

## **In search for an alternative to the current mining policy in the state of Jharkhand, India: ecological basis for sustainability**

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Over the last ten years mining's contribution to the India's gross domestic product had stagnated around a mere 2.2-2.5 percent but recently this sector has witnessed the entry of global corporations who have been granted cheap and easy access to mineral resources by the central and the state government, in a desperate bid to augment foreign direct investments into this sector which is facing a significant rise in global demand. Unfortunately in India the best mining prospects lie in heavily forested and tribal-dominated areas, for instance Jharkhand which emerges as an ideal site for exploring the mining and development paradox.

Mining in Jharkhand is not a simple 'dig and sell proposition' but a complex socio-economic and ecological challenge. Land here is not just a means of livelihood but is intrinsic to the *adivasi* identity, a fact that featured at the core of the demand for separate statehood. Early tenure laws like the colonial Chotanagpur Tenancy Act, 1098 and the post-independence Santhal Parganas Tenancy Act, 1949 were hailed as products of popular struggle. Even the introduction of the Fifth Schedule within the Constitution of India and the Panchayats (Extension to Schedule Areas) Act 1996 were premised on the belief that tribal-dominated natural resource rich areas are best governed with fewer and special laws. In contrast the current plethora of investor-friendly policy and laws like the National Mineral Policy (for non-fuel and non-coal minerals), 2008; the Model State Mineral Policy 2010 and the draft Mines and Minerals (Development and Regulation) Act, 2010 echo the growing opinion of civil society stakeholders that modern industrial growth requires resources from such regions and not the people.

An appropriate framework to critique a developmental model based on mineral resource extraction is by analyzing how different stakeholders, in this case the State, the mining companies and the indigenous tribes relate to the particular natural resource base. The access to natural resources and the burden of ecological degradation are unequally distributed among human actors. Therefore ecological degradation is not a result of human-nature conflict but a conflict between humans.

The focus of this paper is less on traditional policy evaluation, and is more aimed at an inter-disciplinary investigation of the legitimizing strategies that lie behind the mining policy in Jharkhand, based on relevant social, economic, legal and ecological indicators to propose a sustainable alternative that balances the imperatives of a biophysically possible and ethicosocial desirable model of growth for the local people

Keywords: mining, tribals, policy, ecology, sustainability.

## 1. INTRODUCTION

In his 2001 address to the nation, the late President K.R. Narayanan referred to the problem of the *'dilemmas of development'* and he urged the country to carefully consider how it chose to develop its mining industry, which threatens the very survival of local subsistence economies and indigenous population.<sup>1</sup> While over the last ten years the mining sector's contribution to the India's gross domestic product had stagnated around a mere 2.2-2.5 percent but recently the exit of mass employers like the public sector has coincided with the setting-up of large-scale, mechanised and privately-owned mines operated by global mining corporations who have been granted cheap and easy access to mineral resources by both the central and the state government who are desperate to augment foreign direct investments into this sector which is witnessing a significant rise in global demand. Unfortunately in India the best mining prospects lie in heavily forested and tribal-dominated areas, like the state of Jharkhand where mining is being promoted as the quickest and surest way of ushering development into the state. The illusory promise of the economic potential of the mining sector in terms of income generation and local infrastructure development has been offset by the tremendous environmental and social costs borne by the indigenous tribal population.

Mineral extraction based commercial activities is at the heart of the development debate in resource-rich Jharkhand, as successive state governments have signed 112 MoU's with some of the world's largest mining corporations in the last three years and it is in this context, that the state emerges as an ideal site for exploring the mineral extraction and development paradox, within the blueprint of a resource-intensive economic growth paradigm.<sup>2</sup> Mining in Jharkhand is not just a simple 'dig and sell proposition' but a complex socio-economic and ecological challenge<sup>3</sup> as land here is not just a means of livelihood but is intrinsic to the *adivasi* identity of the indigenous tribes residing in the state for generations, a fact that was also at the core of the demand for separate statehood. Modern industrial societies, perceive natural capital such as land as an economic asset easily convertible into financial capital, while amongst the indigenous populations, land and the associated natural resource are considered as an

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<sup>1</sup> *Rich Lands and Poor People: Is 'Sustainable' Mining Possible*, 6th State of India's Environment Report, Center for Science and Environment, 2008, 9.

<sup>2</sup> Moushumi Basu, 'Arcelor-Mittal in Jharkhand', *ECONOMIC AND POLITICAL WEEKLY*, November 29, 2008, 22.

<sup>3</sup> Chandra Bhushan, 'Rich Lands, Poor People: The Socio-Environmental Challenges of Mining in India', Available at: <http://bdsnetwork.cbs.dk/publications/chandra.pdf>, Last visited on: March 4, 2010.

ancestral trust, a notion that is unfortunately dismissed by the modern legal systems as amounting to a mere relic of an arcadian fantasy.<sup>4</sup>

Distributional conflicts may occur at different points in the commodity chain, between the point of extraction of materials, or in manufacture and transport, or finally in the generation and disposal of the waste.<sup>5</sup> Therefore ecological degradation is not a result of human-nature conflict but a conflict between humans, and as conceived by R.F. Dasmann, it is a conflict specifically between the *ecosystem people* and *biosphere people*, in relation to a particular natural resource base. Extending this classification, Madhav Gadgil identifies the indigenous tribes settled in Jharkhand as amongst the most striking example of ecological refugees in the country. They are *ecosystem people*, deprived of their access to their traditional resource base and who are forced to colonize new localities, away from the ecosystems with which they have been integrated over generations.<sup>6</sup> As a result of rampant and ecologically ill-conceived mining, the adivasis in the state have been repeatedly deprived of access to their traditional resource base and are being displaced from lands with which they have integrated over generations. Further as a result of inadequate re-settlement plans they will neither have the attachment, nor the knowledge or the motivation to prudently use the resources from the new catchments.

While critiquing the resource-intensive economic growth promised by policy-makers in a 'resource rich and economically poor' backward state like Jharkhand, this paper would utilize Herman E. Daly's conception of growth as a quantitative increase in physical dimensions and development as a qualitative improvement in non-physical characteristics. Daly further categorizes the two general classes of limits to 'growth': biophysical and ethicosocial limits. According to the latter, forces propelling resource-intensive economic growth are simultaneously eroding the moral foundations of the very social order which gives purpose and direction to that growth.<sup>7</sup> The position taken in the course of this paper would be aligned to the concept of depletion of moral capital as a limit to growth, with the objective of re-focussing the goals of policy-making in industrial economies, like India, which are at present geared towards increasing affluence by economic growth, without accounting for the incidental environmental and social costs. Therefore the issue is not whether mining should be undertaken or not, rather it is about how it should be undertaken. Extraction of minerals and metals is one of the significant drivers of modern urban-industrial economy. Resolving the mining and development paradox in Jharkhand requires balancing the imperatives of

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<sup>4</sup> Nandini Sundar ed., 'Laws, Policies and Practices in Jharkhand', *Legal Grounds: Natural Resources, Identity and the Law in Jharkhand*, Oxford University Press, 2009, 9.

<sup>5</sup> Joan Martinez Alier, *The Environmentalism of the Poor*, Oxford University Press, 2004, vii.

<sup>6</sup> Madhav Gadgil, 'Social Change and Conservation', Jules Pretty et. al., *The Sage Handbook of Environment and Society*, Sage Publications, 2007, 485.

<sup>7</sup> Herman E. Daly, 'The economic growth debate: what some economists have learned but many have not', *The Earthscan Reader in Environmental Economics*, Anil Markandya & Julie Richardson ed., Earthscan Publications Ltd., 1992, 36.

industrialization on one hand and the ecological and livelihood security of the indigenous tribes on the other. The debate revolves around the policies and institutional mechanisms which must be established to ensure that mining is conducted as far as possible in an environmentally and socially acceptable manner, which contributes to galvanizing local as well as national development.

## 2. OBJECTS, SCOPE & LIMITATION

Early tenure laws in Jharkhand like the colonial Chotanagpur Tenancy Act, 1908 and the post-independence Santhal Parganas Tenancy Act, 1949 were hailed as products of popular struggle.<sup>8</sup> Even the introduction of the Fifth Schedule within the Constitution of India and the Panchayats (Extension to Schedule Areas) Act 1996 were premised on the belief that tribal-dominated areas are best governed with fewer and special laws. In contrast to the emphasis on greater decentralization and devolution of powers on the local community and gram sabha's with respect to natural resources management, the current plethora of investor-friendly policy and laws like the National Mineral Policy (for non-fuel and non-coal minerals), 2008; the draft document of the Model State Mineral Policy 2010, which incorporates the salient features of the 2008 Policy applicable to the states echo the growing opinion of civil society stakeholders that modern industrial growth requires the region's and not the people.

The focus of this paper is aimed at an inter-disciplinary investigation of the legitimizing strategies that lie behind such policies and laws. How different stakeholders, in this case the State, the mining companies and the indigenous tribes relate to the particular natural resource base and how access to natural resources and the burden of ecological degradation are unequally distributed amongst them. The paper would attempt to question the substantive rationality behind the agenda of policymakers with respect to the mining policy in India, with special focus on mineral rich backward states like Jharkhand, on the basis of relevant social, economic, legal and ecological variables.

## 3. THEORETICAL FRAMEWORK

### 3.1 *Ecosystem & Biosphere People: Paradigm of Resource Use*

R.F. Dasmann in his paper 'Towards a biosphere consciousness' (1988) identified people at the two extremes of an apparent continuum, the *ecosystem*

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<sup>8</sup> *Supra* note 4, 5. (After the Birsaita rebellion during the late nineteenth century, the colonial government passed the Chotanagpur Tenancy Act, 1908, to address popular protest against the reserving of forests. Under the aegis of these new tenure laws, the state introduced judicial reforms that devolved more power on the village councils and which led to a greater degree of decentralization and recognition of local specificities.)

*people* and the *biosphere people*.<sup>9</sup> The former largely depended on their own muscle and livestock power to gather produce and process most of the resources they consume, the bulk of which came from a limited catchment area. The *ecosystem people* have significantly smaller ecological footprints and have characteristically used their resource catchments over long periods and subsequent generations.<sup>10</sup> *Ecosystem people* can be further classified into autonomous *ecosystem people*, those residing in inaccessible corners of the world, and a second category comprising of subjugated *ecosystem people*, who have been dominated by the *biosphere people* and wield only a limited control over their natural resource base. Furthermore they gather and produce little that can fetch commercial value in markets and therefore the subjugated *ecosystem people* also have very limited access to produce of intensely managed and artificial ecosystems. Adding another category to the existing classification, Madhav Gadgil's 'ecological refugees', are essentially ecosystem people, who have been deprived access to their traditional resource base and are forced to colonise new localities. While their resource catchment remains limited, these are no longer ecosystems with which they have integrated over generations. The *ecological refugees*, neither have the attachment, nor the knowledge, nor the motivation to use the resources of these new catchments in a prudent fashion. Gadgil argues that it is only when people perceive their resource catchments as limited, possibilities of substitution of an exhausted resource as remote, and their own control over the resources as secure, will they be motivated to use the resource base prudently.<sup>11</sup>

According to Gadgil, the Indian population can be classified into three major segments in terms of its relation to natural resources.<sup>12</sup> The majority are ecosystem people, the relatively poor inhabitants of agricultural villages and tribal hamlets and who given their limited purchasing power, must depend on gathering biomass and others resources from their immediate surrounding to meet their subsistence needs. They have historically had very limited access to material goods but abundant plant and animal species to utilize as food, fodder, organic manure, drugs, implements and construction material etc. According to Gadgil a significant reason for the observable depletion in resource base, is that the ecosystem people are being denied access to this resource base. One of the

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<sup>9</sup> Madhav Gadgil, 'Social Change and Conservation', Jules Pretty et. al., *The Sage Handbook of Environment and Society*, Sage Publications, 2007, 485.

<sup>10</sup> According to Madhav Gadgil, most tribal, peasant, pastoral, rural artisan communities can be placed under this category. In contrast, the *biosphere people* have extensive access to additional sources of energy, for instance, fossil fuels, mineral resources and nuclear power. Their resource catchments are vast and these people have huge ecological footprints, as part of an increasingly globalize market economy. Gadgil observes that most First World citizens and the Third World elite behave like the *biosphere people*. Also such *biosphere people* are not motivated to use a resource base prudently if their resource catchment are vast, so that degradation of any particular part of the catchment effects them very little or if they have open before them possibilities of substitution as any one resource element is depleted.

<sup>11</sup> *Supra* note 6, 494.

<sup>12</sup> Madhav Gadgil, 'Restoring India's Forest Wealth', Available at <http://www.ces.iisc.ernet.in/biodiversity/sdev/mg/pdfs/mg099.pdf>, Last Visited on: March 4, 2010.

significant fall outs of ecosystem people being deprived of resource access has led to the emergence of a second category within the populace: that of the 'ecological refugees', who are forced to migrate to urban economic centres, although few succeed in entering the industry and service sector, and their numbers swell in the urban slums. According to Gadgil both the ecosystem people and the ecological refugees may together be said to constitute the subsistence sector. The third segment of the population consists of the omnivores, which is characterised by high level of resource consumption. According to Gadgil, the omnivores, constituting a sixth of the total population have managed to corner the largest share of the nation's resources. He argues that they have successfully managed to grab such a disproportionate and unequal share by concentrating economic, political and administrative power in their own hands, and by organizing patterns of resource use that lead to further augmentation of this power. The omnivores have successfully pushed for an ideology that equates development with organizing subsidized flow of resources to the urban-industrial-intensive agriculture as opposed to the Gandhian school of ecological thought, which focussed on improving the standard of living of the ecosystem people.<sup>13</sup> As a result the ecosystem people have been systematically deprived of access to resources in order to ensure highly subsidized supply to omnivores and consequentially converting more number of ecosystem people into impoverished ecological refugees.

Today few communities of ecosystem people retain control over resources; such control has been or is being usurped by the more powerful biosphere people. The well-being of human groups requires the availability of resources, and possibly a wide diversity of resources, at a minimum level over periods of several years. For territorial groups this implies the need to sustain resource levels on a long-term basis within their own territory.<sup>14</sup> Any group that fails to achieve this would find itself weakened and subject to the aggression of neighbouring groups, and be culturally exterminated. Such special conditions of cultural selection might favour behavioural traits that would determine the sustainable use of the natural resource of that territory. Gadgil asserts that all human communities at some point in their history have been colonizers, having initially neither the motivation nor the knowledge of the resource base to create regimes of sustainable use. Eventually they get rooted in a locality and come to control its resource base effectively and are likely to see themselves as being adversely affected by resource overuse and gradually become motivated to use the resources in a prudent fashion. When so motivated they develop some simple rules of thumb to promote conservation use through a process of trial and error that has developed over generations. For example, such protection may be afforded by creating

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<sup>13</sup> In contrast under the Nehruvian model of growth, the policy adopted was to industrialize at all costs and subsidizing industry in every possible way.

<sup>14</sup> Such endogamous groups where a relatively small number of individuals repeatedly interact with each other over long periods are characterized by intra-group cooperative behavior promoting prudent resource use. Such practices are commonly observed in groups inhabiting stable and productive habitats.

refugia such as sacred groves or ponds.<sup>15</sup> Ecosystem people promote the maintenance of diversity of habitat by protecting samples on sacred sites, which may be associated with animistic spirits. According to Gadgil such measures not only promote the conservation of biodiversity but also promote its sustainable use. In the long term interests of the group, such restraint is often to be likely against the short term interest if the individual group members.<sup>16</sup> While the conservation practices of the ecosystem people with their limited resource catchments are organised on limited spatial scales, for instance, sacred groves ranging from a fraction of a hectare to at best hundred of hectares but they are distinct and may complement the conservation practices of the biosphere people.<sup>17</sup>

### 3.2 Need to Appreciate Biophysical and Ethicosocial Limits to Growth

According to Herman E. Daly, growth is the quantitative increase in the scale of the physical dimensions of the economy i.e. the rate of the flow of matter and energy through the economy, from the environment as raw materials and back to the environment as waste. Diametrically, Daly defines development as the qualitative improvements in structure, design, and composition of physical stocks and flows that result from greater knowledge of technique and purpose. An economy can develop without growing, as qualitative evolution continues to occur.<sup>18</sup> According to Daly biophysical and ethicosocial are the two general classes of limits to 'growth'. Unfortunately neoclassical economics is developed on the assumption that that economy is far from both limits, such as carrying capacity of the environment and limiting satiety of consumer wants etc., and that it is biophysically possible and ethicosocially desirable for aggregate product to grow. As the close-to-the-limits cases increasingly become the norm. there is an imperative need to construct a more general theory that would encompass both the 'normal' and limiting cases and which defines and expressly accounts for the other sources of welfare that growth inhibits and erodes when it presses against these limits.

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<sup>15</sup> There are many outstanding examples of ecosystem people continuing to exhibit, against all odds, a variety of cultural traditions of prudent conservation practices in spite of loss of control over their resource base. According to the 4000 crore Vedanta bauxite refinery and mining project in southern Orissa, the refinery would break even only if the State Government permits it to mine the bauxite-rich Niyam Dongar mountain. Vedanta wants the flat-top mountain massif, the best-forested in the Niyamgiri hill range, but the local Dongria Kondh tribals say it is abode of their god Niyam Raja. This has set the tone of a David-Goliath battle of Avataresque proportions between tribal faith and economic might of the mining proponent. See M Rajshekhar 'Hills on the Edge', THE ECONOMIC TIMES, April 13, 2010.

<sup>16</sup> *Supra* note 9, 488

<sup>17</sup> *Id.* 494

<sup>18</sup> Herman E. Daly, 'The economic growth debate: what some economists have learned but many have not', *The Earthscan Reader in Environmental Economics*, Anil Markandya & Julie Richardson ed., Earthscan Publications Ltd., 1992, 36.

That a change in economic welfare implies a change in total welfare in the same direction if not in the same degree, ceases to be true as the economy approaches either or both the limits. The gain in economic welfare can be offset by loss of natural ecosystem services as a result of the extra production. While perfect internalization of all externalities would make economic welfare coextensive with total welfare or in alternative, the better internalization of ever more pervasive externalities, however according to Daly such claims by economists echo of Archimedes' boast that he could move the earth if only he had a fulcrum and long enough lever.

The economy, in its physical dimensions, is an open subsystem of a larger finite, ecosystem which is both the supplier of low entropy raw materials and the absorber of high entropy wastes.<sup>19</sup> The growth of the economic subsystem is limited by its dependence on this source-sink system and by the intricate ecological connections which are easily disrupted as the scale of the economic subsystem grows relative to the total economic system. The disordering, depletion and pollution of ecosystem interferes with the life support services rendered to the economy by other species and by natural biogeochemical cycles. Economic expansion can be temporarily be financed by the drawdown of terrestrial stocks of minerals and takeover of habitats of other species, which too ultimately reach biophysical limits. Growth supported by the drawdown of geological or ecological capital is limited by the moral obligation to future generations who will have neither the minerals nor the biological gene pool that are depleted to satisfy the wants of the present generation. While growth is still biophysically possible other binding factors may limit its desirability.<sup>20</sup>

F. Hirsh in *Social Limits to Growth* (1976) argues that 'morality of the minimum order necessary for the functioning of a market system was assumed....to be a kind of permanent free good, a natural resource of a non-depleting kind'. Drawing a link between Adam Smith's 'Theory of Moral Sentiments' and 'Wealth of Nations', Hirsh comments that according to the father of modern economics, men could be safely trusted not to harm the community in pursuing their self interest not only because of the invisible hand of competition, but also because of the built in restraints on individual behaviour, derived from shared morals, religion, custom and education. Therefore unsustainable economic growth undermines its

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<sup>19</sup> Entropy is the qualitative difference between equal quantities of raw and waste materials and is of significance to a growing economy. Industrial growth is limited by the stock of the terrestrial low entropy rather than by the stock of solar low entropy, which is superabundant but irrelevant as it is flow limited i.e. its flow-rate of arrival to earth, is strictly limited and beyond human control.

<sup>20</sup> Daly puts forth four ethicosocial propositions limiting the desirability of growth: (1) Desirability of growth financed by the draw-down of stock of minerals is limited by the cost imposed on future generations. (2) Desirability of growth financed by the take-over of the habitat of other communities and species is limited by their disappearance and reduction in numbers. (3) Desirability of aggregate growth is limited by self-cancelling effects on welfare. (4) *Desirability of growth is limited by the corrosive effects on the very moral standards that foster growth, eg. glorification of self interest and scientific-technocratic world view.*



own social foundations.<sup>21</sup> The undermining of moral restraints has sources on both the demand and the supply side of the market for commodities. A growing economy cannot grow unless it can sell. E.J. Mishan in 'The growth of affluence and the decline of welfare', (1980) has noted that a society in which 'anything goes' is *ipso facto* a society in which anything sells. The forces propelling economic growth are simultaneously eroding the moral foundations of the very social order which gives purpose and direction to that growth. On the demand side of the market, one observes the rampant glorification of self interest and the pursuit of 'infinite wants' lead to a weakening of the moral distinction between luxury and necessity, and on the supply side, the success of the 'infinite power' of science-based technology is thought to be capable of overcoming all biophysical limits.

Systematic disruption of the ecological order coupled with the inevitable fragmentation of the moral order, renders effective policy-making deliberation impossible, as there no longer exists a common set of ultimate values or beliefs to which appeal can be made in the endeavour to persuade others, as research in policy science assumes the existence of objective value in the moral world. Mishan observes that policy-making must be aimed at moving towards an improved state of affairs and a policy would be arbitrary if 'better' and 'worse' carry no objective meaning. Daly concludes his assessment of the economic growth debate by observing that as the moral restraint inherent within an economic growth model is eroded then external police power is substituted, which requires the diversion of resources from other uses to substitute for the depletion of the 'free public good' of moral restraint based on shared values. Therefore, at a minimum the problem of sustainability requires maintaining intact the moral knowledge or ethical capital inherited from the past. In fact, sustainability really requires an increase in knowledge, both of technique and purpose, sufficient to offset, in so far as possible, the inevitable degradation of the physical world.<sup>22</sup>

#### 4. LEGAL APPARATUS IN THE STATE OF JHARKHAND

The state of Jharkhand has vast mineral resources, accounting for 37 percent of the total mineral wealth of India and rampant mining of this vast stock of resources has turned large tracts of forests into wasteland.<sup>23</sup> According to MoEF, from 1985-2004, more than 9,000 hectare of forest land had been diverted for mining in the state which has severely affected the people, who include the fifth highest concentration of forest-dwellers and tribals in the country. The Jharkhand Industrial Policy of 2001 has recognised the immense potential for attracting

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<sup>21</sup> *Supra* note 18, 46.

<sup>22</sup> *Id.*, 49

<sup>23</sup> *Rich Lands and Poor People: Is 'Sustainable' Mining Possible*, 6th State of India's Environment Report, Center for Science and Environment, 2008, 159.

large investments to create employment and raise resources. This policy statement also emphasizes on the need for the State government to expedite and simplify the procedure of granting of mining leases, in addition to providing certain relief to facilitate mining in the state.<sup>24</sup> In response to this pro-mining agenda of the state, there is growing popular resistance to mining as the procedure of granting leases ignores both the customary rights that the indigenous groups have over their commons, as well as the protective tenurial laws that govern their management.<sup>25</sup>

Mining in Jharkhand has a long and chequered history. While the first lease for mining coal in Ranigunj was granted in 1774 to the East India Company by the colonial government, the earliest recorded evidence of primitive mineral extraction can be traced back to the people of Bengal and Birbhum, who were ware of the uses of coal and even earlier to that, tribes of Jharkhand, like the Asurs and Agariyas, were traditional iron smelters. With the enactment of the Forest Act, 1874, which prevented the local people from cutting trees or branches, the indigenous industry of producing charcoal-based iron faced extinction. Mining at that time was not a state activity and was carried out by private individuals. In the 1800's many private individuals and companies started acquiring mining leases for coal, on the banks of the Damodar river. This prompted the colonial government to initiate large-scale mining exploitation and mineral-based industries. At that time, the mineral rights every where in the country vested with the government and public companies were set up to take over and run private mines and industries. A few decades later, the 1970's saw the emergence of mechanised mines and since then the labour force in this sector has been progressively rendered redundant. Simultaneously there has been a rise in the alarming trend of subversion of protective laws in light of the formulation of subsequent investment- friendly and pro-industry national and state mining policies. Jharkhand is governed by two main agrarian legislations, the Chotanagpur Tenancy Act, (CNTA Act), 1908 and the comprehensive Santhal Parganas Tenancy Act, (SPTA Act), 1949 were enacted with the intention of policy-makers to protect tribal land from being expropriated by non-tribal outsiders. While one of the important features of these laws is the provision of executive protection to adivasi land, but Section 49 of the CNTA, post an amendment in 1996, allows adivasis land to be transferred to non-adivasis, particularly for public purposes like industry and mining. This Section has been

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<sup>24</sup> Ajitha Susan George, 'The Paradox of Mining and Development', Nandini Sundar ed., *Legal Grounds: Natural Resources, Identity and the Law in Jharkhand*, Oxford University Press, 2009, 160.

<sup>25</sup>The Jharkhand Mines Area Coordination Committee has been resisting land acquisition in the state for the last four years. According to Committee spokesperson Xavier Dais, 62 organisations at the grassroots level have banned the entry of National Thermal Power Corporation, three major plants of Tatas, with an investment of Rs 60,000 crore, 20 coal mines, iron ore and bauxite mines and four uranium mines into the villages. Available at <http://www.firstpeoplesfirst.in/index.php>, Last visited March 4, 2010.

widely misused. Similarly Section 53 of the SPTA allowed acquisition of land by the landlord, in this case the state for building and other purposes.

The Fifth Schedule of the Constitution of India operationalises the constitutional mandate of providing protection to the schedule tribes in the state.<sup>26</sup> All acquisition and alienation of tribal land in this region for mining or for any other purpose should be governed by the provisions in the Fifth Schedule. Sub-section (2) of Section 5 of the Schedule mandates that the Governor may make regulations for the peace and good governance of any area in a State which is for the time being a Schedule Area. Such regulation may prohibit or restrict the transfer of land to members of the Schedule Tribes such areas and also regulate the allotment of land to the same in such areas.<sup>27</sup> The Panchayats (Extension to Schedule Areas) Act, 1996 (PESA) stipulates that in the Fifth Schedule areas, the gram sabhas have to be consulted before land is acquired for any development project.<sup>28</sup> Section 4 of this Act guarantees tribal rights.<sup>29</sup> Also Section 5 of the Jharkhand Panchayat Raj Act, 2001 lays down special rights for the Gram Sabhas in the schedule areas. Sub-section (ii) empowers to manage natural resources within their boundaries, which include land, water, and forest as per custom.<sup>30</sup> While this legislation was enacted modelled on the PESA, it maintain an equivocal stand with respect to the devolution of powers to the gram sabhas for control of the natural resource base and is therefore is in violation of the PESA in spirit. Unfortunately the elections to local governments have been put on hold by a court order because of legal challenges over the state's reservations policy which has handicapped the institutional performance of

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<sup>26</sup> Out of the 24 district of Jharkhand, twelve have a predominantly high population of adivasis who either fall fully or partially under the Schedule.

<sup>27</sup> Ramesh Sharan & Carol Upadhyay, 'Laws related to Land and Resource Rights in Jharkhand', Nandini Sundar ed., *Legal Grounds: Natural Resources, Identity and the Law in Jharkhand*, Oxford University Press, 2009, 217. (This Section has become the basis for the Schedule Area Regulation (SAR) 1969 in Jharkhand).

<sup>28</sup> According to Section 4 (k) and (l) of the Act, the recommendation of the gram sabha is mandatory for granting of leases for minor minerals or concessions for the exploitation of minor minerals or concessions for minor minerals by auction. A GOI Order dated November 11, 1998 further laid out the procedure for acquisition of land for any purpose in scheduled areas by making it mandatory for all and relevant information about the project to be communicated to the affected persons and gram sabhas and consultation to be carried with them before the project is started. Unfortunately at the level of implementation, such protective laws fail to come to the rescue of its beneficiaries due to gross executive inaction.

<sup>29</sup> For example Section 4 (e) the Gram Sabha or the Panchayat at the appropriate level shall be consulted before making the acquisition of land in the Schedule Areas for development projects and before re-settling or rehabilitating persons affected by such projects in the Schedule Areas, the actual –planning and implementation of the project in the Schedule Area shall be coordinated at the State level; (j) planning and management of minor water bodies in the Schedule Areas shall be entrusted to Panchayat at the appropriate level. (k) the recommendation of the Gram Sabha or the Panchayat at the appropriate level shall be made mandatory for the grant of prospecting license or mining lease for minor minerals in Schedule Areas; and (l) the prior recommendation of the Gram Sabha or the Panchayat at the appropriate level grant of concession for the exploration of minor minerals by auction

<sup>30</sup> Unfortunately Section 4(m) of PESA, 1996, giving powers to prevent land alienation and restoration of illegal alienated land, has not been mentioned in the 2001 Act.

development programs on the ground. This has led to the absence of a popularly elected, administratively and fiscally empowered institution as envisaged under the PESA, 1996 and the Jharkhand Panchayati Raj Act, 2001 in scheduled areas, which was crucial for realizing inclusive development<sup>31</sup> Even as the existing laws attempt to maintain self-reliant agrarian tribal communities, the over all thrust of the State Governments mining policies as reflected in the Jharkhand Industrial Policy of 2001 and the Jharkhand Vision document 2010 is in the direction of industrialization and exploitation of the state's mineral resource base at the cost of its people.<sup>32</sup>

## 5. OVERVIEW OF THE MINING POLICY IN INDIA

### 5.1 Background

The New Mining Policy of 1991 marked a radical shift from regulation to development within the mining policy regime in India.<sup>33</sup> The National Mineral Policy (NMP) of 1993 laid out the blueprint to liberalise and privatise the mining sector in India.<sup>34</sup> Subsequently in 2005 a High Level Committee (Hoda Committee) was constituted under the aegis of the Planning Commission's mid-term review of the 10th Five Year Plan<sup>35</sup>, to review the 1993 Policy. In the report submitted, the Committee was of the opinion that although liberalization of the sector was more than a decade old, the results had not been encouraging, which was mainly due to procedural delays in various mandatory environmental clearances at the levels of both the centre and state. The mandate given to the

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<sup>31</sup> Jharkhand: Addressing the Challenges of Inclusive Development, Report No. 36437-IN, The World Bank, 2007, vi-vii, Available at: <http://go.worldbank.org/2W12X7ZYS0>, Last visited on: March 4, 2010.

<sup>32</sup> Nitya Rao, 'Jharkhand Vision 2010 Chasing Mirages', ECONOMIC AND POLITICAL WEEKLY, May 3, 2003, 1755.

<sup>33</sup> In 1994, the Mines and Minerals (Regulation and Development) Act underwent a significant change of nomenclature and was re-named Mines and Minerals (Development and Regulation) Act.

<sup>34</sup> Thirteen major minerals, earlier reserved for the public sector, were opened up to the private sector. Foreign equity ventures in joint ventures promoted by Indian companies, foreign participation and technology in exploration and mining was facilitated. NMP 1993 allowed FDI up to 50 percent mineral concessions had hitherto been restricted to companies with less than 40 percent foreign holding with additional FDI on a case-to-case basis; with all FDI proposals requiring clearance by the Foreign Investment Promotion Board. In 1997 FDI up to 50 percent was taken out of the purview of the FIPB and granted automatic approval. In 2000 FDI was allowed up to 74 percent under the automatic approval route. In 2006, 100 percent FDI was allowed in mining. The GOI divested its equity holdings in a number of public sector undertakings such as Neyveli Lignite Corporation, NMDC, Kudremukh Iron Ore Co. Ltd., Hindustan Copper Ltd., NALCO and Hindustan Zinc.

<sup>35</sup> National Mineral Policy, Report of the High Level Committee, Planning Commission, Government of India, December 2006, Available at [http://planningcommission.nic.in/reports/genrep/rep\\_nmp.pdf](http://planningcommission.nic.in/reports/genrep/rep_nmp.pdf), Last visited on: April 2, 2010.

committee was to simplify procedures for obtaining leases and environment and forest clearance process, to attract foreign and domestic investment into mining.

The Hoda committee has recommended that if a company has received a prospecting license, it should be assured forest clearance if it finds minerals as a result of the exploration.<sup>36</sup> Regarding environmental clearance, the committee has echoed most of the previous Govindrajan Committee's recommendations that subsequently led to the new Environment Impact Assessment (EIA) notification in 2006. These were essentially that public hearing process be limited to the issues covered in the EIA report prepared by a consultant for the project proponent. Also, the public hearings could be done away with if owing to the local situation, it is not possible to conduct the public hearing in a manner which will enable the views of the concerned local persons to be freely expressed. The committee has also recommended that no environmental clearance will be required for lease areas less than 50 hectares. This Report has unfortunately failed to address the issues of rampant destruction of forests ecosystems and wildlife habitats, environmental pollution and large-scale displacement.

On the issue of land acquisition, the National Advisory Council (NAC) has suggested radical changes in the colonial Land Acquisition Act (LAA), 1894. One of the recommendations of the NAC is that 'public purpose' should be redefined to exclude private sector investment, and only limited public sector investment, such as power or infrastructure, should classify as public purpose. The NAC has also suggested that the 'public purpose' clause within the LAA should be replaced with 'public good', including the good of people being displaced. Another suggestion is that a clear distinction be made between 'public purpose' and 'public interest' – according to the NAC, public interest, rather than public purpose should be the basis of the LAA. Also, 'public interest' should be decided only after a thorough analysis of the social, environmental and economic costs and benefits, whose results should be discussed openly and transparently. The NAC has also dealt with the rehabilitation and resettlement policy extensively, suggesting amongst others, land-for-land compensation. One of the most radical proposals regarding change in the land acquisition regime is that the people likely to be displaced should have the 'right to say no' to a development project.<sup>37</sup>

## 5.2 *The National Mineral Policy (non-fuel and non-carbon minerals), 2008.*

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<sup>36</sup>Commentary, 'Mining Policy – protecting environment and people or investment?', Available at: [http://www.cpiml.org/liberation/year\\_2007/July/index.htm](http://www.cpiml.org/liberation/year_2007/July/index.htm), Last visited on: March 4, 2010. (The FCA1980 makes it mandatory for the Ministry of Environment and Forests (MoEF) to evaluate the ecological impact of diversion of forest land for non-forest purposes, and thereafter grant clearances. From 1980 to 1997, a period of 17 years, 317 mining leases were granted in forest areas, resulting in a diversion of 34,527 hectares of forest land. From 1998 to 2005, 881 mining leases were granted, diverting 60,476 hectares of forest land. Therefore, forest diversion for mining activity per year during 1998-2005 was four times higher than diversion during 1980-1997.

<sup>37</sup> *Id.*

According to the 2008 mineral are a valuable natural resource being the vital raw material for infrastructure, capital goods and basic industries and the extraction and management of minerals has to be integrated into the overall strategy of the country's economic development.<sup>38</sup> Mining is closely linked with forestry and environment issues. A significant part of the nation's known reserves of some important minerals are under forested areas. While mining activity is an intervention in the environment and has the potential to disturb the ecological balance of an area, but the needs of economic development make the extraction of the nation's mineral resources an important priority.<sup>39</sup>

Importantly, the Policy claims that conservation of minerals shall be construed not in the restrictive sense of abstinence from consumption or preservation for use in the distant future but as a positive concept leading to augmentation of reserve base through improvement in mining methods, beneficiation and utilisation of low grade ore and rejects and recovery of associated minerals. There shall be an adequate and effective legal and institutional framework mandating zero-waste mining as the ultimate goal and a commitment to prevent sub-optimal and unscientific mining. Non-adherence to the Mining Plan based on these parameters will carry repercussions.<sup>40</sup>

The guiding principle adopted by the 2008 Policy to resolve the paradox between mineral development and environment protection is that a miner shall leave the mining area in better ecological shape than he found it.<sup>41</sup> No mining lease would be granted to any party, private or public, without a proper mining plan including the environmental management plan approved and enforced by statutory authorities. The environmental management plan should adequately provide for controlling the environmental damage, restoration of mined areas and for planting of trees according to the prescribed norms. As far as possible, reclamation and afforestation will proceed concurrently with mineral extraction. All mining shall be undertaken within the parameters of a comprehensive Sustainable Development Framework, which has not been clearly formulated in the Policy.

In all such cases involving the acquisition of land belonging to the weaker sections of society, a social impact assessment will be undertaken to ensure that suitable Relief and Rehabilitation packages are evolved. While compensation is

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<sup>38</sup> National Mineral Policy non-fuel and non-carbon minerals (NPM) 2008, Ministry of Mines, Government of India, Available at: <http://mines.nic.in/NMP2008.pdf>, Last visited on: March 4, 2010. (As envisaged by NPM 2008, zero waste mining will be the national goal and mining technology will be upgraded to ensure extraction and utilisation of the entire run-of-mines.<sup>38</sup>To achieve both these goals of large scale prospecting and optimal mining large investments will be required together with the latest technologies in prospecting and mining. The regulatory environment will be improved to make it more conducive to investment and technology flows and capital market structures will be developed to attract risk investment into survey and prospecting.)

<sup>39</sup> See Para 2.3

<sup>40</sup> See Para 7.2

<sup>41</sup> See Para 7.10

generally paid to the owner for his acquired land, rehabilitation of affected persons in the form of substitute land, land for housing and jobs is not always adequate. Appropriate compensation will form an important aspect of the Sustainable Development Framework.<sup>42</sup> In so far as indigenous populations are concerned the Framework shall incorporate models of stakeholder interest for them in the mining operation especially in situations where they are likely to be deprived of their means of livelihood as a result of the mining intervention.

In areas in which minerals occur and which are inhabited by tribal communities and weaker sections, the Policy recognizes the imperative need to recognize resettlement and rehabilitation issues as intrinsic to the development process of the affected zone. Thus all measures proposed to be taken will be formulated with the active participation of the affected persons, rather than externally imposed. A careful assessment of the economic, environmental and social impact on the affected persons will be made. A mechanism will be evolved which would actually improve the living standards of the affected population and ensure for them a sustainable income above the poverty line. For this purpose, all the provisions of the National Rehabilitation and Resettlement Policy will be followed. Once the process of economical extraction of a mine is complete there is need for scientific mine closure which will not only restore ecology and regenerate bio mass but also take into account the socio-economic aspects of such closure.<sup>43</sup>

### *5.3 Model State Mineral Policy 2010*

This draft policy<sup>44</sup> acknowledges the on one hand, mineral exploration ushers increased economic activity and development in the states but it can have adverse social and ecological consequences, therefore scientific mining has to be carried out along with the implementation of sustainable management practices for the long-term economic development of the State. In public funding of infrastructure, royalty funds will be transparently applied in mining affected areas for development of health and educational institution and for their confirmed management. Facilities like drinking water, power and village development will also be systematically funded. Compliance of environmental laws by miners will be enforced through the Department of Forest and Environment.<sup>45</sup> Local communities including Panchayats, NGOs, etc. will be closely associated with the process of preparation of Mine Closure Plans and it will be ensured that such Plans include adequate provision for long-term

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<sup>42</sup> See Para 7.11

<sup>43</sup> See Para 7.12.

<sup>44</sup> The Model State Mineral Policy 2010, Available at <http://www.indiaenvironmentportal.org.in/files/draft-2010-mines.pdf>, Last visited on: March 4, 2010.

<sup>45</sup> See Para 9

sustainability of host populations and for the best possible use of the mined out areas based on the needs of the local communities.<sup>46</sup>

The State Government shall proactively identify areas where mining-related activities are likely to lead to unacceptable damage to the ecology and the environment and declare 'no-go' areas. It shall ensure adequate coordination between the State Directorate and the State Pollution Control Board for the conduct of the Environmental Impact Assessment in a quick, transparent and professional manner and ensure facilitation of preparation, approval and monitoring of the Environmental Management Plan.<sup>47</sup>

The State shall as far as possible ensure that mining in tribal areas if unavoidable, is done through State agencies in collaboration with local tribal communities, or by tribal organizations such as Tribal Cooperatives, Forest Labour Cooperatives, etc.<sup>48</sup> The State shall facilitate the setting up of such institutions and shall ensure arrangements for the technical support and financial credit, and for marketing of the ore. The draft policy identifies stakeholders who can also be adversely impacted, particularly host populations who derived benefits from alternative land use in the mining area, including forest lands and local population adversely affected in terms of biotic regimes, water regimes, environmental disturbance to the biotic and aquatic regimes etc.

To mitigate the adverse impact, all mines will be asked to put in place Corporate Social Responsibility Schemes, setting aside 3 percent of their net profit of the previous year. Mines will be encouraged to form partnerships with the District Administration, Panchayats and non-governmental organisations for implementation of local area development programmes, maintenance of community assets and creation of on-mine and off-mine employment opportunities. The State's Relief & Rehabilitation policy shall include mining-specific measures addressing issues of long-term impacts of loss of incomes due to mining activities and measures to recompense the loss in a sustainable way, by giving adequate opportunity to mine affected persons in the States' development opportunities. Under the relief and rehabilitation scheme followed by the state, stress shall be laid avoiding displacement of host population due to mining related activities where possible. Also the state shall provide an accessible platform for the registering and redressal of the grievances of the displaced communities.<sup>49</sup> Where displacement does take place, project assistance packages will be put in place in collaboration with the mining company which shall include a combination of employment assistance, land-for-land, homestead assistance/housing and relocation assistance, maintenance allowance, etc.

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<sup>46</sup> See Para 10.

<sup>47</sup> See Para 16

<sup>48</sup> See Para 17

<sup>49</sup> See Para 19



## 6. APPROACH OF THE JUDICIARY AND CASE-STUDY

In September 1997, the Supreme Court of India delivered a landmark judgment in ***Samatha v. State of A.P. and Ors***<sup>50</sup> upholding the rights of tribal peoples to life, livelihood, land, and forests in a case that dealt with issues of mining in tribal areas. The court took account of the fact that 90 per cent of the Scheduled Tribes predominantly live in forest areas and 95 per cent of them are below poverty line and totally depend upon agriculture or agriculture based activities and some of them turn out as migrant construction labour due to their displacement from hearth and home for the so-called exploitation of minerals and construction of projects. The Supreme Court held that forests and lands in scheduled areas, irrespective of whether they were owned by the government or by a tribal community, cannot be leased out to non-tribal people or to private companies for mining or industrial uses.<sup>51</sup> It restricted mining activity in these areas to be carried out only by the State Mineral Development Corporation or a cooperative of the tribal people. All leases granted by the state governments were in contravention of Schedule V of the Constitution of the India and were declared null and void.<sup>52</sup>

In the recent 2009 Supreme Court judgment in the case of ***T.N. Godavaram Thirumulkpad v. Union of India and Ors. and In Re: Vedanta Aluminium***

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<sup>50</sup> AIR 1997 SC 3297. The Borra reserved forest area consisted of 14 villages and is the Notified scheduled area in Ananthagiri Mandal of Visakhapatnam District of Andhra Pradesh. The State Government granted mining leases in this area to several non-tribal persons. The Appellant, Samatha Society claiming to protect the interests and life of the Scheduled Tribes in the area, filed the writ petitions questioning the power of the Government to grant mining leases in favour of non-tribals in the scheduled area, in violation of the Regulation which prohibits transfer of any land in scheduled area to a non-tribal.

<sup>51</sup> The judges in this case were of the opinion that agriculture is the only source of livelihood for Scheduled Tribes, apart from collection and sale of minor forest produce to supplement their income. Land is their most important natural and valuable asset and imperishable endowment from which indigenous communities derive their sustenance, social status, economic and social equality, permanent place of the abode and work and living. It is a security and source for economic empowerment. Therefore, the tribes too have great emotional attachment to their lands. The land on which they live and till, assures them equality of status and dignity of person and means to economic and social justice and potent weapon of economic empowerment in social democracy.

<sup>52</sup> In July 2003, the Government of Orissa went as far as constituting a state subcommittee chaired by the chief minister to discuss the implications of the Samatha Judgment. The committee concluded that the judgment is not binding on the state as there were enough laws in the state to ensure protection of tribal interests and that therefore, Orissa could stay outside the purview of the Supreme Court's ruling. On the basis of this interpretation, the government decided to allow the transfer of land in areas covered by Schedule V of the Constitution for mining and industrial purposes.

**Ltd**<sup>53</sup> the issue before the court was whether Vedanta Aluminium Ltd. (M/s.VAL), a subsidiary of M/s. Sterlite Industries (India) Ltd. should be allowed to set up a one million ton Alumina Refinery Project, at an estimated cost of Rupees Four Thousand crores in the Niyamgiri Hills, in the state of Orissa. The applicant in this case had obtained all necessary clearances. The court dismissed the application as the three-judge Bench held that adherence to the principle of Sustainable Development was now a constitutional requirement and determination of damage to the environment had to be decided on the facts of each case. While applying the principle of Sustainable Development, which aims to which meets the needs of the present without compromising the ability of the future, the Judiciary is required *to balance development needs with the protection of the environment and ecology*. Mining is an important revenue generating industry, but at the same time national assets cannot be allowed to be placed into the hands of companies without proper mechanism in place and without ascertaining the credibility of the User Agency.

M/s. VAL had been denied the grant of clearance as sought by it on the ground that the refinery was totally dependent on mining of bauxite from Niyamgiri Hills, Lanjigarh, which is a vital wildlife habitat and part of which constitutes an elephant corridor and also on the ground that the said Project, including the mining area, would obstruct the proposed wildlife sanctuary and the subsistence livelihoods of primitive schedule tribes like the Dongaria Kandha. The Niyamgiri Hills would be vitally affected if mining is allowed in the above area as it is an important water source for two rivers. The Project would also destroy flora and fauna of the entire region and it would result in soil erosion and therefore the use of forest land in an ecologically sensitive area like Niyamgiri Hills should not be permitted. The Judges of the Supreme Court observed that the Indian economy has been steadily been growing at the rate of 8 to 9 percent of GDP. However, accelerated growth rate of GDP alone does not provide inclusive growth. The judges in this case opined that *they were not against the project in principle but at the same time were not inclined to clear the project*. The Court in order to balance development *vis-à-vis* protection of wildlife ecology and environment suggested a Rehabilitation Package and modalities to operationalise the principle of Sustainable Development.<sup>54</sup> The Supreme Court in this case held that if

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<sup>53</sup> (2008)2 SCC 222. M/s. Vedanta Aluminium Ltd. has filed an application before this Court seeking clearance of the proposal for use of 723.343 ha of land, including 58.943 ha of reserve forest land in Lanjigarh Tehsil of Kalahandi District in the Sate of Orissa for setting up Alumina Refinery. The refinery is totally dependent on mining of bauxite from Niyamgiri Hills, Lanjigarh, which is the only vital wildlife habitat, part of which constitutes elephant corridor and also on the ground that the said Project, including the mining area, would obstruct the proposed wildlife sanctuary and the residence of tribes like Dongaria Kandha. Niyamgiri Hills would be vitally affected if mining is allowed as the proposed site is an important water source for two rivers.

<sup>54</sup> M/s. SILL was given the liberty to move the Supreme Court if they agree to comply with the following modalities as suggested by this Court. Some of the relevant provisions of the package directed that: M/s. SILL will deposit, every year commencing from April 1, 2007, 5% of its annual

petitioner was agreeable to the Rehabilitation Package formulated by court then they shall be able to initiate a proper application. This Court in this case held that it wasn't against the project in principle. It only sought safeguards which are able to protect nature and balance it with the objective of development.<sup>55</sup>

### 6.1 *Ib Valley Coalfields Case-Study: Impact of mining on types of capital.*

In a another coal-abundant site in Orissa, Mishra has used a sustainable livelihood framework to study the impact of coal mining on the local tribal communities of the Ib valley spread over two districts, Jharsuguda and Sundargarh, to highlight the fact that mining which is a form of physical capital, leads to the enhancement of financial capital, but has a mixed impact on physical and social capital and has a pronounced long-term negative impact on human and natural capital.<sup>56</sup> The commencement of mining operations creates indirect employment opportunities and also generated valuable foreign exchange earnings and tax revenues. These projects also lead to basic infrastructural benefits like the construction of roads, schools and primary health clinics in remote and socio-economically backward areas. Mining results in displacement of local communities, disrupting their livelihood pattern based on forest-based subsistence. In most cases they are also not adequately compensated for the damage to the surrounding natural environment due to air, water and land pollution and the irreversible loss of symbiotic community culture of the host

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profits before tax and interest from Lanjigarh Project or Rs. 10 crores whichever is higher for Scheduled Area Development. M/s. SILL shall pay NPV of Rs. 55 crores and Rs. 50.53 crores towards Wildlife Management Plan for Conservation and Management of Wildlife around Lanjigarh bauxite mine and Rs. 12.20 crores towards tribal development. In addition, M/s. SILL shall also bear expenses towards compensatory afforestation. The user agency shall make arrangements for mutation and transfer of equivalent non-forest land identified for compensatory afforestation to the ownership of the State Forest Department. The user agency shall undertake phased reclamation of mined out area. It should also undertake a comprehensive study of the wild life available in the area in association with institutes of repute like Wild Life Institute of India, Dehradun, Forest Research Institute, Dehradun etc. and shall prepare a site specific comprehensive Wild Life Management plan for conservation and management of the wild life in the project impact area under the guidance of the Chief Wild Life Warden of the State. The User Agency shall undertake development of greenery by way of plantation of suitable indigenous species in all vacant areas within the project. The forest land diverted shall be non transferable. Whenever the forest land is not required, the same shall be surrendered to the State Forest Dept. under intimation to Ministry of Environment and Forests, Government of India. If M/s. SILL, State of Orissa and OMC Ltd. jointly agree to comply with the above Rehabilitation Package, this Court may consider granting of clearance to the Project.

<sup>55</sup> In the subsequent case of *T.N. Godavaram Thirumulpad v. Union of India (UOI) and Ors. and In Re: Sterlite Industries (India) Ltd*, (2008)9SCC711[0], the petitioners unconditionally accepted the terms and conditions and the modalities suggested by this Court under the aforementioned rehabilitation package and the court granted clearance to the forest diversion proposal for diversion of 660.749 ha of forest land to undertake bauxite mining on the Niyamgiri Hills in Lanjigarh in Orissa.

<sup>56</sup> Prajna Paramita Mishra, 'Coal Mining and Rural Livelihoods: Case of the Ib valley Coalfield, Orissa', *Economic and Political Weekly*, Vol. XLIV No. 44, October 31, 2009.

population. Livelihood as defined by Mishra is a means of gaining a living and comprises of the capabilities, assets (natural, physical, human, social and financial capital) and activities, and the access to these required to determine the living gained by the individual and the household. The livelihood approach discusses how the creation and destruction of capital affect livelihood and the also the influence of different livelihood options, in this case mining on capital.

The livelihood framework adopted by Mishra, views people as operating within a context of vulnerability and the access to poverty-reducing assets and factors. As a consequence of mining, the project affected host populations are forced to adopt different livelihood strategies which result in diverse outcomes. According to the study, mining has a positive impact on financial capital which denoted the stock and flow of financial resources that people use to achieve their livelihood objective, as there is a rise in per capita income and the standard of living, in case the host populations receive job opportunities in the mines. Physical capital comprises of basic infrastructure and producer goods needed to support livelihood. With a positive impact on the per capita income of the host population, the household's capacity to keep durable assets at home incrementally increases. Within the livelihood framework, human capital is perceives as means of achieving livelihood outcomes and represents the skill, knowledge, access to education and health services which determine the ability to work to achieve livelihood objectives. Further the displacement of local communities which leads to a loss of land and livelihood, leads to the depletion of social capital or the resources which the local people draw upon in pursuit of their livelihood objectives. Finally of the all the types of capital, the most severe impact of mining is on natural capital which includes the stock of natural resources and environmental assets which form the primary basis of subsistence of the host population. In conclusion, Mishra argues that within the livelihood framework, being rich in one form of capital, while having inadequate access to others is unlikely to lead to sustainable livelihood. In case of mining, which is a form of physical capital, there is no contribution to the augmentation of human and natural capital, even though it has a short-term positive impact on financial and social capital. While mineral extraction leads to creation of revenue and foreign exchange earnings for the state, but the negative impact on the project affected host population, in the form of environmental pollution and ecological degradation, fall in agricultural production and displacement are not accounted for.

## 7. CONCLUSION

*You take my house when you do take the prop  
That doth sustain my house;  
You take my life  
When you do take the means whereby I live.*

William Shakespeare, MERCHANT OF VENICE (1596-1598)

Environmental degradation is not the result of an inherent conflict between humans and nature but between people. Policy makers therefore do not face a choice between the environment and reducing poverty and can achieve both by securing a more equitable distribution of the nation's natural wealth and by reclaiming nature as an asset that equally belongs to both the rich and the poor. The natural world is not a mere backdrop to the human economy; it is an indispensable form of wealth. Unequivocal acceptance of industrial growth has brought us to the threshold of the earth's ability to absorb pollution and exploit its scarce resources. There is an imperative need to demineralise the economy and promote a culture of 'doing more with less', by acknowledging the environmental and social costs incidental to extraction, processing and producing each unit of economic output from mineral resources.

At a minimum the problem of sustainability requires maintaining intact the moral knowledge or ethical capital inherited from the past. In fact, what sustainability really requires is supplementing commercial knowledge of technique with traditional know-how of purpose, which would be sufficient to offset, in so far as possible, the inevitable degradation of the physical world. The way human actors organize both resource access and resource use is of crucial importance to the sustainable management of natural resources. Institutional arrangements flowing from prudent policy-making become the levers by which behaviour of human actors can be modified and the goals of natural resource management can be steered towards. A sustainable mineral resources management plan for mining needs to be initiated at national, regional and community level. Such a model of management should focus beyond the biophysical manipulation of natural resource extraction, but should also respect the inherent ethicosocial limits to growth. Over the past five decades, the Indian state has gradually acquired an environmental valence aimed at minimizing environmental costs of development, harnessing local knowledge and devolution of power to mobilize the local population around the issue of better governance and husbandry of natural resources. The process is unfolding at different speeds across Indian states, but the movement is undeniable.

In Jharkhand literally meaning the 'land of forests', almost all minerals resource deposits in the state are in the same regions that hold its greenest forests and most abundant river systems. These lands are largely inhabited by the state's poorest and marginalized indigenous people who depend on the very same forests and watersheds for their livelihood. Among the *adivasis* in Jharkhand, land and the surrounding natural environment serve as a template for social organization and political thought besides being a mode of subsistence. The protection of the environment and the enforcement of community rights over natural resources constitute the foundation and the *raison d'être* of tribal institutions in Jharkhand. As a result of short-sighted and deficient policies and

laws, Mineral access is cheap and royalties earned by the central and state exchequer are low which are seldom used to finance in situ development projects. Policy-makers have also systematically ignored local practices and institutions which have ensured prudent use of resources over generations.

Between the two opposite views of the development debate in Jharkhand, one view contends that the development of the mining will act as the natural launching pad for growth acceleration and financing of broad-based social development. Since the state has the substantial share of the nation's mineral resource base it should capitalize on this strength. By substantial fiscal gain in the form of mineral revenue and spending the additional gains on rural and social development, will ensure equitable growth. In contrast, the alternate view is that the potential risks associated with the mining sector are high and that agriculture has shown great potential through impressive growth in recent years contributing significantly to poverty reduction and human resource development. The mining sector has led wide-scale destruction of livelihoods rather than their creation. Hence, the natural launching pad is not all that natural after all, and agriculture provides a much safer option given the adverse conditions of governance. The state can reduce its high degree of income inequality and high incidence of rural poverty through inclusive growth by achieving a balance between growth in mining and agriculture. The state should also fulfil the administrative need for popularly elected and administratively and fiscally empowered local self-government institutions. The transition to industrialization, particularly mining-led growth requires strong government institutional structures to mitigate the associated ecological and social risks.

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