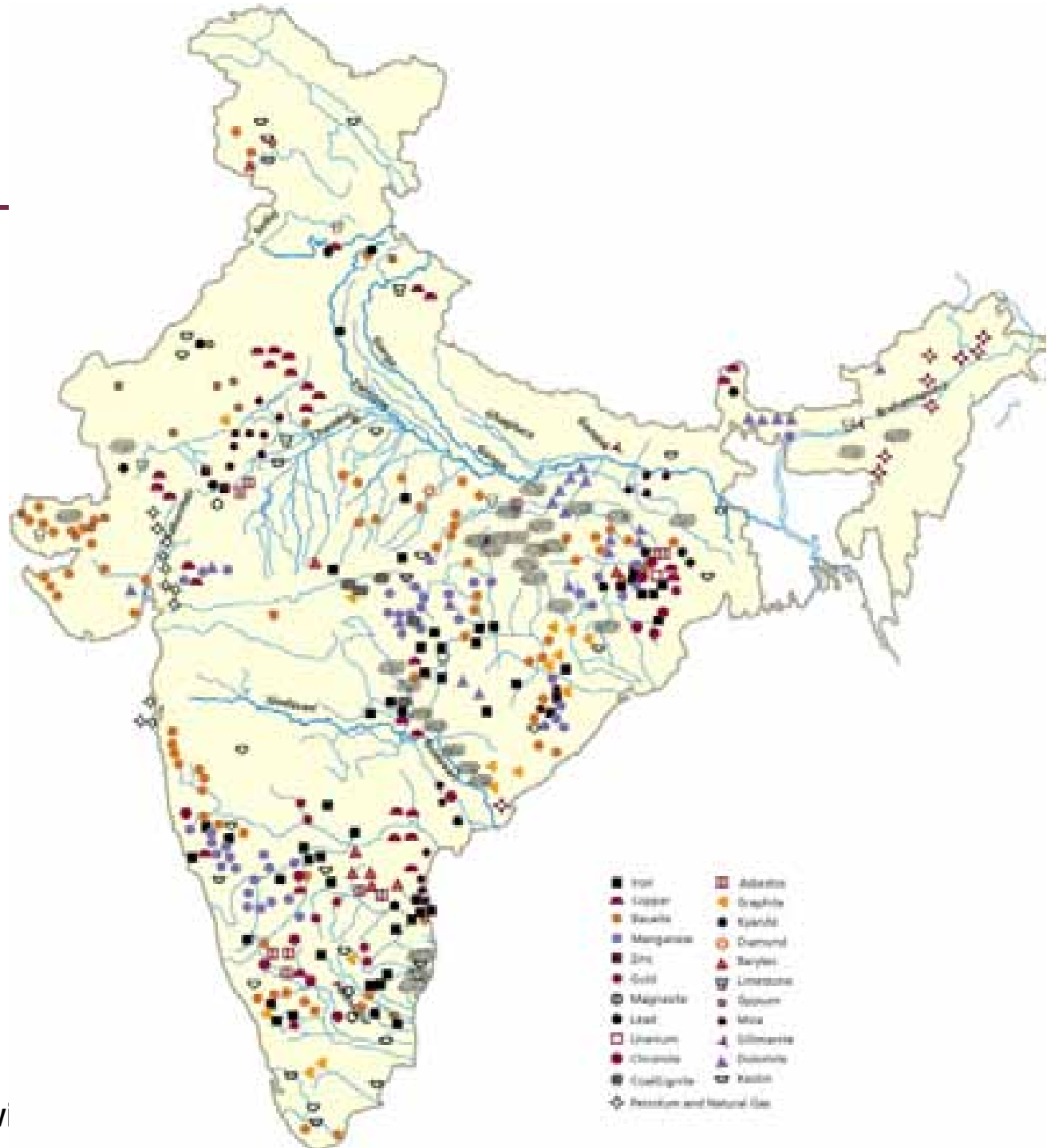
Lead/ Zinc districts

- **Bhilwara** produces 83 per cent of India's zinc; ranked 25th out of the 32 districts of Rajasthan in HDI. Almost half of the population illiterate and BPL

Mineral deposits in the country are in **forested** areas



Mineral deposits are where rivers flow: watershed





Challenge of the balance

- **Policy has to be designed to bring local benefits; to mitigate impacts on environment; to ensure water security**
- **Regulatory institutions have to be strengthened to assess damage; to enforce emission standards and rules; to build compliance**
- **Hoda Committee recommendations inadequate to deal with this challenge**



Myth 1: Mining sector constrained by environment and forest rules

- Fact: Forest clearance 7 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



The facts are:

In almost all cases

- forest clearance **granted**;
- environmental clearances **given**;
- where public hearing goes against project, project is **cleared**;
- renewals are a mere **formality**;
- Where mine is not meeting regulations, **no case filed**

**So should we dispense with regulations or
should we strengthen regulations?**



The ground reality is:

- **Current mining practices destroy environment and local livelihoods**
- **Overburden is piled on land; flows into rivers and cultivated lands; In 2005-06: 1.6 billion tonne of waste and overburden from coal, iron ore, limestone & bauxite generated**
- **Groundwater is depleted as mines breach watertable;**
- **Air pollution from mines and transport of minerals makes life miserable;**



Incompatible?

So

- **Is mining and environment incompatible?**
- **Or, is mining and environment incompatible because we do not have effective regulations and regulatory institutions?**



Many regulations...

- **MoEF: EIA & EMP & Forest Clearance**
- **IBM: Mine plan, EMP, closure plan as well as monitoring and regulation under MCDR**
- **SPCBs: Consent to establish and operate, monitoring and regulation under water and air act**
- **DGMS: Health & Safety (including dust, vibration, noise within mines)**
- **Is this over-regulation or multiplicity and bad management?**



Non-existent 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**



+ Weak institutions

- **SPCBs of mineral rich states – Jharkhand, Orissa and Chattisgarh - do not have capacity to regulate mines**
- **Of 300 odd operational mines in Orissa, only 172 are covered under consent management**
- **Deterrence for non-compliance – legal action is not working**
- **Between 2004-2006 Orissa PCB filed 5 cases (none against mines)**

‘Voluntary’ compliance cannot work



Conservation rules weak

- MCDR, 1998 – Only regulation which is specific for mining and environment
- Most provisions are broad and ambiguous – end up treating each mine as a special case
- On mine restoration: “where ever 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”



MCDR, 1988

- “**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”. **‘Not feasible’ is undefined**
- “the dumps shall be properly secured to prevent escape of material in harmful quantities which may cause degradation of environment and to prevent causation of floods”. **‘Harmful quantity’ is unknown**



Rules weak; inspection meaningless: IBM report on inspections

	1999-2000	2000-01	2001-02*	2002-03*	2003-04*	2004-05*
Mines inspected	2791	2789	1653	2145	2462	1986
Mines in violation	1404	835	986		1281	
Percentage violation	50	30	60		52	
Violations rectified	759	508	613	1535	1895	919
Percentage violations rectified	54	61	62		148	
Prosecution launched	131	79	51		134	
Percentage of violators prosecuted	9.3	9.5	5.2		10.5	
Cases in favour of IBM	28	51	33		16	
Percentage in IBM's favour	21	65	65		12	
Mining operation suspended			9		3	



EIA must be strengthened, not weakened

- **Hoda committee wants process expedited. No public hearing for less than 50 ha etc..**
- **But**
- **Weakening public hearing will only mean that there will be more conflict;**
- **Current problem is different**
Time is spent on file movement; no time spent on study and assessment. No credibility in study done
Fix this



What needs to be done

- **Public hearing must be mandatory**
- **Final EIA report must be made public**
- **EIA must be done through independent agency, paid by industry through cess, not directly**
- **EMP very weak. Compliance non-existent. All monitoring reports must be made public.**



Forest clearance is mere formality

- **It takes time. But it is (almost) always given**
- **“Obsession is compensatory afforestation payment”**

- **Answer not to circumvent forest clearance.
But to improve it**
- **Forests are critical as watersheds**
- **Forests are local livelihood support**
- **Take Goa**



Goa

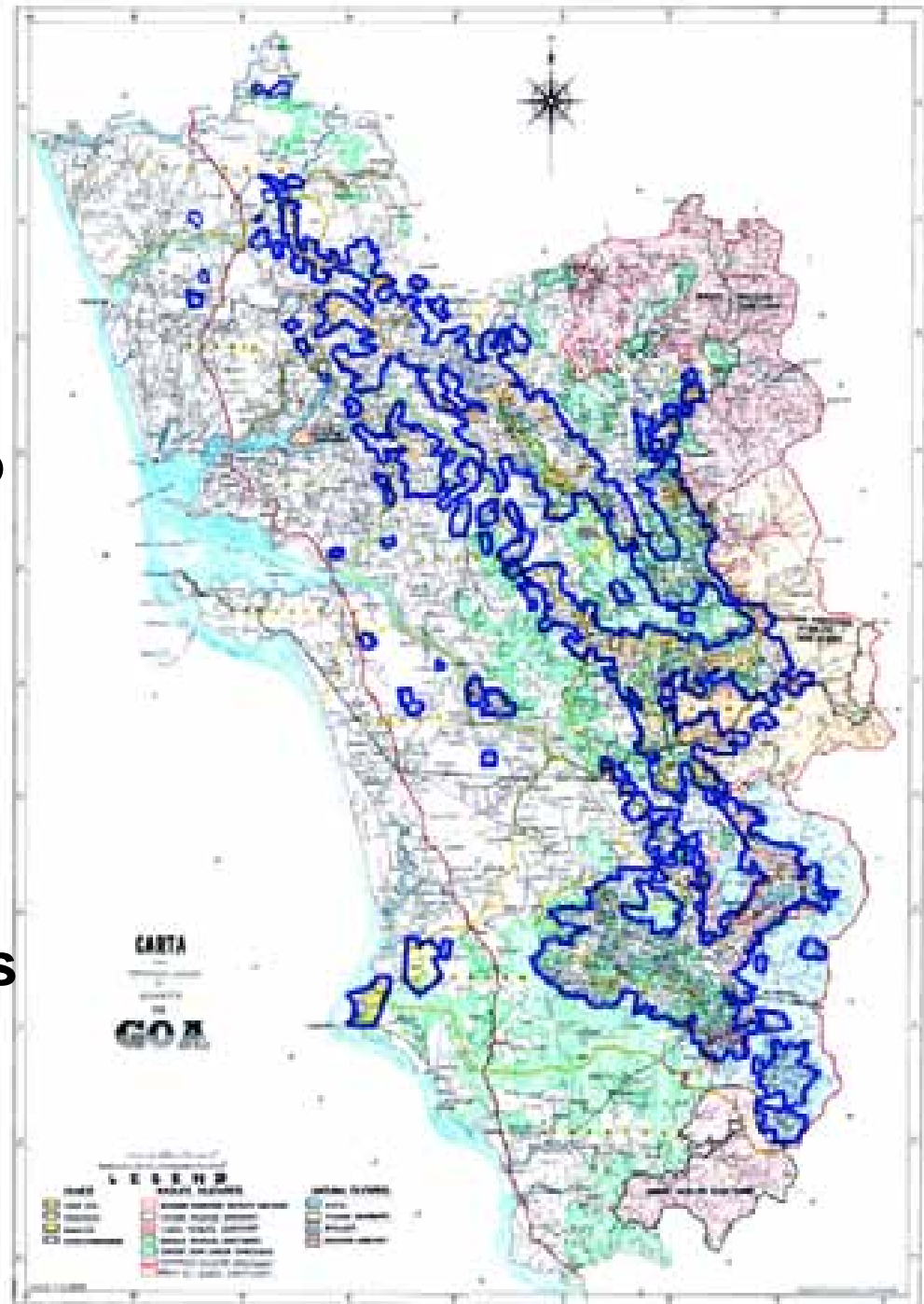
**Iron ore price
increased from \$16 to
\$60 per tonne.
Windfall to industry**

**Wants more leases
opened**

Leases in forest areas

**Forest in villages.
Destroys their life**

Centre for Science and Environment





Protests grow. When nobody listens
people say **no** their way





What needs to be done

- **Moratorium** on biodiverse areas -- protected forests, national parks and wildlife sanctuaries
- **Tough conditions** in ecologically sensitive areas –Himalayas and coasts
- **Specific consideration** for role of forests as watersheds and local needs
- **Fix loopholes** in clearances so that forest for mining cannot be de-linked from production plant etc



Water is next flashpoint

- **Water stress is growing in India**
- **Use in agriculture will continue with more efficiency;**
- **But will need more for industry and cities**
- **New tension. Growing skirmishes**
- **Alumina refinery in Vizianagaram opposed for water; Bauxite mine and refinery in Lanjigarh being opposed also for water. Will transport from 65 km away from river. River already stressed. **Not isolated cases****



Water prudent development

- **Mining has three problems**
- **1. It destroys watersheds for mining; mine waste destroys streams and rivers**
- **2. It needs water for its mining and production plants**
- **3. It leads to pollution from mines and waste from production plants**

Need a specific mining policy for water



Mine closure: global problem

- In the US government is footing the bill for mine closure. Estimated cost of closing over a trillion dollars
- In India IBM estimates:
 - 296 abandoned mines (also called orphaned mines) of major minerals + 214 **coal mines**
 - **Total official number: 510 – who will foot this bill?**
- In reality many more mines are abandoned



Mine closure plans weak

- In 2003 mine closure plan made statutory

But

- CSE reviewed 36 closure plans – very poor plans; no basis for improvement
- Financial surety (Rs 15,000 -- Rs 25,000 per ha) ridiculously low. Will not be deterrent
- **In West, companies show bankruptcy and run away. Why will it be different here?**



Way ahead

- **Recognise that there are issues that need fixing**
- **Recognise that institutions that can work in the public interest are increasingly disabled**
- **Recognise that if local environment destroyed; then local livelihood also devastated. Local conflicts will grow**
- **On this basis, modify mining policy**



Myth 2: Mining is development

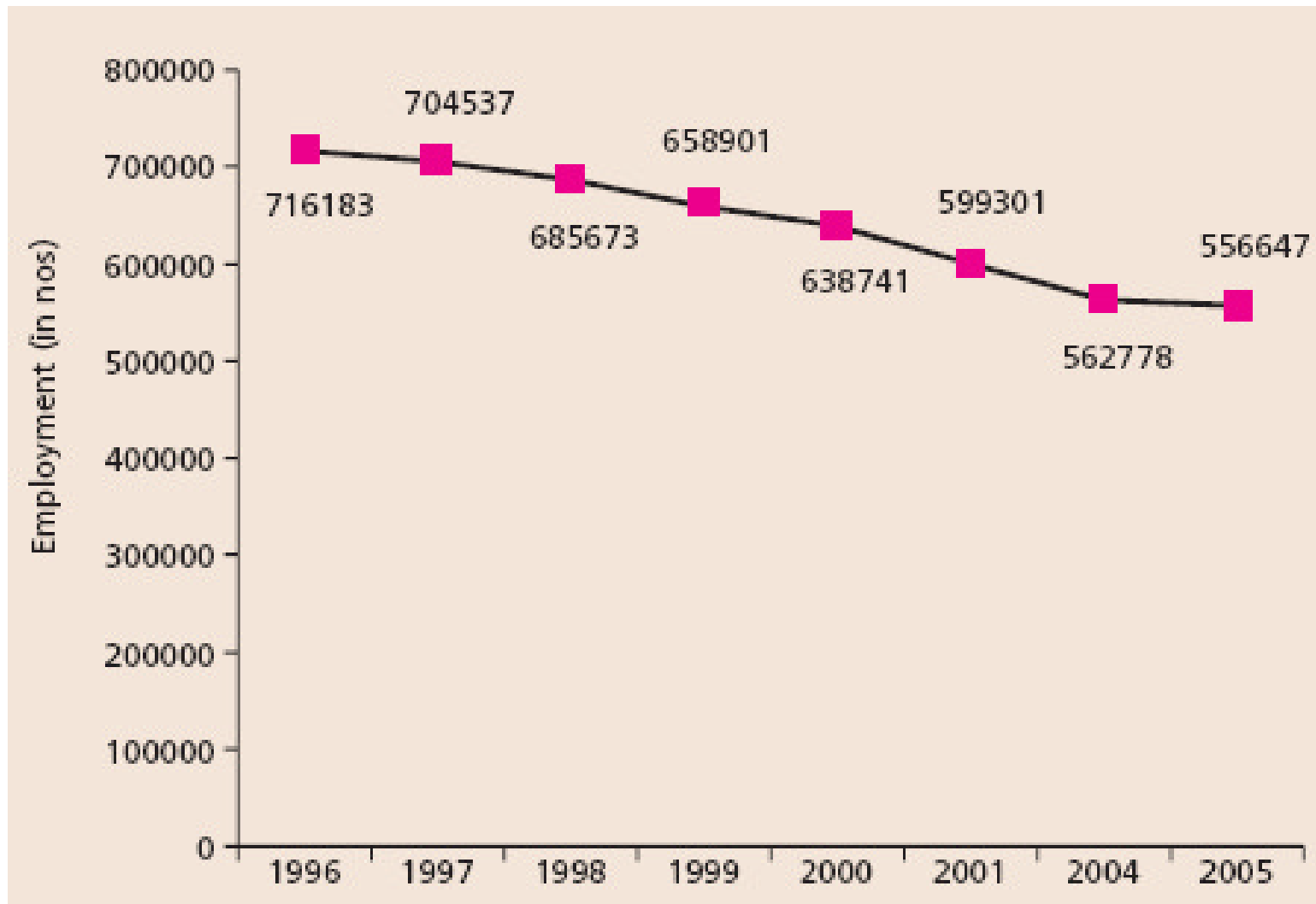
Current recommendations

- Increase lease area from 10 sq km to 50-100 sq km (**what does this mean for displacement**)
- Provide 3 per cent of turnover for local development (**is this adequate?**)

Mining does not provide local benefits, only costs.

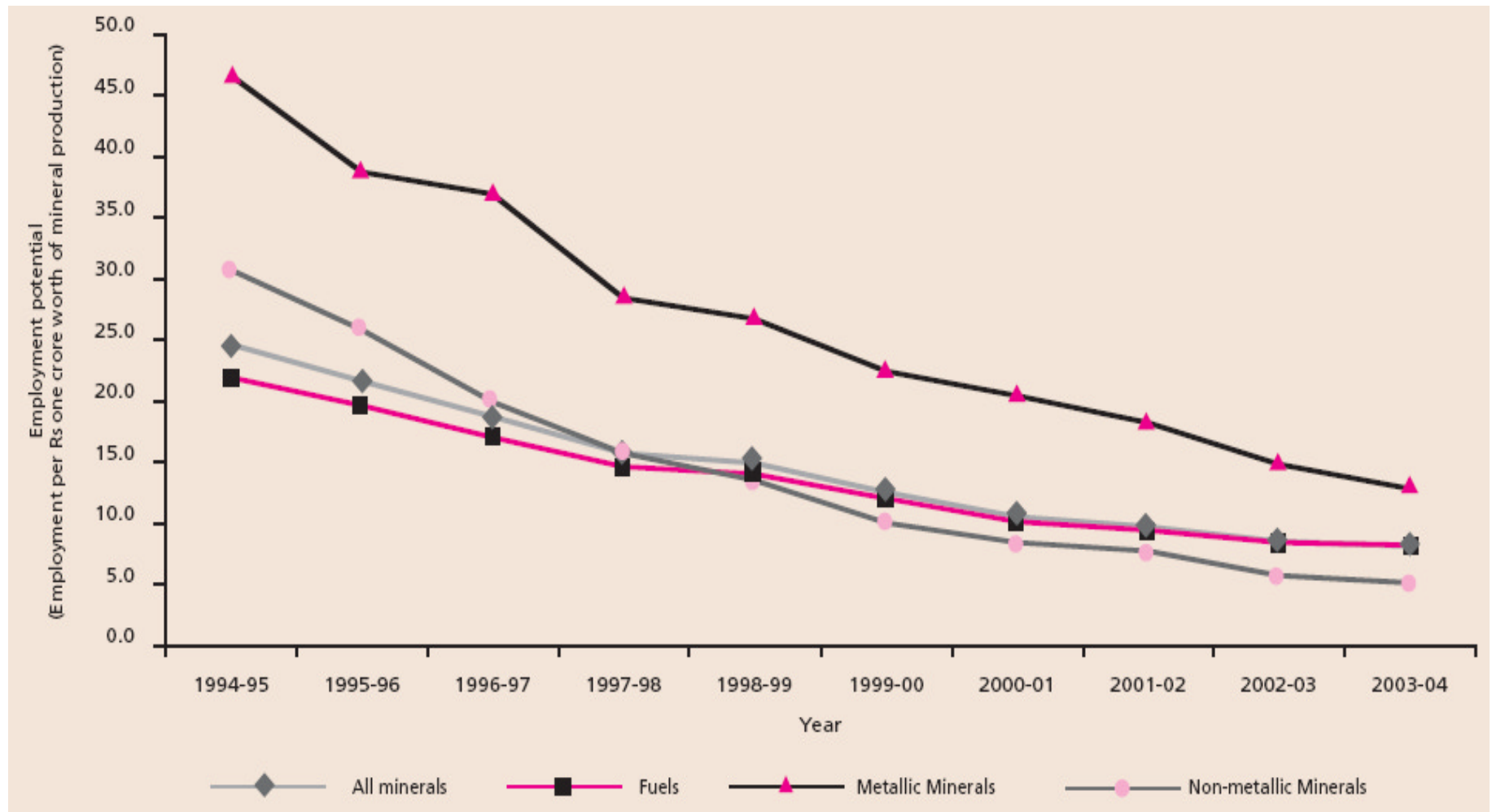


Modern mining not a great employer



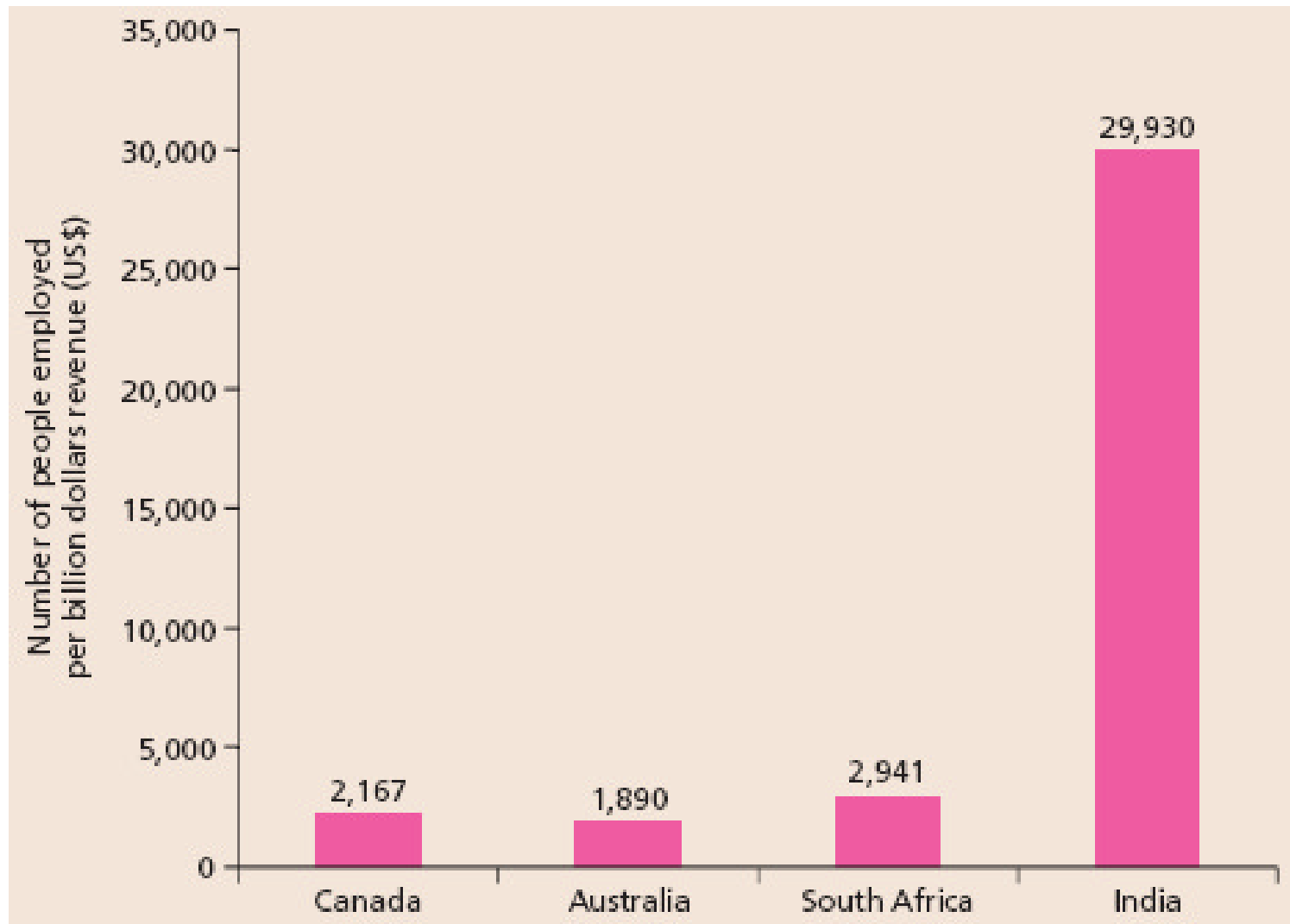


No of employed dropping in all minerals





Will decrease further





Cement: employment?

- Currently for **600** people employed for 1 million tonnes of cement produced
- In new cement units only **300** people employed for 1 million tonnes produced
- From 2000-2004; production increased by 30% people employed reduced
- In Japan **53** people employed for 1 million tonnes produced



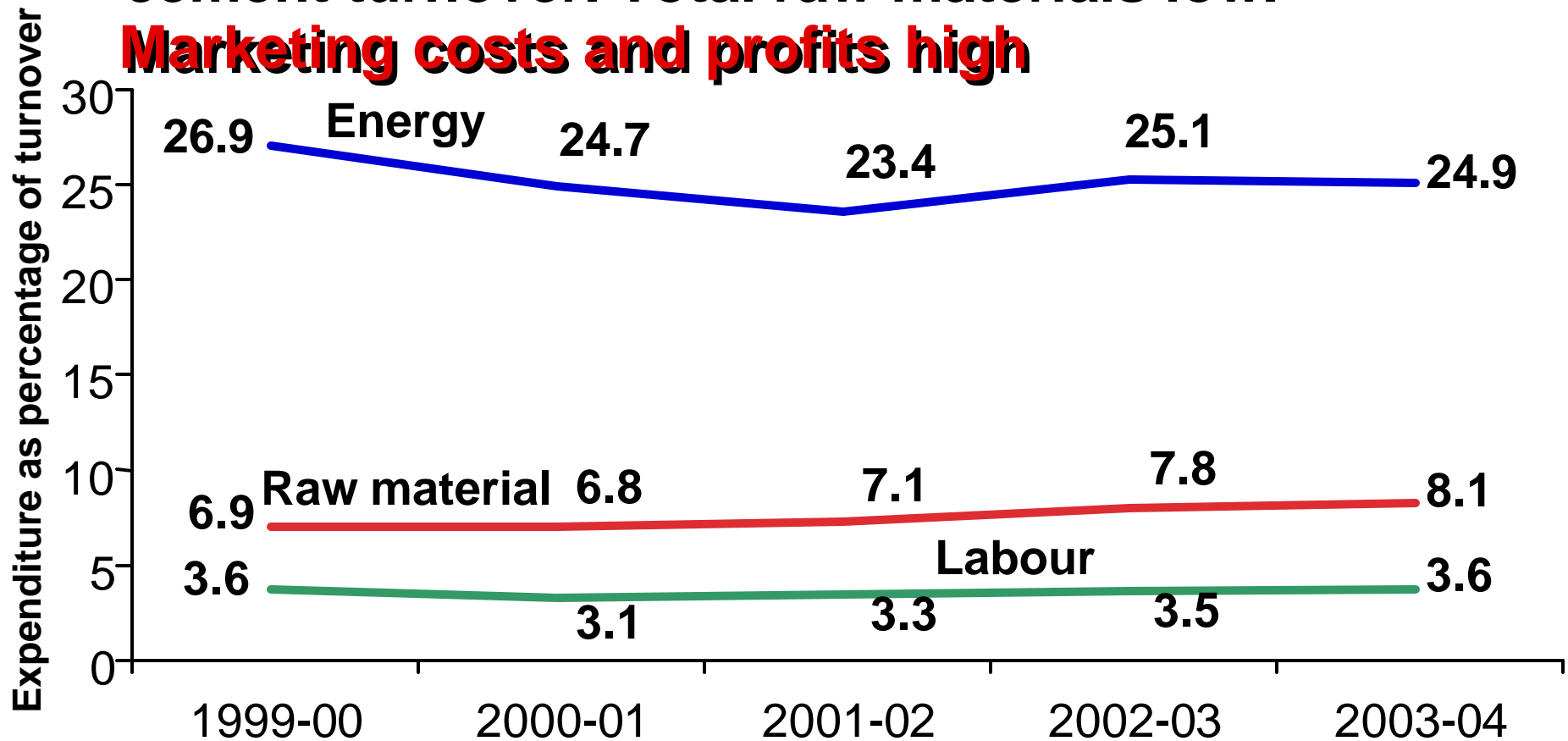
Nature of modern 'development'

- **Modern industry requires resources – land, water, forests, minerals – of region**
Not people; Brings benefits in other regions.
- **The answer is:**
- **Modern industry must pay full value for local resources -- water, forests, minerals.**
- **It must bring benefits to local region**



Cement: cheap raw material. Local People and environment lose

- Limestone raw material cost is only 3-4 per cent of cement turnover. Total raw materials low. Marketing costs and profits high**





Displacement is human cost

- Mining also means **displacement**; mainly involuntary displacement of tribal and economically weaker sections of the population
- We want to compete with the mining industry of Canada, Western Australia, PNG, Brazil etc., but we miss one crucial fact – **population density**



India's population density

- **Population Density (persons/ sq. km)**
 - Western Australia: 0.79
 - Canada: 3.3
 - Brazil: 20.5
 - PNG: 13
 - Chile: 22
 - China: 137
 - **India: 329**

Any large-scale land use change will lead to large-scale displacement



Poor track record in rehab

- No complete data on displacement
- Estimates: During **1950-1991**, **2.55** million people displaced – 12 per cent of displacement by all projects – 2nd largest out of all projects
- 55 per cent from Scheduled Tribes – highest of all projects
- Only 24.7 per cent resettled (no estimations on rehabilitation) – **lowest of all projects**



Need consent

- Concept of “**Free, Prior and informed Consent (FPIC)**” is catching up
- Philippines and Australia have laws requiring FPIC for projects
- To consent people will have to be convinced of benefits
- Cannot have short-cuts and use coercive techniques to get people’s consent
- **Will not work..**



No windfalls. Share 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**
- **PNG: 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**



India needs to do all and more

- **Mines in Scheduled Area. Need special protection.**
- **Have to be serious about sharing benefits.**
- **Have to share with **states**; Increase royalty (eg: iron ore);**
- **Have to share with **local people**: Provide ownership rights to people; share in business of mines;**
- **Otherwise promises made to be broken.**
Credibility crisis grows



Otherwise mining will lead to more conflicts. Will not be efficient or productive

Conflicts recorded in English media 2006

1. Calicut, Arunachal Pradesh, sand mining
2. Kanchi Taluk, East Godavari dist, Andhra Pradesh, uranium
3. Vemalaswaram, Andhra Pradesh, bauxite
4. Nandyala, Andhra Pradesh, uranium
5. Tummal, Karnataka, sand mining
6. Anant, Gujarat, limestone
7. Pordoland, Gujarat, limestone
8. Jalsu, W Saurashtra, Burkhard, uranium
9. East Singhbhum, West Bengal, iron ore and coal
10. Hazaribagh, West Bengal, coal
11. Nandya and Darna, Bihar, Burkhard, coal
12. Kudremukh, Karnataka, iron ore
13. Malappuram, North Kerala, Bauxite, lignite, chromite and sand
14. West Ghats hills, Nilgiris district, Meghalaya, uranium
15. Jharguda, Orissa, bauxite
16. Bhatnagar, Orissa, Orissa, bauxite
17. Kalamand, Orissa, bauxite
18. Kanchi district, Orissa, iron ore and manganese
19. Kanchi, Rayagada, Orissa, bauxite
20. Barshi, Rajasthan, sandstone mining
21. Taji Sahasr Lalimandil, stone coal and manganese
22. Nagapattinam, Tamil Nadu, sand mining
23. Alwayal, Kerala, sand
24. Bellary, Karnataka, iron ore
25. Sandalpur, Orissa, bauxite
26. Patpur, West Bengal, coal
27. Wonda, Himachal Pradesh, mining
28. Chanda, Himachal Pradesh, slate mining
29. Sullia, Himachal Pradesh, limestone
30. Parola, Sikkim, Himachal Pradesh, illegal mining
31. Tura, West Bengal, sand mining
32. Dhanbad, West Bengal, coal mining
33. Tuticorin, Kerala, lignite, Orissa, chromite
34. Barshi, Orissa, iron ore
35. Kallankannada - Pinnacled, Orissa, iron mining
36. Nagapattinam, Andhra Pradesh, Uranium mining
37. Bannerganga National Park, Bangalore, sand mining



38. Chinnampalayam, Karnataka, mining and quarrying
39. Srirangapatna, Mysuru, Karnataka, mining
40. Bahpur, Karnataka, sand mining
41. Kullasol, Chamarajanagar, Karnataka, granite
42. Thuvallapuram, Kerala, sand mining
43. Pempin, Kerala, sand mining
44. Thuvallur, Tamil Nadu, sand mining
45. Ramnathapuram, Tamil Nadu, sand mining
46. Yellare, Tamil Nadu, mining, sand mining
47. Jambhli, Rajasthan, granite mining
48. Pinnal Lake, Madhya Pradesh, limestone, stone quarrying
49. Yellare, Bihar, bauxite, lignite
50. Vaidolara, Gujarat, manganese mining
51. Saram, Bihar, Ludhiana, Punjab, sand mining
52. Jhalapour, Madhya Pradesh, illegal mining and quarrying
53. Baran, Rajasthan, iron-ore, stone, manganese, quarrying
54. Siron, Haryana, quarrying
55. Sula, Bihar, sand
56. Shikhar, Uttar Pradesh, limestone, granite
57. Singrauli, Uttar Pradesh, coal
58. Baran, Chhattisgarh, iron ore
59. Mathura, Uttar Pradesh, mining
60. Jyngira and Palla villages, Orissa, sand quarrying
61. Panchajanya, Andhra Pradesh, lignite
62. Bhatpur, Orissa, iron ore
63. Tinsaha, Orissa, iron ore
64. Pinnal, Orissa, iron ore
65. Sullia, Orissa, iron ore
66. Dandamulla, Chhattisgarh, iron ore
67. Jagajyotsna, Orissa, iron ore
68. Karamch, Orissa, bauxite
69. Angul, Orissa, coal
70. Sunandhaka, Uttar Pradesh, coal and limestone
71. Saram, Himachal Pradesh, limestone
72. Jhalapour, Rajasthan, marble
73. Nagarmahal, Rajasthan, marble
74. Chinnampalayam, Karnataka, coal
75. Nagpur, Maharashtra, coal
76. Kalia, Andhra Pradesh, lignite