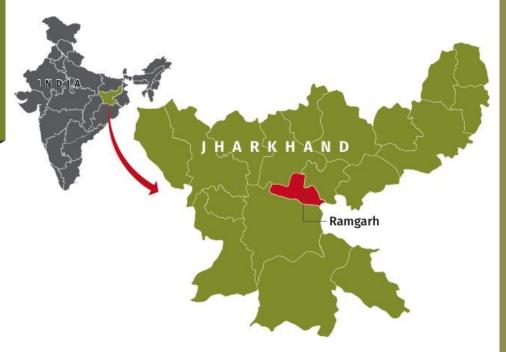# Planning Just Transition in Coal regions
Case Study: Ramgarh, Jharkhand

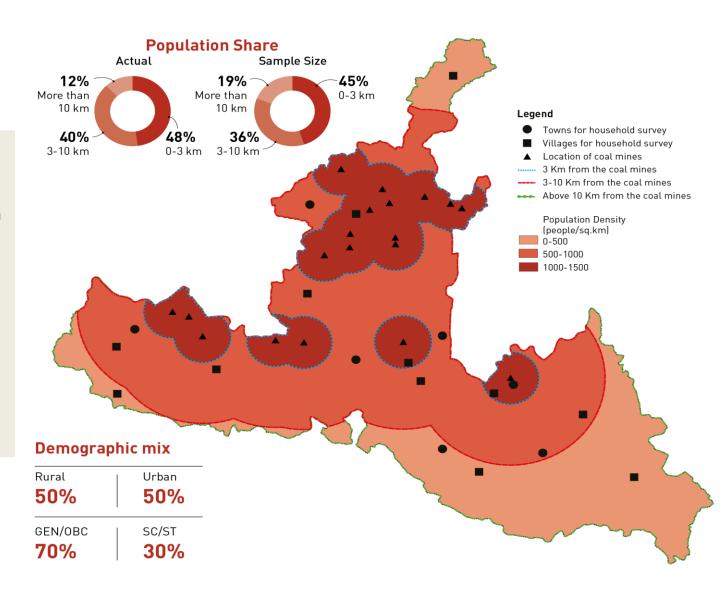Population- 1.1 million
48% urban, 52% rural

Coal Profile

- Fifth largest coal producing district of Jharkhand – 10% of state's production

- Two-thirds of operational mines unprofitable

- 50% mines already closed; Existing coal mines will close in 20 -25 yrs.

- Annual revenue from coal: Royalty – US $65 million; DMF– US $18 million

- 10.5% of geographical area under 24 coal mining leases

Study approach

Secondary research

Primary research
- 406 Household survey
- 14 Focus Group Discussions
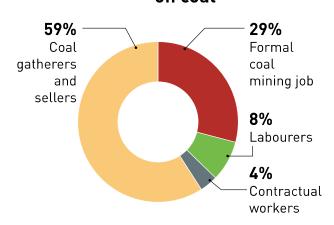- Semi-structured Individual interviews

Population Share

Actual

- 12% More than 10 km
- 40% 3-10 km
- 48% 0-3 km

Sample Size

- 19% More than 10 km
- 36% 3-10 km
- 45% 0-3 km

Legend
- ● Towns for household survey
- ■ Villages for household survey
- ▲ Location of coal mines
- ┈ 3 Km from the coal mines
- ┅ 3-10 Km from the coal mines
- ┈ Above 10 Km from the coal mines

Population Density (people/sq.km)
- 0-500
- 500-1000
- 1000-1500

Demographic mix

Rural	Urban
50%	50%

GEN/OBC	SC/ST
70%	30%

Key findings

Coal dependence

Occupation of households dependent on coal

59% Coal gatherers and sellers

29% Formal coal mining job

8% Labourers

4% Contractual workers

Spatial distribution of households deriving income from coal

Percentage

	0-3 km	3-10 km	Above 10 km

Spatial distribution of coal mining workforce (%)

■ 0-3 km ■ 3-10 km ■ Above 10 km

- Coal Gatherers and Sellers
- Contractual Workers
- Labourers
- Formal Coal Mining Job

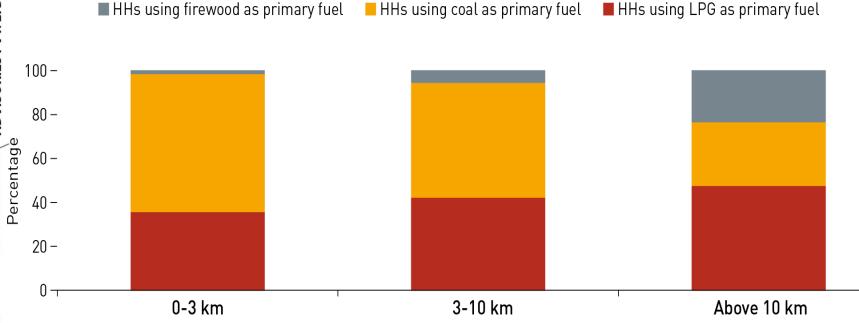0   10   20   30   40   50   60   70   80   90   100

Coal dependence

- **Cooking fuel**
  - 52% households used coal as primary cooking fuel; **78% had LPG connections**

  - Average monthly household consumption of coal was **116 kg;** equivalent to **0.28 MT annually** for entire district
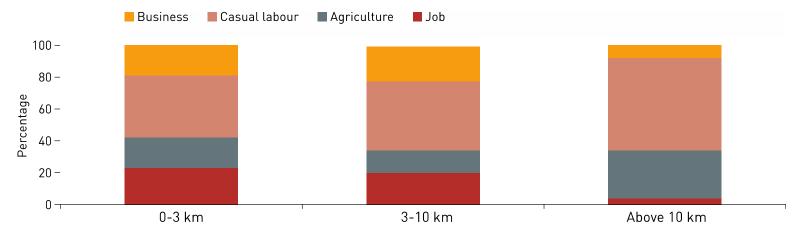
■ HHs using firewood as primary fuel   ■ HHs using coal as primary fuel   ■ HHs using LPG as primary fuel

Distributional impact
Economic Status & Opportunities

Income distribution among households

■ Less than ₹5,000 ■ ₹5,000 to ₹10,000 ■ ₹10,000 to ₹15,000 ■ ₹15,000 to ₹25,000 ■ More than ₹25,000

Household distribution as per major income source

■ Business ■ Casual labour ■ Agriculture ■ Job

Distributional impact
Amenities, Healthcare, Education

- **No discernible difference** in access to basic amenities (electricity, clean cooking fuel and piped drinking water) in mining versus non mining areas.

- **Social Infrastructure underdeveloped**
    - Health care- Avg 50% deficit in primary healthcare resources and infrastructure
    - Education- Less than 50% enrolment in education beyond elementary level; only 16% schools have facilities for secondary & higher education.
    - Drinking water- Only 17% rural households have PWS connection

Stakeholder perceptions

- **High perceived dependence on coal:** 77% households believed coal was important for livelihood; only 27% had an income from it

- **Decline in employment**: Mechanisation impacting employment, formal becoming contractual in nature

- **Closure of mines without planning:** Only formal workers being taken care of; no efforts for those in informal economy

Looking ahead…

- **High negative impacts envisaged:** Rise in unemployment, social instability, out-migration

- Coal **direct revenue substitution not the** biggest challenge; Diversifying the economy is key.

- **Huge potential for development of alternative sectors:** Agriculture, Fishery, Tourism, Education and skill infrastructure

Risks of Unplanned Mine Closure

District Planning Matrix

Just transition planning

- **Determine timeframe**
  - Consider remaining life of mines; Staggered approach

- **Develop an approach of inclusive planning**

- **Identify and create alternative income and employment opportunities**
  - Formal workers
    - Retraining and reskilling
    - Early retirement options with severance benefits
    - Pension benefits
    - Temporary financial assistance
  - Informal workers

- **Economic diversification**
  - Agriculture, horticulture, forestry, aquaculture
  - Mine land reclamation and its economic use
  - Industrial restructuring including alternate non-polluting use of coal
    - Government employment generation schemes (convergence)
    - Skill training
    - Employment for building the new economic and social infrastructure

- **Improving social and physical infrastructure**
  - Health, Education, women and child care, social security
  - Water, energy, connectivity, urban amenities

- **Securing financial resources**
  - District Mineral Foundation
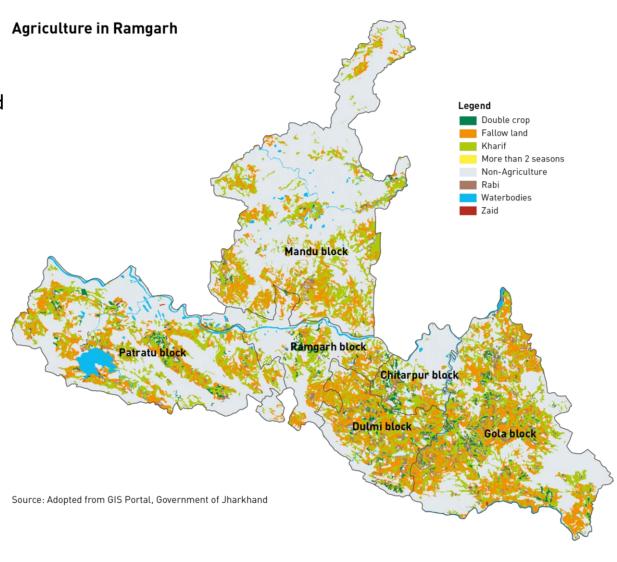 - Govt. programme convergence
  - Private sector investment

Agriculture

- **Existing characteristics:** Mono-cropping, rain-fed agriculture

- **Good agricultural land:** productivity higher than state and national average

- **Water deficit**: Availability of 110 mcm against demand of 547 mcm; only 18% of gross cropped area irrigated

- **Potential:** Development of irrigation, horticulture & agro-forestry potential yet to be developed

Agriculture in Ramgarh

Legend
- Double crop
- Fallow land
- Kharif
- More than 2 seasons
- Non-Agriculture
- Rabi
- Waterbodies
- Zaid

Mandu block
Patratu block
Ramgarh block
Chitarpur block
Dulmi block
Gola block

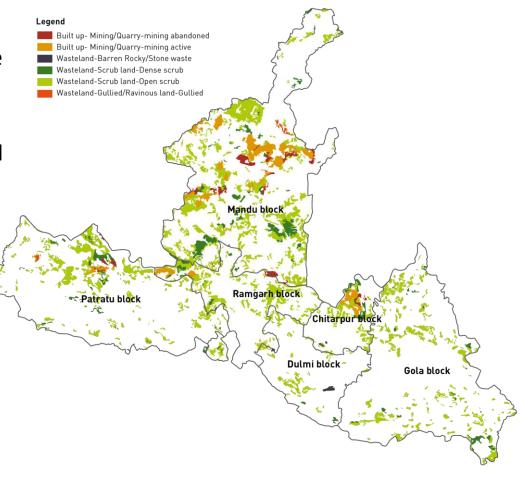Source: Adopted from GIS Portal, Government of Jharkhand

Mine Area Redevelopment

- **Reclaiming mine land**: 14,000 hectares of land under coal mine leases – fishery, industrial hub, tourism

- **Determining rights on reclaimed land:** Ownership and user rights need to be clearly defined; policy needed

- **Reusing Coal Infrastructure**: CCL schools, hospitals, quarters can become public assets

- **Implementing mine closure plans:** Take socio-economic aspects into account

Legend

- ■ Built up- Mining/Quarry-mining abandoned
- ■ Built up- Mining/Quarry-mining active
- ■ Wasteland-Barren Rocky/Stone waste
- ■ Wasteland-Scrub land-Dense scrub
- ■ Wasteland-Scrub land-Open scrub
- ■ Wasteland-Gullied/Ravinous land-Gullied

Mandu block

Patratu block

Ramgarh block

Chitarpur block

Dulmi block

Gola block

Special thanks to:

Abhishek Agrawal (Gola)

Birendra Kumar Jha (Hehal)

Rajeev Ranjan (Lohardaga)

Rajkumar Tudu (Mandu)

Reshmi Kumari (Chitarpur)

Ruby Kumari (Ramgarh)