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# Forest and Environment Clearances: Problems for economic growth or problems for environmental protection

**Centre for Science and Environment, New Delhi**



# The questions

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1. What has been the scale of environment and forest clearances granted in the country?
2. What is the cumulative impact of these clearances?
3. What is the monitoring done to ensure that the projects, once cleared, meet environmental conditions and safeguards?



# Forest clearance

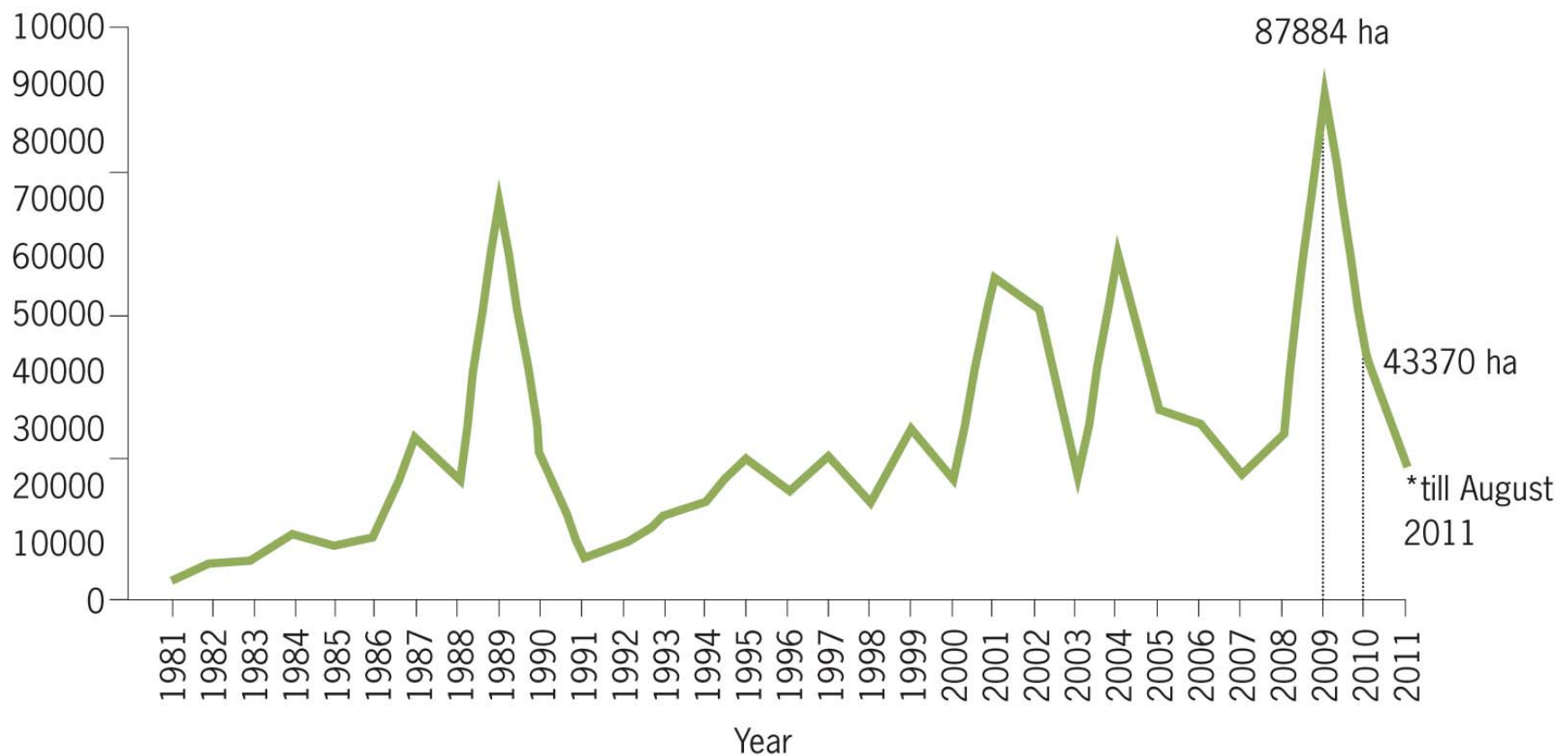
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- ◆ Unprecedented rate of clearance in the last five years (2007-2011; 11<sup>th</sup> FYP);
- ◆ 8,284 projects granted forest clearance and **2.04 lakh hectare** (ha) of forest land diverted -- 25 per cent of all forest land diverted for development projects since 1981. **Pace of clearance doubled**
- ◆ In one single year – 2009 – as much as 87,884 ha of forest was granted clearances – **highest in any one year since 1981**
- ◆ The area diverted is equal to about four times the area of a Panna or a Sahyadri or a Tadoba tiger reserve.

# Trend of forest land diverted: 1980-2011



**Figure 2: Forestland diverted\***



*\*For all projects excluding regularisation of encroachments*

# Pace of forest land cleared in last few years unprecedented



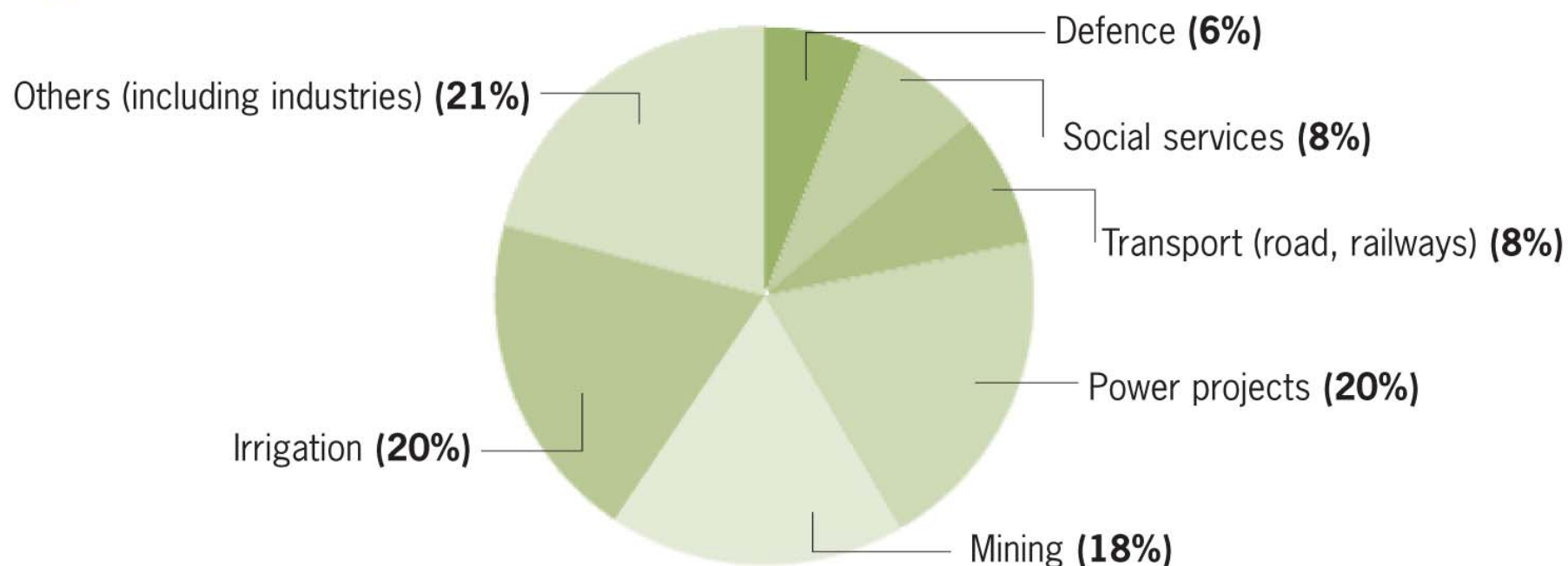
Period/Year	Forestland diverted* (in ha)
1981-92	198421.19
8 <sup>th</sup> FYP (1992-97)	84587.07
9 <sup>th</sup> FYP (1997-2002)	147397.57
10 <sup>th</sup> FYP (2002-2007)	196262.32
2007	22033.78
2008	28509.45
2009	87883.67
2010	43370.38
2011 (till August)	22627.78
<b>11<sup>th</sup> FYP (2007-2012)</b>	<b>204425.06</b>
<b>Total forestland diverted for development projects</b>	<b>830244</b>

**153881 ha — 19% of all forestland diverted for development projects from 1981 till August 2011**



# Forest clearances: last 30 years.

**Figure 3: Purpose-wise forestland diversion\*#**



\* For all projects excluding regularisation of encroachments

# For the period 1981- August 2011

## Forest clearances in 11<sup>th</sup> FYP

One-fourth of all forest diversion was for mining

	Forest area diverted (in ha)	Percentage of total forest diverted (%)
Defence	13137.9	6.4
Social services, rehabilitation and human settlement	3405.8	1.7
Transport (Road, Railways)	24387.3	11.9
<b>Power projects</b>	18898.9	9.2
Hydel	5553.7	2.7
Thermal	2199.1	1.1
Wind	2760.4	1.4
Transmission lines	8385.6	4.1
<b>Mining</b>	49904.6	<b>24.4</b>
<b>Irrigation</b>	26839.6	13.1
Others (including industries)	67851.1	33.2
<b>Total area diverted</b>	2,04,425.01	100



# Forest clearances

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- ◆ Forest clearances are being granted without considering **the impact of forest diversion on biodiversity, wildlife, water, the community etc.**
- ◆ **No impact assessment reports prepared.**
- ◆ No system in place **to check the veracity of information.**
- ◆ Documents based on which forest clearance is granted is not in public domain – **non-transparent process**
- ◆ **The present system not working.**





# Environment clearances

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## Coal Mining

- **181** coal mining projects given EC; combined production capacity cleared is at least **583** million tonnes per annum (MTPA); mine lease area **1.54** lakh ha.
- In 2010, India produced about 537 million tonnes coal.
- **During last 5 years, MoEF has granted EC to double the coal production capacity in the country.**



# Coal Mining

<b>State</b>	<b>Number of mines granted EC</b>	<b>Capacity (in MTPA)</b>
Andhra Pradesh	29	48.46
Assam	1	0.15
Chhattisgarh	21	102.88
Gujarat	1	0.30
Jharkhand	32	140.33
Maharashtra	32	43.14
Madhya Pradesh	35	134.95
Odisha	13	93.69
Rajasthan	4	5.50
Uttar Pradesh	1	4.00
West Bengal	12	9.87
<b>Total</b>	<b>181</b>	<b>583.26</b>



## Coal Mining: Top 10 districts

<b>District</b>	<b>Number of projects granted EC</b>	<b>Capacity (in MTPA)</b>
Korba	6	78
Sidhi	7	70
Angul	7	52
Hazaribagh	12	52
Singrauli	4	48
Chatra	5	46
Khammam	12	26
Chandrapur	21	26
Talcher	1	20
Raigarh	5	19
<b>TOTAL</b>	<b>80</b>	<b>436</b>



# Thermal power plants

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- 267 thermal power plants adding up to 2.1 lakh MW capacity granted EC during 11<sup>th</sup> FYP.
- **Coal-thermal power plants:** 200 coal-based thermal power plants adding up to 1.76 lakh MW installed capacity granted EC.
- **Gas-thermal power plants:** 44 gas-based thermal power plants adding up to 0.34 lakh MW installed capacity granted EC.



# Thermal Power Plants

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- At the end of the 10th FYP, the installed capacity of the TPPs in the country was 86,015 MW.
- The ECs granted to during 11<sup>th</sup> FYP is about **two and a half times** the capacity of TPPs the country has installed in **60 years after independence**.
- During the 11th FYP, only 32,394 MW capacity TPPs have been installed. The installation of TPPs during 11th FYP is just about **7,500 MW/ year**.
- However, on an average every year during the 11th FYP, about 45,000 MW capacity were granted ECs – **more than six times the actual installation rate**



# Thermal power plants

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- In Andhra Pradesh the maximum capacity of coal-based TPPs in the country was granted EC – 24,630 MW
- Tamil Nadu and Maharashtra followed closely with 22,034 MW and 21,025 MW respectively granted EC



# Thermal Power Plants

<b>District</b>	<b>Number of TPPs granted EC</b>	<b>Capacity granted EC (in MW)</b>
Nellore	8	12260
Kutch	8	10195
Cuddalore	4	8020
Singrauli	4	6880
Janjgir-Champa	6	6043
Nagapattinam	4	5510
Jharsuguda	4	5095
Nagpur	5	4700
Korba	7	4220
Raigarh	6	4200
<b>TOTAL</b>	<b>56</b>	<b>67123</b>



# Impediment to growth?

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- It is said and said that environment is holding up economic growth
- “India’s credit rating slipping because of green regulations”
- “Can’t build and supply energy because of environmental delays”
- “Coal mining held up...”
- “Industry leaders meet PM on green clearances”
- “Committee set-up to expedite green clearances”





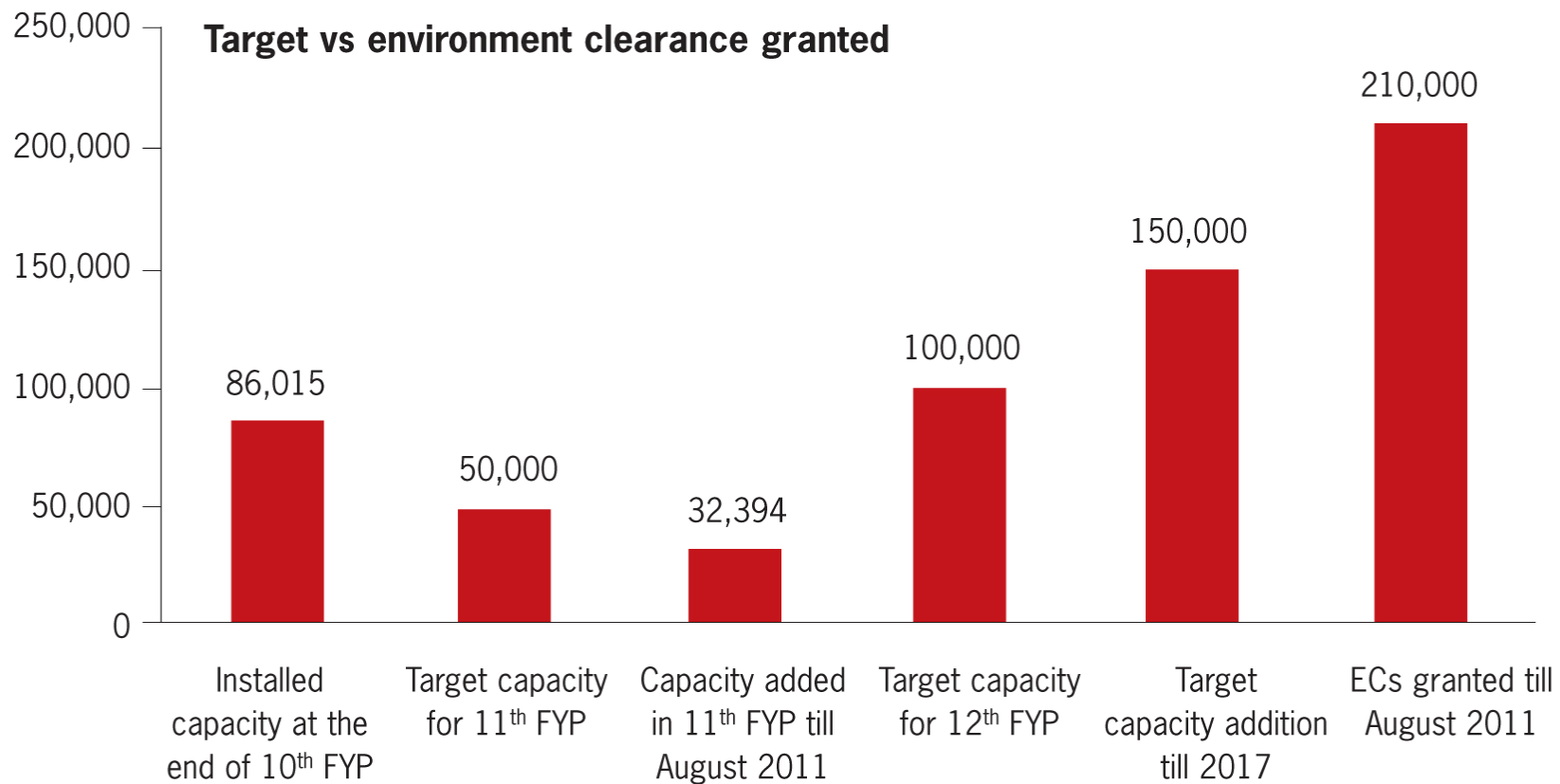
# Take thermal power

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- Projected target for additional thermal power capacity:
  - 11<sup>th</sup> FYP: **50,000 MW**
  - 12<sup>th</sup> FYP: **100,000 MW**
- In the last five years (till August 2011), MoEF has granted environmental clearance: **210,000 MW**
- **Cleared 60,000 MW more than what is proposed till the end of 2017**



# Only 32,000 MW built





# Take coal mining

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- Public sector companies produces 90% coal; **2 lakh ha** of mine lease area (including 50,000 ha of forests)
- CIL reserves are **64 billion** tonnes
- CIL produces **450 million** tonnes annually
- MoEF has cleared **583 million** tonnes in addition
- Why is there a shortage?
- Why can't CIL produce more from existing mines?
- **What about private captive mines?**



# Take coal mining

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<http://www.coal.nic.in/letters.htm>

- ◆ Many private companies have got coal mines but have not started production.
- ◆ Ministry of Coal issued warning to specific mines for immediate development or de-allocation. But of course nothing has happened.
- ◆ **Still, Minister of Coal is demanding more clearances. WHY?**



# All go. **No no-go**

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- ⑩ There is huge pressure to dismantle the current environmental regulations
- ⑩ The Chaturvedi Committee (for the GOM) wants forest clearances for coal mining to go
- ⑩ The Manufacturing policy wants environmental clearances and regulations to go in manufacturing zones (No public hearing for individual plants)
- ⑩ Call is to clear projects, dilute procedures because environment “**holding up growth**”

# Land, water and license to pollute

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## **The game is:**

Get land (at throwaway prices); then get water allocation (from state); then apply and get permit to pollute



# Water allocation

## Sector-wise water allocation

Sector	Water (in million m <sup>3</sup> /annum)
Cement	88.84
Coal mining	58.3
Iron and steel	1098.08
Thermal power plants	7000
Mining	90.43
<b>Total</b>	<b>8335.65</b>

This is equal to what is needed to meet the daily water needs of about 250 million people (@100 lpcd)– ***cleared without impact assessment***



# Water

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- No impact assessment of water withdrawal in the EIA report
- No cumulative impact assessment, no assessment of impact on competing water users
- EIA report mentions “water allocated by the state government” – accepted by EACs and ECs granted
- **Interestingly, the water allocation letters clearly mention that the state government take no responsibility if allotted water is not available**



# Re-allocation of water: displacing livelihoods



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- Chhattisgarh: Mahanadi
  - Orissa: Hirakud dam
  - **Amravathi: Upper Wardha project**
  - **Sompeta, Kakrapalli, Nirma** – acquiring water bodies as wasteland
  - All struggles against takeover of water and water bodies



## Mahanadi: over-sold?

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- Last 5 years: 24 thermal power projects of 19,500 MW installed capacity granted EC
- Water will be drawn from Mahanadi and its tributaries
- Allocated 1.55 million m<sup>3</sup> per day
- **Where will it come from?**



# Mahanadi: over-sold?

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- **CSE study on water allocated to industries in Chhattisgarh from Mahanadi and its tributaries: 2009**
- Permission granted to projects withdrawing water from Mahanadi directly: 1.5 billion m<sup>3</sup>/year
- Permission granted to projects withdrawing from Lilagarh, Hasdeo and Seonath: 1.2 billion m<sup>3</sup>/year
- Water withdrawal of the existing industries and urban areas: 1.0 billion m<sup>3</sup>/year.



## Mahanadi: over-sold?

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- Projected future water withdrawal from Mahanadi and its tributaries: **3.7 billion m<sup>3</sup>/year**
- The dependable water availability in the Mahanadi (measured at Kasdol, Raipur; it lies upstream of Raipur) over the last 10 years is **an average 1.53 billion m<sup>3</sup>/year**
- From where will water come? Will Mahanadi reach Orissa? What will be the impact on numerous irrigation projects being planned by the government? If there is no water will not industry start withdrawing groundwater?

# Cumulative impact: coal+thermal+++ and critically polluted areas



## Projects granted environment clearance during 11<sup>th</sup> FYP in critically polluted coalfields

District	Coal mining capacity (in MTPA)	Coal-based thermal power capacity (in MW)
Korba	77.64 +	4220
Angul-Talcher	72.17 +	5734
Hazaribagh-Chatra	97 (20% of India's current production)	4135
Singrauli	48.375 +	10080
Chandrapur	25.576 +	7260
Raigarh	19.2 +	4200
Jharsuguda	16.5 +	5095



# Monitoring

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- MOC data – 228 mines of CIL in violation of environmental laws--- **EC given for expansion to many of these mines without checking the compliance status**
- There are at least 240 abandoned coal mines where no reclamation has taken place. **Area of abandoned mines is equal to that of Greater Mumbai – no action taken**



# Monitoring & Compliance?

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- Practically no monitoring of EC conditions (once in 3-4 years); lack of deterrence for non-compliance
- Self monitoring, self reporting without checks
- Monitoring reports have hardly been used for enforcement



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**We need an agenda for change.**