



POSCO Movement: A Socio-Economic Impact Assessment

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Abstract: The state of Odisha occupies an important position on the mineral map of India both in terms of deposits and production, which are not only extensive but also equally diverse. The liberalisation of mining and industrial policies has allowed direct foreign investments and setting up of a large number of mining and industrial projects located in strategic areas in India. One of them is the POSCO project spanning two different districts of Odisha namely Jagatsinghpur and Sundargarh. The Government of Odisha signed a Memorandum of Understanding with South Korean steel giant POSCO (Pohang Steel Company Limited) for a period of five years for setting up of a 12 million tonnes per annum Integrated Steel Plant at Paradip in Jagatsinghpur in the district of Odisha on June 22, 2005. The project of such a massive capacity had two important components, the Integrated Steel Plant and the Mining Project. It was primarily proposed that integrated steel plant and private cargo port would be set up in Paradip and the mining area would be in the Khandadhar hills of Sundargarh district. Under this backdrop a team of anthropologists conducted field investigation in those areas to assess the socio-economic impact assessment for the said mega project. Earlier it was proposed that the district and state authorities as well as the POSCO project would look after the viable means of alternative source of livelihood, as the compensation grant based on the market price of the tangible assets was not able to make up the total loss the displaced family or the community had suffered. But unfortunately, this promise was not fulfilled and land acquisition was started. This incidence started agitations and several socio-political movements against the establishment of such a mega project. This paper deals with such movements and their implications on socio-

Received : 04 July 2023

Revised : 18 August 2023

Accepted : 24 August 2023

Published : 26 December 2023

TO CITE THIS ARTICLE:

Datta, A., Dhar, R., Biswas, R.R. & Sahoo, P.R. (2023). POSCO Movement: A Socio-Economic Impact Assessment, *Indian Journal of Anthropological Research*, 2: 2, pp. 113-137. <https://DOI:10.47509/IJAR.2023.v02i02.02>

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economic life of the people and its fall out on the setting up of the establishment of the million-dollar project.

Keywords: POSCO project, Integrated Steel Plant, South Korean steel giant, Mining, Mineral map

Introduction

The liberalisation of mining and industrial policies has allowed direct foreign investments and setting up of a large number of mining and industrial projects located in strategic areas in India, from time to time as a policy plan. These have resulted in building up of mega projects with vast industrial and allied infrastructure, multipurpose dams, exploration and extraction of mineral wealth, thermal power plants and large industries in almost every part of the country. A number of studies have shown that these projects have resulted in displacement of the original inhabitants and uprooting them of their socio-economic and cultural web of life built over generations. In the absence of the viable means of alternative source of livelihood, the compensation grant based on the market price of the tangible assets are not able to make up the total loss the displaced family or the community had suffered. As a result, instead of creating resources for the human development, often these development projects have resulted in creating ruptures and social tensions in the socio-economic and cultural fabric of the society.

The state of Odisha occupies an important position on the mineral map of India both in terms of deposits and production, which are not only extensive but also equally diverse. Though mining and extraction of metals were in practice from ancient period in Odisha, the independence of the country brought a rapid growth of mining activities in the state. Iron and manganese ore mining are spread over extensive areas in Keonjhar and Sundargarh districts to meet the demands of new industries and export. In a status paper on mining leases in Odisha by *Vasundhara* team (2006) it was stated that a total of 605 mining leases covering an area of 99,931.55 Ha in the state were granted before December 31, 2005 of which the top districts in terms of area covered by mining leases are Keonjhar (31.28%), Sundargarh (20.03%), Angul (10.24%), Jharsuguda (8.87%), Koraput (6.3%) and Mayurbhanj (5.4%). In terms of number, the largest numbers of mining leases are in Sundargarh district (130), Keonjhar (119), Bolangir (75), Kalahandi (72), Mayurbhanj (46) and Jharsuguda (26) with a big presence of tribal population and reserve forests which belong to the scheduled areas. As a consequence of these developmental activities, thousands of acres of agricultural, common and

forest lands were either submerged or destroyed and a large number of people were displaced. A significant number of these people are the tribals and other economically marginalised rural people who bear the brunt having disposed of their land, both agricultural and homestead along with the loss of their traditional occupation. They were forced to withdraw from their sacred groves, the family graves, as well as from their places of worship. Again with the scattering of kinship groups, the disruption of family system and informal social network as well as distancing from the links with trade and market has socio-cultural consequences.

Background of POSCO Project

The Government of Odisha signed a Memorandum of Understanding with South Korean steel giant POSCO (Pohang Steel Company Limited) for a period of five years for setting up of a 12 million tonnes per annum Integrated Steel Plant at Paradip in Jagatsingpur district of Odisha on June 22, 2005. The project of such a massive capacity had two important components, the Integrated Steel Plant and the Mining Project.

(i) Integrated Steel Plant

The Integrated Steel Plant included a massive steel plant to be set-up on the north-western bank of Jatadhar Mohan River about 12 kms outh of Paradip port in Erasama block of Kujang tehsil in Jagatsinghpur district of Odisha.

(ii) Mining Project

In consequence of the signing of MOU between South Korean steel giant, Pohang Steel Company Limited (POSCO) with government of Odisha, the Odisha government proposed for the licensing of a mining in a stretch of 6100 acres of land in Khandadhar hill ranges in the Banoi subdivision of Sundargarh for captive iron ore mining initially for 30 years and then for another 20 years on renewal to the Central government to meet the raw material requirements of the project. But in between two litigations were filed against the proposal of mining. In addition, POSCO also requested for an integrated township spread over an area of 2000 acres apart from 25 acres for office space at Bhubaneswar to house its large workforce, road, rail and port infrastructure including the dedicated railway line to transport ores from the mine-belt to steel plant and port at Paradip, water supply infrastructures to supply 12000 to 15000 crore litres from Jobra barrage river Mahanadi and grant of 'SEZ' status for access to subsidies and tax holidays.

Genesis of POSCO Problem (2005 – 2012)

Immediately after the MOU, the POSCO *Pratirodh Sangram Samiti* (PPSS) was formed in August-September 2005 by the people who opposed the project and a people's blockade was declared in three gram panchayat areas affected by the steel plant project. The blockade disallowed entry to the area for the government officials and POSCO employees.

The Scheduled Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act was passed by Parliament of India on December 18, 2006 which is applicable in both project plant/port and mining areas. Some sections relevant to the project are the following:

2(o) declares that all those living on forest land for at least three generations (75 years), as well as forest dwelling scheduled tribes, have rights under the Act.

3(1) (a) recognises right to land under occupation and/or cultivation in forest areas.

3(1) (c) recognises right to own, use, collect, dispose of minor forest produce.

4 (5) bars removal of any forest dweller without recognition of rights.

5 Empowered *gram-sabhas* (village councils) to protect and manage forests as a statutory authority.

Rehabilitation and Periphery Development Advisory Committee (RPDAC), a body mandated under ORRP to see the process of rehabilitation (implementation and monitoring) met in 2006 to make people aware of the POSCO project.

Land Acquisition Process

The land acquisition process resumed on May 18, 2011 after a gap of nine months. The district administration chalked out elaborate strategies and planned to demolish nearly 40 betel vines a day. About fifty officials, including revenue department staff and IIDCO (Industrial Infrastructure Development Corporation of Orissa) were engaged for demolition of betel vines. As a preparation, ten to twelve platoons were posted at Kujang about 15 km from the POSCO site. Though only two platoons (about 60 personnel) of armed forces were deployed at Balitutha, the entry point to the proposed plant site villages, majority of security personnel were kept in reserve at Kujang, about 10 km from the villages. The district administration of Jagatsinghpur had requisitioned 20 platoons of police, including five platoons of women force, for deployment at Gadkujang, Kujang, Nuagaon, Gobindpur, Balitutha, Trilochanpur and other

places in and around the project site. Ambulances and fire brigade were also stationed in the area. On May 18, the land acquisition work was undertaken by four teams comprising over 60 officials and personnel from revenue, forest and other departments at Polanga village under Gadakujanga area, a strong hold of pro-project group. Elaborate security arrangements were made to ensure smooth acquisition of land. Among the first to receive cheques for parting with their betel vines during the process were Sarbeswar Behera (pseudo names) and Kalindi Behera of Bayanala locality of Polanga village. 16 betel vines were acquired on that day. While Sarbeswar was handed a cheque of Rs 1.40 lakh, Kalindi received Rs 1.60 lakh. On the other hand the anti-project activists of *POSCO Pratirodh Sangram Samiti* assembled in the Dhinkia area and blocked the road to Dhinkia and Gobindpur while supporters of *Bhitamati Suraksha Manch* (BMSM) staged blockade near Nuagaon. The land acquisition was disrupted on May 19, 2011 when a group of villagers belonging to United Action Committee staged a sit-in at the proposed site. With villagers showed reluctance to come forward to hand over their land, teams engaged by the administration of Jagatsinghpur district for land acquisition conducted measurement of betel vines, ponds for pisciculture and plantations. The land acquisition teams visited Polanga and Bayanala in Gada Kujanga panchayat area and carried out measurements of different sites including betel vines. Consequently, the administration dismantled betel vines of 18 people who had grown betel on around three acres of government land at Polanga, Bayanalakanda and Nuagaon villages after paying Rs 37.50 lakh as compensation. Orissa High Court issued notices on May 20, 2011 to the State and Central governments and POSCO India on a PIL alleging illegal forest clearance granted in favour of POSCO in Jagatsinghpur district but land acquisition continued in between. The Minister, MoEF on June 12, 2011 said that forest clearance was no license for forcible land acquisition. The district administration decided to ban the participation of children in POSCO protest on June 28, 2011. The National Green Tribunal slapped notices to Union ministry for Environment and Forest (MoEF), Orissa government, Orissa State Pollution Control Board (OSPCB) and POSCO India for granting the environmental clearances on Aug 03, 2011.

Mining Lease in Khandadhar, Lahunipada, Sundargarh

In 2007, the Kudremukh Iron Ore Company, a public sector undertaking, approached the Orissa High Court challenging the state government's recommendation to grant mining lease to POSCO India in Khandadhar in Sundargarh district. The High Court referred the matter to the Centre in

April 2007. The Centre's "revision court", a quasi judicial body, had asked the state government to consider all applications afresh and allowed the state government to bypass the first-come-first-served criterion while making the selection afresh within four months. This criterion was the key basis on which a private company had challenged the government's recommendation. The state government had recommended POSCO's name again on January 9, 2009 after hearing the 200-odd applications for the prospective licence for the Khandadhar iron ore reserves. This was challenged by Geomin on the ground that the decision was taken without giving "equal opportunities to all applicants, especially the applications filed earlier". The High Court had directed that the licence recommended by the State in 2009 to POSCO be cancelled. It held that Geomin should have the preferential rights as it had applied for licence way back in 1991. The High Court said that the notification was violation of Section 11(5) of the Mines and Minerals (Development and Regulation) Act, 1957, as it failed to record a special reason why POSCO, which applied last, should get the licence out of turn. Odisha High Court through its order no W.P.No (C) 23/2009 of July 27, 2010 set aside the prospect of mining in Khandadhar hill ranges and remanded for fresh consideration to the government. A division bench of Supreme Court on December 6, 2010 directed the Centre, Odisha government and POSCO to maintain status quo on the Orissa High Court judgment cancelling the State's decision to grant prospective iron ore mining licence to the South Korean steel giant POSCO, over the Khandadhar mines. The case is still pending.

Protest and its fall out

The three panchayats of Steel Plant area together formed an organisation called POSCO *Kshatigrasth Sangharsh Samiti* (PKSS) to oppose the project but by January 2006 some members openly came out in favour of the project. But the opposition continued under several leaders under three separate groups depending on their political affiliations. The most prominent of them has been the POSCO *Pratirodh Sangarsh Samiti* (PPSS), led by a prominent leader of the Communist Party of India (CPI), with a stronghold in Dinkia Panchayat. The other group was *Bhita Mati Bachao Andolan*, dominated by the Congress which has been more or less inactive. The third group was *Nav Nirman Samiti*, is a voluntary effort spearheaded by the *Rashtriya Yuva Sangathan*, the youth wing of the Sarvodaya movement that follows Gandhian principles. This group used to be active around Nuagaon Panchayat. The groups though were united in opposition but differed on some basic issues. In an interview to the Times of India in 2011, the

leader said “we are not opposed to POSCO per se or industrialisation. Industrialisation is required for the economic development of the state and country. Agriculture cannot match the output of industries. But at the same time, ignoring agriculture and focusing on industry alone cannot help the country’s economy. There should be balanced economic growth. For that, there is no need to set up industries in a region with fertile land that yields guaranteed income from agriculture. Any effort of the government in this direction will be strongly opposed. At the POSCO site, people have a thriving economy with the cultivation of betel and cashew, and fishing activities”. The *Nav nirman Samiti* though have less presence have taken an anti industry position.

Despite these differences, the villagers had come together under these various banners on every occasion to raise their voices in protest against the project, barring few families who agreed to sell their land. The key strategies of protest included picketing at POSCO’s local office, holding rallies and demonstrations, *gherao* and detention of and blockading the area to prevent the entry of all government and POSCO officials. One of the effective strategies to stall progress of the project has been the setting up of check posts and barricades in the area by the local communities. These check posts kept on vigil round the clock by the women and children had restricted the movement of local officials and POSCO staff at the project site. At the mining site, in Lahunipara block in August 2007, the *Khandadhar Suraksha Samiti* under the leadership of BJP’s All India Vice President and MP from the area submitted a Memorandum to the Governor of Orissa demanding that the mining lease to POSCO should not be granted considering the impacts on the local environment and life. The Memorandum states “The Khandadhar Water fall, a 245 meters cascading side is not only a place of tourist attraction but a natural flow of irrigation system that caters the needs of six to seven Gram Panchayat located in Lahunipara block under Bonaigarh sub-division of Sundergarh district. Any denudation of volume of water from Khandadhar River will affect thousands of families whose vocation is agriculture. There is a proposal of leasing out Khandadhar Hill range to the POSCO for lifting of iron ore. Our bitter experience has been that a small mines been operated by OMC in these area has greatly diminished the flow of water. Any large scale excavating and lifting of iron ores will dry up the water fall of Khandadhar.” Similarly the CPM as well as the Congress Party formed their own organisations to oppose the mining lease but did not sustain the momentum.

In early January, 2008, an autonomous group, *Khandadhar Suraksha Sangram Manch* (KSSM) was formed but is yet to mobilise activities in the area. But it is

clear from the talks of the people that the villagers are not likely to allow the project. There have been instances of driving away the POSCO officials from the area when they came there.

As for the current status of the project, POSCO has opened the project office in Bhubaneswar, but the construction phase for Steel plant and Port are yet to begin. A conditional approval was also granted for withdrawal of water for the construction only from Hansua Nalla and not from Mahanadi at Jobra barrage. But POSCO was not very happy with this as the water from Hansua Nalla does not meet their requirement. In principle, the SEZ status was approved in 2006 and renewed twice in 2007 and 2008. As SEZ status renewal is only allowed twice, POSCO India was forced to reapply for SEZ status in January 2010. For infrastructure developments like township and road, the land is yet not earmarked.

The steel plant is located in the area designated as CRZ I and III which is prohibited under CRZ notification. The clearances were not obtained for laying the pipelines for the discharge of effluents. In all the cases REIA was conducted and no Comprehensive EIA was done. The REIAs of steel plant and the minor port did not assess the full environmental impact of the plant with its total capacity of 12MTPY. REIA for the steel plant was done for only a capacity of 4 MTPY of the steel plant. It also does not include all components of the integrated project such as rail and road transportation, water pipe line, township, etc for the steel plant. The REIA for the port was conducted during monsoon period which is unscientific. For example, the household of Dhinkia Panchayat is 650 and it is difficult to conduct the complete Social Impact Assessment within a couple of days. The regular protest meetings and the police deployment in the area showed that there was no harmonious relationship between the district officials and affected families for more than 5 years. Dula Mandal (pseudo name) one of the anti-POSCO member of PPSS was murdered. The police filed 152 cases against *POSCO Pratirodha Samiti* (PPSS) activists, over 642 people have outstanding warrants against them, and over 40 activists have been imprisoned.

A combined public hearing for both the steel plant and port was organised on April 15, 2007 at Banabehari High School, Kujanga about 15 kms from the affected villages. The venue was not close to the project site. The villagers had complained that many could not travel to participate in public hearing. The public hearing was based on the REIA of the port but the contents of the reports of the NIO that the steel plant is located in CRZ area was not disclosed to the people.

Displacement Issues

As per Orissa government records, the total land area sanctioned by the state government for the project is 4,004 acres, of which 3,566 acres is government land and the remaining 438 acres is private land. According to Odisha Government, about 471 families amounting to approximately 2,500 people would be displaced in the steel project area. Gadkujang Panchayat: Polang village- 62 families, Bhuyalpal village- 12 families, Nuliyasahi village- 135 families; Dhinkia Panchayat: Dhinkia village- 162 families, Gobindapur village- 90 families; Nuagaon Panchayat: Nuagaon village - 10 families.

The study estimated that if the actual social displacement and environmental impacts of the project's mining, pipeline, road/rail networks and township development were comprehensively and honestly assessed, it was only then that the massive and irreversible social impact of this project and its environmental consequences could be fully perceived.

Transit Camp

Till now, the POSCO authorities are not able to find any alternative site for resettlement. Due to the violent protest movements, 78 families came to the transit camp at Badagabapur, 10 km from Dhinkia in 2007 and are surviving with a dole of Rs 20/- per day. It is difficult to assess whether they came here of their own choice or were forced to leave. The villagers from Dhinkia, Nuagaon, Gobindapur and Nolia Sahi who lived with each other peacefully are now pitted against each other where the politicians as well as administration are playing their own cards. The situation is that now a villager from Dhinkia cannot dare step inside neighbouring Nuagaon on being labelled as either 'pro' or 'anti' POSCO. According to the local people POSCO Company is paying Rs. 20 per person per day and constructed tin roofed rooms for them to live as they came here willingly as they hoped to get compensation amount in lieu of the land. But according to the people living in the transit camp they were driven away from their villages as they supported POSCO project. They are of the opinion that the productivity of the betel vines as well as the farming was declining day by day and had no future, so it was wise to accept the establishment of POSCO plant and bargain for a better compensation package and jobs. But it was observed that the amount of dole was not enough to feed a family. Most of the children have stopped going to schools and many are unable to get the work as daily wagers. Many want to go back to their villages as they live in a very unhealthy situation with very little basic amenities.

Socio-Cultural Aspects of the Steel Project Area

The population details of Ersama block as per Census 2001 showed that the total number of families in the project affected in three-gram panchayats of Dhinkia, Nuagaon and Gadkujang were 3353 and total population was 17,357. Almost a third of the population belonged to the Scheduled Caste. The Scheduled Tribe populations were less than 1% in this project area. Only Polanga village had 23 tribals (Census, 2001). Jatadhar village of Nuagaon GP did not have significant population. Table below shows the village wise population distribution of the three-gram panchayats of Erasama block and table shows the population of Project affected villages.

Name of Gram Panchayat	No of HH	Total Population			Scheduled Caste Population			Scheduled Tribe Population		
		M	F	Total	M	F	Total	M	F	Total
Gadakuja	701	1720	1651	3371	668	639	1307	13	10	23
Dhinkia	1717	4756	4460	9216	1677	1650	3327	1	0	1
Nuagaon	935	2437	2333	4770	212	178	390	1	0	1
	3353	8913	8444	17357	2557	2467	5024	15	10	25

Population of PAV (Project affected villages) in Erasama block, Jagatsinghpur District for the Census Year 2001

Name of Village	No of HH	Total Population			Scheduled Caste Population			Scheduled Tribe Population		
		M	F	Total	M	F	Total	M	F	Total
Bayanalkandha	41	103	92	195	67	58	125	0	0	0
Bhunyapal	63	145	114	259	10	5	15	0	0	0
Polanga	87	192	183	375	38	33	71	13	10	23
Noliasahi	140	326	298	624	0	0	0	0	0	0
Nuagaon	919	2413	2333	4746	199	178	377	1	0	1
Gobindapur	532	1347	1265	2612	520	517	1037	0	0	0
Dhinkia	693	1983	1891	3874	716	709	1425	1	0	1

The villagers are engaged in paddy cultivation twice a year along with growing of green grams and different types of vegetables. The farmers earn more during Kharif (summer) season than the Rabi (winter) season. Other occupations of the area are betel leaf cultivation, growing of betel nuts, cashew nut cultivation, collection of pandanus (kewra) flower and coconut as well as prawn cultivation. Most of the villagers are marginal and small farmers with small land holdings but a sizable quantity of crops such as paddy, betel vines, cashew and other tree crops are grown which keeps them at sustainable self

sufficient level. According to villagers, the vast majority of betel vine, cashew and *kewara* (a local fruit for essence extraction) cultivation takes place on forest land, while most of the paddy cultivation takes place on private and revenue lands. The land near the shore is good for betel vine cultivation and in spite of the frequent cyclones and tidal surges, the inhabitants of this area are able to grow a sustainable produce from their lands. Many landless villagers are engaged in betel vines, agriculture, fishing and other works as daily labourer. According to estimation, a daily labourer working in the betel yards may earn approximately Rs. 200-300 a day depending on the specialised work. An agricultural labourer gets Rs.150 a day along with two meals. A village earns Rs. 8-10 for collection of one pandanus flower.

Betel Vine Cultivation

According to the villagers, more than 1000 betel vines are present in the project area of the Dhinkia village and more than 200 people are indirectly involved in the betel vines of the area. There are various estimates of betel vine cultivation given by different review committees and study groups. According to one estimate given by the villagers there are 5000 betel vines grown in three Panchayats, which are tended by 10,000 cultivators (Meena Gupta Report). A research team of American researchers (Iron and Steel) on the basis of their investigation stated that approximately 85-90% of the population are primarily based on betel vine cultivation, either as cultivators of betel vines or wage labourers. They further estimated that the income from betel vine cultivation is on the order of Rs. 37,000– 40,000 per decimal. Wage labourers received “Rs.150 for plucking of betel leaves, Rs.180 to Rs.200 for carrying of sand and re-layering of sand mixed mustard dust in the betel vine slots, and Rs.220 to Rs.240 for the work of untying and reburying the betel vines”, in addition to two meals a day. Wage labourers had little difficulty in finding work when required. Another estimate mentions that the average annual income from this cultivation is Rs 1 lakh per acre with another Rs1 lakh for other ancillary employment (Asher, 2009). Many of the landless families depend on basket making for packaging betel or work as daily labourers on the betel vine cultivation for their livelihood. Around 30 lakh betel leaves are transported to Mumbai, Bangladesh, Pakistan and Saudi every year.

Cashew Cultivation

The villagers mainly depend on cashew cultivation during the summer and an average cashew tree yields 100 kg of nuts a year which is approximately worth

about Rs 4000 and over 200 tonnes of cashews are exported annually from the project affected villages.

Kewra

Kewra (*Pandanus odorifer*) is collected from the jungles near the shore and each flower costs Rs. 10. Perfume is distilled from these leaves on a cottage industry level and sold. The extract of kewra is an aromatic essence and widely used in a variety of food products in supari, to flavour biriyani, *zarda*, *mishti*, etc. The *kewra* extract is also a highly valued perfume.

Fishing

Fishing is an important occupation done in different places of the project area and outside near the estuary throughout the year along with prawn cultivation. About 50% of the families are engaged in pisciculture chiefly prawns. Many other families fish in the estuary– all 108 families of Noliyasi hamlet which lies close to the estuary. The average daily catch per person is about 20 kg. The hamlet as a whole sells 1.5 quintals of fish every day, the daily earnings per family ranging from Rs 100 – Rs 5000. A significant amount of catch is transported and sold in Cuttack (Asher, 2009). It is estimated that 20,000– 30,000 fishermen, many of whom don't reside in the project area, are dependent wholly on estuary fishing for their livelihood.

Impact on livelihood pattern

As per official estimates, about 471 affected families having a total of around 1500 heads were to be relocated. Thus, the land-owning population would be affected due to the acquisition of private land having homesteads and ownership, if they were not properly compensated. It is well known that the displacement of families and homesteads without proper resettlement, rehabilitation and adequate compensation for the displacement leads to adverse impact on the people. However, as per local perception and from the local leaders more than 4000 families having a population of 22000 would be affected by the project. These people are directly dependent on the betel vine cultivation (*pana*), cashew nut cultivation, paddy cultivation (*dhan*), pisciculture and fishing (mina) in Jatadhar estuary. Apart from these primary sources of economy for the people, they collect different types of NTFP from the nearby forest and *pandanus* flower. The cash crops like betel, betel leaves, *kewra*, cashew along with paddy, coconut, fishing and pisciculture provides employment to these people throughout the year. The villagers are apprehending that they

would lose their self sustained economy. The loss of a thriving economy and livelihood are the major concerns of the villagers. To them the glaring example of the displaced persons due to IOCL plant at Trilochanpur is present. Those people after losing their resources of livelihood are presently living a miserable life. The compensation money could do them no good and the most suffered ones were the women of the house who had to put hard labour to feed the people. The villagers and many living in other surrounding villages believe that they would not be able to get most of the jobs given by POSCO as they do not have the requisite skills. At the most they would be engaged as unskilled or temporary workers. Even if they get the jobs, they won't be able to get a secure livelihood as they are enjoying now

Impact on Health

The common health problem is expected to rise from the breathing of polluted air due to industrial emissions, traffic emissions, poor sanitation systems and unhealthy environment affecting the local community. The people of the nearby area are already facing the diseases like acute respiratory tract infection, chest infection, skin allergy, loss of hearing, and other occupational health related problems due to the presence of various industries in the area. The coming of another large industry of such extent in the area would increase the problem of the common people.

Impact on total Environment

There would be potential impacts on air environment due to emissions of fugitive dusts, vehicular emissions and noise at the construction site, also the discharges of washing of the construction materials and discharge of untreated sewage would impact the water environment. The waste water discharge from the plant would cause marine pollution due to discharge of suspended solids, oil and grease, acids/alkalis, etc. There would be appreciably high rate of dust emissions which would impact the air environment. During operational stage, there would be noise from the plant and machineries.

Impact on biological environment

The area is cyclone prone with storm surge. There would be adverse impact on the terrestrial ecology due to diversion of 341.14 hectares (843 acres) of protected forest cover of Casuarinas trees and to some extent agricultural land cover. There would be loss of protected forest cover of 341.14 hectares mostly of Casuarinas trees and loss of some of the privately owned betel vines. The

aquatic ecology of Jatadhar Mohan River Creek and marine ecology of the sea would have significantly adverse impact due to the release of the untreated wastewater with high temperatures above sea water surface temperature, suspended solids, oil and grease from the plant. Mitigation measures will be required to minimise the adverse impacts on water and air environment.

People's Opinion: Discussions with the villagers and leaders of the protest movement

The discussion held with the local villagers and leaders brought out some key factors of economy. According to these people *dhana* (paddy), *pana* (betel leaf) and *mina* (fish) are the three primary source of economy of these three-gram panchayats earmarked as the project site. The soil condition is good for the cultivation of paddy and betel. Fishes are available in the creeks and estuary areas. A large part of the community also used fishing as part of their subsistence economy. Betel is the central crop of the local economy which is cultivated in the forest lands for generations and they collect different types of NTFP from the nearby forests. The other crops of the area are cashew, coconut, *kewra* and rice. Pandanus flower are collected and sold to local dealers for extraction of essence. It is one of the economic resources of the local poor people. The villagers grow different types of vegetables in their kitchen gardens for their daily use and sell the surplus in the market. The government is bringing POSCO, a foreign company and providing this site but to them it is their motherland which they do not want to handover. It is a sentimental issue for them. According to the government it will provide many facilities but the company is here for doing a business. The steel project and the port will disturb the ecological balance of Paradip, Kujanga and Erasama area of Jagatsinghpur district. It has been their experience that setting of such companies will invite all kind of immoral activities i.e., the drugs, liquors and all criminal elements as these are the side effects of the heavy industrialisation. These activities have already started at the village square of Trilochanpur due to the presence of OICL Company. The inhabitants of these villages are having self sufficient livelihood with the cultivation of betel leaves, paddy, cashew nuts, coconuts and fishing which would be completely lost when the lands would be acquired. The apprehension is that they would lose their house, village, sacred groves and social support system. To them the displacement would mean not only loosing the land and occupation but also the future generation would not be able to learn the art and knowledge behind the occupations of agriculture, betel vine yards and in pisciculture as done in these parts. The old people and sick persons are able to do the related works

under the shade of the betel vine (*boroj*) due less heat absorption and absence of direct heat but they may not be able to stand the harsh climate in the plant like POSCO. As they are the owners of the land, they are the masters, here they have the freedom, even the landless ones have the freedom to decide when to work or not but if POSCO takes over the land and they are engaged in the plant, they would become the servants. They also anticipate that their own knowledge, on the basis of which they are earning a decent livelihood at present, would not be respected. They are aware of the stance taken by the pro-POSCO people. According to these villagers, most of the pro-POSCO villagers though have their lands in the villages but either the land remains fallow or they are absentee landlords and stay in towns and cities. To them loss of land does not mean anything as they would be paid a heavy amount for the land. They are not happy with the way the R&R programmes have taken place at different project sites of Odisha including the sites present at Paradip. The villagers were not properly rehabilitated when the sites for OICL Company were acquired. As for employment in the POSCO as per rehabilitation scheme, they are aware that they would not get any skilled work in the plant as they are not skilled in that area, so they would earn very less of what they are earning at present.

The pro-POSCO views

According to the people supporting the setting of the steel plant in this area a developmental project like POSCO should be encouraged by the Government for the all round development of the state as well as of the nation. It is bringing Rs.52,000 crores, the largest ever Foreign Direct Investment (FDI) in India. The Orissa government is trying to “bring prosperity and wellbeing to its people” through this project. Much more job opportunities will be created through this mega project and the Odisha government as well as the India Government will earn huge tax from this project. For the overall development of Odisha, big projects like POSCO are essential but they should be established with a clear policy framework and effective future plans for the people and region. They find that the Orissa Rehabilitation and Resettlement Policy is beneficial for the project affected people and the R&R policy plans of POSCO company were framed on the basis of this policy for the people so there is no fear of the poor. They would be taken care of in the R&R programme.

The anti-POSCO views

By setting up of the POSCO plant at Paradip there will be a large displacement of 30,000 people directly from three panchayats i.e., Nuagaon, Dhinkia,

Gadakuja of Erasama block and more than 1 lakh people will be displaced indirectly in the slow process. It will severely hamper the life of the poor displaced people. POSCO will disturb the ecological balance of Paradip, Kujanga and Erasama area of Jagatsinghpur district. Construction of the new port will ravage the sand dunes almost six meters high which are the breeding, spawning and foraging grounds of several fish species, including the endangered Olive Ridley marine turtles and other marine mammals such as dolphins. The mouth of the Devi River is one of a handful of sites around the world where mass-nesting by Olive Ridley turtles has been observed. The SEZ approval would lead to the loss of revenue of government of India as several taxes would be subsidised. The extraction of water from Zobra and Naraj barrage of river Mahanadi for the plant would be a loss to the farmers who irrigate their lands from the canals of Taldanda, Machhagaon, Birupa of Cuttack, Jagatsinghpur, and Kendrapada district. If a private port is built at Paradip for POSCO, the recent Paradip port will face an aggressive competition and there is a possibility of submergence of the recent port into the Bay of Bengal due to the geographical situation.

POSCO - Mining Project

Though the government of Odisha identified over 6,100 acres of thickly forested land on Khandadhar hills for the captive iron ore mining, the exact coordinates of the mining area are yet to be earmarked because of the two pending litigations. An estimation given by an independent study group indicates that eight gram panchayats of the Lahunipara block in Sundargarh district with more than 50 villages inhabited by Paudi Bhuyan, Munda and other castes groups within a radius of 10 kms of Khandadhar Hill range will be directly and indirectly affected by the mining activities. The mining activities in Sundargarh date back to 1898 when limestone was exploited in the Bisra region. Later mining for iron ore, coal and bauxite also started. The industrial advancement of the district, especially after construction of the steel plant at Rourkela has made a great impact on the decadal growth. The entire district of Sundargarh comes under the tribal sub-plan area. There are three Integrated Tribal Development Agencies (ITDA) covering three sub-divisions of the district and one Paudi Bhuyan Development Agency (PBDA) for the development of the Primitive Tribal Group (PTG) of Paudi Bhuyan in Lahunipara block.

Proposed affected area

The area in question comes under the Lahunipara block of Bonai subdivision which is a part of the ex-princely state of Bonai. The whole area of Lahunipara

block is largely an isolated hilly tract with an average elevation of about 800 ft. (244 m) above sea level with variegated flora and fauna forming a rich biodiversity. The area is bounded by craggy hills interspersed with few passes or gorges which connect it with the surrounding areas. Topographically, the landscape exhibits widely diversified tracts of mountains, the most prominent among them is the Khandadhar hill range which are 22 in numbers. The block head quarter Lahunipara has a semi urbanised character due to its proximity to the National and State Highway. National Highway 23 which begins from Chas in Jharkhand passes from Rourkela, Lathikanta, Rajamanda to Bonai, Barkot and reaches Talcher, is busy with the dumpers for the transportation of minerals. After Lathikata, a part of reserve forests under Bonai Forest division begins and continues till Rajamanda. This forest is the part of Saranda forest region, the stronghold of Maoist activities which extend from Chaibasa to Sambalpur. The National highway 23 passes through the Chandiposh forest which is the main Maoist corridor and extends till Sambalpur. The road at Chandiposh on the right hand side from Rourkela passes through the centre of Saranda forest and goes till Koida, the main mining activity area.

Affected Villages

The villages surrounding the Khandadhar hills are the part of homeland i.e. *Bhuyan Pirh* of Paudi Bhuyan, who are one of the primitive tribal groups in Odisha. The proposed mining area is a part of Bhuyan Pirh and mainly falls in Lahunipara Block and in parts of Keonjhar district. According to the local NGO's and the villagers, the total gram panchayat areas of Talbahali, Kuliposh and Bhutuda and parts of Saskela, Haldikudur, Fuljhar, Kurda and Khuntgaon would be affected directly as well as indirectly by the mining by POSCO.

The Paudi Bhuyan Development Agency (PBDA) also distributed lands among some Paudi Bhuyan families for settled cultivation in the three Gram Panchayats of Haldikudar, Phuljhar and Kuliposh and also provides educational and health facilities to the families of Paudi Bhuyan living in five Gram Panchayats. A number of minor irrigation projects have been set up by Integrated Tribal Development Agency on the streams at Kilinda, Talabahali, and Bijaghat to irrigate the farm lands, vegetables and fruit orchards in the villages. The villagers of three villages i.e. Talbahali, Kuliposh and Khuntgaon gram panchayat use the water of Khandadhar stream for domestic use like washing and bathing and for irrigating the cultivable lands. This water is also used by the local government for the seed collection centres which are located at Kuliposh and Bandaberna of Khuntgaon gram panchayat. A

number of fruit farms have been developed by the horticulture department at Talabahali and Kuliposh where mangos, banana and litchi are cultivated. Thus, the streams emerging from Khandadhar hills and the waterfalls are the lifeline of a large number of villages of the area. A minor irrigation dam has been constructed on the Korapani stream which supplies water to the gram panchayat of Phuljhar, Haldikudur and Khuntgaon. The largest minor irrigation project of this area is situated on the Kuradi stream which also irrigates the agricultural fields of the villages in Balanga and Bimalagarh gram panchayat in Koida block and Sankhaposh and Kaleiposh of Lahunipara block throughout the year. Depending upon this water, rice, pulses, vegetables are largely cultivated in this area. For better forest management and protection, the Bonai Forest Division *Van Surakhsha Samiti* (VSS) have been formed in each village through active participation of the people living in and around the forest area, with the intention towards reducing people's dependency over the forest by providing alternate livelihoods to local people. The local government has involved civil society and non-government organisations for a better implementation of the programmes. The area is also witnessing mushrooming of NGOs working on a variety of issues including health, education, livelihood and natural resources management as the government is also outsourcing its development and welfare work to NGOs thus providing an excellent condition for growth of NGOs here.

Existing Mining Activities in the Area and its Impact

The first large scale economic activity inside the Khandadhar forest began with the leasing of lands to Orissa Mining Corporation (OMC) for iron ore mining at Kankaragarh by the Government of India in 1966. Due to easy access to iron ore, dolomite and water a number of sponge iron plants are operating in this area. Most of these sponge iron ore plants are located in clusters because of the easy availability of raw materials and communication facilities in these areas. The iron ore mining site of 160 ha area of Orissa Mining Corporation (OMC) is situated near the *Korapani* stream. The presence of this mining site has resulted in a large scale denudation of forest cover. They have located the dumping ground on the eastern side of the Uskela stream. The villagers of nearby gram panchayats witness regular transportation of minerals from Barsuan and Koida in Upper Khandadhar to other places. The researchers have also observed the presence of trucks and dumpers moving in the villages of Talbahali gram panchayat. A road passes from Lahunipara town to Lalei chowk and reaches the Khandadhar waterfall. This road is mainly used by

the villagers and the miners for transporting the mineral. During the tourist season, the Ladapani village receives many tourists who come for picnic. It has been observed that few villagers from Fuljhar, Budhabhui and Uskela mainly the Munda tribals work as labourers in these mines and walk quite a distance of two hours to go to place of work. The villagers as well as the NGO's have their own explanations regarding the existing mining activities in their vicinity. Two NGO's *Jan Vikas* and *Sundargarh Gram Unnayan Parishad (SGUP)* mainly deal with the forest rights and health issues of the inhabitants, mainly the Paudi Bhuyan tribals. Thus there were two kinds of expressions regarding the presence of mining and sponge iron industries in the vicinity. The NGO groups mainly concentrated on the environmental and health issues.

(i) Environment and water Pollution

According to the local NGO *Jan Vikas*, the ambient air quality of the area is polluted with the presence of particulate matter and oxides of sulphur and nitrogen due to the mining. The mining and transportation of minerals at Barsuan and Koida in upper Khandadhar has caused air pollution in the surrounding villages. Sponge iron plants nearer to Lahunipara, Rajamanda and Bonai have also polluted the air. Many villagers complain of the spread of fly ash on agricultural field and forest vegetation due to the heavy release of particulate matter in the air due to mining and industrial activities. There is a heavy accumulation of red oxides in the stream water due to the overburden of dumping of OMC wastes products leaving it red in colour. During rainy season, the water overflows and spreads in the agricultural field. The villagers use the stream water for their daily consumption like taking drinking water and bathing as well as irrigating the nearby agricultural fields. During rainy season this water is contaminated and undesirable for animal and human consumption. The agricultural fields and produces on both sides of Korapani stream and Uskela stream get severely damaged. The Uskela stream meets other two streams Khandadhar stream and Sasa stream at Phuljhar village as a result these two are also getting affected. Similarly, extraction of groundwater is another important issue. Water scarcity has become the major problem in this area due to the setting up of sponge units in clusters as the owners of the sponge industry are not in a position to bring water through tankers or build small check dams. As a result they have illegally dug bore wells in their units. Usually, each sponge iron unit has three to five bore wells which have been dug without the permission of water resource department. Due to rapid rate of ground water extraction by these units, water scarcity has become a major

problem in the area. The allotment of patta rights under Forest Rights act have started but the process is very slow due to the lack of interest on the part of the government.

(ii) Denudation of the Forest Cover

As estimated, approximately 6,100 acres of thickly forested land on Khandadhar hills would be acquired for the captive iron ore mining for the POSCO steel plant. As iron ore mining is in open cast form, it involves tremendous amounts of transportation of ore and wastes which would spread in a large area other than actual mining site. Thus, a large area of dry deciduous to semi ever green forest cover would be directly denuded due to active mining. The approach road to the proposed mining site and conveyors belt for transporting of ore from the mining site to Refinery plant passes through very dense and rich forests. Secondly, as it would be an open cast mining, it will generate high noises during excavation, drilling, transportation, blasting and crushing operations. Thirdly, it will also pollute the air through emissions from various sources like drilling, blasting, transportation and crushing operations. The constant traffic on the road by the heavy machinery and trucks, continuous operation of machineries, blasting, influx of outsiders and run-off water from the mining site during the monsoon season would destroy the rich ecosystem and lead to the destruction of wildlife natural habitat.

(iv) Destruction of Plants & Floral Species

Several studies have revealed that whole area surrounding the Khandadhar mountain range shows a varied degree of floral diversity. The major part of the forest is covered by Sal (*Shorea robusta*) and Pia-sala (*Pterocarpus marsupium*) which are the dominant species in the area. Most of these trees are of livelihood importance to the tribals and non-tribals living in the area and play a pivotal role in the socio-economic life of the Paudi Bhuyan. To these people, the forests of Khandadhar serve as an important natural resource as they provides them with food, shelter, firewood, medicine and agriculture. In fact the resources of the forest are used in all the sphere of life activities. It gives them the food items, fire woods, fodders for the domestic animals, raw materials for house, collection of honey, agricultural items, etc. for the livelihood. Usually the collection in deep forest is mainly done by the men but the bulk share of the work is done by the women. Almost all the materials for the construction of the house are sourced from the nearby forests of Khandadhar. The living house of the Paudi Bhuyan is rectangular in shape. The roof of the house is made of thatch

and is supported by wooden rafter and pillars which are mainly the woods of Kasi (*Bridelia sp.*) tree. The Sal (*Shorea robusta*) tree is used as beams and Assan (*Terminallia alata*) as cross bars of the roof. Previously, bamboo was used in the walls and veranda. But now woods are also used and brought from the jungles. Bamboo (*Bambusa ventricosa*) strips are used for the walls and plastered with mud. The doors are made of *Baunsa* (*Bambusa ventricosa*). The woods of Sisu (*Dalbergia latifolia*) are used as wooden frames for doors and planks for shutters. But with the denudation of the forest this dependency would be lost forever. The Paudi Bhuyan and Munda communities mainly keep cows, bullocks, buffaloes, goats, sheep and poultry for their daily use. The cows and buffaloes are mainly for agricultural purposes. The goats and chickens are domesticated for consumption as well as sacrificed for ritual purposes and thus always kept with special care to save them from wild animals. *Gauda* are the milk man and produce dairy products and earlier had symbiotic relation with the Paudi Bhuyan who considered themselves as owners of the land. They are also engaged them to tend to cattle and take them to the grazing lands which are mainly the valley and plateau. The acquisition of the area will be a great loss as there would be neither the land for grazing nor fodder. A great impact will fall on the basketry work. The Paudi Bhuyans are skilled in bamboo crafts and make varieties of baskets, paddy containers, winnowing fan, bamboo mats and other such items of different shape and size in their leisure hours for the domestic use as the forest area is rich in bamboo. The Paudi Bhuyan collect mushrooms, tubers, roots, shoots, green leaves, fruits, berries and nuts, seeds from the local forest either for consumption or sale. Almost in all the seasons, they collect variety of minor forest produces like lac, *sal* leaf, resin, *char*, and many kinds of wild rope, firewood, leaves for making cups and plates and several others which they sell in the market. The principle minor forest produces available is *sabai gras*, lac, *tassar*, *myrabolan*, *mahua*, *kusuma seed*, resin, *tamarind*, gum and *sal seed* and have a high importance from the perspective of local livelihood. Wide range of medicinal plant species are used by the medicine men, *Raulial/Baidya* who treats their patients psychologically through the appeasement of the different spirits as well as with the herbal medicines based on local herbs, shrubs, roots, tubers, flowers and bark of different plants and trees available in the mountainous and forests of the area. The deep forest of Khandadhar provides them various kinds of herbs, plants and tubers, some of which are of high medicinal value. Bahagharo Naik, aged 45 (name changed) from Ladapani said that 'we do not want anyone to disturb us. If company people come here for mining forcibly, we would lose everything. We would lose our homeland,

our land, our own people. We would have nothing to eat. Our own seeds and plants would be lost. We do not find it in the towns. Traders from distant place come to weekly *haat* at Khuntgaon to purchase our own produce. All these would be lost forever.'

Observation

The above discussion brings us to ponder on the whole situation. In POSCO case two large areas with two different natural resources are under threat. In the coastal areas of Jagatsinghpur, the economy of the marginal people of three-gram panchayats based on betel plantation, coastal fishing, agriculture, along with cash crops like kewra collection, coconut, and cashew nut are in stake for the sake of development. These people would lose their livelihood resources, home and hearth due to the large scale of land acquisition undertaken by the state government in the name of development. On the other hand in the mining areas of Lahunipada, a dense forest cover surrounding the Khandadhar hills range will be lost forever thereby damaging the ecology, economy and culture of the tribal inhabitants, specially the Paudi Bhuyan. These poor tribal people would be forced to leave their own homeland even if there is no land for land acquisition. The two situations concerning POSCO project are two separate cases in respective situation with different problems of their own. But the two situations share some common concerns. The growing demand for steel in the international market and the prospect of receiving highest FDI by the state of Odisha have increased conflicts and protests by the inhabitants who are of opinion that the state governments does not show any concern for conservation of forest or protecting rights of communities. There are some basic points which need to be addressed in order to access this situation.

1. The MOU between Government of Odisha and POSCO lapsed on June 23, 2010 and till date it has not been renewed. Thus, the validity of the clearances made for the project automatically come into question.
2. The first phase of the land acquisition started on July 27, 2010 after one month of the lapse of MOU.
3. The prospecting license for the mining in Khandadhar hill range of Sundargarh granted to POSCO was set aside by the Orissa High Court and remanded for fresh consideration to the government. A division bench of Supreme Court directed the Centre, the Orissa government and POSCO to maintain status quo till further hearing in December 2010.
4. The three components of the project, i.e. the Steel Plant, Captive port and Mining area are integral to each other, but three components were

shown separately. As the Steel Plant and Captive port cannot function without the clearances for the mining, therefore the Company needs to seek clearance of mines on the very ground of functioning Steel Plant and Captive port.

5. Ministry of Environment and Forest on January 31, 2011, accorded environmental clearance to the plant with 28 conditions and the port with 32 conditions ignoring the reports of the different committees as well as the provisions of the Forest Rights Act and its own order of August 3, 2009 stating that no application for 'diversion' (i.e. clearance for non forest use) can be made without the certificates from *gram sabha* of the affected area stating that (i) the process of implementation of the Forest Rights Act is complete and all rights have been recognised and (ii) that they consent to the diversion after being informed of the nature and details of the project and rehabilitation project.
6. Ministry of Environment and Forest accorded environmental clearance to the steel plant on May 2, 2010.
7. Land acquisition process resumed on May 18, 2011 after almost one year.
8. Prime Minister assured in Seoul that the government is keen to move forward with the POSCO project and there is some progress in this regard.
9. National Green Tribunal (NGT) on March 30, 2012 suspended the final order dated January 31, 2011 made by the Ministry of Environment and Forests till fresh reviewal.
10. The steel plant is located in the area designated as CRZ I and III which is prohibited under CRZ notification.
11. In all the cases REIA was conducted and no Comprehensive EIA was done. The REIAs of steel plant and the minor port did not assess the full environment impact of the plant with its total capacity of 12MTPY.
12. REIA for the steel plant was done for only a capacity of 4 MTPY of the steel plant. It also does not include all components of the integrated project such as rail and road transportation, water pipe line, township, etc. for the steel plant.
13. The mining area Lahunipada comes under Scheduled Area, in fact the whole of Sundargarh is a Scheduled Area thereby coming under PESA Act.
14. The larger impact area of the mining zone comes under Paudi Bhuyan Development Agency under the provisions of PVTGs. Twenty-

two Paudi Bhuyan tribal villages situated in this area are under the threat- Contradiction of protection and development. In the Steel Plant and Captive Port area, the total land required for the project belongs to the 8 villages in 3 gram panchayats who are going to lose a total of 4004 acres of which 3566.32 acres is government land and 437.68 acres is private land. About 73% of total land belongs to the three villages of Dhinkia, Gobindapur and Nuagaon. A total number of 3353 families are going to lose their land either partially or totally and lose their source of livelihood under the category of PAF which is equally as devastating as displacement from one's homestead land. The census reports confirm the presence of both other traditional forest dwellers (OTFD) and forest dwelling Scheduled Tribes on the project area. The District Gazetteers (1906, 1933 and 1992), Settlement reports (N. R. Hota Report on Settlement of Kujang Forest Block 1959-66) and maps show the documentary proof of the existence of forests in some nature in and around the area. There is the presence of documentary and archival evidences in the form of NISTAR receipts (the procedure for maintaining land rights) (**MoEF/MoTA Committee Report on Forest Rights Act** and forwarding letter of N.C, Saxena dated August 5, 2010) and District Gazetteers (1906, 1933 and 1992) which establish the presence of OTFD for generations of more than 75 years and their dependency on the forests for their livelihood needs for generations. The Resettlement and rehabilitation have not been started but has followed the ORRP almost similar for improving the land compensation and included the betel vine growers. However, details of rehabilitation benefits and different components of the package were discussed at RPDAC meetings. But the package is only one time compensation for diverting the land for POSCO, the landless agricultural labour and the fisherman were not included in the package. There is a lack of planning to minimise the displacement. The rehabilitation package is not equal with the value of loss of the household in the affected area. No special care has been taken for protecting the rights of the weaker sections of society, especially members of the Scheduled Castes and Scheduled Tribes, and to treat the matter with concern and sensitivity. Rather, the social tension is growing among the people day by day. Though 20 households were rehabilitated at Badagabapur but they are not fully self sufficient and are provided Rs 20 per day towards the consumption of food. The

mining areas of Sundargarh region have already observed the pitfalls of mining operations in name of development. They have witnessed the displacement of people by the mining operations that fled from their homeland and sustainable livelihood in search of alternative livelihood in other parts of the state and outside. The impact is expected to fall on the tribal people like Paudi Bhuyans who live here in the hill tops and foothills of Khandadhar forest which is the part of their *Bhuyan Pirh* (traditional homeland). The villages of Phuljhar Panchayat only know that POSCO will take this mountain that is why the people are coming to this area for the survey. The ensuing impact due to the POSCO mining would be severe.

References

- Asher, M. (2009). Striking while the iron is hot: A case study of the Pohang Steel Company's (POSCO) proposed project in Orissa. *National Centre for Advocacy Studies*.
- Balgir, & Dash. (2004). [Title not provided]. Retrieved from http://www.icmr.nic.in/annual/rmrc_bh/2003-04/RMRC%20CH-4.pdf
- Bhowmick, S. (1997). *Paan: Anadrita Laxmi* (In Bengali). *Betel leaf: The Neglected Goddess of Wealth*. Moyna Prakashani, Calcutta.
- Cernea, M. M. (1995). Understanding and Preventing Impoverishment from Displacement: Reflections on the State of Knowledge. Keynote Address presented at the International Conference on Development-induced Displacement and Impoverishment, *University of Oxford, England*, 3-7 January.
- Derry, R.L. (1930, January 2). Inspection notes. District Forest Officer, Puri Division, Puri on Kujang Estate, Forest, Cuttack.
- Hota, N. R. (1959-66). Report on Settlement of Kujang Forest Block.
- Indian Council of Agricultural Research, New Delhi*. (2000). *Annual Report of All India Coordinated Research Project on Betel vine (ICAR)*. National Research Centre for Medicinal and Aromatic Plants, Boriavi, Gujarat, India.
- Mathur, H. M. (1997). Managing projects that involve Resettlement: Case Studies from Rajasthan, India. *World Bank, EOI, Washington, DC*.
- Murthy, A. Aruna, & Vasundhara, Y. Girikaro. (May 2006). Status Paper on Mining leases in Odisha. *Conservation & Livelihood Team (A. Aruna), Vasundhara, May 2006, Vasundhara*.
- Rath, B. (2005). *Vulnerable Tribal Livelihood and Shifting Cultivation: The Situation in Orissa with a Case Study in the Bhuyan – Juang Pirh of Keonjhar District*. Retrieved from www.vasundharaorissa.org