Mining and People's Protest: A Study in India's North East

Bhattacharjee Jhimli

Department of Sociology, Assam University, Silchar, Assam, INDIA

Available online at: www.isca.in, www.isca.me

Received 10th June 2014, revised 11th August 2014, accepted 4st November 2014

Abstract

Drawing on three case studies, this paper highlights the opposition faced by mining projects in North East India. The paper emphasizes on the issues on which opposition is made by people's groups and the strategies involved in engaging in activism against mining. It has been seen that the mining over here has a similarity of issues of opposition which are found in the other parts of the country as well as in the world. These issues involve threat to cultural erosion, displacement of people and impact on environment.

Keywords: Mining, protest, environment, North East India.

Introduction

Mining operation continues amidst the varieties of challenges to people's life, livelihood, and the ecological set up of the area of its operation. Because of its ill effect, mining project very often generates opposition from civil society. India's North East which has vast reserve of mineral resources also experiences the same. This is mainly observed in case of its three major mining operations in the region. These are: coal mining in Assam, Uranium and Limestone mining in Meghalaya. It is to be noted that the region has the potentiality to meet most of its energy requirement for the continuity of its growth centered path of development for the country as a whole. Though because of the communication barrier the region is a late addition in its different sorts of operation related to development and industrialization, the region has made lot of hue and cry for its mining operation in Meghalaya, mainly for Uranium and limestone, recently being the rat hole mining of coal. All these made it necessary to study the people's opposition to mining operation in the region in terms of the issues involved and strategies followed and the success it has made in its goal. The paper is based on three case studies: First: coal mining in Assam, second Uranium mining in Meghalaya and third being the Limestone mining in the same state.

The paper is based on both secondary as well as primary sources of information. The secondary data are collected from different published works while the primary data are collected by the author from the field itself. A case study method has been followed to understand the nature of activism in North East India.

A general treatise on people's protest against mining

Most of the mining operations are very often found to face opposition and protests from different corners mainly from the environmentalists and local people who are affected by mining. Mining has a multiple of affects starting from deforestation, air pollution, pollution of river etc. While environmental impact is one of the major reasons of rising protests against mining, displacement of indigenous people is a very common ground for which mining is opposed highly all over the world. This is true of all environmental movements over the world. As mining operations are increasing to cater the need of the growing economy, the sizes of the mines are also increasing. To Fernandes and Asif, the size of coal mines has grown from an average of 150 acres in 1960s to an average of 800 acres in 1980s and to some 1500 acres today. The increasing size of mines mainly coal mines have more displacement effect in comparison to the past. Moreover the rehabilitation and resettlement of the displaces are also not done adequately. Very often the compensation given to the affected people is very meager. The compensation in terms of giving job to the diaplaces is also very unsatisfactory. This can be observed in case of Karanpura village of Jharkhand where 10.18 percent of the 6265 families are given jobs in the mining sector¹.

The impact of mining and the reactions to it in India is wide and far. In their study on impact of coal mining in Damodar river basin R.K.Tiwary and B.B. Dhar² maintained that exploitation of coal mine and related industries have exerted a great impact on the environment of the basin. Besides effecting the environment, mining also leads to displacement of people mainly indigenous people. According to T.E. Downig mining has displaced 2.55 million people between 1950-1990³ in India. Because of these multiple causes mining very often face opposition from different groups. The recent report of protest by Green groups in Australia against its largest coalmine in Queensland⁴ is an example of activism against mining. Environmentalists claimed that the proposed mine will damage ground water supplies and contribute to climate change. It is estimated that the mine will have a carbon emission more than the total carbon emission by Denmark. The Green Groups thus threatening legal action to prevent the mine to go ahead. The non-ferrous metal mining in Guatemala⁵ is yet another example

Int. Res. J. Environment Sci.

of people's protest against mining. Because of its negative impact on environment and poor people engaged in agriculture, the civil society of Guatemala has opposed vehemently against mining operation in Guatemala.

In India, Samanta, an NGO, organized tribals to protest mining on reserved land. The famous Samanta judgement is thus the victory of people's movement against state's intrusion into tribal land. In Karnataka, Samaj Parovartan Samudaya (SPS) became successful to bring a halt to illegal ore mining in 2011 and since then it is working with the community to reclaim their livelihood and environment. The recent example of people's protest against mining is the protest by the 8000 villagers in Niyamgiri hills in Orissa, in India⁶. Vedanta, the London Stock exchange listed company faced stark opposition from the villagers. The proposed project is likely to affect the project area in various ways. The Kondhs, the tribal people living in the forest, believe the mountain range as sacred and Niyam Raja who is their god is the provider of all essentials to them. The villagers alleged that the operation of Vedanta will come on the way of their religious and cultural rights. In a move the Supreme Court ordered that the right of the tribals must be protected by the Odissa government.

India's North East popularly known for its pristine beauty and dense forest, also faces environmental and livelihood threat for indigenous people because of mining. The region came under mining operation during British rule in the last quarter of nineteenth century when coal was discovered in upper part of Assam. The exploration and extraction of coal in Tirap district of Assam is followed by coal extraction from Meghalaya. The coal extraction in Tirap district faced protest mainly after nationalization of Assam Railway and Trading Company in 1973. Besides extraction of coal that led to protest from different concerned groups, the proposed uranium mining in Meghalaya raised lot of protest from people. The recent addition of Lafarge chapter on limestone is yet another story of mining project, environmental degradation and people's protest. Following discussion focuses on the mining in north East India and people's protest in the region.

Mineral and Mining in North East India

North East India, a geographical region comprising of eight states namely, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Sikkim and Tripura holds a reserve of coal, natural gas, oil and limestone. Assam and Meghalaya has a large reserve of what is called 'Black Gold' i.e., coal. The region has a small fraction of its total area under lease for mines. It is reported that North East India has 395 millions of coal deposits apart from Uranium, petroleum, limestone and other minerals. According to the Indian Bureau of Mines 1991 and director of Economics and statistics, 2003, quoted in Fernandes⁷, coal mining leases in Assam is 3126.98 acres while that of limestone is 2214.14 acres of Area.

Mining in North East India started with the discovery of presence of coals in the Margherita hill ranges when it started

the exploration of natural resources in different parts in the world to feed the energy need of industrialization in the west. Along with the prospect on tea production and the respective trade on tea, another prospect that came in to their sight was the exploration of mineral resources in upper Assam, more specifically of coal in the Patkoi hill range of Assam. Initially coal was discovered in the Makum coal field which gradually reached to the adjacent areas of Patkoi hill ranges. Though the commercial riverine dispatch was started in October 1883, the Digboi railway workshop dispatch of coal in true sense started only on February 18, 1884⁸, the day the first passenger train was opened.

Initially with coal mining operation in upper Assam, the mining operation continued to increase in rigour and vigour in different parts of North east India. Though the initial story was a story of exploration, excavation and experimentation, the later story was the rising consciousness and protest which was many times generated by the felt discomfort by the mining affected people and sometimes by the environmentalists, activists and academicians of the region. This can be understood by study of three specific cases of movements against mining in North East India.

Movement against open cast mining in Ledo Margherita, Upper Assam

Activism against coal mining in upper Assam is perhaps one of the oldest of protest against mining in North East India. The coal discovered in Makum, in upper Assam has started the excavation process around and gradually Ledo became famous for the coal fields present in Assam . Coal was required by the Railways for its use as fuel for locomotives and workshops, traffic etc. Tea gardens and timber plants also required coal to generate power. Coal has received growing demand not only to meet the needs of the local industries, but also to meet the demand of industries outside the region and country. To meet the growing demand and to avoid the wood fuel, different collieries were set up in different places at Namdang in 1885, Ledo New West in 1903, Baragolai in 1909, Tipongpani in 1904 and Namdang Dip in 1904. All these mines were operated under the administrative control of Assam Railway and Trading Company till the date of Nationalization on May 1, 1973, under the control of "Coal Mines Authority Limited", a holding company on first day of November 1975. Since then the Makum coal field of Margherita area has been placed under North Eastern Coal fields controlled by Coal India Limited.

There are presently six working coal mines in North Eastern Coal fields, Margherita and an exploratory mine at Simsang at Garo hills of Meghalaya. The six working mines of North Eastern Coal fields are Tipong Colliery, Baragoloi Colliery, Ledo Colliery, Jeypore colliery, Tikak Colliery and Tirap Colliery, out of which Tirap and Tikak are open cast mines and rests are underground mines.

While the underground mining is relatively a more environment

Int. Res. J. Environment Sci.

friendly method, the open cast mining causes major scars to nature. Since underground mining is more expensive and has some limitation in Assam's soil condition, open cast mining has been the main method used by the mining companies such as National Mining, Ashok Mining, Upadhyaya Mining engaged in mining operations in Margherita.

There cannot be any doubt about the harmful effect of mining in the surrounding areas. The unsystematic and haphazard manner of coal mining followed in the Makum coal field has adverse effects on the surrounding eco system. Drainage of mine water from Lakowa and Geleki which is also known as 'gaspani' in local language has damaged thousands of acres of crop fields causing them unsuitable for cultivating these lands.

Though there are a number of protests against the destructive method of coal mining from the very time of nationalization of coal mining, no systematic and organized protests has been made to make it a successful movement.

In the early 1980s when some students went to study the environmental condition in the coal mining areas of Patkoi hill, they were struck by the destructive effects of open cast coal mining on the land and people of nearby villages. These destructive effects were documented by the Students Science Society, an organization based in Guwahati. These reports were later published in the local newspapers to attract the attention of the people of Assam. Public meetings were organized in the affected villages by the society. But they failed to get mass support as most of the villagers were directly or indirectly dependent on the industry. Besides the mafias who patronised the mining activity also indirectly threatened the villagers whenever they tried to protest against mining. As has been said by Monoj Patwary, the then student leader of the tour, "There is a nexus of Police, Administration and Mafia for which doing anything against coal mining was a risky task. We could document everything only when we could arrange to be a part of educational tour of Jorhat Engineering College."

Despite the lack of support from the villagers, the protest initiated by the students managed to attract the attention of the State Government and an enquiry was ordered on the environmental condition of the region. This response from the government encouraged the Student's Science Society and to make the protest stronger they called upon the All Assam Students Union (AASU), Yuva Chatra Porisad (YCP) etc. to join hands with them.

Faced with pressure from the different student's organizations the then Minister of Environment and Forest Mrs. Maneka Gandhi ordered an enquiry which brought out the destructive affect of mining on the environment. In response to the findings some measures were taken to restore the ecological condition of the region. Some plantations were done and the pits were filled by soil. Coal India also gave some compensation to the village people displaced by the mining operation. The movement against mining however failed to last. The fear of reprisal by the local *mafias* and the lack of support from people who were

dependent on mining industry led to the shelving of the movement by the students.

Not much voice was raised for a year. However following a massive landslide in Number 1 Malugaon village, on July 7, 2001, the people of the affected villages were frightened that more landslides may occur any time. The landslide had brought down the primary school and a dozen hutments. Thirty eight families were displaced to Paninal of Ledo. Though people of Tirap tribal belt nursed a feeling of deprivation generated by mining in that area, but the incidence of Malugaon has created a permanent fear in people's mind in the surrounding villages. The Malugaon incident not only shook the mind of the local people, it had also shaken the mind of the intellectuals all over the region. In September 2001, a committee under the name "Ledo Open Cast Mining Protection Committee" (LOCMPC) was formed by some human rights and environment conservation activists in the state to make the movement more effective. The main leader of the organization, Mr. Durlav Mohanta with some environmentalists and other members made an extensive study to assess and document the effect of mining on the lives of the people. It has been observed by the organization that the mining operations had affected the crop fields of the villagers because of the acid water coming out of the mines. And the burden of coal in the hill slopes which lead to the flow of coal and acid in the fields mainly in the rainy days. The drainage of water carrying acid in the Tirap river has led to the reduction in the growth of fishes in the river.

The committee had got extensive support from different organizations of tribal people of Patkoi hill range having different kinds of interests namely Patkoi Pahar People's Protection Committee, Ledo Sonali Pather Porichalona Somittee. But the organization soon became defunct due to the clash of interest of the Ledo Open Cast Mining Protection Committee and Tirap Autonomous District Council Demand Committee and Patkoi Pahar People's Protection Committee, the latter two were more concerned with people's right on land and tribal identity issue and the former specifically with envirnmental issues.

Though incorporations of different interests are very much common in the new social movements, which involves concern with issues other than economic or typical class based issues; the clash of interests often makes the movements to lose its rigour. At the same time, the involvement of Tirap Autonomous District Council Demand Committee and Patkoi Pahar People's Protection Committee also widened the dimension of the movement. The Tirap Autonomous District Council Demand Committee has been demanding for the formation of Tirap Autonomous District Council including Tirap, Makum, Buridihing and its adjacent areas of Margherita and Digboi Legislative Assembly of upper Assam. The region is the home of several tribal who consider themselves as indigenous. The people of the region had experienced a feeling of deprivation and exploitation which became more intense after the introduction of different projects that demanded heavy exploitation of nature by the government. Such activities by the Vol. 3(11), 65-70, November (2014)

state intensified people's fear for their rights and subsistence. This fear was strongly communicated in the Souvenir of the Frontier Tribes (Simanto Janajatiya Abhibartana). As has been mentioned in the Souvenir, the Tenth Amendment of the Land and Revenue Act of 1886 made in 1947 give the tribal legal right to the land of the region which came under the Excluded Areas during the British period. However gradual migration by the non tribal from outside into the region amassing vast tracks of land for their tea and citronella cultivation led to a feeling of threat to livelihood and land among the people most of whom are peasant by occupation. They realized that such kind of exploitation can only be stopped if they possess strong administrative power and self determination. The creation of Tirap Autonomous District Council Demand Committee with its demand for the formation of Tirap Autonomous District Council was an outcome of this threat perception and fear of losing their land and livelihood. However loss of land was not the only issue of concern for TADCDC. The committee was equally concerned about the increasing degradation of the environment caused by open cast mining in the region. To strengthen their fight against the deleterious effect on the environment by open cast mining the TADCDC joined forces with Ledo Open Cast Mining Protection Committee but it failed to achieve its objective because of the conflict of interests. In another move TADCDC joined hands with Patkoi Pahar People's Protection Committee (PPPPC) which also protested against open cast mining. The organization has been protesting against the mining along with other organizations like All Assam Tribal Sangha, Tribal Students' Federation, Assam, Ledo Sonali Pather Parichalona Samity etc. Like TADCDC, PPPPC also did not have environment as the sole concern of its protest. Along with its demand to stop the excavation of coal by North Eastern Coal Fields, it also demanded the issue of land patta to the tribal people residing in the Makum Mouza, halting of eviction of encroachers from these villages etc., which shows that this organization is also concerned with the right of the tribal people to their land.

From the above discussion it has been seen that though there were protests against the environmental degradation in the region caused by the destructive practice of coal mining it could not generate much success due to the diversity of interests of the different action groups. While organisations like Students' Science Society and Ledo Open Cast Mining Protection Committee were primarily interested on the issue of damage to the environment and people's life, the TADCDC tried to combine environmental issues with political autonomy and right to self determination. Such conflicting interests have reduced the ability of this movement to emerge as a state level movement. Moreover there were no coordinated efforts to bring different groups under common umbrella which also came in the way of development of the movement as a popular one and thus also came in the way of its success.

The uranium mining imbroglio

The proposed mining of Uranium has created a major contradiction in the region. This yellow cake, the most precious

of metals generated a lot of protests and demonstrations when it was proposed to be extracted and a mining project was established in the region. Though the deal was primarily between Uranium Corporation of India Limited (UCIL) and the Government of Meghalaya, the project has generated lot of protests from NGOs, opposition parties, students union and local people. When UCIL received the permission from the headman of the uranium rich village on the promise of development, the Khasi Students Union had made an appeal to the village headman to withdraw the permission ⁹.

It has been reported that the AMD found the yellowcake in Meghalaya in Meghalaya before 1991 in its West Khasi Hills. In the name of samples they took vast quantities of ore running into hundreds of tons. Now the Uranium Corporation of India Limited has decided to acquire the land for the purpose.

To stop this effort, the protesters of the region had written a letter to the Prime Minister and the DAE was made to respond for the same. The reason showed by the DAE was removing the uranium which is the source of radiation in this area.

Indeed the UCIL had planned to have the Domiasiat mining operational within four or five years. The UCIL also received the permission for beginning mining of uranium in Domiasiat in Meghalaya, the opposition from the local Khasi tribe had prevented UCIL from developing the mine. The uranium project in Khasi hills brings forth the competing claims between the state government on the one hand and District Council on the other. The Khasi District Council states that as per the Sixth Schedule to the Constitution it has the ownership right to the land and no one be of state government or federal government can acquire val. The district council had permitted UCIL for conducting an exploratory survey and did not permit UCIL for commercial operation of mining. On another occasion, the Hill State People's Democratic Party (HSPDP), which is a constituent of the ruling Meghalaya Democratic Alliance coalition, had opposed the decision of the Government to begin extraction of Uranium with a view that it would endanger the health of the people of Meghalaya. HSPDP president H.S.Lyngdoh observed that Uranium extraction would not only produce radiation effects on people but also on cattle.

Strong opposition also came from the Meghalaya People's Human Rights Council (MPHRC) on the ground that radiation from the mineral would pose health hazards to people besides affecting the environment.

In defense of the government, the Chief Secretary said that the state government was not at all involved in the entire process when the UCIL conducted the geo-physical survey at Domiasiat. The Secretary of Mining and Geology, S.S Gupta stated that the department would soon submit a proposal to the Cabinet Committee on Economic Affairs (CCEA) to set up a high level committee that would compose of some Ministers and senior Government officials, for examining all issues

Int. Res. J. Environment Sci.

related to the project which will include issue of health and would recommend the terms and conditions for any mining lease, if government decides to do so in future. It was known that the managing director of UCIL was ready to pay whatever compensation required for the land acquired by the UCIL. The UCIL also stated that the project will not be started without the consent of the local people.

With a view to get the consent of the local people and to impress them about the safety of uranium mining a visit to the Uranium mining site of Jaduguda in Bihar was organized. The team comprised the Ministers of Mining and Geology and Labour along with the representatives of local NGO namely MPHRC, Hynriewtrep Environment Status Preservation Organisation (HESPO). Contrary to UCIL's expectation, the team said that the mining of uranium has rather resulted in widespread health problems in the surrounding areas of mines. These organizations organized had collectively organized a protesting the mining operation on the very occasion of 'World Anti-Uraniom Day'. As a result the chief minister of Meghalaya announced that the decision on mining would be taken only when all aspects of its operation will be examined thoroughly including the health and safety, while the UCIL maintained that it has got consent of the landowner of the proposed mining area.

Notwithstanding this assurance, the student's organizations such as KSU and North East Students' Organization protested against the proposed Uranium mining and on December 14, 2004, a general strike was called by KSU. Besides a coordination Committee against Uranium Mining was formed which comprised of various organizations as KSU, Western Youth Welfare Organisation (WYWO), MPHRC and Lai Lyngdoh Welfare Organisation (LYWO). This committee decided to launch a movement in the region to prevent the mining. The Committee decided to hold a public rally at to highlight the negative impact of the project.

On April 12, 2005, the organizations and the landowners of the area erected a gate at Domiasiat, where the mining operation was proposed for a check on any unauthorized kind of entry into the area. They also warned the people against entering into the gate erected in the entry into the proposed area of project without seeking prior permission of the land owners who had set up the gate. For the protesters the gate was also symbol of people's protest against the project. The Dorbar Shnong (village council) of Domiasiat also extended full support to the protest.

After the visit to Jaduguda the representative of the Government maintained that the team was unable to find any negative effect of uranium in Jaduguda, but the tribal council leaders stated otherwise. The leaders also condemned the stand taken by the Khasi Hill Autonomous District Council (KHADC) and also maintained that the land owner of the villages and people should go by the opinion of the unbiased experts. They also did not appeal to the people for making a judicious decision since the UCIL nor has the State Government clarified about the

rehabilitation and compensation of the families.

In the verge of protests from different corners the Langrin-War-San Lyngdoh Development Organisation (LWLDO) opganised a big rally at Wahkaji village near Domiaset attended by people of several villages which decided to welcome the proposed Uranium project. The organization composed of Ranghah Shnongs and headman i.e., Sirdars of the villages. Thus the mining of uranium too brings into forefront the conflicting interest of state government and local people and also between local organisations. The protest has two major grounds; first is the concern for ecological balance and the threat of health hazard anticipated from the proposed mining and the second being the issue of displacement and rehabilitation measure as nothing is clear from the state government for the relocation and compensation to the affected families. Though both the local people and state government are at loggerheads regarding the project, the protest has got a major credit for its sustained effort aimed at putting a stop to the project. This has created serious problems for the state government to carry out its preparatory work thus stalling the start of the project.

The coal mining in Tirap district of Assam is yet another issue that invites protests and movement by local people. Besides, the presence of a number of stone quarries in different parts of North East India has also raised lot of hue and cry at the local level.

Lafarge: another chapter in North East

Lafarge, world's largest cement producer has faced opposition from environmentalists and local people and people's organization for its mining operation in Meghalaya. As Meghalaya is known for its limestone reserve, which is estimated to be 2,165 million tones, the French industrial concern has therefore brought a set up for mining operation in the state in its Khasi hills district which is its one of the different mining set up of the company in the country along with states like Rajasthan, Andra Pradesh etc. The French giant is to supply limestone to its \$255 million cement plant at Chhatak in Bangladesh. The arrangement is that the limestone mined in Meghalaya will be transferred by a 17 km conveyor belt from Meghalaya to the Chhatak plant.

The project has received enormous criticism¹⁰ from environmentalists, NGOs and indigenous people. The first objection was that it came on the way of exercising land right by native people. The Khasi people are recognized as an indigenous community and have sole right over land. Hence the land was not free for any external holding or operation. Secondly the villagers from the adjacent areas have documented the ill effects of Lafarge mining. Shella river and Phrangkaruh river have their source in the project drying up. The Shella river is affected due to powerful blasting along with the threat to aquatic water. The fishes in the two rivers died due to large-scale deforestation. Besides it was also seen that the mining

Vol. 3(11), 65-70, November (2014)

operation has impacted the livelihood of the local people who were dependent on that land in two ways: first it incorporated agricultural land and second it is viewed that if the mining by Lafarge continues there will be nothing left to the local people who were also dependent on mining operation for their survival. It is to be noted that limestone mining in Nongtrai dates from 1885.

The activists and villagers under the banner of Shella Action Committee filed a petition to Supreme Court of India alleging that Lafarge is mining on forest land and did not have the required clearances. It was alleged that LUMPL obtained Environmental clearances by falsely declaring areas covered with natural forest as waste land. It also alleged that the EIA for obtaining environmental clearances was not based on scientific study.

Local activists found the move as a conspiracy to alienate the native Khasi tribals. The Action committee also filed a PIL in Meghalaya High Court for the same.

Mining by Lafarge in Meghalaya became important for two reasons. First it will earn revenue to the government. Second it will lead to the bilateral relationship smoother between India and Bangladesh. Third it will give a boost to South East Asian economy in the purview of Look East policy.

Lafarge had multiple credits that way. Though on fifth February, 2010, the apex court stopped the Lafarge to carry out mining operation in Meghalaya by saying that mining in the environmentally sensitive zone cannot be permitted, the same court lifted its 17 month- old stay on mining by Lafarge in Meghalaya. The revised environmental clearances from MoEF given by Lafarge was also upheld by the court The SC thus took decision on the site clearance by MoEF of 18.06.1999, EIA clearance of 9.08.2001 along with the revised environmental clearance dated 19.04.2010 and the stage I forest clearance dated 22.04.2010. Besides the court also maintained that the limestone mining in these areas has been going on for centuries and a scientific approach by Lafarge is likely not to affect the people in the area.

The Lafarge chapter thus shows the conflict between the growth oriented development paradigm and a paradigm of sustainability and environmental justice the project though is aimed to give a boost to south Asian economy as well as national economy in its turn, it has a direct impact on the ecology and livelihood of the people of the project area.

Conclusion

A close examination of the people's protests over the mining projects show two major concerns: One, the effect of mining on the physical environment and health of local people which has been repeatedly spelt by the studies made by different researches, and two, the issue of compensation and relocation of

the affected people which depicts the issue of human rights over land and livelihood. The mining operations in North East India thus go through similar experience as is found in case of the rest of the states of India as well as the world. The region being highly inhabited by tribal people further suffers for meeting the need of compensation for each tribal family as the land belong to community and the distribution of land is highly made on communal ownership basis. As a result estimating the loss incurred by the individual family is very difficult and compensation for such loss is more complex. Again since the tribal land cannot be given to any private body the tribal people feel the move for mining operation as a conspiracy to alienate the tribal people from their forest land. This needs to be further understood by keeping the very nature of the society and the institution associated in the entire process.

References

- 1. Fernandes Walter, Mines, Mining and Displacement in India in Gurdeep Singh et *al* Managing the Social and Environmental Consequences of Coal Mining in India, Dhanbad, The Indian School of Mines University, 333-344 (2007)
- **2.** Tiwary R.K. and Dhar B.B., Environmental Pollution from Coal Mining Activities in Damodar River Basin, India, *Mine Water and the Environment*, **3**, 1-10 (**1994**)
- 3. Downig T.E., Avoiding New Poverty: Mining Induced Displacement and Resettlement, IIED and WBCSD, London, Research paper, 58, (2002)
- **4.** Green Groups Explore Legal Action to Halt Massive Queensland Coalmine, *The guardian*, (2013)
- 5. William N Holden and Daniel R., Jacobson Civil Society's Opposition to Nonferous Metals Mining in Guatemala in Voluntas, 19, 325-350 (2008)
- **6.** Jitendra Das, Villagers intensify protest against Vedanta in.reuters.com/article/2009/01/17/idIndia-37504320090117 visited on 13/11/2014, (**2014**)
- 7. Fernandes Walter, Mines, Mining and Displacement in India' in Gurdeep Singh et *al* Managing the Social and Environmental Consequences of Coal Mining in India, Dhanbad, The Indian School of Mines University, 333-344, (2007)
- **8.** Dutta Ranjit, North Eastern Coal fields at a Glance in *Dihing Patkoi Festival*, a souvenir, 59 (**2003**)
- 9. New Uranium Mining Projects, Meghalaya, India cited in www.wise-uranium.org/imprint.htm visited on 13/11/2014 (2014)
- **10.** Lyngdoh G.W., Why Lafarge Limestone put on hold ?, Meghalaya Times, (**2014**)