



The coming wars over water

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Land and water wars

- Current 'wars' over land, but next big struggle is over water
- The allocation-reallocation of water from agriculture to industry and urban areas; between urban and industry
- Water is needed for new growth
- Not considered. Or discussed

Skirmishes



Nirma: Gujarat

People vs cement plant

Sompeta/Kakrapalli: AP

People vs thermal power projects

EIA clearance given: Waterbody
taken over



Nirma: common waterbody handed over to cement factory



Re-allocation of water: displacing livelihoods



- **Water allocated to industry/ cities**
- Chattisgarh: Mahanadi
- **Amravathi: Upper Wardha project**
- Orissa: Hirakud dam water
- Renuka dam: Delhi water
- Vizak: agriculture **vs** city **vs** industry
- Cola/beverage companies

Chattisgarh: cost?


Huge development rush

State has forests

State has minerals

But state does not have
water

Who will assess
cumulative damage?



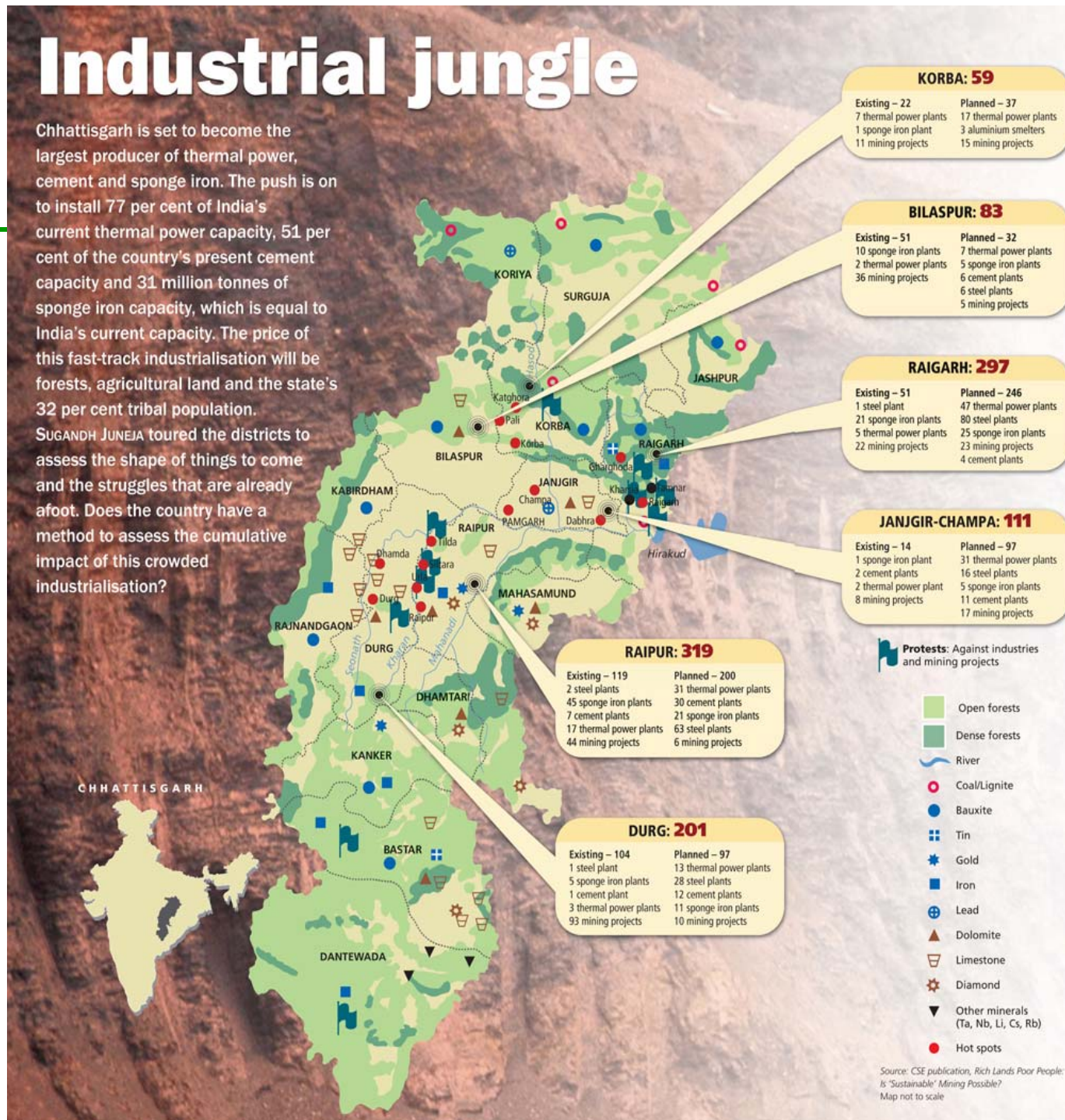
District	Thermal power plants (TPP)	Mining	Industrial projects	Const- ruction	Hydro- electric	Total
Korba	6	5	1			12
Janjgir- Champa	5					5
Raigarh	1	4	7		1	13
Surguja	1	6				7
Raipur	1		17	2		20
Bastar		1				1
Bilaspur		1		1		2
Kanker		4	1			5
Korea		4				4
Durg		1	6			7
Total	14	26	32	3	1	76

District	Biomass based TPP	TPP	Mining	Industrial Projects	Total
Durg	1		2	5	8
Janjgir- Champa	1	14	2	1	18
Korba		9	10	1	20
Mahasamund	1				1
Raigarh	1	14	6	16	37
Raipur		2	3	20	25
Surguja		2	5		7
Dantewada			4	1	5
Kabirdham			2		2
Kanker			2	2	4
Koriya			3		3
Bastar				3	3
Bilaspur				3	3
Rajnandgaon				2	2
Total	4	41	39	74	138

Industrial jungle

Chhattisgarh is set to become the largest producer of thermal power, cement and sponge iron. The push is on to install 77 per cent of India's current thermal power capacity, 51 per cent of the country's present cement capacity and 31 million tonnes of sponge iron capacity, which is equal to India's current capacity. The price of this fast-track industrialisation will be forests, agricultural land and the state's 32 per cent tribal population.

SUGANDH JUNEJA toured the districts to assess the shape of things to come and the struggles that are already afoot. Does the country have a method to assess the cumulative impact of this crowded industrialisation?





Energy vs water

- Rivers being taken away for hydro-electric projects – no water in the river for ecology/livelihood

- Ganga
- Arunachal Pradesh
- Himachal Pradesh

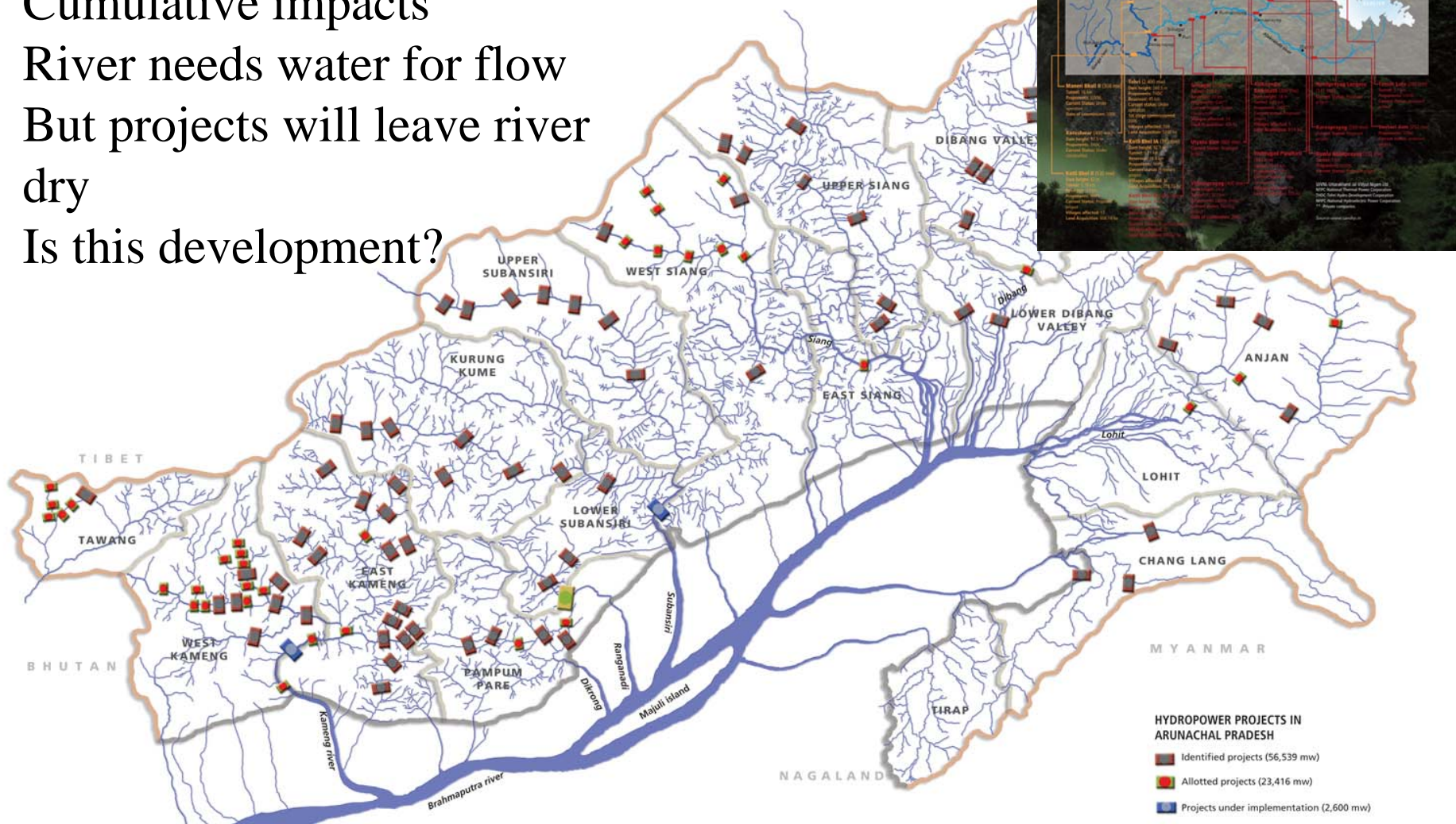
Rivers without water?

Cumulative impacts

River needs water for flow

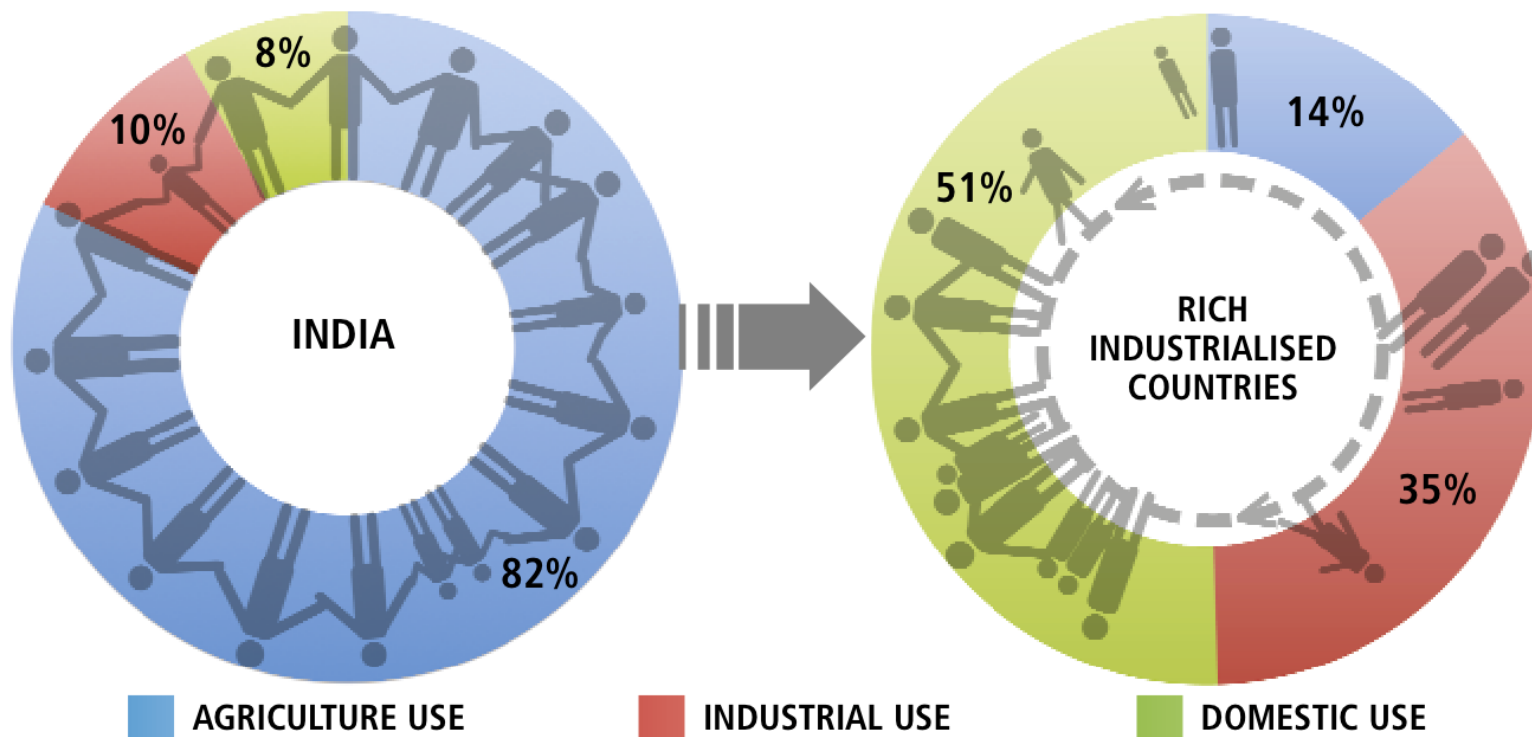
But projects will leave river
dry

Is this development?



Tensions will increase: India's non-transition

MORPHING INTO AN URBAN-INDUSTRIAL SOCIETY: BUT INDIA CONTINUES TO LIVE IN ITS VILLAGES



Source: UNESCO 2009, *Water in a Changing World*, Third UN World Water Development Report, Paris.



Tensions over pollution

Urban-industrial sectors take water. **Return waste and pollution**

This adds to water stress

Tensions over pollution growing enormously



Policy shifts beginning

- Discussions over new water policy – change priority of agriculture to give priority to industry/urban: use of word livelihood proposed
- Build pressure about inefficiency in agriculture – wastage of water
- Policy to charge for water – economic users of water – can pay for water; higher value addition per unit of water etc

No policy that protects interests of water



- EIA – environment policy – no concern for water allocation -- focus on pollution or biodiversity
- Forest clearance – concern for biodiversity, not value of forests for water
- Waterbodies -- can be categorised as wasteland (revenue land); lakes (can be renotified); catchments not protected



Difficult to report

- 1. Water data is not available
- 2. Water data is difficult to understand
- 3. Struggles are local, disaggregated
- 4. No national picture on water wars



But critical: make or break

- **Water determinant of future**
- Climate change will lead to greater variability; extreme weather events
- Development will lead to greater pressures and pollution
- Stress will lead to impacts on environment – destroy rivers, lakes
- Scarcity will lead to livelihood impacts