

Politics of Mining Induced Industrialization And Marginalization of Tribals In Odisha

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Abstract - *In the neoliberal era, mining-based industrialization has been increasingly taking place to accelerate the pace of development of the state. The present model of industrialization is being carried out in an exploitative and exclusionary manner; Whereby affected tribals are not found availing their fair share. The government, in carrying out industrialization, is facilitating billionaire multinational companies by providing all the needed facilities to the industrialist even at the cost of sacrificing affected tribal people. It results in not only missing of tribal voice from the plank of development of the state but also losing of valuable mineral resources of the state at throwaway prices. Politics of Industrialization has caused victimization and marginalization of tribals, particularly in Odisha. The development in Odisha has been prospering mining companies along with endangering tribal life and livelihood.*

Keywords - Mining Industrialization, Tribal marginalization

I. Text

Mining regions are places that contribute immensely to the industrialization of the state. But mining everywhere worsens the preexisting conditions of the impoverished communities. Mining activities bring profit which is not used in the socio-economic development of the indigent communities, and not create 'equitable' mining where affected people will be equal sharing of the profit. (**Bonita Meyersfeld, 2016**) Tribal living in mining regions are mostly found to be impoverished, increasing backwardness, low per capita incomes, and an unhygienic environment. Keonjhar district in Odisha, for instance, is the most mined district of Odisha, having the lowest per capita incomes remaining under multitudes of deprivations in the state (**Chandra Bhusan, 2008**).

During the process of mining operations, tribals are being divided and highly displaced. It causes around four times more displacement in comparison to any other developmental activity. National Sample Survey Organization data reflects that in India, 41.63% of tribals do not have any homestead property due to mining-induced displacement. Corporations are appropriating minerals at a cheap rate without making proper

rehabilitation to the affected tribal (Minati Sahoo, 2014). It is estimated that eight million Indian tribals are facing eviction from their homeland. They are treated as an encroacher and are blamed for clearing the forest cover by environmentalists. Even the highest court of India has given the order for such eviction to the tribals who have not possessed ownership deeds. Even thousands of tribals' demand for land right under the Forest Right Act are outrightly rejected. Tribals, as per human rights activists and Ngo's voice, are supersensible for preserving the forest for getting roots, and tubers are not recognized by the government. The government, for promoting the interest of the billionaire industrialists, is sacrificing tribals and forests in the pretense of preserving the environment. There needs global support for preserving the indigenous people in India. (Mari Marcel thekaekara 2019).

In Odisha, there has been a strong corporate lobby for keeping the lower price of minerals and obtaining subsidized facilities from the government. Dams are built near every aluminum industry to meet the huge water requirements of their aluminum plants. Hirakud dam was built near the Jindal plant, Rengali dam was set up near NALCO refinery, etc., implying that dams were primarily made for providing electricity to these mining plants not meeting developmental needs of masses. It is evident from the fact that mining companies are using enormous water from the Hirakud dam, for which farmers in-demand areas of Hirakud dam are protesting for their dying crops. For the sake of development and promoting common interest, dams were made with the loss of land and livelihood of thousands of people. The benefits are being appropriated by vested interest politicians and industrialists (Felix Padel, 2010).

The tribals have been facing threats from the state, which is expected to provide safety and livelihood security to the tribals. There is a need for inclusive industrialization in the state whereby the vulnerable tribals' life and livelihood can be secured. It should balance protecting the interest of the state and the locals simultaneously. Here I have made an effort of showing the nature of industrialization being carried out in India and Odisha, along with emphasizing areas unpacking impacts of mining on tribals.



II. Materials and methods

I have developed this paper out of reviewing and reading relevant secondary literature relating to mining and industrialization and its larger impacts on tribals. I have tried to explore analyzing the kind of industrialization being carried out in Odisha and the politics of the pauperization of tribals in mining regions. An attempt also is made to unpack the rationale behind the influence of Multinational companies in the process of mineral operation. This paper will assist the policymakers and mining companies in developing their sense of responsibility towards the mining-affected tribals.

A. Market Oriented Industrial Policy and influence of Multinational companies

Industrialization in the state occupied the center stage, and systematic endeavor was made in the industrial policy 2015. The policy endeavors to make “a destination of choice” for industrial enterprises. It has made provision for quick implementation of industrial projects, assuring electricity connection within fifteen days of application, institutionalized system of ventilating industrial grievances, etc., for boosting the confidence of carrying out industries in the state (Industrial Policy -2015).

The policy also created a provision of ‘Single Window Mechanism’ in giving clearance to an industrial project. Earlier, the multiplicities of rules and regulations involved a lengthy period, and the industrialists were restless in obtaining data and clearance in different governmental offices. To boost the interest of the investor and make them a partner of development, the industrial policy made a provision of a Single Window mechanism acting as a tool of offering convenient service to the industries. The District Industries Centers (DICs) were directed to maintain a compressive database on micro and small enterprises. This will prevent the repetition of information and filling in different forms for getting different approvals/ clearances. This help in saving the time of the investors in getting various statutory approvals/ clearances, enabling them to concentrate on setting up the industry freely, guiding and assisting an investor on various fronts¹

It also creates a ‘High-Level Clearance Authority’ chaired by the Chief Minister, who involves in the task of giving overall direction to the industrial development of the state. It looks at various industrial development such as the promotion of Foreign Direct Investment (FDI), environment management, land policy (IPR, 2007, section 7.2). It also provides a timely and effective dispute/ grievance resolution mechanism for industries; the State Government shall constitute a ‘Shilpa Adalat (industrial court)’ that meets every month and hear the grievances/ complaints of investors.²

The government of India organized the 19th world mining congress and export meeting with the participation of more than 60 industrial companies in the world. The meeting aimed at providing excellent business opportunities for investing in the mining sector. For the sake of promoting the common interest of the people and preventing coal mafias, the government adopted the policy of nationalization of coal in the year 1973. This also could not bring any solace to the local people since the government officials became corrupted and exploited people through contract labor. Consequently, the benefit of mining could not reach the tribal people. From the 1980s onwards, mining companies have been adopting the mechanization of mining. Mining companies are also presently using transnational technologies that cannot absorb millions of people coming to the labor market. This creates rising unemployment for the person who lost land for mining-related industrial activities. People had to lead miserable life in the mining region. NALCO provides a house which, according to a member of Niyamagiri Surakshya Samiti, is suitable for pigs. The workers of NALCO are protesting against the privatization decision of the government. In the process of privatization, the displaced people who are employed in the lowest rank job in this company will be the worst victim. The report of the government’s mines and mineral department in the year 1996-97 clearly makes one introspect of the present process of development. As per this report, India’s natural gas will be ended within twenty-three years; existing crude oil will be finished in a span of fifteen years, coal within 213 years, copper and gold within 64 years and 47 years, respectively. Iron will be exhausted in 135 years, chromites, manganese, and bauxite within 52 years, 36 years 125 years, respectively. This fact must be kept in mind to rethink the rapid extraction of minerals considering all the costs it incurs on people and ecology.

Through mining and industrialization, the industrially rich countries are managing their environmental and economic crisis by exploiting minerals from the poor countries. For example, a country like America consumes 53 kg of aluminum per individual annually. But it has no aluminum industry. Since the aluminum industry requires a lot of power, enormous water, and environmental cost, they use huge aluminum without paying the socio-environmental cost for it. Therefore, the Alcoa of the US entered into an agreement with Sterlite Company for obtaining aluminum from Chhattisgarh and Odisha. Developing countries like India remain under huge debt for which they are influenced by these MNCS demands. They always want to have a repressive kind of government, rising ethnic conflict, high corruption, the weak rule of law unaccountable for violating human rights, etc. The World Bank is facilitating the expansive mining activities in the fragile tropical forest that affects the ecosystem and indigenous tribes.

One will be surprised to know the report of NCDS (Nabakrushna Chaudhury Developmental Studies, one of

¹“Opportunity in Odisha” -(Investor Guide) Government of Orissa, page 38. available at- www.teamorissa.org

²“Orissa Industrial Policy Resolution” 2007 available at- orissa.gov.in/e_magazine/orissaannualreference//243-264

the pioneer research institutes in Odisha) mentioning that the state takes a loan of 412 crores in making every 100-crore investment in developmental activities since the government is paying in power, water, infrastructure, etc. at a hugely subsidized rate. Various NGOs are having nexus with these mining companies and strongly supporting increasing mining extraction. For example, to normalize people's resistance in Kshipur, the NGO 'Business Partner of Development' sponsored with CARE India NGO, conducted a workshop on "building a tribal vision of development" on behalf of Alcan and Hindalco Company. The 'Mines Mineral and People' is the only organization that claims to fight for the cause of grass root people are no exception. It is evident when this NGO participated in the meeting of the Mining Congress expo, where it talked nothing in criticizing MNC's rather talked on sustainable mining, proper rehabilitation, and corporate responsibility.

Mining companies are now adopting various means of making mining extraction a peaceful activity. One such policy of incentivizing community and bearing the responsibility of community development is corporate social responsibility (CSR). Through CSR activities, they try to improve the quality of life of the tribal people. They are adopting sustainable mining, which is both ethically and environmentally acceptable. They try to improve the socio-economic livelihood condition of the community and create new opportunities for enhancing the skill and capabilities of the tribal community. They are adopting capacity-building strategies as an ongoing process in which communities are made a partner of development. They are providing training and needed education to the people of the mining community. So that they will possess the requisite skill needed for meeting the demand of the job market. (Narula, 2017 pp 86-87).

Reputed mining companies are making systemic efforts to improve the all-around development of the tribal community. TATA company, for instance, through TSRDS (Tata steel rural development society), performing a lot of work in promoting education, health sports culture, and making infrastructural development of the tribal region. Even it provides mobile health clinic facilities to the people. It provides women employment in nursery animal husbandry, poultry, bamboo making, etc. It is building cooperative society, market complex and all other related activities for improving the socio-economic living condition of people.³ Similar developmental activities are advertised in many other reputed companies such as OMC, Vedanta subsidiary of Sterlite international, NALCO, etc., on their respective website.

Shiv Sethi, in his critical writing, tried to unpack the ways corporate are appropriating natural resources through the strategies of CSR. CSR, according to Shiv Sethi, "is a

deliberate ploy to counter, fragment, and control and re-channel peoples' resistance, against the corporate takeover of community resources, by means other than direct violence or its explicit threat". The central idea of implementing CSR is to legitimize their plunder over natural resources. It creates an acceptable image and helps mining companies to minimize resistance to their exploitative activities, and thereby they can function in a peaceful way. It takes away the primary functions of the state in fulfilling the needs of people. For example, Vedanta, in its advertisement of CSR showing of doing the activities such as providing free education, health facility, giving midday meals, etc., which the state has been doing as her core function. The CSR approach is so enchanting that the middle class, bureaucrats, and civil society will give unquestionable support to it. Corporations, by doing CSR, are not looked down upon as outsiders rather acting as a guardian of the mining-affected people. It helps the corporate of mining for a long time till minerals of a region come to an end. Through this populist measure, they also obtain many favorable conditions of mining in terms of huge subsidies, tax holidays, and other forms of larges.⁴ It is clear from that fact that POSCO, due to a subsidy of government, is earning a profit of rupees Rs 3330 per tons and other facilities by obtaining SEZ status. It is due to the fact that POSCO IS paying rupees 4500 per ton while UNCTAD decides the price of one ton of iron rupees 7250. A similar example is widely evident in many other mining companies.

The cost and profit analysis will give a clearer view of the viability of any developmental paradigm. There are many benefits of sustainable mining, such as – it will ensure a better standard of living for the tribal people. Second, it will make the fuel-efficient engine. Aluminum, for example, makes durable and erosion-resistant buildings. Aluminum preserves the food items, thereby preventing waste. Packaging food items, including aluminum, save 30 percent of all food items. Aluminum industries give four times more employments than other service industries.

Aluminum industries promote the modern lifestyles of increasing consumption. In the case of Odisha, the Aluminum industries like NALCO and others makes provision of the following kinds of benefits. Firstly, the company shares profit with the local communities, thereby enabling the people to enjoy a better standard of living in the mining regions. Secondly, it generates revenue that is most essential in meeting various developmental functions of the government. Thirdly benefits of the people such as getting employment in the mining companies, getting Pucca houses, accessing the better road, extending medical felicities, etc., are already made available under CSR. It also contributes to the profits of the shareholder and investors of mining companies. It also stimulates for

⁴Sethi 2012 "Vedanta and Corporate social responsibility" *sahati*, April. Available at www.sahati.com

³Sukinda-Odishaand Tata steel"community care" available at odisha.tatasteel.com

growth of industries such as metro builder as in the case of 'Vedantanagar' in the Niyamgiri regions. Most of the mining-related decision is taken behind the lacking closed-door transparency. There is a question as to how massive environmental costs could match the economic development. The cost of loss of land identity and livelihood cannot in any way be compensated.

Mining regions are marked by a rising hierarchy whereby the poor get poorer, and the rich make an obscene profit. The mining companies are claiming to share 5% profit for the development of people. But in practice, these profits are not spent for raising the quality of life tribal's rather is used to develop infrastructure, and the money they spend is based on a top-down approach and is used in an unaccountable manner. They are given unskilled meager wages and minimal compensation for the loss of their habitat. Mining has created large-scale unemployment. This leads to the cases like the villagers in Panchpatmali bribing in obtaining laboring jobs. Even skilled workers in BALCO company were given forced voluntary retirement under VRS (voluntary retirement scheme), and 21 were paid less than what was promised by Anil Agarwal UK based company (Padel-2010, pp388). The government is desperately inviting FDI, which means the foreign financial institution is taking our precious natural resources. Since we are fascinated by the iron foodstuff, we pay the price of our forest and river. The government is influenced to give huge electricity subsidies so that the production cost will be very low. "Real development would see an end to the exploitation, inequality, and lie." (Padel, 2010 pp393). It must be based on self-reliance and giving more emphasis on cash crops and transporting food which is rarely taking place in mining-induced development. The present capitalist model of development is parasitic and unsustainable.

Development that is based on the purely economic term is distorted development that exploits mercilessly innumerable tribes and makes them traumatized by creating insecurities on all fronts. The cost of extracting mountain top is also enormous. The mining plants incur various expenditures such as investment on land, labor, electricity, water, transport cost, etc., which are prerequisites for the installation of plants. But the plant operation also involves a lot of external costs such as massive pollution, including the creation of red mud, ash pond, huge carbon emission, which in turn brings changes in irregular rainfall and global warming, and misbalancing biodiversity.

But it has an unimaginable cost on people or society by displacing people, taking agricultural land of people, deteriorating health condition of people, undermining the community life and the larger negative impact of environmental degradation on the future generation. It creates a barrier to the flow of the river, killing many aquatic species. The united report published in the year 2002 suggested that mining must cover all its costs. But how can one calculate the actual cost of water, forest, air quality sense of community feeling?

Still, the ministry of forest and environment (MOEF) guideline estimates the forest cost by mentioning that 1 hectare of the forest at the density of 1.1 will be valued at Rs 126.74 lakhs over a period of 50 years. As per this calculation, the NiyamDongar alone has a 50 percent density of forest which will be valued at 417 crores. Stern report 2006 similarly calculate the damage of a ton of carbon dioxide amounts rupees 85\$. Six to twenty tons of carbon dioxide is emitted in producing one ton of aluminum. Financial analysis that explains in monetary terms of nonrenewable resources has its gross limitation in comparing social or human cost it incurs. Making displaced erstwhile self-sufficient tribal into a landless laborer, making them struggle for the job, breaking down their egalitarian society, lowering their standard of living by making environmental catastrophe, introducing the corrupted values like instances of rape and murder being reported in Lanjigarh, increasing industrial diseases, etc. cannot be accurately calculated and compensated. On the other hand, the trees bushes on the top keep the bauxite mountain fertile, which are sold very cheap at \$ 17 per ton, while mining companies destroy the price, amounting to \$ 1000 per ton of aluminum mined.⁵

B. Corporate Lobby and Increasing State Facilities for Industrialization

The industries are continuously seeking more and more facilities and subsidies in road construction, an extension of electricity, supply of cheap water, etc., so that their industries could sustain and could get huge profit. The industries are availing many facilities such as availability of tax holiday: Mining companies in specified backward areas are eligible for a complete tax holiday for a period of five years from the commencement of production and a partial tax holiday thereafter receive depreciation allowances. The benefits of accelerated depreciation are available for tax purposes. As a result, the total amount of depreciation that is allowable as a tax deduction does not change, but the company is allowed to make such deductions earlier in the project's life. Tubes, winding ropes, haulage ropes, stowing pipes, and safety lamps used in mines and quarries are allowed 100 percent depreciation. The government is undergoing heavy debt in fulfilling these requirements.

Environmental protection equipment, pollution control equipment, energy-saving equipment also qualify for 100% depreciation. ⁶ The facilities provided in the mining policies in Odisha and financial decisions are now being decided from London and Washington, in a hierarchy of power that is unknown to the people who have been affected by the projects. This is because it is the most

⁵Felix padel "konds and Khondalites" 2010 out of this earth: east India advisis and aluminum cartel pp. 376-387

⁶Government of India Report of the working group on "Mineral Exploration and Development (other than coal and lignite) Policy Implications vol-.iv page 83 available at mines.nic.in..

highly indebted state in India. The World Bank and other organizations have lent money to the state for various infrastructure projects. The consequence of which, the tribal problems are missing from the plank of the state agenda.⁷

In every country, there is a concept called “Aluminum Cartel” cut between government industry and banks whose mission is to keep the prices of aluminum at the lowest rate. In India, the cartel influence is seen in the writing of the Hoda Commission and the Planning Commission that ceaselessly endeavored to promote corporate imperialism. This is exercised through FIMI (Federation of Indian Mineral Industries). It tries to protect arms manufacturer mission by using cheap bauxite.

The cartel keeps bauxite prices low, preventing the free market, lobbying for more subsidies and against the tax cut, keeping the aluminum price at an advantageous position, lobbying for a particular project, to ensure uninterrupted supply of aluminum to the richest countries, their arms companies, and their arms industries. The cartel activities go in the coordination of major aluminum companies, including Alcan, Indal, Hindalco, Vedanta, BHP Billion, L&T, NALCO, Jindal, etc. They will be allowed to mine the region by supporting the infrastructure development of the mining-rich countries through IFAD (International Fund for Agricultural Development), WB (World Bank), DFID (Department for International Development), and other international organizations.⁸

C. Political nexus and issues of mining induced industrialization

The government has adopted pro-business policies after 1991. The policies relating to investment and leasing of mining have been relaxed. Private ports are facilitated for the export of minerals. There has been rising land alienation of the people. For example, from 1995 to the year 2011, the government has diverted 50276 acres of land for various industrial projects. It is estimated that 250000 acres of land have been utilized for mining projects in the state, most of which are tribal land. But on the other hand, employment has seen a dramatic fall in the present form of the mining operation. For instance, RSP (Rourkela Steel Plant), which was established soon after independence, provided 34000 jobs (Meher 2003). But Mittal has established a plant with the capacity of 12 million tone steel in Keonjhar has created only 550 jobs (Pattanaik 2006). Out of this small job, the lion's share goes to the outsider, and the rest are appropriated by the influential locals.

Consequently, the mining that causes disruption to the life and livelihood of the poor people are found of not availing any profit. The particularly small peasantry, people working as a sharecropper, and other forest-dependent are

worst affected. They are, therefore, for their rights and justice showing their resentment against mining and industrialization for which many resistance movements are taking place. The present project is also not seen as a work carried out for the development of the people. Tata steel plant had acquired in Gopalpur, 7000 acres of land against which communist party of Indian fought vigorously, and women were the forefront of this movement. Despite resistance, Tata company acquired 3700 acres of land under its possession. There are many resistance movements in Odisha taking place against state developmental projects such as the protest against dam as in case of Hirakud dam, defense center (HAL), in setting up public sector industries NALCO. These resistance movements were not successful and not widely supported due to the fact that these projects were seen as the precondition for fulfilling the demands of the development of the nation, and thereby these projects drew legitimacy of masses.

In the case of Narayan patana, there was stiff resistance against land alienation and exploitation of tribes. The tribal under the banner of ChasiMulia Association Sangh (CMAS) was deeply fought and able to suspend the mining extraction of Maliparvat Mountain by the Hindalco Company. The government named this association as an entity having Maoist link, and to suppress it, CRPF were deployed in the year 2009 during the time of harvesting. CRPF prevented the harvesting of crops, and being angered by this activity, the leaders and followers of CMAS marched towards the police station. The police opened fire on them, killing two followers and wounding many followers. The government, on the other hand, reported that CMSA attacked a police station, and the result of which hundreds of followers were arrested and CMSA leaders Nachika Linga was declared to be the most wanted criminal and searched to nab dead or alive. (Kumar, 2014 pp 69).

Mining companies are maintaining close contact with the various top-level office and officials such as the chief minister, prime minister Office, finance offices, etc. for example, P.Chidambaram was an active board member of Vedanta Company. For mining-related issues of the company like Vedanta and POSCO, there was direct intervention from the office of the Prime Minister and finance minister of the government of India. Vedanta Company has immensely contributed to the present ruling BJD (Biju Janata Dal) of Odisha. There is a frequent allegation of the top-level bureaucrats being bribed by influential companies. There have been many allegations that the politicians and bureaucrats take the decision in favor of companies with the intention of getting their relatives employed in various mining companies. Politicians are also seen as possessing companies, as in the case of Naveen Jindal MP (Member of Parliament) of congress having ownership of Jindal steel company in Odisha. Baijayanta Panda BJD MP also is a scion of the IMFA (Indian metal ferrous alloys limited) group.

⁷(Padel and Das 2007:40)

⁸(Padel and Das 2010: 320-321)

It shows that in the mining sector, there has been a good coalition between politicians and global capitalists. Local administration and police personnel have been acting as the machinery of companies. It is evident clearly from the CAG (Controller and Auditor General) report finding a lot of irregularities in the process of land acquisition for the needed mining projects (CAG- 2012). So also, the report of the Shah Commission estimating the loss of 59000 crores which according to commission happened under the unholy nexus of mining companies and government officials in Keonjhar district of Odisha. Illegal mining was found even over the popular companies working in this district.

The result of which the mining has become very exploitative, and tribal voice is ignored in the entire process of mining operation in the state. False cases are with very serious allegations are being made against the protestor of a mining project in the state. Prafulla Samantra, a well-known Gandhian and environmental activist, is being charged with armed robbery, banditry, and murder. Abhay Sahoo, antiposco leader, was also booked under similar charges, and many grassroots activists are also imprisoned under false cases. There are cases of use of Lathis and tear gas against the protestors of movement. There is also seen of having the close connection of goons and criminals with the contractors and also nexus between police and criminal element. Which lead to the arrest and killing of various Activists?⁹

There are many irregularities in the royalty system in India, which causes huge loss of revenue of the mineral-rich states. The central government, for instance, according to the law, is needed to rectify the royalty in the interval of each 3 years, but in reality, it is taking around 5 years for which the state fails to address the multiple impacts of the mining operation. There is a huge gap in the rate of royalty across different States of the country. For example, in November 2010, the average price in all India level per tonne of iron-containing less than 60% of ore was fixed at rs 1203 while in Goa it was Rs. 1415, in Jharkhand, the price was Rs. 282, and in Odisha, it was only Rs. 592.¹⁰

Similarly, there exists a huge mismatch of the prices of the mineral products of India that to the price of the international markets. For example, as shown in the following table that the price of the bauxite and iron is pegged at US\$ 5.5 and US\$ 13.5 in India, while the price of those at the international level is fixed at US\$ 100.8 and US\$ 77.4, respectively. The existing low rate of royalty has propelled various companies to rush to invest in Odisha's mining sector. This is clearly represented in the following table.

(Variation in Royalty prices)

(Prices in 2002-03 (US \$/ tonne)

Minerals	Domestic price	International price
Bauxite	5.5	100.8
Chromite lumps/fines and chips	57.9	87.5
Iron ore*	13.5	77.4
Feldspar	10.0	111.8
Fluorspar	99.3	129.6
Graphite	326.7	495.8
Dead burnt magnesite	169.4	103.3
Calcined magnesite	94.8	99.0
Mica	5.6	507.3
Silica sand	1.4	11.9

(Iron ore prices are for the year 2005-06)

Because of the existing low prices of the minerals, the mining companies are making exorbitant profits out of mining industries in India. For Example, NALCO's balance sheet is a useful indicator of the economics of bauxite. In 2005-06 its net profit after accounting for taxes and payments to the State was Rs 1,562 Crore. The company's balance sheet also says the state's share in this, as royalty and cess, came to Rs. 37.54 crore (or 2 percent of the total profit). For States, royalty is the key source of revenue from the mining sector. Other charges and taxes on the sector contribute little to the state kitty. Yet royalties on minerals form a small proportion of the revenue receipts from the major mineral-producing states. In most-mined Odisha, a mere 5-6 percent of the total revenue comes as royalty. It clearly shows that the benefits of mining do not percolate to states¹¹. This is more elaborated in the second chapter, where there is a more detailed analysis of industrialization and larger ramifications in the state of Odisha.

Historically construction of dams and the aluminum industry goes hand in hand. Mountains containing bauxite

⁹ Kundan kumar 2014 "confronting extractive capital: social and environmental movements in Odisha" economic and political weekly vol.49 no. 14 April 5

¹⁰ "Mining Royalty-Odisha"

available at-HRD
www.orissalinks.com/orissagrowth/topics/resource.../mining-royalty.

¹¹ "Mine No More"-CSE occasional tabloid
www.cseindia.org/userfiles/mine_no_more.pdf page-8

are converted to alumina and finally aluminum. Smelters need huge electricity in separating aluminum bonding from oxygen. For example, 13500-kilowatt hours of electricity requires for smelting one ton of aluminum and also produces on an average 13.1 tons of carbon dioxide. Refining one ton of aluminum requires 250kwh of electricity. In Odisha 60% of electricity is used in metal factories. The dam also uses enormous water for its operation. According to a Wuppertal institute study, producing a ton of aluminum requires 1378 tons of water. Since electricity cost is much higher in producing aluminum, aluminum companies adapt their strategies in building a dam for getting cheaper hydropower and subsidies for their plant. Soon after the building of Hirakud dam, smelter Jindal was built near it, Rengali was constructed near NALCO smelter in Angul, and so on, which can be questioned whether the dam was constructed for the development of backward regions or fulfilling the demands of smelting industries.

Mining industries are a motivator for the construction of the big dam, and this process has led tribal landless. It has created many multiplying problems, including the problems of siltation. It has been displacing thousands of people who have never been consulted nor given any choice for leaving. It also greatly lowers the standard of living of people. The environmental cost of building the dam is enormous. The flooded forest is decomposed, which produces methane, one of the greenhouse gas. The water remained stagnant and thereby losing the quality of oxygenation. Huge lands are flooded with algae and weeds. Despite all its ill effects, demand for new dams is growing very strongly with the false appeal of improving the living standard of people.

In Odisha, despite having a number of dams exceeding the capacity of the river, the government, in its process of industrialization, is planning aggressively for installing new dams. For instance, the lower Suktel dam is planned to supply a refinery near Gandhamrdan. The Hirakud dam was built to meet the demand of the aluminum smelter of Indal Company of this place. This dam was created forcibly displacing people, destroying the ecosystem, and completely subduing resistance. As per estimation, it inundated 285 villages. It flooded 1 80,000 acres of agricultural and forest land.

All these losses were sidelined with the prime intention of the then government of providing electricity to Alcan and Indal smelter. The dam smelter complex is believed to ignite fast industrialization. But the results of the Hirakud dam leads to the toxic surrounding of fluoride contamination and increasing suffering to crop cattle and local habitat. The existing Canal that supplies water for farming is rapidly drying. The emphasis is given to supplying dam water not for farming but for companies like Bhushan steel plant Vedanta and Hindalco. The government should look at evidence of dam danger and stop further expansion of Dams. Because of vested interest

and increasing extractive motive of aluminum dams are being constructed.¹²

Discontented farmers in command areas of Hirakud dam had made a human chain of numbering 20000 in the year 2006, and in the year 2007, 30000 farmers gathered near the dam and made peaceful protest under the organization of Chasi Rekha (farmer's demarcated line) for obtaining water for irrigation of their agricultural land. They protested against the sucking of dam water by the mushrooming of industries. Unfortunately, most of them were coming from the dam's command areas and had been waiting for water even after fifty years of the establishment of the Hirakud dam. They were lathi-charged and fifty farmers injured by the police while they were trying to enter over the dam, in case of Talab village which is situated near the dam and was one of major canal named 'Sesan canal' have been providing irrigation of 24,280 hectares of land that have been sustaining the agricultural livelihood of 60,000 households. From this place, industries are lifting water, and they have been struggling for adequate water for the last five years. Here is a restricted area Vedanta company laying underground pipes even without obtaining due permission from the concerned dam authorities and Hindalco laying pipe for lifting water for its second plant that will worsen the situation.

In the year 2005, there was a protest by the Talab villagers for the complete damage of their dried crop. It is due to the Bhusan company lifting water from the canal head. From 1990 onwards increasing water is being allowed by the government for the industrial use and in the year 1997, there happened sixfold increase of allocation of water for meeting demands of industries. It will definitely worsen the water scarcity and very badly affect the 90 percent of command areas people depending upon agriculture. Even the technical committee established by the government of Odisha also suggested that Vedanta and Hindalco plants situated at the canal head will affect the agriculture of this area. Still, no step is being taken to change the location of the above-mentioned companies. There is demand before the government for irrigating another 40,470 hectares of land as was promised in the original dam plan. It will become a herculean task before the government since the government is now failing to irrigate regularly the existing 215,655 hectares of land. It is because the government has signed MoU with various industrialists with the promise of making available water and electricity and thereby attracted investment of amounting rupees Rs 300,000 crore.¹³

¹²“Bauxite business in Odisha” felixpadel out of the earth page - 72-80

¹³“30,000 farmers demand Hirakud dam water-down to earth”31 December 2007 ,

III. Results and discussion

The developmental policy in Odisha is being influenced by the decision of influential multinational industrialists. Industrialists not only take minerals at cheap but also undermine the existing livelihood system of the local people. The politicians are gaining favors and opportunities from the mining companies, and thereby the voice of the poor tribals is found suppressed. The corporates are adopting CSR (corporate social responsibility) policy to get acceptance from the urban people and continue the mineral extraction despite all resistance. There is a need to adopt participatory, inclusive development so that the local people, government, and mining companies will be benefitted.

IV. Conclusion

Mining and industrialization in Odisha have failed in creating an inclusive and equity-based economy. Tribal's quality of life is not considered in the process of development. Government is biased towards multinational companies and that at any cost, it wishes to fulfill the promise signed in a memorandum with various industrialists. The mining process in Odisha is not addressing the issues framed under a sustainable framework that is very responsive to the need of the community along with protecting the environment. The time has come to question the centralized, monopolistic model of development that ignores the real developmental pattern of the tribal community. Development must respond to protecting livelihood and creating alternative livelihoods for the tribal.

Tribals are very vulnerable people and make disproportionate sacrifices for the sake of fulfilling the developmental mission of the state. They are forcefully deprived of their common property resource, and in the process of resettlement, the cost of pre-existing common property and environment is not taken into calculation. They are victimized by being alienated from their family ties, identities, and culture and from their knowledge system. The state is grabbing land in creating a myth of doing development. There is a pressing need to recognize their way of life, belief values, and knowledge system. The state should stop imposing our life system over the tribal, they are nature's friends, and forest stream hills and mountains occupy a very significant place in their life. They should not be forced to confirm the needs of the market.

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