

# INDIA

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## Background

Occupational safety and health (OSH) is a right enshrined in the constitution of India, which calls upon the government to direct its policies in such a way, “that the health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter vocations unsuited to their age or strength”. In a similar manner, it directs the state to “make provisions for securing just and humane conditions of work and for maternity relief”.

However, the reality on the ground portrays a different picture with a majority of workers facing serious OSH problems including death and disability due to accidents in the workplace across various industrial sectors, and diseases such as silicosis, asbestosis and work-related cancers among many others. This is the dark side of the Indian growth story that has been boasting an annual growth rate of 8 percent or more. The growth of economic activities has not seen an equivalent growth in measures to protect the health and safety of workers as enshrined in the constitution.

In addition, there are no efforts to even assess or acknowledge the seriousness of OSH problems. If one wants to find the mortality or morbidity in India due to OSH reasons, there are possibly no integrated figures to give a clear picture. Most of the statistics are fragmented and are too low to be credible. If official statistics are taken at their face value, then India has the world’s lowest accident fatality rate, considering that in 2008 out of 130 million workers working in factories there were only 478 fatal injuries, according to the Directorate General of Factory Advice Service and Labour Institute (DGFASLI). This is the reporting situation in the so-called ‘organised’ factories, where accidents are relatively easier to report. In reality, the majority of workers work in small informal units, Compounding this are the complexities of diagnosing

occupational disease. It is fairly clear that the majority of cases of accidents and diseases are not being reported.

The most prevalent occupational practices that increase the risks for morbidity and mortality include – workers working in hazardous industries such as mines, chemical industries, construction without proper training in occupational health and safety; continued use of hazardous substances in the manufacturing processes, such as asbestos and many cancer-causing chemicals that may have been banned elsewhere. The situation is further exacerbated by overcrowding and poor sanitary conditions.

In spite of the lack of data, there have been some estimates about fatality: The International Labour Organisation (ILO)<sup>1</sup> estimates that around 403,000 people in India die every year due to work-related problems. In a similar manner, experts in the OSH field<sup>2</sup> (2009) have estimated that the current burden of accumulated occupational diseases in India is around 18 million cases.

## **1. Legal provisions and financing**

In India, there is no comprehensive legislation for occupational health and safety covering all workers in all economic sectors. Safety and health statutes for regulating OSH of persons at work exist in four sectors, namely mining, manufacturing, ports, and construction. A number of OSH laws and regulations are applicable in a fragmented manner and the regulations have very specific objectives to cover the problems of safety and health to a limited extent.

At the same time legislation on OSH has existed in India for more than 50 years. The principal health and safety laws are based on the British Factories Act. The Factories Act, 1948 has been amended from time to time, especially after the Bhopal gas disaster, which could have been prevented. The Factories (Amendment) Act, which came into force on 1 December 1987, contemplated a shift away from dealing with disaster (or disease) to prevention of its occurrence. A special chapter on hazardous industry was added to take care of the OSH of the workers. Under this chapter, pre-employment and periodic medical examinations and periodic monitoring of the work environment is mandatory for the industries listed in Schedule I of the Act. The permissible limit for 120 substances has also been laid down. The Act is implemented by state factory inspectorates, supported by industrial hygiene laboratories. There are similar provisions under the Mines Act. The Factories Act is applicable only to factories that employ 10 or more workers, thus only a small percentage of the total workforce in the country are covered under the provisions of the Act.

## Key OSH legislation

- ❖ Factories Act, 1948, and its amendments in 1954, 1970, 1976 and 1987
- ❖ Mines Act, 1952
- ❖ Dock Workers (Safety, Health and Welfare) Act, 1986
- ❖ Plantation Labour Act, 1951
- ❖ Explosives Act, 1884
- ❖ Petroleum Act, 1934
- ❖ Insecticide Act, 1968
- ❖ Indian Boilers Act, 1923
- ❖ Indian Electricity Act, 1910
- ❖ Dangerous Machines (Regulations) Act, 1983
- ❖ Indian Atomic Energy Act, 1962
- ❖ Radiological Protection Rules, 1971
- ❖ Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989

There are also two key laws covering workers' compensation and welfare. They are:

- Workmen's Compensation Act, by which a worker can claim compensation
- Employees State Insurance Act (ESI Act), which is a contributory social insurance scheme that protects the interests of workers and their families in contingencies such as sickness, maternity, injuries on the job causing temporary or permanent physical disability or death, loss of wages or loss of earning capacity. As of March 2011, there were 60.2 million beneficiaries under this scheme.

Occupational health services in India have to compete with primary & curative health care services for financial support and expenses. While 3 percent of the gross domestic product (GDP) is spent on health care, almost 75 percent of this is spent on curative health care services. Only the government of Rajasthan budgeted funds for occupational health care in its State budget for 2010-2011. It provided US\$5 million for expenditure on infrastructure for the diagnosis of silicosis.

## Ratification of ILO Conventions

The International Labour Organization (ILO) has passed 58 conventions on OSH, of which India has ratified only three – the C.115, C.174 and C.136.<sup>3</sup> In the past 10 years, it has ratified only one convention on OSH, that is C.174 on the Prevention of Major Industrial Accidents. One of the important conventions on occupational health is convention 155. This convention, if ratified, would help bring the workers in most economic sectors under the provisions of the laws, offering them protection of health and safety at workplace. With the exception of India, all the newly advanced economies known as the BRICS, Brazil, Russia, China and South Africa, have ratified this convention.

The ILO and World Health Organization (WHO) jointly devised the Program to Eliminate Silicosis, and helped frame the National Program for the Prevention and Elimination of Silicosis. In India, however, this program exists only on paper. According to the Ministry of Labour and Employment, approval of this program is pending with the Planning Commission. The Planning Commission informed us that the proposal has been sent back to the ministry, and it is for them to submit an amended proposal. A division for monitoring silicosis has been set up at the Central Labour Institute in Mumbai, without a clue about its functioning and activities.

## Second Labour Commission

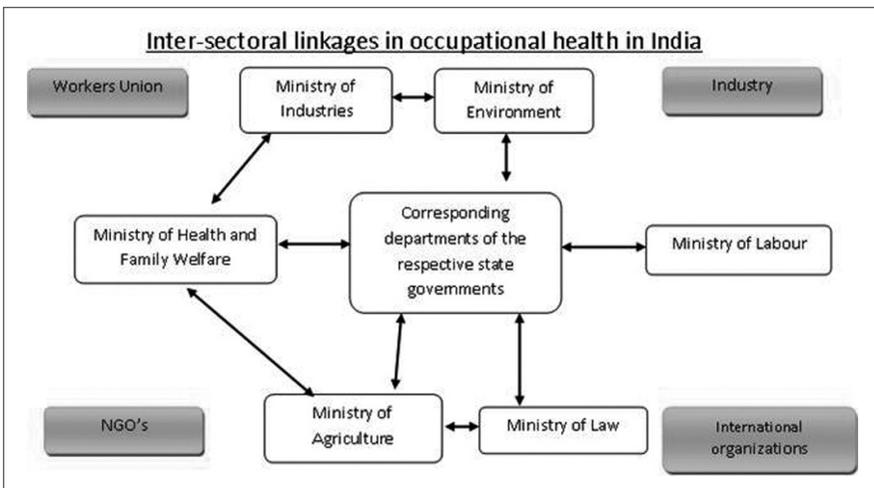
The Second Labour Commission formed by the Government of India submitted its report in September 2002, and made several recommendations on safety, health and the environment. An important recommendation was to establish a National Commission of Safety & Health to set standards for OSH. It also recommended the establishment of Central and State Boards on OSH. The Commission's report included the Occupational Health & Safety Bill for consideration.<sup>4</sup> It is almost eight years since the report has been submitted, but no action other than the formation of the OSH policy has been taken. Predating that second Commission, civil society groups including trade unions, drafted the Indian Labour Code in 1994 which has similar recommendations on OSH.<sup>5</sup>

## 2. Implementation of law

In India, occupational health is not integrated with primary health care: OSH remains under the mandate of the Ministry of Labour and Employment, and not the Ministry of Health. Enforcement is carried out by the Directorate

of Industrial Safety and Health at the state level which operates through factory inspectors and medical inspectors of factories. There is no single authority to coordinate between the various established implementing agencies and under various laws at the state and central government level. The Factory and Boiler Acts are implemented by each state's labour departments. The Mines Act is implemented by DGMS throughout India; the Explosives Act and its rules are implemented by the central government's Ministry of Commerce and Industry and so on.

**Figure 1 Government departments and organisations involved in OSH in India**



The issue of multiple agencies has been discussed for years, and there are several recommendations to bring them all under one roof. This has not taken place despite legal reforms in several other sectors. Moreover, implementing agencies have been weakened in the last decade. Of the 983 sanctioned posts for factory inspectors in 2007, 29 percent of the posts or 282 were left vacant.<sup>6</sup> In addition, state policies are driving towards the dismantling of the inspectorate system which is often called “Inspector Raj”. Some state governments have issued instructions to the inspectors not to visit factories for inspection unless there is a complaint. They also have come up with schemes for self-certification.

All the acts list a series of specifications to be implemented to ensure a safe workplace. But in the absence of clear and specific standardisations and regulations, most of the workplaces are able to get away with varying degrees of hazardous operations. This lack of specifications thus leads to the lack of proper regulation despite the existence of the acts. For example, time intervals

for health and safety surveys are not specified, so many factories operate for years without a proper survey. In most factories even the level of dust, noise, humidity, or toxic gases are not measured regularly. Neither do the factories have instruments, nor the expertise to measure and monitor the work environment.

As a direct consequence of these fragmented policies, different ministries and affiliated divisions or departments are responsible for administration of occupational health services in the country. The principal ministries are Labour; Health and Family Welfare; Environment and Forests; Commerce; Home Affairs; Human Resources and Development; and Industry and Agriculture. However, the overall responsibility for health and safety at the workplace rests with the Ministry of Labour and Employment.

The responsibility is divided in the sense that the Ministry of Labour is involved in formulating the legal instruments and enforcing these, while the Ministry of Health is involved in education and training.

The policy decisions and the setting of standards with regard to occupational health care generally take place at the national level. Regional centres, often consisting of specialised institutes, link up the national and plant-level occupational health services. Tertiary care hospitals, hospitals attached to medical schools and other specialised hospitals offer national-level services in occupational health care. Medical centres, dispensaries and factories' medical facilities provide occupational health service at the plant or workplace level. Occupational health services at the plant or enterprise levels are usually available in large enterprises; in small enterprises occupational health services in most instances are not provided.

Director General of Factory Advisory Services & Labour Institutes (DGFASLI) working under the Ministry of Labour provides assistance to each state's enforcing agencies, training and educating them in the field of OSH. It also helps in drafting statutory guidelines and regulations, besides conducting intervention studies to assess the prevalence of occupational health disorders and diseases. Similarly, the Director General of Mine Safety (DGMS) is responsible for the health and safety of mine workers and implementation of the Mines Act.

The organisations involved in research, occupational health surveys and epidemiological studies include the National Institute of Occupational Health and Industrial Toxicology Research Centre, which carries out studies in both the organised and unorganised sectors.

The medical inspector of each state working under the Directorate of Industrial Health and Safety Organisation supervises the state level occupational health services for workers. The Employees' State Insurance Corporation [ESIC] provides curative health care to around 15 million employees. The corporation has set up five zonal Occupational Diseases Centres (ODCs) with a view to providing facilities for early detection and diagnosis of ODs among ESI beneficiaries. Set up in the year 1952 under the ESI Act 1948,<sup>7</sup> ESIC has today grown to a mammoth health insurance corporation with a huge cash reserve of almost US\$ 1.8 Billion. The corporation has been audited by the apex audit institution, the Comptroller and Auditor General (CAG) of India, which in its reports for the years 1995 and 2005 pointed out large-scale deficiencies in the functioning of the corporation (More detail on this audit is given later in the report).

Occupational health centres are mandatory at various hazardous process factories or units and a full-time occupational health physician is required when the number of employees exceeds 200. At the factory level, healthcare is provided either by the management or through the Employees' State Insurance Scheme (ESIS), which again provides only curative health services.

Moreover, more than 94 percent of the Indian labour force (own account workers, the workers in power-consuming enterprises with less than ten workers and non-power consuming enterprises with less than 20 workers) fall outside the purview of the Factory Act. Many of the small enterprises not covered under the act may be engaged in the manufacture and handling of highly hazardous substances, waste handling or carrying on operations dangerous to the health and safety of workers. Moreover, workers in small sweat shops, office workers, telephone-booth operators, agricultural labourers to mention a few, do not come under the Act. The agate workers of Gujarat, thresher operators in Punjab, Rajasthan, Bihar, Uttar Pradesh are other examples of workers exposed to health threatening operations but for whom there is no coverage. The agate workers, who cut, grind, polish and carve agate stones into ornamental items either in their homes or in small sweatshops, are exposed to silica dust which results in a high incidence of various lung diseases, as serious as silicosis. They are not covered under any act.

## **Issues related to governance- Statistics**

The responsibility of collecting and publishing statistics on occupational accidents and diseases lies with the Labour Bureau located at Shimla. The bureau

receives the statistics from the state Labour Departments. The states file these statistics through returns to the bureau. The quality of the returns filed by the states, however, remains poor as the returns lack important data. This absence of essential data makes it difficult to measure progress. Also, many states fail to file returns to the bureau, which is a matter of great concern.

The data on accidents as reported in the Indian Labour Yearbooks of 2005 and 2006 (Pub.: Labour Bureau, Government of India. P.165) are given in Table 1. The data for factories, mines, railways, ports and docks pertain to a different time period, making it difficult to understand and analyze the exact situation.

**Table 1**

	Fatal	Non-Fatal
Factories (Year: 2004)	494	11,857
Mines (period: Jan-Sept, 2006)	111	591
Railways (Year: 2005-06)	009	031
Ports & Docks (Year: 2005-06)	017	094

*Source: Labour Yearbook, 2005-06.*

According to the Director General of Factory Advisory Services & Labour Institutes [DGFASLI], there are 324,761 registered factories and more than 24,000 factories engaged in hazardous operations.<sup>9</sup> (See Table 2.) This data is available for the year 2009 on a provisional basis. However, regarding the statistics on their site, DGFASLI states that “due to non-receipt of statistics from all the States and Union Territories, there are limitations to the use of this data bank. Though this information can be used for knowing the state-wise status of safety and health as well as compliance level with statutory standards in factories, **no national level statistics can be prepared for arriving at conclusive inferences.**”

**Table 2**

Statistics of Factories at a Glance: 2009	
Registered Factories	324,761
Working Factories	270,294
Employment - Total	130 Million up from 111 Million in 2007
- Women	1.7 Million down from 1.8 Million in 2007
Injuries - Total	33,093
Fatal	1,509 (4.56% of total injuries) up from 1,387 in 2008

*Source: Director General of Factory Advisory Services & Labour Institutes, 2009.*

This data is only for factories and establishments which provide information to DGFASLI. It can only be imagined how many incidents and injuries go unreported.

According to the Labour Bureau, total injuries (fatal and non-fatal) increased by 34.76 percent, i.e. from 14,776 in 2005 to 19,912 in 2006. (See Table 3.) However, total injuries (fatal and non-fatal) declined by 60.94 percent, i.e. from 15,290 in 2007 to 5,972 in 2008. Details provided by the Labour Bureau (only) on fatal and non-fatal injuries are given in Columns 1, 2 and 3 below.

**Table 3**

Year	Fatal Injuries	Non-Fatal Injuries	All Injuries	All injuries as per DGFASLI
2001	627	27737	28364	28364
2002	540	19913	20453	20453
2003	525	15907	16432	16432
2004	562	14458	15020	15020
<b>2005</b>	<b>613</b>	<b>14163</b>	<b>14776</b>	<b>10714</b>
<b>2006</b>	<b>1068</b>	<b>18844</b>	<b>19912</b>	<b>45549</b>
<b>2007</b>	<b>821</b>	<b>14469</b>	<b>15290</b>	<b>34216</b>
<b>2008</b>	<b>478</b>	<b>5494</b>	<b>5972</b>	<b>33939</b>

*Source: Data as reported by DGFASLI and Labour Bureau*

DGFASLI and the Labour Bureau function under the Ministry of Labour, yet the data indicate that there is hardly any coordination between the two. There is a huge discrepancy in the figures provided by the two organisations. Up to 2004, the data provided by both agencies were same, but since 2005, there is a marked difference. Whereas the Labour Bureau says that the total number of injuries in 2008 was 5,972, DGFASLI puts the figure at 33,939, a huge difference of 27,967. Is it that there is a deliberate attempt to suppress the correct information, or is the correct information not reaching the Labour Bureau?

During the fiscal year 2006-07, the ESIC paid dependent benefits to 1,019 claimants, compared to 912 in the previous year. Temporary disability benefits were paid to 8.8 million insured persons (IPs) and 12,861 IPs received permanent disability benefits from ESIC during the same period.<sup>10</sup>

ESI Corporation (ESIC) publishes an annual report with data on compensation, but it does not publish the data for the occupational diseases and the occupational accidental injuries. How do we then get the data on how many workers in India claim disability benefits and how many get compensation for occupational diseases by ESIC?

**Table: 4**

Year	Fatalities	Non-Fatal: Permanent disability	Non-Fatal: Temporary disability
2001	1346	1520	4381
2002	1501	1592	3649
2003	1663	1912	4136
2004	1581	1662	3507

*\*Data relate to only those States/Union territories which have submitted the returns and thus does not include information about the States which have not filed the returns.*

*Source: ESIC*

Thus, we have three different sources of information on work-related fatalities and yet all three together do not give us a correct and complete picture. This is partly due to the fact that all these acts, the Factory Act, the ESI Act and the Employees' Compensation Act/Workmen's Compensation Act have their own definitions and limitations. There is no provision to report accidents at work for a large number of workers in different economic sectors. There is an urgent need to devise a way to collect, unify and simplify this data.

In India there is roughly one factory inspector for every 506 factories. In some of the states the ratio is higher, such as in Punjab where the ratio is 1:1,601 and Andhra Pradesh where it is 1:795.

The construction industry makes a significant contribution to the nation's economy and provides a large number of workers with employment. As per the latest statistics released by CIDC, about 31 million people are employed in the construction sector in which close to 73 percent are unskilled labourers. Even though it is one of



Children working at iron ore crushing site photo at Bellary, Sandur taluk courtesy.

the fastest growing sectors in India, it records a greater maximum number of accidents and injuries than any other industrial activity. In addition to the cost of human injury and death, the accidents are unduly expensive in terms of the damage of property and delays in the completion of projects.

Some safety experts claim that the average Fatal Accident Frequency Rate (FAFR) in the Indian construction industries is 15.8 for 1,000 employees. Construction hazards are rated as eight times more risky than those in the manufacturing sector. Compared to factories, even the mining industry has a higher proportion of fatal and nonfatal injuries (almost two to three times more).

### **3. Occupational injuries and diseases**

#### **Occupational Diseases**

The statistics for the overall national picture of occupational diseases and injuries are not adequately compiled in an easily accessible format. In a comprehensive, seminal work on OSH around the world, Leigh et al have estimated an annual incidence of occupational disease of between 924,700 and 1,902,300 persons and 121,000 deaths due to occupational disease in India.<sup>11</sup> Based on the survey of injuries in agriculture, Mohan and Patel (1992) in a study of Northern India estimated an annual incidence of 17 million injuries per year (2 million moderate to serious cases) and 53,000 deaths per year in the agriculture sector alone.<sup>12</sup> A report by National Institute of Occupational Health [1999] records more than 3 million people working in various sectors like mines, ceramics, pottery, foundries, metal grinding, stone crushing, agate grinding and slate pencil industries, all of whom are occupationally exposed to free silica dust and at potential risk of developing silicosis.<sup>13</sup>

Under the Right to Information Act, ESIC released information in 2010 on 1,576 cases of occupational diseases,<sup>14</sup> which occurred between 1997 and 2009. These include silicosis, asbestosis (47 cases), byssinosis, other lung diseases (70 cases), noise-induced hearing loss (471 cases) and cases of mercury, lead and chromium poisoning (97 cases altogether), dermatitis (7 cases), and chronic obstructive pulmonary disease (COPD, 6 cases).

ESIC was further instructed by the Central Information Commission to publish the data of Occupational Diseases every month on their website. However, it appears they are not following the directive.

Indian Labour Yearbooks, 2005 and 2006 (p.167) reported only seven cases of suspected occupational diseases during the year of report that were referred to the National Referral Diagnostic Centre and an opinion was given. The report did not give any other data on occupational diseases. However, as seen in the data above, ESIC revealed 1,576 cases of occupational diseases. A comparison of these figures with those from the ILO and others shows the weakness of India's official data. Different agencies quote different data based on different definitions and time frames making a comparison and analysis impossible.

### **Notifiable Occupational Diseases**

Section 89 of the Factory Act provides for any medical practitioner to notify the details of the patient of any of the 29 occupational diseases listed in Schedule III of the Factory Act to the factory inspectors. Failure to do so will result in a fine of up to US\$20. However, a majority of the medical practitioners either do not know of this provision, or somehow do not come across any such patient with a work-related disease, or simply choose to violate the law. The end result is that the annual return filed by the states' Labour departments to the Labour Bureau has the column for occupational diseases blank.

In February 2011, the following diseases have been included in the list of Notifiable Diseases under Section 25 of the Mines Act, 1952.

- All other types of pneumoconiosis, excluding coal workers' pneumoconiosis, silicosis and asbestosis. This includes siderosis & berilylosis.
- Noise-induced hearing loss.
- Contact dermatitis caused by direct contact with chemicals.
- Pathological manifestations due to radium or radioactive substances

### **Diagnosis of ODs**

Health care in India is so advanced that the country has achieved an international reputation for health tourism, providing high quality medical care at competitive prices for foreign patients. But despite the progress made in the medical field, the country still lacks expertise in the diagnosis of occupational diseases not only by the public sector health services but also in the private sector. We rarely find general hospitals- public or private - having Out Patient Departments (OPD) in occupational and environmental health care services. DGFASLI boasts of a large number of medical experts trained in Occupational Health. Moreover, post-graduate training in Industrial Health is provided by

the Labour Institutes as well as the National Institute of Occupational Health. These experts then are qualified and required to serve the industries as a part of the fulfilment of their obligations under the Factories Act.

The responsibility of the Factory Medical Officer is to monitor the health of the workers. There is a provision to employ part time or full time medical officers by the units categorised as Hazardous under Schedule 1 of the Factory Act depending upon the number of workers employed. These medical officers are expected to detect occupational diseases and report to the respective authorities appointed under the Factories Act. These medical officers either are unable to detect the cases of occupational diseases or do not report to the authorities, thus violating the legal provisions, because their work is not reflected in the official data. India as a country has a great challenge ahead to integrate general health with occupational health.

### **Compensation of ODs:**

The medical costs incurred in the treatment of several occupational diseases may be reimbursed under the Employees' Compensation Act (previously called the Workmen's Compensation Act) as well as the Employees' State Insurance Act. Workers who have been diagnosed with any occupational disease among those listed in Schedule III of these Acts can claim compensation. Burden of proof, in case of the listed disease, is not on the worker. In most cases, the worker has not undergone a formal diagnostic process, thus his claim for compensation will lack the required medical evidence, and he will not be able to enjoy the benefits of the laws.

In many cases when a worker is diagnosed with a work-related illness, he or she will still be unable to claim compensation, if they do not have any proof of having been employed. Hundreds of tribal workers from Gujarat, Madhya Pradesh and Rajasthan working in the stone crushing factories in Gujarat were diagnosed with silicosis. However, none could claim compensation, as they did not have any proof of employment.

There were some workers from Gujarat who were covered by ESI Act, but they too could not claim compensation, as the employer's record showed that they had worked for less than six months. According to the provisions of the law, they must have worked for at least six months to qualify for compensation. In some cases, ESIC denied the claim on the grounds that the patient was diagnosed when he or she was not working in insurable employment. The

ESIC reports show that out of hundreds, only four claimants may qualify for compensation. In case of the death of a worker suffering from silicosis, the family of the deceased was entitled to claim the dependent benefit under ESI Act. However, the corporation refused to give any compensation, saying the family could not prove the cause of death.

### **Problems with Employee State Insurance Corporation (ESIC)**

The Employee State Insurance Corporation (ESIC) is a social security scheme and the largest provider of medical facilities and insurance in the organised sector in the country. As of 31 March 2011, it provided healthcare to more than 60 million beneficiaries.<sup>15</sup> The corporation has its headquarters in New Delhi, and operates through a network of 52 regional, sub- regional and divisional offices located in various states.

However, the ESIC has been marred with bureaucracy and corruption. ESIC has been audited by CAG routinely. The last audit was done in 2005 for the fiscal years from 1999-2000 to 2003-2004. A performance audit

#### **Rambha Kamji Kharadi - Accident in Cotton Gin**

Rambha is one of four siblings, 3 sisters and one brother. After the Diwali festivals, she went away with Kalu, the met (contractor), to work in a factory in Gujarat without informing her family. She was just 13, a 'child' as defined by the Child Labor (Protection & Regulation) Act, 1986. A cotton Gin is hazardous and no child can be employed in a cotton gin.

She was taken to Ganpati Gin in Kadi where there were 20 workers in all. Rs.60 /- per day for 12 hour duty was the condition. Shift would be changed each week. No identity card issued. The dormitory was provided by the gin on the premises. On January 27, 2008 around 5 PM while sweeping in the charkha [spinning wheel] room, her left leg fell and was trapped in screw conveyor under the floor pit.. Her left foot got cut vertically from toe to heel. She does not know who, how and when was she taken for treatment. No one informed her family back home for almost one month. Later, they were asked to visit to collect the wages but still no news was given about the accident. Her father recollects that there was police complaint filed by the Union and the contractor but Rambha does not recollect if her statement was recorded by the police. The factory paid all the treatment costs plus Rs.1000/- towards her travel expenses. At home they continued treatment for some time for which they had to spend Rs.1500/-.

Now she helps in the kitchen. She can not do any other domestic chores. She walks with the help of a stick, limping on one leg. Her injured left foot is completely deformed and only one toe can touch the floor. A claim for compensation has been filed. As reported by the union, disability as assessed by the doctor appointed by Union has been assessed to be 40 percent. Claim is under progress in Labor Court.

review of the functioning of the ESIC had been conducted earlier during 1993-94, covering the years from 1989-90 to 1993-94, and the audit results were reported in Comptroller and Auditor General's Report No. 11 of 1995. It was mentioned in paragraphs 30.6, 30.7, 30.8 and 30.14 of the report that there were shortfalls in holding Regional Board meetings, identification of the establishments to be covered and inspection thereof; mounting arrears of contributions to be recovered as well as deficiencies in the payment of benefits to insured persons.

The Ministry of Labour and Employment had replied in its Action Taken Note (ATN) in August 1996 that necessary remedial action would be taken. The Audit in 2005, however, ascertained that the above shortcomings still existed. The CAG pointed out glaring irresponsibilities regarding corporate governance; financial management; recovery and contribution; actual coverage of employees; providing timely benefits to insured persons; non-construction and commissioning of hospitals; idle equipment and much more. In fact, the audit has noted that the surplus funds accumulated from 1999 to 2005 by ESIC had risen to almost US\$ 900 Million. Imagine the surplus the corporation must have accumulated in its almost 60 years of existence. This money would go a long way to provide world-class health services to the workers who have actually contributed this money. The corporation also does not seem to bother or care about settling the claims of the workers, to those who have paid to enrol in the scheme. There is no timeframe defined for the settlement of claims. Many claims remain unsettled for a long time due to various reasons. Claim Documents or test reports go missing from the files. Medical boards are not held in many regions delaying the payments of the claims.

Further, ESIC is not willing to share the huge database of information about diseases and illnesses detected by its doctors with other government agencies. The reason given for not sharing this information is that "it is not in the Act". This lack of data sharing results in incorrect and incomplete data being used in making policy decisions. In a complaint filed under the Right to Information Act (RTI Act), the information commissioner ordered ESIC to publish monthly data on occupational diseases on their website. Alas, the order has not been followed by ESIC and repeated reminders have not been heeded. According to the latest figures for March 2011 sent by ESIC Model Hospital at Andheri, the northern suburb of Mumbai in Maharashtra state, only five suspected cases of occupational diseases were detected in Mumbai (3 cases of contact dermatitis, 1 burn injury, and 1 eye injury), and no cases were reported to the other government agencies. Other centres have not bothered to give their data.

Not surprisingly, there are no fixed specifications to measure and evaluate the degree of disability incurred. In a RTI response asking for the basis for judging the degree of disability in various claims, the response was “This is at the exclusive discretion of the members of the Special Medical Board based on relevant medical case papers/history”. In fact, no such standards or specifications have been found in any other hospital or establishment in the country.

In its bid to improve its services and policies, ESIC circulated an action plan letter numbered U-16/18/1/2007-Med.1 and dated 11 July 2008 (a copy is available on their website) which recommended several steps in strengthening the Occupational Health Services in the country. The scheme had a separate budget of US\$ 0.40 per insured person (IP) annually to be borne by the ESIC. In an RTI filed with the corporation asking about the various activities undertaken according to the action plan, some of the questions put to them and their replies are given below:

- What efforts have been made by ESIC for educating employees about health hazards at the workplace? Kindly provide a copy of any literature that has been distributed. Please provide budgetary allocation (year-wise) for this task and the expenditure incurred there on. Their reply – ESIC do not undertake education of employees about health hazards in the work place.
- How many Occupational Diseases Surveillance Teams have been constituted by ESIC? Please provide a region-wise list and also specify the dates of formation. Kindly provide the list of equipment with these teams. Kindly provide a list of inspections carried out by each team and the result of the inspection. Reply – There are no Occupational Disease Surveillance Team (s) constituted by ESIC.
- There was a specific instruction to publish Occupational Data Centre (ODC) data. Please provide the medium and frequency of such publication. Kindly provide a copy of each publication. Reply – There are no specific instructions given by ESIC to publish ODC data
- Please provide a copy of the region-wise annual calendar for the sensitisation of the employers towards the occupational hazards for 2008-2009 and 2009-2010. Please provide a copy of any reference material/literature generated for the purpose. Reply – There is no annual calendar for sensitisation of employers towards occupational hazards.

Some of the regional offices were not even aware of this action plan and asked us to provide them with a copy.

Similar shortcomings have been found in the corporations working in the state of Gujarat by People's Training and Research Centre (PTRC). In a report titled "Employees State Insurance Scheme in Gujarat: Whom does it serve?" is said that ambulance services are so poor that only 0.6 percent of insured persons could receive the services. There are places where an ambulance van is available, but drivers are not and vice versa. There are nine emergency centres, but the number of patient using them is extremely poor. The availability of doctors and services are poor and not evenly distributed in the state. In Ahmedabad region, there is one dispensary for every 3,597 insured persons (IPs), in Rajkot there is one for every 2,543 and in Baroda region one for every 5,819.. We can be sure that the conditions are not different in the rest of the country.

Despite all these shortcomings and lapses, when asked, whether the Ministry of Labour is satisfied with the performance of ESIC as a whole, the reply is "Yes, the ministry of Labour and Employment is very much satisfied".

In another case, in a writ filed in the Supreme Court of India (079 of 2005) with regard to the health problems faced by the workers in coal-fired thermal power plants, the court issued an Order in 2008 as follows:–

1. Comprehensive medical check-ups of all workers in all coal fired thermal power stations by doctors appointed in consultation with the trade unions. First medical check-up to be completed within six months. Then [it is] to be done on a yearly basis.
2. Free and comprehensive medical treatment to be provided to all workmen found to be suffering from an occupational disease, ailment or accident, until cured or until death.
3. Services of the workmen not to be terminated during illness and to be treated as if on duty.
4. Compensation to be paid to workmen suffering from any occupational disease, ailment or accident in accordance with the provisions of the Workmen's Compensation Act 1923.
5. Modern protective equipment to be provided to all workmen as recommended by an expert body in consultation with the trade unions.
6. Strict control measures to be immediately adopted for the control of dust, heat, noise, vibration and radiation, as recommended by the National Institute of Occupational Health (NIOH).
7. All employers to abide by the Code of Practice on Occupational Safety and Health Audit as developed by the Bureau of Indian Standards.

A compliance report in respect of suggestions as above was filed with the Supreme Court, which listed responses from 37 companies with coal-fired thermal power plants. Needless to say, the report stated that 34 responding companies were complying and the other 3 stated that the orders will now be complied with.

A survey and information gathering campaign was done in the state of Gujarat for the workers in various thermal power plants to find the truth behind these responses. The survey found glaring holes and blatant lies by the authorities.

It was also observed that even if medical check-ups were being done, the reports were not being given to the workers, especially to the contract workers. No explanation was given for the reasons or the results of the tests. Some workers even said that they do not get paid sick leave pay during their illness (although this was only in two cases)

### **Silicosis**

Silicosis is one of the oldest occupational diseases. Workers engaged in the mining, manufacturing and construction sectors are at the risk of contracting silicosis. Some developed countries have succeeded in controlling the incidences of silicosis through various measures, but in India, reliable data is simply non-existent. One example will be enough to demonstrate how callous the Indian Government is in this regard. The Industrial Toxicology Research Centre (ITRC), Lucknow, carried out a study of the agate workers of Khambhat in the early 1980s and found high incidences of silicosis amongst these workers. The report included recommendations for bringing down the disease rate. Neither the state, nor the central government thought it fit to take any action. Then NIOH carried out a study on the orders of the Gujarat High Court in 1988. NIOH also carried out a few more studies at various intervals over the next 12 years. Newspapers and magazines kept on publishing horrifying stories of the victims. Several documentaries were made and some even won National Awards, but on the ground, there was no change and even today, workers keep dying. One after another, the state governments have shied away from taking any effective action.

To some extent, the State of Madhya Pradesh has succeeded in bringing down the incidences of silicosis amongst the workers in the slate-pencil industry. They enacted a state law for the welfare and rehabilitation of the victims and stopped slate-pencil making in residential areas. In Gujarat, the workers of a glass factory started a struggle for compensation for silicosis in 1980s, as a result of

which the Gujarat High Court passed a landmark judgement in this case.

In 2006, the National Human Rights Commission (NHRC) declared silicosis as an important health problem of the country. Then it started accepting complaints on silicosis. It joined a petition to the Supreme Court as a submitting party, and in 2009, the Court passed an interim order regarding this petition, instructing the commission to go ahead with securing monetary relief in the confirmed cases of death due to silicosis and for rehabilitating the people with silicosis. As a result, in one of the complaints brought before it, the commission passed an order in November 2010 directing the government of Gujarat to pay US\$6,000 compensation to each family of the 238 workers who died of silicosis. It also directed the government of Rajasthan and the latter complied, paying US\$ 6,000 to 21 widows. In the last few years, this

**Raju Khushal – a warrior**  
[b. 26.06.1974 – d. 05.12.2011]

Raju was the first in the history of the agate industry to file a claim for compensation for work-related silicosis under the Employees Compensation act and under the Bonded Labor Abolition Act.

He was from a Dalit family. He attended school until the 5th grade in a primary school. Then as a child labourer he joined Japan Shoes House (shop) in Khambhat, receiving wages of Rs. 300 per month. He left after working for about two years.

He then went to his uncle's factory to learn to shape stones. In a few days he learned the art of working on a Bankda machine, a horizontally spinning emery wheel. He kept moving from one factory to another every six to eight months. Once in need of some advance, after his employer refused to lend him money, another factory owner gave him the advance on the condition that he should work in his factory. Raju was badly in need of money and there was no time for negotiating his rates. He accepted the condition. The condition and the loan agreement were both oral agreements.

In this way, Raju started working for Kishan Bhil in 91/92 at lower piece rates compared to his previous employment. Workers who take an advance will often be paid less than the market rates for their labor, a tradition in this industry. He worked at Kishan Bhil's factory continuously for 17 to 18 years until 2009.

Raju came for a medical examination in 2007. He informed us that 20-25 of his colleagues working in the same factory had died of silicosis. So when he was tested positive, he decided to leave the job. He joined the Silicosis Victims Association and started participating in the programs. When his employer noticed this, he started pressuring him to keep away from the association. He stopped going to work in February, 2009.

Both of his parents were doing the same work. His father died in 2002. Mother, too, contracted silicosis. One of the younger brothers, Prakash (25) is also doing the same work. Today his wife and elder son have a food stall using where they sell food to different areas to earn their livelihood and support the family.

has empowered the workers and the organisations working with them. More and more workers are now coming forward to stake their claims.

### **Asbestos-related diseases.**

Asbestos is one of the most hazardous materials on earth. The ILO and WHO both have recommended a ban on its use. More than 55 countries have already banned the use, mining, import, manufacture, sale and applications of asbestos. More countries are joining in, either announcing a ban or controlling its usage.<sup>16</sup> India has continued to use it, even though the mining of asbestos has been banned. In fact, Indian imports of asbestos have more than doubled in the last three years. In India, 100,000 workers are exposed to asbestos. More than 6,000 workers in India suffer from asbestosis and 600 from asbestos-related cancers.<sup>17</sup> The Occupational Health and Safety Centre in Mumbai has examined 473 former workers of an asbestos textile factory, and out of these 133 were found to be suffering from asbestos related diseases (ARD). In Ahmedabad, in Gujarat, the Occupational Health and Safety Association (OHSAs) found 87

#### **Subrayan Ramaswamy Gondar**

Subrayan Started work in Gujarat Composit Cement Ltd on 1 March 1974. His routine job involved manually opening the plastic Asbestos Bag and to empty it in the mixing machine. He started experiencing breathing problems in 1995. He underwent a medical check-up through the ESIC Panel Doctor who diagnosed the problem as TB and started his medication. The company closed down in 1995 but restarted its operations in 1999 where in Subrayan was placed in the sheet cutting division. He worked till 2005 when the company because of his deteriorating health condition compelled him to take voluntary retirement. He then vacated his home in East Digvijat Nagar and shifted to Meghani Nagar. During his entire career in the company, he was never told about the hazards of the substance he was working with nor was he provided with a correct medical diagnosis and treatment

He experienced many difficulties in his new place. He did not have any income or job. The family used to survive on the money received through the pension fund and his wife used to do manual work in nearby homes.

In July 2007, his health deteriorated and he was admitted in the Civil Hospital. However there was no improvement in his condition and his case was referred to the Gujarat Cancer Research Institute on 13 August 2009. After about a year on 9 July 2010 he died, leaving behind his mother (68 years old), wife (43), Daughter (16 who had to leave studies after matriculation), 2 sons (the elder, 14, who had to leave studies after 9 class, and the younger, 11, in the 6th grade).

Today his wife and elder son have a food stall using which they sell food to different area to earn their livelihood and support the family.

workers and 3 citizens suffering from ARDs. The Civil Hospital in Ahmedabad also reported several cases of pleural plaques recently. Tata Memorial Hospital in Mumbai reported 107 cases of Mesothelioma in the period 1985-2007. Civil society groups, such as Asia Ban Asbestos Network (A-BAN), are demanding a complete ban on asbestos in Asia including India, but there is no move in this direction yet on the government's part. There is a fear that in a few years time, a large number of workers and citizens will fall prey to ARDs.

#### 4. Training & Research in occupational health & Industrial hygiene

There are around 1,125 qualified occupational health professionals in India and only around 100 qualified occupational hygienists. Modern requirements estimated a need for more than 8,000 qualified medical practitioners in occupational health. WHO, in its sixtieth World Health Assembly, has expressed concerns over major gaps between and within countries, between the exposure of workers and local communities to occupational and environmental hazards and access to occupational health services.

A number of universities and institutions in the region offer training opportunities in the field of occupational health, safety, industrial hygiene and ergonomics. These training and educational courses are for physicians, nurses, paramedical staff, safety professionals and regulatory staff, such as factory inspectors. In a country like India, various institutes have only carried out very basic research in occupational health. Other than basic research in occupational health there is a lack of real operations research from public health perspectives that could be used to address the prevalent occupational conditions. Hence, there is a need to assess, strengthen and consolidate the existing training modules in terms of the content and modalities of teaching, as well as for the accreditation of such courses by the national authorities. The Central Labour Institute under DGFASLI offers one such course, a three-month Certificate Course in Industrial Health.

NIOH is one of the prime institutes of Indian Council of Medical Research (ICMR) and has two regional occupational health centres (ROHC)



Sanitation facilities for stone quarry workers in Pune photo courtesy.

at Bangalore and Kolkata for catering to the regional needs. Established in 1966 and originally designated as the Occupational Health Research Institute, it was re-designated as the NIOH in 1970. Its major activity is research in occupational health. The Institute has published more than 500 research papers in national and international journals. The other activities of the institute include short-term training programmes for industrial medical officers, industrial hygienists, factory inspectors, workers and trade unions, etc. The institute advises the ministries of Health, Labour & Environment, and Commerce on the issues related to occupational health, safety and environment.

### **Health Education**

It is very important to educate the workers and the general populace on occupational health. The health departments have huge budgets for hoardings to disseminate the required information. We often see messages spread through TV, newspapers and hoardings on tuberculosis, malaria, dengue fever and other illnesses. However, we do not see any messages on occupational diseases. It was a pleasant surprise to see an educational message on silicosis outside a metro station in Delhi.

During the last decade only one course in Industrial Hygiene was added in the whole of India, a distance learning course by a medical college, and not by an engineering college. How long shall India neglect this important branch of science?

## **5. Role of NGOs & social struggles**

The toxic gas release at the Union Carbide plant in Bhopal in 1984 was an important turning point in the long history of industrial safety and health in India. The public debate following the accident resulted in the Factories Act being amended in 1987. Civil society organisations came to a few industrial centres to work on this issue. These included the Hazard Centre in Mumbai, Occupational Health and Safety Centre (OHSC) Mumbai, and the *Vyavasayik Swasthya Suraksha Mandal* (VSSM) in Baroda. The Society for Participatory Research in Asia (PRIA), based in Delhi, started systematic work on the issue and continued to do so till 1995. It organised training and workshops for activists and published popular educational material in local languages. It initiated the National Campaign on Dust-related Lung Diseases (NC-DRLD) in 1990, which continued for two years. It helped establish a grassroots OHS organisation in Gujarat, the People's Training & Research Centre (PTRC),

Kamdar Swasthya Suraksha Mandal (KSSM) and Occupational Health and Safety Association (OHSA). These organisations worked hard in the last decade to generate awareness among the workers of their rights, and helped in identifying the workers suffering from occupational diseases, and also helped them to claim compensation.

The struggle led by KSSM helped more than hundred textile mill workers suffering from byssinosis to claim compensation from ESIC. A few textile workers also claimed compensation for noise-induced hearing loss (NIHL).

OHSA helped power plant workers get diagnosed and then claim compensation for NIHL and asbestos-related disorders (ARDs). OHSA also helped workers of the Asbestos Cement factory to claim compensation for ARDs.

OHSC in Mumbai helped a large number of textile workers to claim compensation for byssinosis and NIHL. It also helped the former workers of an asbestos textile factory to claim compensation for ARDs. Recently 97 victims of asbestos-related diseases in Bombay have been able to claim compensation totalling US\$600,000 from a Turner and Newall funded trust in the United Kingdom.<sup>18</sup>

PTRC helped workers claim compensation for occupational asthma, occupational dermatitis, NIHL, chromium toxicity and silicosis. It also helped workers in the agate industry to organize and help improve technology to reduce silica dust at work. It has contributed in sensitising civil society by publishing bimonthly newsletters on the subject as well as popular literature for the past 20 years.

There are also examples, where workers themselves waged a struggle without any outside help. Workers at Alembic Glass works in Vadodara came to know, while attending a trade union conference that it is silicosis which many of their colleagues suffer and died of, and not TB. They also learned that silicosis is a work-related disease for which they can receive compensation under the ESI Act. They took their case to the state government and the then Labour Minister directed NIOH to examine the workers. As a result, many workers were found eligible to claim compensation under the ESI Act. The ESI Medical Board assessed '0 % disability' in many cases. This decision was challenged in the Labour Court and a long drawn out legal battle resulted in an historic order by the Gujarat High Court favouring the claimants. The judgment stated that the disability incurred was 100 percent disablement and the sufferers should receive compensation accordingly.

The Vadodara Kamdar Union took up a campaign for workers of a chromium factory in Baroda in 1998. More than 50 workers were found to have nasal septum perforation, a few had asthma, some had skin ulcers and some had liver damage. As a result of the campaign some workers could claim compensation. NIOH then carried out a study and the pollution control board ordered the closure of the unit.

In West Bengal, Nagrik Munch helped workers claim compensation for byssinosis, silicosis, NIHL and other diseases.

Shilpi Kendra, Indore, and Khedut Mazdoor Chetna Sangathan, Jhabua campaigned to get compensation for silicosis sufferers among the tribal workers working in those areas.

PRASAR, Delhi, took up the issue of workers suffering from silicosis while working in stone crushers in the Lal Kuan area in Delhi. It filed a public interest litigation (PIL) in the Supreme Court, which is now being heard by the court. Now there are groups like the Mine Labour Protection Campaign Trust in Rajasthan which has raised its voice for mine workers suffering from silicosis and asbestosis. In Jharkhand, Occupational Safety & Health Association of Jharkhand (OSHAJ) has taken up the cause of occupational diseases.

Jan Swasthya Abhiyan started a campaign in the year 2000 to remind the government to fulfil its promise on health for all by 2000. Later, NHRC in collaboration with JSA organized public hearings on the denial of the right to health care. They also initiated a process to review the status of Occupational health. In this process, the Commission identified silicosis as an important health issue and formed a task force to come up with recommendations.<sup>19</sup>

Mine Labour Protection Campaign (MLPC) in Rajasthan and Pathar Khadan Majdoor Sangh (PKMS), Madhya Pradesh have also been instrumental in securing rights for mine workers in Rajasthan and Madhya Pradesh respectively

## 6. Conclusion

A large proportion of the Indian workforce does not have any law to protect their health and safety at work. This is not only true for workers in the unorganised sector, but also for those in the organised sectors. And strangely, workers in education, transport, health care and local self-governments also have no legal protection as regards OHS at work. No protection is available for

the manufacturing workers in companies employing less than 10 persons. The majority of the Indian workforce is engaged in the primary sector of agriculture, and this industry is considered to be one of the most hazardous industries by ILO. Yet, agricultural workers have no legal protection.

Furthermore, the working population, being largely illiterate, is unaware of the hazards associated with their occupations. The data is lacking even in the formal sector, and there is no mechanism for the collection and maintenance of credible statistical information. In the current phase of globalisation with increasing flexibility of employment and informalisation of the workforce, more and more hazardous industries have been shifting to India from developed countries. In the current situation where implementing and inspecting machinery under the labour laws are more or less paralysed, the numbers and degree of occupational health and safety problems is on the rise.

Workers' movements and NGOs are trying hard to bring about a change in the conditions, but with the given intensity and seriousness of the problems, wider and more intense initiatives are badly needed to address this challenge. It is becoming crucial to concentrate our efforts on:

- Introducing industrial hygiene practices based on accurate knowledge of existing national hazards and a job-exposure matrix for reducing the risks associated with the occupational hazards.
- Tracking down the prevalent or changing pattern of occupational diseases and injuries, by strengthening national registries of occupational diseases and establishing sentinel surveillance, to convince policy-makers of the hidden burden of occupational diseases
- Developing a strong campaign for more progressive and protective legislation covering all economic activities with legally binding provisions for preventive and curative support to informal workers, for adequate staffing in the factory inspectorate, for establishing occupational health centres at district levels, and for initiation of occupational medical courses.
- Strengthening the network of groups working on these issues to bring greater pressure on the decision-makers and offer alternatives, and launching mass awareness and health education programmes.

### **Recommendations**

- Legal protection for OHS should be extended to workers in all economic sectors. The first step in this direction can be ratification of ILO Convention

155. Later budgetary provisions should be made to implement the convention.

- Recommendations of the Second Labour Commission on OSH must be implemented.
- All vacant posts in implementing agencies, like labour inspectors, should be filled immediately and a new assessment of the manpower needed be done in view of the increase in the number of units and the workforce.
- Take concrete measures to strengthen the system for collecting and publishing labour statistics.
- Occupational health care services need to be integrated with general health care. All public hospitals should have a department of occupational and environmental health.
- Curriculum of medical education may be redesigned to overcome the problem of misdiagnosis of occupational health illnesses. Health care budgets should include funds for education in the field of occupational health. Central and state governments should fund research on social, legal, engineering and medical aspects of the occupational and environmental health problems.
- Procedures to claim compensation for occupational diseases must be simplified by amending the legal provisions of the ESI Act and Employees' Compensation Act. Funds may be created for compensating workers in unorganised sectors.
- Medical practitioners should be encouraged to report incidences of occupational diseases. Steps need to be taken to create a conducive social environment in this regard.
- Workers, trade unions and labour NGOs should be given an increasing role in implementing the legal provisions for OHS. They should be extended financial assistance to organise seminars, training programmes and conferences.
- Simple technology for the prevention and control of occupational diseases for small and cottage industries should also be developed.

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