



भारतीय प्रतिष्ठान
NATIONAL FOUNDATION FOR INDIA

COAL TRANSITION CHHATISGARH

A WORKING PAPER

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1 Phasing-down Coal In India



“In India, coal fits at the top slot of the energy matrix at 50%, where wind, solar, and other renewable energy sources contribute 29%”

Coal has been the backbone of the energy sector in India for decades and the only major source of electricity for the nation with more than 50% of the energy produced by thermal plants. In India, coal fits at the top slot of the energy matrix at 50%, where wind, solar, and other renewable energy sources contribute 29% followed by hydropower at 11.5%. (Ministry of Power-Installed generation capacity-2022).

Energy matrix globally is affected by climate change, international treaties and pacts, multilateral agreements, bilateral deals and availability of natural resources in the country. And so in India, the prospects of energy production from coal in the years ahead are gray, owing to carbon emissions associated with it.

On the question of why phasing down of coal, it must be noted that India is the third-largest emitter of CO₂ (from fossil-fuels) in the world; it produced about 2.3 billion metric tons of CO₂ in 2019¹ whereas the power sector accounts for 49% of the total CO₂ emissions in the country². Against the backdrop of rising CO₂ emissions, strong renewable energy economics, (in terms of cost per unit of energy generated) international climate change mitigation deals- India at COP26 in 2020 declared commitment to reach Net-Zero emission by the year 2070 and pledged under the Paris Agreement 2016 to cut greenhouse gas emissions intensity of GDP by 33-35% by 2030.

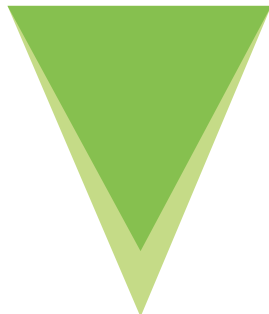
Coal Transition is a gradual process and is driven by myriad layers of factors, including technical (mine specific) ones. There are three types of closed mines or mine closing 1) abandoned mine, 2) policy-closed mine and 3) orphaned mine. Orphaned mines are mines where the owner cannot be found or is financially unable to carry out environmental restoration after the mine is closed³. A mine gets abandoned due to resource depletion, (decline in quality of coal). Finally, policy-closed mines, located in nature reserves, are forced to close by the local environmental policies and regulations⁴. (Not specific to India) Additionally, mines are shut due to amalgamation with other mines, conversion of underground mines into open cast mines and if coal production falls below 1 MT per annum.

1 Union of Concerned Scientists-Each Country's share of CO₂ emissions published Jan 14 2022

2 The Economic Times-India can cut carbon emissions by deploying renewables, gas power: GE Gas power-Published on Oct 11 2021

3 Environmental Impacts Related to Closed Mines in Inner Mongolia-Honglei Liu 1,2,* , Qiang Wu 1,3, Jianxin Chen , Mingjun Wang , Di Zhao and Cheng Duan -2021

4 Ibid (paraphrased)



On the other side, coal transition has its downsides too. 'Phasing-down' of coal is linked to millions of livelihoods, and unplanned overnight mines closures would gravely impact ecological resources, the region's agricultural capacity and livelihoods. Chhattisgarh, given the prominent position it holds in coal production, supporting millions of people directly and indirectly whose incomes are driven by coal mining would be first in line for suffering immediate fallout as consequence of coal transition.

It must be noted that the costs of coal transition on livelihoods are more pronounced given that fact that size of the coal driven commercial activities or coal-backed coal economy in India is huge in terms of energy generation, employment, incomes, tax-receipts and takes a formidable position at the macro-level in India. In this perspective, it would be of paramount importance to understand and build holistic framework in support of livelihoods that are at stake in the wake of coal transition. In this regard, last November 2021, National Foundation For India released a Phase I report which quantified direct and indirect jobs associated with coal mining and coal-allied sectors including power, iron and steel, and bricks, at the national level. The study made an attempt to create a socio-economic profile consisting of age profile, general and technical education levels, vocational trainings, job contracts, and wages. The aim of this exercise was to assess the extent of re-skilling and training which would be required while transitioning jobs. However, the lack of data availability on socio-economic indicators acted as a limitation of the study to capture labor dynamics at state and regional level. This discussion paper attempts to deep dive into the coal economy of Chhattisgarh state and present the challenges associated with policy, state level statistics and expected impact on coal depend community.



“National Foundation For India released a Phase I report which quantified direct and indirect jobs associated with coal mining and coal-allied sectors including power, iron and steel, and bricks, at the national level.”



2 Coal Economy in Chhattisgarh



The story of economic development in Chhattisgarh has interrelated dynamics between coal, land rights and agriculture, based on complex matrix of tribal rights, political will, economic development, and law enforcement- due to the fact that state is bestowed mineral resources, a fertile soil bank, and a strong industry. Economic development has arrived in varying patterns and proportions over the last 21 years, and it may not be wrong to deduce that mining pumped up industrial activity gradually and created employment opportunities but it is important to not to forget that policy discourse and policy moves oscillated between the rights of the tribal people, need for development, harnessing natural resources, land rights issues and mining over the years.

Coal plays a dominant role in the state as its reserves constitute 16% of the total coal deposits in India⁵ and contributes almost 15%⁶ to the state's economy. In addition to that it employs millions of people both directly (extraction to transportation, transportation to crushing, crushing to dispatch point to coal washing) and indirectly and supports various forms of formal and informal occupations. Chhattisgarh is the largest coal producing state with a share of about 22.2% followed by Odisha, contributing 19.8% to the national output, and Jharkhand (18.5%).⁷ In terms of volume, in 2019-20, Chhattisgarh registered the highest coal production of 157.745 MT followed by Odisha 143.016 MT, and Jharkhand 131.763 MT⁸. During the year 2018-19 Chhattisgarh topped in terms of despatches accounting for 21.8% of total despatches followed by Odisha (19.5), and Jharkhand (18.6%)⁹. In Chhattisgarh, coal is mined from more than 6 districts with most mines being upper-ground or open cast. Currently 28 underground mines are operating the state¹⁰.

“During the year 2018-19 Chhattisgarh topped in terms of despatches accounting for 21.8% of total despatches followed by Odisha (19.5), and Jharkhand (18.6%)⁹.”

Table No. 1: Table of Coal Production

State	2016-17 (in '000)	2017-18 (in '000)	2018-19 (in '000)
Chhattisgarh	1,38,525	1,42,546	1,61,893
India	6,57,868	6,75,400	7,28,718

Source: Indian Mineral Year Book 58th Edition (Part-III Coal & Lignite) 2019-Gol, Ministry of Mines

5 Mineral Resource Department, Government of Chhattisgarh

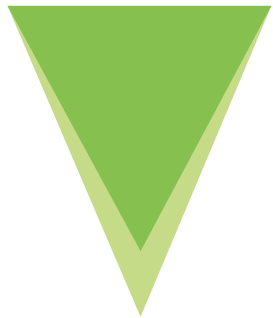
6 Coal Transition in India-TERI report 2018

7 Indian Mineral Year Book 58th Edition (Part-III Coal & Lignite) 2019-Gol, Ministry of Mines

8 Coal Directory 2019

9 Indian Mineral Year Book 58th Edition (Part-III Coal & Lignite) 2019-Gol, Ministry of Mines

10 Pai, S; Zerriffi, H; Kaluarachchi, S, 2021, "Indian coal mine location and production - December 2020", <https://doi.org/10.7910/DVN/TDEK80>, Harvard Dataverse, V1

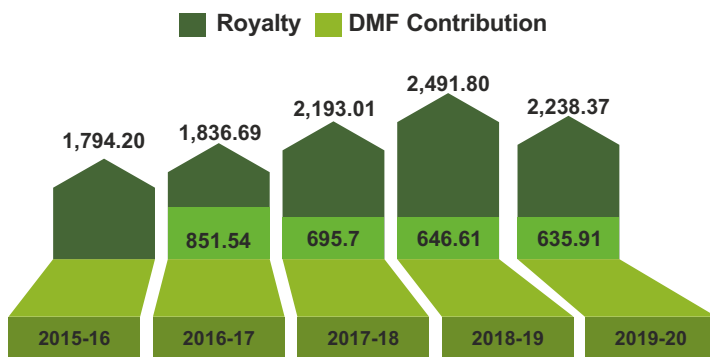


Currently 52 coal mines are functioning in the state¹¹ with an average production between 150-170 MT spread across large swathes of land, providing livelihood, and supporting sustenance for millions of people (directly and indirectly). Thermal power, steel, cement, sponge iron and fertilizer industries are the biggest consumers of coal in the state and provide employment to large population and also constitutes as a major part of the state revenues. Concentration of thermal, steel, cement and allied industries in high coal bearing regions of the state indicates inter-connection and inter-dependability of not just employment and income but also industrial dependence of these sectors on coal.



Chart No 1: Royalty and DMF Contribution

Royalty and DMF Contribution to the State-2015-2020



Source: CIL Annual Reports 2016-17, 2017-18, 2018-19 and 2019-20

In the wake of substantial closure of mines, (as mooted under coal transition plans) industries and industrial units using coal as the primary source of energy (such as steel and cement, including thermal power stations) will face brute consequences in terms of production and employment, thereby affecting the whole regional economy in the state. As matter of fact industry accounts for 41.08% followed by service sector 36.89% and agriculture sector 22.07% in the state gross domestic production 2019-20 statistics¹². On the other hand, royalty share in the total not-tax revenues of the state are gradually inching up higher and it is assumed that with launch of commercial mining policy in the state, coal royalties would witness a surge in the coming years. In terms of economic contribution of coal to the state, the state derives 13% of the total economy and 66% as the total value of coal to the state value of total coal output.¹³ Royalties constituted almost 24% in the state's own non-tax revenue for the year 2019-20.¹⁴ In terms of annual growth over a period of last 4 years, royalties in percentage terms

“Thermal power, steel, cement, sponge iron and fertilizer industries are the biggest consumers of coal in the state and provide employment to large population and also constitutes as a major part of the state revenues.”

11 Pai, S; Zerriffi, H; Kaluarachchi, S, 2021, "Indian coal mine location and production - December 2020", <https://doi.org/10.7910/DVN/TDEK80>, Harvard Dataverse, V1

12 Estimates of State Domestic Production of Chhattisgarh-Government of Chhattisgarh, Directorate of Economics and Statistics, Chhattisgarh 2019-20.

13 Coal Transition in India-TERI Report 2018

14 TERI Report, Coal Dependence and Need for a Just Transition-2021



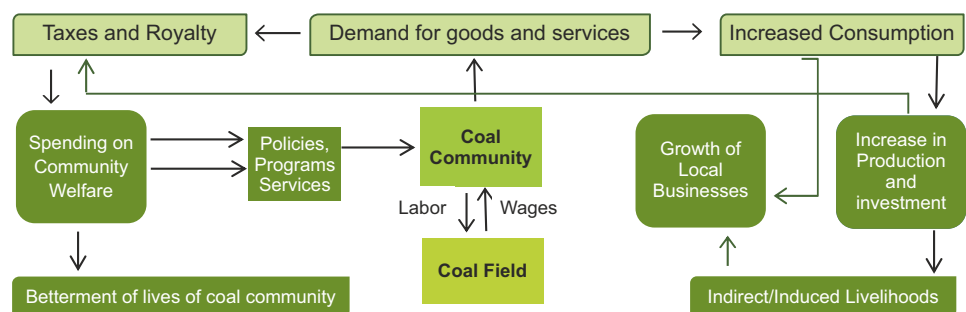
recorded an average growth rate of 6% although in the year 2019-20 royalties registered a negative growth of 10%.

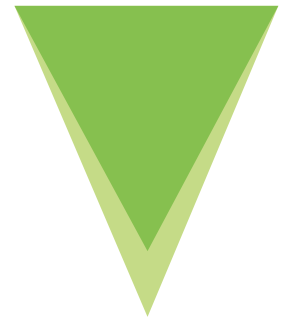
Coal economy functions primarily on the basis of incomes and revenues generated through coal mines and allied activities leading up to increase in demand for goods and services- which further acts as accelerator effect on taxes and local businesses. The summation of accelerator effect in total helps the local economy to grow over a period of time with coal mining being central to it. People living around mines usually are a part of coal economy directly (engaged in mines) or through induced livelihoods (such as earnings through a business or enterprises in the vicinity of the coal activity) and whereas indirect engagement with coal mostly located near the industrial centers, washries, railway sidings other avenues.

The coal economy is essentially a multi-layered exchange system where at the lower level of the system unregistered, unorganized workers are engaged in direct and induced jobs and at the middle level of the system semi-skilled workers and people with self-employment are engaged and at the top level skilled workers engaged in organizations and corporations associated with coal. In this regard it wouldn't be wrong to foresee that in absence of coal mining, local economy would suffer deteriorating blows on accounts of lessening employment options, decreased demand for goods and services and thereby lower tax and royalty revenues to the state which in effect will adversely impact the public spending on social programs and infrastructure projects in the region in the long-run. Mine closure and local economy especially in coal towns and peripheral villages, are deeply inter-connected because local livelihoods, incomes, local exchange of goods, tax payments, and spending (including public) and investment and as well as small businesses and street vendors operate as function of mining.

“The summation of accelerator effect in total helps the local economy to grow over a period of time with coal mining being central to it.”

Figure 1: Conceptualization of Coal Centered Regional Economy





Often it is been noted that it is not just the coal mining workers who are affected but the whole economic cycle in the region gets battered. Additionally, the quest for finding another means for substance kicks off the phenomenon of gradual dispersion. The self-employed, small businesses and local vendors including street hawkers, are indirectly dependent other the occupations. People making their living on the sidelines of the mining all stand to lose. In this case, what framework would be the best guard for the coal community against unplanned coal transition?

Table No 2: Key Mining Districts and Mines by Type

Key Mining Districts	Number of Mines Operating	Production range in MT (in 2019-20)	Type of Mine
Korba	Gevra, Kusmunda, Dipka, Manikpur and Surakachhar 3&4	45-5 MT	OP
Raigarh	Baroud, Gare Palma IV/2&3, Jampali, Bijari and Chhal	2.7-1.47 MT	OP
Surguja	Parsa East and Kanta Basan	15 MT	OP
Korea	Churcha RO, Haldibari	1.59-0.66 MT	UG

Source: Pai, S; Zerriffi, H; Kaluarachchi, S, 2021, "Indian coal mine location and production -December 2020", <https://doi.org/10.7910/DVN/TDEK80>, Harvard Dataverse, V1

An important observation made during the field visit is that most of the workers in industrial units of Raigarh and peripheral towns are migratory labour, working under labour contractors with limited flexibility on work timing, work location, or any worker benefits. They are also not on the formal registries of the firms. Work structure, labor work, and living conditions are mostly decided by the contractors, and it was noted that many non-native workers suffer on account of their rights being compromised by employers and contractors. Additionally there was little evidence that migratory workers were able to access the benefits of any government-run schemes due to lack of awareness among workers/migratory labor about any such programs and schemes.

“Work structure, labor work, and living conditions are mostly decided by the contractors”

3 Regional Situation Analysis



Northern Chhattisgarh Economy

In the northern Chhattisgarh districts of Koriya, Surguja, Jashpur and Balrampur, most of the population is dependent on agriculture and agro-processing industries as the major source of livelihood¹⁵. In Surguja district, agriculture is the dominant occupation. The intensity of coal mining activities is relatively lower compared to other high coal bearing districts of the state. Surguja is at the boiling point for tussle between traditional indigenous population and mining projects but it must be noted that employment in thermal, steel, cement and other industries, serves the population. On the other hand, Koriya hosts the most of Under Ground (UG) mines followed by Surguja and major chunk of the population is dependent on agriculture and forest economy due to the fact that Koriya host one of the thick forests in comparison to district such as Korba, Surguja.

“Koriya hosts the most of Under Ground (UG) mines followed by Surguja and major chunk of the population is dependent on agriculture and forest economy”

Up in the south-eastern side of the state, the district of Jashpur remains mainly a rain-fed agro-driven local economy where most of the population is engaged in agriculture and forest resources. It must be noted that in Jashpur, incidence of poverty is high. The districts of Raigarh, Surguja, and Surajpur contribute 80-90% of the total coal production with 25 operating mines¹⁶ and an estimated workforce of 20,000. This region also boasts major electricity generation, and aluminum and steel plants employing lakhs of people.¹⁷ Katghora (Tehsil in Korba district) contrasts somewhat in terms of the agriculture workers' profile: 64.8% of the farmers hold marginal land (< 1hectares) 21% agriculture population holds small sized of land (1-2 hectares) 12.6% of the people holds medium size of the land (2-4 hectares) and just 1.6 of the total agro-dependent population holds large size of the land (>4 hectares)¹⁸. Furthermore, 56% of the population in Katghora is below poverty line and 71% of the people are engaged in small business for livelihood¹⁹.

15 Inclusive Media for Change Report on Chhattisgarh –Paraprashed-https://www.im4change.org/docs/chhat_chap2-41-84.pdf

16 A novel data set for analyzing sub-national socio-economic developments in the Indian coal Industry-Sandeep Pai and Hisham Zerriffi 2021-Research Study

17 Ibid

18 Swati Tiwari, Improving Livelihoods of Small and Marginal Farmers in Korba District of Chhattisgarh, 2015-Institute of Agri Business Management, Bikaner.

19 ibid

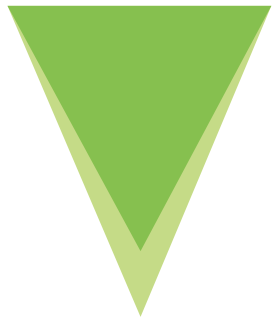
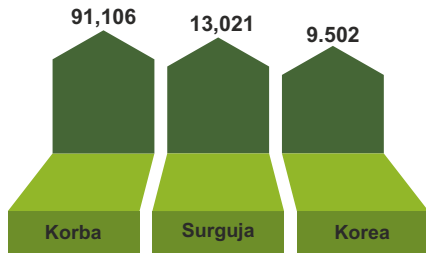


Chart No 2: Direct Engaged Population in Coal Mining in Key Districts



Source: Pai, S; Zerriffi, H; Kaluarachchi, S, 2021, "Indian coal mine location and production - December 2020", <https://doi.org/10.7910/DVN/TDEK80>, Harvard Dataverse, V1

Korba, Surguja and Korea are the top-ranking districts for people directly employed in mining. Districts of Raipur, Bilaspur, and Raigarh are the industrial zones for the state. A total of 15 mines currently operate in Korba district and 10 mines currently operate in district of Korea²⁰. Furthermore, Korba district boasts 4 thermal plants and 1 major aluminum plant, and hosts many small and medium scale industrial enterprises. Out of the total 52 mines, 28 mines in the state are Underground (UG) mines. It must be noted that UG are the first in line for closure on technical grounds such as increasing temperatures due to depth of the mines, health issues of workers, falling production. Hence in terms of vulnerability, Koriya district poses high risk in the future.

During the field visit to Surguja district it was noted that native tribal people residing in and around mines in the interiors make most of their living from forest resources and agriculture. Recently, the Chhattisgarh government has given permission to Rajasthan Rajya Vidyut Utpadan Nigam for the diversion of forest land for coal mining in an area of 1,136 hectares under Phase II of Parsa East-Kanta Basan coal block. The Central government has allotted 15 Million Tonnes Per Annum (MTPA) coal blocks in Parsa East-Kanta Basan (PEKB). Locals expressed their agony over the proposed expansion; lack of enforcement of laws related to forest rights and their inability to efficiently utilize compensation received from the company in lieu of their land. Most of the people in the vicinity of the mines are primarily agriculture dependent and depend on traditional forest resources to make living, though very few people have land rights. The problem with these Agro-dependent tribal populations is lack of residence proof, which requires a minimum stay of 30 years. Due to migratory nature of the populace they naturally become deprived and face limited opportunities for mingling in mainstream economic activities.



“ A total of 15 mines currently operate in Korba district and 10 mines currently operate in district of Korea²⁰ ”

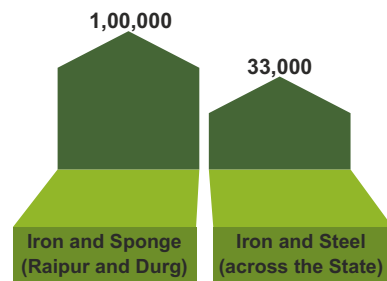
20 Ibid



Central Chhattisgarh Economy

Central plains zone is considered to be the hub of industrial activity and consists of districts such as Bilaspur, Raipur, Raigarh, Durg, and Rajnandgaon. It is estimated that over 160 medium and small-scale industries operate in Raipur and Durg districts, employing over 100,000 people in iron and sponge industries. Over 33,000 people are directly employed in iron and steel sector in major firms across the state²¹. In terms of incidence of poverty, Durg and Raipur both are on the lower rungs of the poverty index measured through multidimensional poverty index (MPI) 2021. Raipur has 21.82% of population categorized as multi-dimensionally poor, followed by Durg with 20% of the population considered being poor under the MPI data for 2021.

Chart No 3: Workers in Iron and Steel Sector (Central Chhattisgarh and State)*



Source: Annual Survey of Industries Data Set 2018-19* Estimates for state figure.

The government of Chhattisgarh initiated an ambitious and the biggest ecological restoration program in Durg district in the wake of the recent closure of a limestone mine in Nandini mines area²². The project aims to create India's biggest man-made forest. Economy of the district is mainly driven by cement and steel plant located on the Howrah-Mumbai highway and it is one of the densely populated regions of the state.

Southern Chhattisgarh Economy

The southern region houses the Bastar Plateau, one of the problematic (in terms of civil unrest) and deprived zones. It is heavily forested, with almost 50% of the belt covered by forests²³. Iron ore, bauxite, agriculture and sand mining are the pivotal sources of livelihood for southern districts such as Kanker and Baster. In Baster, paddy is grown in 1, 30,042 hectares, followed by ragi 10,494 hectares and maize being grown in 9066 hectares²⁴. On the other hand, limestone and granite are key minerals extracted from the district. In Kanker currently 13 mining, 16 quarry, and 2 temporary permits have been sanctioned for

“Iron ore, bauxite, agriculture and sand mining are the pivotal sources of livelihood for southern districts such as Kanker and Baster.”

21 Annual survey of Industries dataset-2018-19 and

22 Mongabay-Durg forest division plans reforestation over 2,500 acres- published 08/2021

23 LEAD Krea University- Understanding Chhattisgarh's Livelihood Landscapes Through PRADAN's Initiative

24 District Statistical Handbook-2015-16 Government of Chhattisgarh

mining of non-coal minerals²⁵. The indigenous communities and forest dependent population in district of Dantewada are facing the brunt of mining projects in the region. Iron ore is the abundant mineral found in the district of Sukama where the total forest area is 223,872 hectares out of the total land area of 333,530.²⁶The economy of districts Sukama, Bastar, Dantewada and Kanker is primarily driven by agriculture and mining, including forest resources. As it can be understood with limited resources, and heavy dependence on forest and agriculture, southern districts of Chhattisgarh are on the top ranks for poverty in the state. Dantewada and Narayanpur have more than 50% of population living under multi-dimensional poverty²⁷.

Vulnerability and the Challenges

In the Phase-1 of the report, the Socio-economic Impacts of Coal Transition-published by NFI, presented that districts with at least one of four assets (thermal plants, steel and iron plants, transportation, railway and brick making) or with presence of coal mine will be the most vulnerable. In the similar light, 3-4 districts are considered here after further research that stands a chance to get hit badly in with wake of coal transition. It is an indisputable truism that socio-economic impact of coal transition is expected to be harsh on communities when coal mines are closed (without planning) and it is primarily assessed by loss of livelihood, decline in family incomes, long periods of redundancy, displacement and homelessness. Districts of Koriya, Korba and Raigarh belt are considered most vulnerable because of three important factors: high densities of UG mines in Koriya, (. In the phase 1 report, it was mentioned that most of the UG mines will likely be shut down within this decade and following the same analogy, further comments and analysis for specific districts of Chhattisgarh is presented here) higher concentration of industrial activity in in Raigarh, (dependent on coal) and lastly due to huge population deriving income from coal related sources in all 3 districts.

The conundrum is the diverse socio-economic profiles of the people, their occupations, unsustainable jobs, disturbed livelihood scenario and high-degree of dependence on coal, small and unstable employment opportunities (especially in high-coal bearing regions of the states). Oftentimes people get displaced, move and continue their search for sustenance without being accounted for in state population statistics if any are in place.

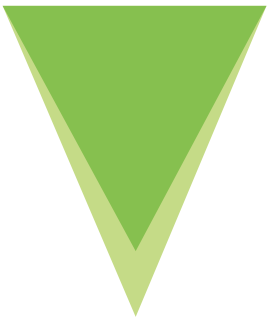
“The economy of districts Sukama, Bastar, Dantewada and Kanker is primarily driven by agriculture and mining, including forest resources.”



25 District Survey Report-Mineral Resource Department-Government of Chhattisgarh 2019

26 Brief Industrial Profile of Sukama District-MSME development Institute-Gol.

27 National Multidimensional Poverty Index-Baseline report based on NFHS-4 (2015-16) NITI aayog-2021.

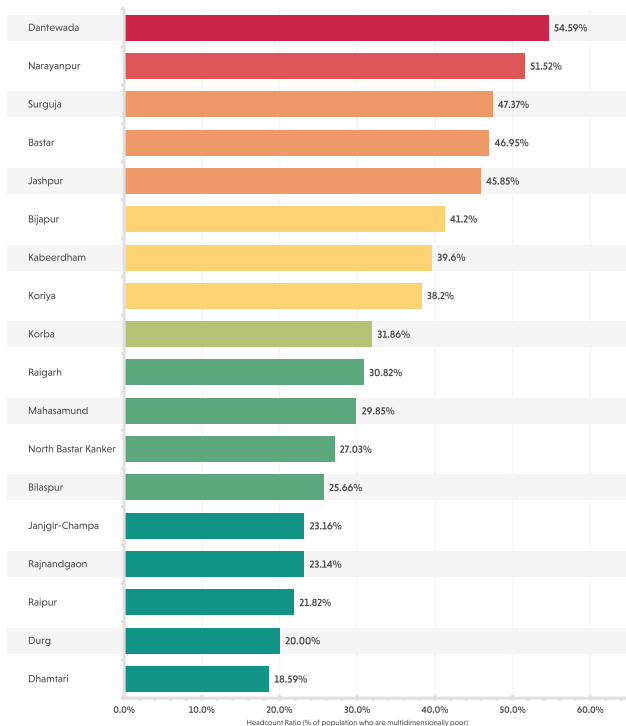


“Durg, Raipur and Bilaspur are placed relatively lower on the MPI index's ranks.”

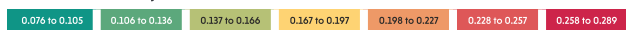
The biggest challenge associated with traversing population is to account people affected, assess socio-economic impact and map potential feasible options for livelihood and to deliver health and educational services. The foundational pillars for mapping the ground level impact of coal transition are collaboration, community engagement, reliable statistical data and effective functioning of institutional mechanisms. In this light it is critical to briefly discuss the state of poverty in key districts of the state-it will pave the way for framing developing policy interventions and possible economic reforms for those regions in light of the statistics. The below figure presents a snapshot of percentage of population who are multidimensionally poor. The southern districts (Dantewada and Narayanpur) hold the upper ranks in the poverty index while the districts of Koriya and Korba have moderate levels of poverty. Finally, Durg, Raipur and Bilaspur are placed relatively lower on the MPI index's ranks. The dispersion of income across the state varies, which calls for region-based measures for fighting poverty. In the same line, the level of impact on livelihoods across the state differs and requires prudent region-specific measures.

Chhattisgarh: Headcount Ratio

Percentage of population who are multidimensionally poor in each district



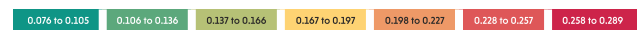
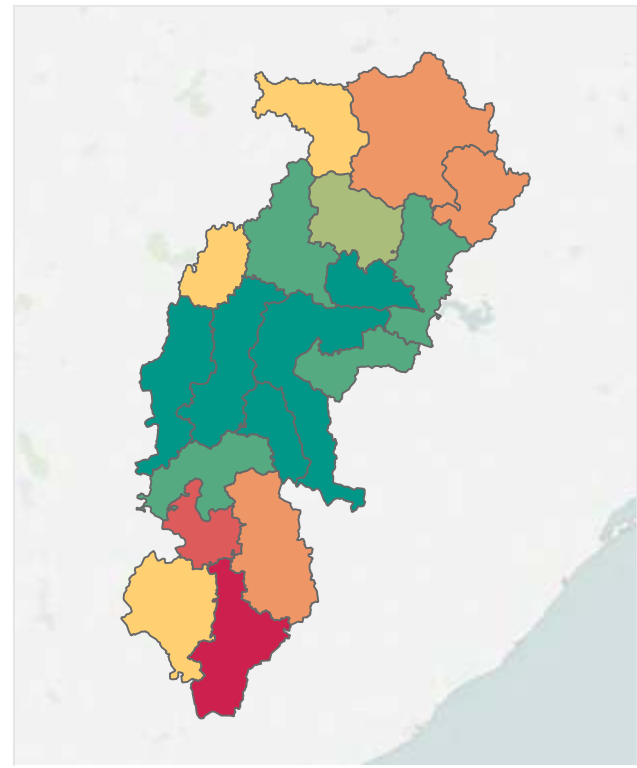
Multidimensional Poverty Index



The size of the bar represents the percentage of population who are multidimensionally poor in each district of Chhattisgarh. The colour of the bar represents the MPI score of the district. The colour moves from green, through yellow, to red as the MPI score increases. Green represents areas with the lowest MPI scores while red represents areas with the highest MPI scores represented by a colour.

Chhattisgarh

Multidimensional Poverty Index Score (District-wise)



Districts of Chhattisgarh are as per the 2011 Census of India. The colour represents the MPI score of a district. The colour moves from green, through yellow, to red as the MPI score increases. Green represents areas with the lowest MPI scores while red represents areas with the highest MPI scores. The legend provides the range of MPI scores represented by a colour.

4 Policy Mapping and Road Ahead

While assessing the vulnerability of the districts, it was observed that each district has a different set of challenges compared to another in terms of geography, demographic indicators, occupational structure, economic base, etc. Hence, an in-depth study at the district level is imperative to formulate a strategic action plan for economically safeguarding and empowering affected communities. The subject of coal is heavily regulated in India. Coal is a central subject where land is a state subject; hence the overall coal administration landscape has a plethora of policies, regulations, laws, and rules. Coal policy discourse is predominantly ingrained with energy and industry voices and coal production is primarily guided by energy dynamics in the country.

The Approach towards Mining and Livelihoods

Amendment of the Coal Bearing areas Act of (CBAA) 2013 and Commercial mining policy of 2020 have given great impetus to private mining, land acquisition, leading to rights being compromised, loss of rights, and increased space for coal mining in the state. Additionally, the proposed amendment in the Coal Bearing areas Act 2021 paves the way for quicker acquisition of land for mining purposes, which earlier required “obtaining consent of the majority of population and from paying adequate compensation to affected people before land is acquired for coal mining.”²⁸ The approach towards mining that is being currently followed such as the mining model (Mine Developer and Operator Model), role of private mining, regulations and roles of PSU's and private players among other plays a vital role in determining the extent of impact on livelihoods and environment.

And on question of how affected regions and people are supported as a consequence of mining activity, Categorically, two separate mechanisms operate to protect ecological resources and interests of the coal community-: central government driven policies and regulations (such as PMKKY, Forest Act of 2006, Coal Bearing areas Act 1957 PESA act 1996, Schedule V of the Indian constitution and others) and the investments / programs run by mining companies (R&R) in mining vicinity. In other words, we can put it that the support measures being implemented operate in a fragmented fashion.

The on the ground the reality is contrary to our understanding which was revealed during the visit to Raigarh. There was blatant neglect of laws and principles pertaining to workers' protection and welfare,



“Coal is a central subject where land is a state subject; hence the overall coal administration landscape has a plethora of policies, regulations, laws, and rules.”

28 News Click-Modi Government Introduces Amendment Bill to Help Corporate Profit from Coal Mining-published Aug/2021



“According to statistics gathered from field visit, 2, 24,000 job seekers are currently formally seeking employment options in Raigarh district.”

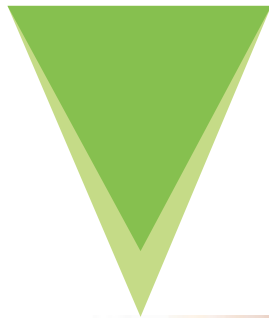
despite established formal rules and regulations. The industrial units (mostly) rely on labor contractors for their workforce, and most of the workforce comes from different states or districts. This led to creation of employment void for locals. Additionally, non-native workers are not given their respective rights and are often deprived of their fair compensation in cases of industrial accidents; however, local labor representatives and local leaders bridge the gaps between the workers' rights and behaviors of the industrial units. The economic impact of hiring non-native workers leads to an employment void and this is a substantial problem for local youth and job seekers. According to statistics gathered from field visit, 2, 24,000 job seekers are currently formally seeking employment options in Raigarh district. While a handful of the contractors do aim to fulfill the statutory requirements for workers, absolute statistics are not currently available. Rather, non-native workers' (or the migratory workers') jobs are not stable and people often suffer at the hands of the labour contractors

This implies that mechanism for implementation of relevant laws and guidelines is weak mainly due to poor reporting, knowledge gap on the victim's side, coercion from the contractor, financial limitations, corruption, negligence or delayed response at the administrative level, poor district level official machinery, poor attendance at government offices, and high number of existing number or complaints among other issues. This leads to the problem where policies and programs face the “poor implementation” which remains the corner stone for true and more effective implementation of policies and utilization of funds.

District Mineral Foundations (DMF): DMF are established under Chhattisgarh District Mineral Foundation Trusts 2015 amended 2019, and “under Section 9B of the MMDR Act, 1957 [which] empowers the State Government to make rules for composition and functions of District Mineral Foundation”²⁹ with an objective of working for the benefit of the people affected by mining and related operations. Key areas under the DMF are healthcare, drinking water supply, education, environmental preservation, pollution control, skill development for employment, sanitation and training, and capacity building, matching and gap filling, including various infrastructure and development projects. DMF is the implementation agency for Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY), a programme meant to provide welfare to areas and people affected by mining operations. Mining companies contribute 10% of the royalties for mining leases granted after 2015 and 30% of royalty for leases granted prior to 2015 to the DMF fund.³⁰ Out of the total DMF contributions to Chhattisgarh of Rs 635.91 crore (CIL contribution) for the year 2019-20 just Rs 100.54 crore was spent on drinking water in the Korba district. Additionally, Korba is the leading district in Chhattisgarh for total DMF allocations and

29 Government of India-Lok Sabha Question Response No 2707-2021

30 Vikaspedia Website- Pradhan Mantri Khanij Kshetra Kalyan Yojana (paraphrased)



is expected to have the highest collections every year. Since 2017, the top 5 areas of DMF expenditure in Korba district are drinking water, development of physical infrastructure and education.³¹

Visit to Raigarh revealed that the DMF in Raigarh operates a council of officers belonging to line-departments representing respective needs and challenges. The council is headed by the district commissioner/ magistrate where proposals from different departments are brought and discussed. Afterwards, the work on different functionaries begins following wider consultations. The DMF prioritizes work on the basis of proposals and recommendations submitted by the council of officers from line departments. Restoring ecological damage, addressing water related issues, building water facilities, constructing roads and providing basic services are a few prominent areas of work that the DMF in Raigarh focuses on apart from other mining related activities.



Rehabilitation and Resettlement: Mining companies run Rehabilitation and Resettlement (R&R) programs and their essential aim are to support communities affected by mining operations. In Chhattisgarh, West Chirmiri region, CIL undertook the restoration and rehabilitation (land reclamation) of an opencast mine with 728.39 hectares, they reclaimed 40%, plantation and backfilling was done to almost 49.70% of leased area and they covered 64.63% of land with green cover.³² South Eastern Coal Fields claim that 2,803 out of 3,376 people/families were employed/paid compensation and 840 families were shifted as a part of its Environment Safe Guard project in Gevra, Chhattisgarh³³. R&R measures executed by mining companies address issues in the backyard oftentimes (surrounding areas of abandoned or closed mines), rather the focus must be on regional orientation where R&R doesn't operate with a big vision of housing or just rehabilitation because, allocation of funds and construction of houses in conditions where sustaining life is challenge in itself Then it would not render as rehabilitation or resettlement.

“Coal is a central subject where land is a state subject; hence the overall coal administration landscape has a plethora of policies, regulations, laws, and rules.”

However, a field visit to the area near the PEKB in Surguja district reveals a startling reality contrary to the set rules and activities. Rehabilitated colonies set up by the companies in the 10-15 Km radius of the mine are far-off from habitable areas, with no water and no electricity, making life unsustainable for most. Currently, those colonies and houses are abandoned by settlers due to inhospitable and painful living conditions. It must be noted that relocation of displaced people from their native lands to rehabilitation colonies cuts them off from their livelihoods, and these rehabilitated colonies fail to offer a basic survival services or facilities so people have no choice except to move back into deeper forests. It's like getting trapped in vicious cycle where there is no

31 Centre for Science and Environment-DMF status report 2017

32 Land Restoration / Reclamation Monitoring of 27 Opencast Projects producing less than 5 mcm (Coal+ OB) per annum & 08 Clusters of Coal Mines based on Satellite Data for the Year 2019 CMPDI Ranchi 2019

33 Six Monthly Report of Monitoring the implementation of Environment Safe Guards-2021

possibility of gaining good living nor there is a possibility of retracing their life back to the original position. The problem is lack of holistic approach towards rehabilitation and resettlement where the onus doesn't at all finishes by just physically transferring people from their original lands and positions, there must be a synchronization of needs of the local affected people and rehabilitation services offered by mining corporations. In this sense it is rather clear that the DMF and R&R operates independently and on specific challenges; however, coal transition calls for greater cooperation and bolder action at the regional economy level to revive and maintain livelihoods. It must be understood that the district authorities become the focal point of the transition roadmap since they are the key implementers and the first point of contact for local resistance or support,³⁴ but there's no denial to the fact that both R&R and DMF mechanisms also play their role effectively. The over gambit of responsibility towards just transition must be shared agencies and institutions unequivocally.

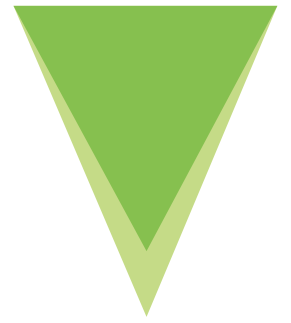
Table No 3:- Matrix of Current Support Mechanism to Coal Community

General Principles	Areas of Challenges (Coal community centric)		Mining Companies	State Government	District Mineral Foundation	Central Government
Taking Stock of the affected	Mapping of Vulnerable population (due to coal mine closure)	Key Aspects of Just Transitions (Coal Community Centric)	No program or policy in place	No program or policy in place	No program or policy in place- further research required	PMKKKY operates through DMF but no clarity on mapping
	Support of indirectly dependent population		No program or policy in place	PESA Act and implemented Community Forest Resource Rights under Forest Act of 2006. *	DMF responsible- (further research required)	10 districts of Chhattisgarh are under V schedule*
Livelihood and Basic Services	Absorption of workers (incase of coal mine closure)		Individual level- not for indirect labor	Further research Required	Not responsible	Not a central subject
	Alternate Livelihood		Most firms do not offer (in Chhattisgarh) Further research required	Godhan Nyay Scheme 2020, PESA Act 1996 BIHAN scheme (SLRM)-not directly for coal workers as such	DMF responsible- further research required	MGNREG schemes and PESA act can also be considered National Rural Livelihood mission operates conjunction with SLRM
	Financial Support in times of redundancy		Mostly for people who lost land	No program or policy in place	Further research required	Further research required
	Provision of healthcare and education service		Further research Required	No program or policy in place (further research required)	DMF is responsible-few programs implemented	Support through PMKKY (further research required)
Focusing Community	Supporting the displaced community		Offer services in case of land acquisition else no support at a town level	No announcement so far (further research required)	DMF is responsible- (further research required)	Support through PMKKY (no direct intervention)
	Participation of Local Communities in Transition Process		Further research required			

Source: Author

“According to statistics gathered from field visit, 2, 24,000 job seekers are currently formally seeking employment options in Raigarh district.”

34 Socio-economic Impacts of coal transitions in India-National Foundation for India-Nov 2021



The table above sketches out the schema of mechanisms in place for the coal community in Chhattisgarh. It aims to categorically present how the community is supported and what institutional mechanism is functioning for specific issues associated with coal transition. 8 key coal community-centric issues associated with the basic principles of health and sustainable working community are analyzed above, cross examining how they are taken care of and what are the still existing potential challenges that continue to affect the coal community.

The administrative scope and policy framework that governs the coal sector and its intricacies is complex and suffers from poor enforcement and lack of institutional coordination. More specifically, ground realities that were assessed through the prism of coal transition (and greater push for less-carbon oriented energy sources in the country), it wouldn't be wrong to say that Chhattisgarh stands at the cusp of cosmic change in terms of its economy, occupational structure, and livelihoods. In the coming years, coal will subside as a primary source of energy and income, millions of people dependent, engaged and associated with the coal economy would be in deep crisis, struggling for livelihood and sustenance if coal transition goes moves ahead unplanned. The lifelines for stronger policies and effective holistic enforcement on ground are the very critical factors for just transition and in case of Chhattisgarh, the pivotal role is to be played by regional and district level authorities.



41 *Pai & Zerriffi, 2021*

42 <https://doi.org/10.1093/jeg/lbu015>

43 *Campbell & Coenen, 2017*

5 The Road Ahead



“Furthermore, it is a challenge to consider the significance of the regional economy in light of the current scenario and to revitalize it in a sense that livelihoods of the people are restored.”

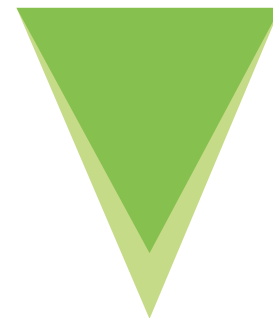
The real challenge associated with coal transition in Chhattisgarh is absence of reliable statistics on key issues such as 1) labor impacted (given the fact that mines are closed in different locations and time frames) 2) estimates of people dependent on mining indirectly (this will help in designing support measures for the entire population of region affected) 3) lack of official records of displaced and migrated population. Furthermore, it is a challenge to consider the significance of the regional economy in light of the current scenario and to revitalize it in a sense that livelihoods of the people are restored. Additionally, coal community doesn't have a strong voice to defend their position and on top of it in the corridors of governance coal transition is not yet considered as an oncoming big responsibility problem hanging on the heads.

In light of the above analysis, NFI aims to launch an in-depth research exercise to assess the potential impact on livelihoods associated with coal transition with an objective to create strong factual ground for policy making for the welfare of the affected communities in Chhattisgarh.

NFI will undertake the next phase of the coal study in the state of Chhattisgarh. Phase-1 of the research study estimated direct and indirect jobs in coal and coal-allied sectors at the national level. The study was acknowledged as one of its kind for defining a coal transition worker and looking at energy transitions from a community's perspective.

Going forward, the objective of Phase-2 is to estimate the induced jobs and engage with the coal communities to facilitate knowledge sharing. Induced jobs refer to those employed to provide goods and services to meet consumption demands of additional directly and indirectly employed workers. For example, a local street vendor or a tea seller. Hence, major study activities to be conducted at state and district level are as follows:

- ◆ Work with state and local government of Chhattisgarh to map resources on coal and non-coal revenues, DMF, CSR, and local



taxes, income levels, existing demographic, and socio-economic indicators.

- ◆ Create a data repository of energy and climate action plans in the state.
- ◆ Facilitate knowledge sharing between state and central ministries - labour, coal, agriculture, energy, environment, and climate change.
- ◆ Conduct a household level survey (quantitative) in 2 districts of Chhatisgarh that will likely be impacted due to a coal transition.
- ◆ Conduct qualitative surveys in the form of focus group discussions with stakeholder groups like labour unions, coal sector officials, and personal in-depth interviews with state and local government representatives, and civil society groups.

The NFI research exercise revolves around studying the potential impact on communities, environment, and on their livelihood's with an aim to build road map for “need-based” evidence backed programs and schemes and thereby protect subsistence of marginal communities.

Annexure

Annexure-1-List of Fifth Schedule Districts/Areas

Fifth Schedule Areas/Districts	
Completed Scheduled Areas	14
Partially Scheduled Areas	06
Grams Panchayats	5,632 Gram Panchayats (48.28%) in Scheduled Areas out of total 11,664 Gram Panchayats
Villages	9977 villages (49.5%) in Scheduled Areas out of total 20,126 villages

Source: Implementation of PESA in Chhattisgarh, Department of Panchayat and Rural Development 2020

Annexure-2-List of Underground Mines

Underground Mines	District	Coal Production MT (2019-2020)
ChurchaRO	Korea	1.59
Haldibari	Korea	0.66
Vijay West	Korba	0.5
Bhatgaon	Surajpur	0.42
Bagdeva	Korba	0.39
Singhali	Korba	0.38
NCPH R6 NEW	Korea	0.35
PANDAVPARA	Korea	0.35
JHILIMILI	Surguja	0.34
KURASIA	Korea	0.33
SHIWANI	Surajpur	0.31
KATKONA 1&2	Korea	0.25
GAYATRI	Surguja	0.25
DHELWADIH	Korba	0.25
URAKACHHAR MAIN	Korba	0.19
WEST JKD	Korea	0.17
BARTUNGAHILL	Korea	0.16
NAWAPARA	Surajpur	0.15
REHAR	Surguja	0.13
RAJGAMAR 4&5	Korba	0.13
BALGI	Korba	0.12
BALRAMPUR	Surguja	0.11
SURAKACHHAR 3&4	Korba	0.1
KUMDA 7&8	Surguja	0.08
RANIATARI	Korba	0.05
MAHAMAYA	Surajpur	0.04
KATKONA 3&4	Korea	0
KETKI	Surguja	0





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