Socio economic Impact of Coal Mining in Dhanbad City

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Abstract
An overwhelming majority of coalmine workers especially those who are daily rated or piece rated in Argada area belong to rural peasantry of Bihar and Jharkhand whereas most of the officers have joined this job due to high pay packages and facilities of a central government employee. Daily rated and piece rated workers are also paid well, according to the central government pay scales. Most of the mine workers come from rural areas and their previous one or more generations were peasants or used to cultivate their small pieces of land, which later on became unsustainable to earn a livelihood as the pressure on their land further increased, every next generation.

Research Paper
Two main reasons for, why some were forced out from the job of farm labour, were insufficient wages and seasonal nature of employment. They opted for coal mine job, as it was government sector job which assured them more sense of security and moreover, it didn’t require a lot of skill initially. In the past, the unsustainable nature of subsistence farming for small land owners and insufficient wages for agricultural labourers led to poverty and unemployment. These people from the rural areas of mainly Jharkhand and Bihar looked towards the coal mines in search of a steady employment and a fixed source of income.
As the new millennium settles down one realises that owing to the large global population and their activities significant impacts are occurring on the land, the air, the water and the flora and fauna. A great majority of the technologies, characteristic of the industrial society of 1990s, have been invented during the last 50 years. Most of the natural resource consumption and pollution have also been caused within this period (Chodkiewicz 1990). The realisation that unless corrective measures are taken the capacity of the Earth to sustain life may be in jeopardy gave rise to various schools of thoughts. Initial reactions were characterised by an overall acceptance that growth cannot be continued indefinitely and imminent or certain exhaustion of natural resources will lead to doomsday. A rapprochement between the diverse concepts were attempted by International Union for Conservation of Nature and Natural Resources (IUCN) which coined the term 'Sustainable Development' (IUCN 1980). The concept of sustainable development tried to bring about a complete change in the philosophy that lies behind the ways in which people interact with the environment and a change in the methodology with which the interactions occur (Middleton 1995). The concept also tried to meet the requirements of a shift in development paradigm towards equitable growth where social objectives were recognised as distinct from and as important as economic objectives (Munasinghe 1993). India is the third largest coal producer in the world and has substantial coal reserves (204 billion tonnes, plus 63 billion tonnes of prognosticated reserves).

Opencast mining accounts for 74% of the total coal output and the remaining 26% is met by underground mining. The share of the underground output in the total production is expected to be maintained at the current level, though coal production is expected to increase by 2010. The average depth of the underground mines is 150-200 meters with a seam thickness of 2-3 meters and 60 meters for opencast mines with average seam thickness of 3-4 meters.

On an average, 75% Indian coal types are not highly gaseous. However, the underground eoking coal reserves of the eastern coal belt are highly gaseous and go up to gaseousness of degree three. Almost 45% of the underground coal output is met from the two coal fields in the sample sites selected, belonging to the easters region of the country. The coal seams of the region primarily possess superior grade coal: prime and medium coking, and some semi and weekly coking coal.
The nationalization of coal mines in the seventies ushered in the era of hope, for organized and sustainable growth of the coal mining industry. In these formative years, almost the entire coal sector came under the authority of Coal India limited. The onus to discover mineral deposits in the country is borne by the Geological Survey of India (GSI) and Directorate of mine and geology of state governments. Indian Bureau of Mines (IBM) and mineral exploration Corporation limited (MECL) have also contributed on this subject.

The Constitution of India (1950) has a part numbered XVI which deals with Special Provisions relating to Certain Classes; and Art. 330, the first in this part, specifies the main classes to which the provisions will apply. They are (a) the Scheduled Castes; (b) the Scheduled Tribes except those in the tribal areas of Assam; and (c) the Scheduled Tribes in the autonomous districts of Assam. Art. 342 lays down that the President may "by public notification specify the tribes or tribal communities or parts of or groups within tribes or tribal communities which shall for the purposes of this Constitution be deemed to be Scheduled Tribes. . ." They were duly specified by the President through the Constitution (Scheduled Tribes) Order 1950,* S.R.O. 510. The tribes, groups or parts of tribes or groups so specified in the order, number about one hundred and sixty, leaving out the Scheduled Tribes of Assam.

A large number of these tribes and groups were, in the olden regime, contained in the Excluded Areas and/or Partially Excluded Areas. The Indian Census had been dealing with them under the religious heading of Animism though some of the well-known Commissioners of Censuses were not satisfied with the procedure. J. A. Baines, the Commissioner of the Census of 1891, considered the distinction between tribal people who were Hinduized and those that followed their tribal form of religion as futile.¹ Mr. Enthoven, the Superintendent of the Census of 1901 for Bombay referred to the practical difficulty of distinguishing the so-called Animists from others who formed regular Hindu castes.² Sir Herbert Risley, known for his anthropological predilections, pointed out the awkward situation that "one and the same religion figures in the original returns of the census under as many different designations as there are tribes professing it." Further, he described Hinduism as "Animism more or less transformed by philosophy" or "as magic tempered by metaphysics." He finally opined that "no sharp line of demarcation can be drawn between Hinduism and Animism.
Mineral exploration involves decisions that are necessarily based on a variety of criteria - measurable attributes of the alternatives being considered, that can be combined and evaluated in the form of certain decision rules. The quantitative criteria are evaluated as fully continuous variables. Such criteria are typically called factors and express varying degrees of suitability for a decision under consideration. For example, proximity to a shear zone would be treated as buffer zone on a continuous expression of suitability according to a special numerical scale (i.e. 0-1; 0100; 0-255 etc.). The process of converting data to such numeric scales is called standardization. Standardized factors are combined by means of weighted linear combination, i.e. each factor is multiplied by a weight with results being summed to arrive at a multi-criteria solution. A logical process for the development of such weights is the procedure of pair-wise comparison matrix.

Visitors to and travellers through the habitat of some of the Scheduled Tribes briefly described here have been struck by the sight of large stone slabs or menhirs of all sizes, most of them unworked stone, in the vicinity of their villages, just outside them. Thus Lieut. Tickell visiting the country of the Hos more than a century ago notes the cenotaph stones buried upright to commemorate the deceased at the edge of a Ho village. R. V. Russell writing half a century ago about the Chhindwara Gonds remarked that outside a Gond village a number of memorials to the dead were to be seen. The memorial as he calls it consisted of four stones placed upright (?) with another half-buried in the ground in the centre of the square formed by these four.

The Hos and the Mundas speak of the place where the remains of the deceased are buried and the stone-memorial raised as sasan. May we remind our readers that this word which looks so tribal may after all be connected with the Sanskrit word for the cremation ground smashana?

In Argada area, majority of the workers (66 %) are above the age of 40 years. The workers below age of 30 years constitute only 3.88 % and workers below 40 years of age are only one third or 33.88 %.

The Santals, the Hos, the Mundas and the Oraons have at one end of their village a grove of trees known as sarna or jahira which is a place of worship, magic rites and even festivities.24 The only other scheduled tribe among whom either a village or a cluster of hamlets is known to have a grove sacred to gods are the Khonds, the god being the God of War. 25
The word sarna is exclusively used by the Mundas, the other word jahira being so used by the Hos and the Santals and both the words are used by the Oraons.

The study area of Jharia Coalfield as shown is the only source of prime coking coal in India and has been subjected to unplanned and haphazard mining activities for the last several decades. This belt which forms a part of Damodar Valley coal basins is surrounded and directly underlain by archean gneiss. Exposed rock types belong to Talchir and Damuda series of Gondwana System. This Damuda series of Gondwana System consists of Barakar, Barren measure and Raniganj formations. Of these, the Barakar and Raniganj formations contain famous coal seams. The general landscapes of the area is characterised by undulatory rocky and gritty surface with thin veneer of in situ soil supporting thin and sporadic vegetation.

Reference

1. JASB., IX (1840), p. 796.