



SPECIAL REPORT

ON

SILICOSIS

BY

RAJASTHAN STATE HUMAN RIGHTS

COMMISSION

Rajasthan State Human Rights Commission

Forward

This is a Special Report on Silicosis being submitted under section 20 of the Protection of Human Rights Act, 1993. Since Rajasthan is a state having large number of sandstone mines and during the mining operations the legal provisions relating to the safety, security and health of the workers are being ignored totally, an occupational disease – silicosis – is very prevalent among the mineworkers. Though the disease is incurable, it can easily be prevented if the mine owners comply with the legal provisions and the central and state government departments concerned have the will to enforce them. Unfortunately, this is not happening and consequently thousands and thousands of mineworkers contract silicosis and die of it. The Medical and Health Department of Rajasthan has not been taking satisfactory steps to detect cases of silicosis which has become an endemic problem in the state. Since it is a serious violation of human rights of the mineworkers and the state and central government departments concerned have failed to protect human lives – a duty cast on them by Article 21 of the Constitution – the Rajasthan State Human Rights Commission has deemed it necessary to submit this Special Report to the State Government with the request to initiate action on the various problems highlighted in the report and place the Special Report and the action taken report before Rajasthan *Vidhan Sabha*.

Jaipur,
Dated Dec. 03, 2014

(Dr. M. K. Devarajan),
Member.

Abstract

Silicosis is the oldest known occupational disease. It is caused by inhalation of silica dust for a long time. It is an incurable disease and can increase the susceptibility of the patient to other complications like tuberculosis, cancer, ischemic heart disease, bronchitis, bacterial and fungal infections etc. Prevention of silicosis is easy in case the mine owners and government agencies have the will to do so. Mineworkers in Rajasthan have been suffering from it and dying of it – in fact the disease has become endemic in the state. It is not possible that the authorities concerned were totally unaware of this serious problem. However, there has been no effort on their part to prevent this malady, lay down procedures for its detection and to provide any relief to the affected person. Though cases of silicosis had been detected occasionally from the mines earlier, a systematic enquiry was conducted in the state in 2009-10 by a team of the National Human Rights Commission (NHRC) that was deputed to enquire into a complaint made by an NGO. They were able to detect 22 cases of persons who died of silicosis and another 52 who were affected by it. On the recommendation of the NHRC, Government of Rajasthan (GoR) gave ex gratia payment of Rs. 3 lakhs each to the dependents of the deceased. The state authorities concerned were given several directions for the prevention of the disease by the NHRC. Unfortunately, they did not take the issue seriously, and failed to implement the assurances given to NHRC and thereby lost the opportunity to prevent the further spread of this disease and save precious human lives.

2 The Rajasthan State Human Rights Commission (RSHRC), with the assistance of a group of experts on the subject, has been working on the problem of silicosis among the mineworkers for the last two years. Its efforts have resulted in the government agencies concerned starting to give attention to the problem. Systems are being evolved for the prevention and detection of the disease and the rehabilitation of the affected persons and the families of the deceased. The Commission's efforts have resulted in the detection of 891 cases of silicosis, including 57 cases of death. These detections have taken place primarily due to the efforts of two NGOs that were able to work effectively due to the support extended by RSHRC and the National Institute of Miners' Health (NIMH), Nagpur. On the Commission's recommendation, the state government has decided to give ex gratia payment of Rs. 1 lakh to silicosis/asbestosis patients and Rs. 3 lakhs to the dependents of the deceased from the Rajasthan Environmental Health Cess Fund managed by the Rajasthan Environment & Health Administrative Board (REHAB). REHAB has already made a provision of Rs. 500 lakhs for this purpose out of which Rs. 386 lakhs have been sent to District Collectors for distribution. It has also sanctioned Rs. 3165.63 lakhs for the upgradation of facilities for the prevention and detection of these diseases. Apart from this several other decisions for the prevention of occupational diseases and other problems of mineworkers were taken at the level of Chief Secretary, Rajasthan and the REHAB.

3 This Special Report has been necessitated due to slow pace of implementation of the decisions already taken and the need to have a holistic approach on the part of the state government to deal with this

serious problem. The report has made an effort to flag several issues like total violation of legal provisions for the safety, security and health of mineworkers by the mine owners; the inability and the lack of will on the part of government authorities concerned to reign in the mine owners; failure of the regulatory agencies concerned; the lack of awareness about occupational diseases among the government doctors; lack of preparedness on the part of the Medical and Health Department to deal with the problem; absence of any program to rehabilitate the affected mineworkers etc.

4 The Commission has, based on the insight gained by it during its work on the issue and based on inputs from experts, given its suggestions to deal with the problem. The most important suggestion is to enforce the mandatory requirement of '**wet drilling**' during mining operations which can prevent silicosis among mineworkers to a considerable extent. Other suggestions include the enforcement of other legal provisions for the safety and health of workers; strengthening of the enforcement mechanism; the need for the Mines Department of Rajasthan to play a more proactive role by suspending/cancelling the leases of erring mine owners; the necessity of having an integrated silicosis control program; effective ICE activities among the mine workers and owners; monitoring committees at the state and district level, a well thought out program for the rehabilitation of the affected workers etc.

5 The work of RSHRC so far has been confined to the prevalence of silicosis among mineworkers only. However, it has taken up the issue of

silicosis among workers engaged in sculpting and carving of stones in Sikandra area of dist. Dausa. The work done by an NGO and the Commission has already resulted in the detection of 67 cases of silicosis in Sikandra. The problem of silicosis among these workers is more acute than among mineworkers and in a meeting organized by the Commission at Dausa on 15-07-2014, the owners of the units intimated that 8-10 workers have already died of the problem. The problem of silicosis is likely to be prevalent among workers engaged in several other occupations like stone crushers, quartz mining and processing, foundries, sand blasting, ceramic industries, gem cutting and polishing, slate and pencil industries, glass manufacturing, construction workers etc. During preliminary discussions, the Chief Inspector, Factories and Boilers Inspection Department, Rajasthan and his medical officer informed the Commission that no case of silicosis or other occupational disease has been detected in any unit coming under the department's jurisdiction. This looks quite unlikely, in view of the prevailing conditions and the matter needs to be probed into thoroughly.

6 In view of the likelihood of the widespread problem of the prevalence of silicosis and other occupational diseases that has come to light during the short period of Commission's intervention, the government had accepted our suggestion to have a state wide study. However, not even the terms of reference for the study have been framed even after 15 months. The departments concerned also have not displayed any urgency or sensitivity to implement the other important decisions taken. In view of this, the Commission has also suggested the need for an independent agency with adequate powers to

deal with all the issues relating to occupational diseases and an institute to conduct studies and research into the problem.

7 This Special Report is being submitted to the state government with the request to table before the Rajasthan *Vidahan Sabha*.

List of Abbreviations

ARAVALI	: Association for Rural Advancement through Voluntary Action & Local Involvement
CS	: Chief Secretary, GoR
DGMS	: Director General Mine Safety, GoI
DMG	: Director, Mining & Geology, GoR
DMS	: Director Mine Safety (under DGMS)
DVS	: Dang Vikas Sansthan, Karauli
GoI	: Government of India
GoR	: Government of Rajasthan
GRAVIS	: Grameen Vikas Sansthan, Jodhpur
MLPC	: Mine Labour Protection Campaign Trust, Jodhpur
NGO	: Non Government Organization
NIMH	: National Institute of Miners' Health, Nagpur
NIOH	: National Institute of Occupational Health, Ahemedabad
PSF	: Principal Secretary, Finance, GoR
PSM	: Principal Secretary, Mines & Petroleum, GoR
PSME	: Principal Secretary, Medical Education, GoR
PSM&H	: Principal Secretary, Medical & Health, GoR
REHAB	: Rajasthan Environment, Health Administrative Board

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Chapter I

Introduction

1.1 This is a Special Report of the Rajasthan State Human Rights Commission (RSHRC) about the prevalence in Rajasthan of silicosis, a dreaded occupational disease which is not curable, but completely preventable. The report is being submitted to the authorities concerned under the provisions of Section 20 of the Protection of Human Rights Act, 1993. The objective of this Special Report is to draw immediate attention of Government of Rajasthan (GoR) and Government of India (GoI) to -

- the alarming prevalence of this silicosis among the workers engaged in mining and quarrying activities in Rajasthan;
- to the possibility of prevalence of this disease among the workers engaged in other occupations;
- the lack of concern and/or awareness about this problem among the officers of the Central and State Government departments concerned;
- the widespread violation of the safety measures provided under the different laws by the mine owners;
- the total failure of the departments concerned to reign in the mine owners and force them to take safety and security measures they are required to take under the law;
- the inability of the government departments to prevent and detect the cases of silicosis;
- the lack of awareness and preparedness of the state's Medical & Health Department to deal with the problem;

- the impact of this deadly disease on the lives of affected workers and their families;
- the commendable work done by the National Institute of Miners' Health (NIMH), Nagpur and some Non-Government Organizations (NGOs) like the Mine Labour Protection Campaign Trust (MLPC), Jodhpur and the Dang Vikas Sansthan (DVS), Karauli for the detection of silicosis;
- to highlight various problems and place before the authorities concerned the suggestions of the RSHRC about the measures they should take regarding various aspects of the problem; and
- to impress upon the State Government the need for a comprehensive 'Pneumoconiosis Prevention and Control Program' for Rajasthan.

1.2 Silicosis is caused by inhalation of fine silica dust. It is the most ancient and commonest of all pneumoconioses. It continues to be the most serious occupational lung disease and claims more lives than any other occupational disease. A major source of exposure to silica dust in Rajasthan is sandstone mining activities. Sandstone is available in abundance in several districts. The major mining areas are located in Jodhpur, Bundi, Alwar, Bhartpur, Karauli, Dholpur and Bhilwara districts. The sandstone mineral, a sedimentary rock formation, contains large amounts of free silica (SiO_2). Extraction of sandstone slabs requires drilling in sandstone formations leading to the generation of dust that contains substantial amounts of crystalline silica. Prolonged exposure to such dust causes silicosis in the workers engaged in these mines.

1.3 The information available with the Commission indicates that large number of persons working in sandstone mines in Rajasthan have been dying of silicosis. Though this has been happening for decades, and the government functionaries concerned had knowledge about this, the problem was brushed under the carpet by all concerned. Consequently, the measures which could have been taken to prevent this malady assuming endemic proportions were not taken, resulting in more and more mine workers and those working in other vulnerable professions getting afflicted by silicosis.

1.4 Though cases of silicosis had been reported occasionally from the mines in Rajasthan earlier also, the problem was first brought on record after Mine Labour Protection Campaign Trust (MLPC), a Jodhpur-based NGO working for the welfare of mineworkers in Rajasthan, made a complaint to the National Human Rights Commission (NHRC) on 06-11-2009. NHRC deputed a team to enquire into the matter. The team detected 74 cases of silicosis including 22 mine workers who died of silicosis and 52 who were suffering from it. On the recommendation of the NHRC, Government of Rajasthan gave ex gratia payment of Rs. 3 lakhs each to the dependents of 21 deceased from the Chief Minister's Relief Fund. One case could not be traced due to incomplete address. No ex gratia payment was given to the 52 patients of silicosis detected by the NHRC team.

1.5 RSHRC started working on this problem since Dec 2012. Thanks to the support provided by the RSHRC and NIMH, DVS and MLPC were able to facilitate the detection of large number of silicosis patients in the State during this period. Details are as follows:

Sl. No.	Name of District	No. of Silicosis Cases* Detected	No. of Silicosis Patients who Died
1	Karauli	623	27
2	Dholpur	53	5
3	Jodhpur	92	16
4	Nagaur	10	2
5	Bundi	14	2
6	Dausa	67	4
7	Bharatpur	31	
8	Barmer	1	
	Total	891	56

*Includes the number of persons who died of silicosis

1.6 Apart from this Association for Rural Advancement through Voluntary Action or Local Involvement (ARAVALI), Jaipur, an organisation established by GoR, and Grameen Vikas Sansthan (GRAVIS), a Jodhpur-based NGO have also been active in capacity building and livelihood matters of mineworkers.

1.7 Government of Rajasthan had set up a Pneumoconiosis Board, in SMS Medical College, Jaipur in 1965 to detect and certify cases of pneumoconioses (occupational diseases) in the State. However, this Board did not become functional until the intervention of the RSHRC in

2013. After the Commission's intervention, five more Boards were set up – one each in Government Medical Colleges at Jodhpur, Udaipur, Ajmer, Kota and Bikaner. These Boards have become functional only recently and there are several problems plaguing their work. These Boards so far have been examining mostly the suspected silicosis workers brought to them by DVS and MLPC. These are only mineworkers. So far, there has been no significant effort by any government agency to detect these cases. Considering the fact that detection of silicosis has just started gaining momentum and prevalence of this disease is common among workers engaged in several other occupations also, the number of silicosis patients in the state will run into several thousands. This would give an indication to the authorities concerned the enormity of the problem and the challenges they face in addressing various issues relating to the problem.

Chapter 2

About the Disease

2.1 **The National Human Rights Commission (NHRC)**, which has been working on the problem of silicosis for quite some time, has submitted its Special Report dated 23-08-2011 to the Parliament through the GoI. The following extracts from the above report will give an authentic idea about silicosis:

2.2 "Silicosis is an incurable lung disease caused by inhalation of dust containing free crystalline silica. Crystalline silica or silicon dioxide (SiO₂) is found in quartz, sandstone, flint, slate, a number of mineral ores and many common building materials including clay bricks, concrete, mortar and tiles. Occupations with exposure to silica dust include mining, tunnelling, stone work and sand blasting. In all these occupations, workers breathe in tiny silica particles released into the air with the dust created by cutting, crushing, chipping, grinding, drilling, blasting or mining, and in the process become victims of silicosis. All those engaged in the manufacture of ceramics, glass and abrasive powders are also susceptible to silica dust."

2.3 "Workers involved in dry sweeping of areas where sandstones and rocks are broken or crushed or those engaged in loading, unloading and dumping sand or concrete or cleaning of building materials with pressurized air are all susceptible to silicosis as these processes generate large quantity of dust clouds. Hence, any activity in which

crystalline silica dust exists, even if it is carried out in open air, can be perilous."

2.4 "The silica particles inhaled are so small that they can only be seen with a microscope. At the same time, they are so light that they can remain airborne for a long time. As a result, silica can travel long distances in the air and affect populations not otherwise considered to be at risk. Research studies conducted by the World Health Organization, India Council of Medical Research and the National Institute of Occupational Health have time and again brought forth the fact that silicosis is not only a serious threat to the health of those who are engaged in occupations that are potentially exposed to crystalline silica dust but is a constant health hazard for people living in the vicinity where these occupations are carried out."

2.5 "These studies have further shown that exposure to crystalline silica dust, even for a short period of time can cause silicosis and lead to gradual impairment of lungs in few years along with other temporary or permanent disabilities and finally death. Unlike other diseases, there are no symptoms whatsoever whereby one can come to know about the onslaught of the disease in its early stages. A frequent cause of death in people with silicosis is silico-tuberculosis or lung cancer. Respiratory insufficiencies due to massive fibrosis and heart failure are other causes of death. However, due to lack of awareness, even among the doctors, silicosis is often confused with other diseases. The number of persons who die from silicosis in India is vast but there are no statistics available concerning these deaths. It has also been established that there is no

medical treatment for silicosis. Silicosis is thus a disabling, irreversible, fatal disease and continues to progress even when contact with silica stops. It is, therefore, ironic that in comparison to other deadly diseases like HIV/AIDS and cancer, silicosis has not received the required attention which it deserves. As a result, a large number of workers affected by it receive negligible support and their families are left in miserable conditions".

Silicosis : A Human Rights Issue

2.6 "Silicosis is both a health issue and a human rights issue. It has an impact not only on the right to life but also on the right to live with dignity of all those affected and their families. The Government agencies and employers under whose jurisdiction any such occupation is carried out in the absence of preventive measures and which causes silicosis, are responsible for serious violation of human rights of the affected workers and their families. Furthermore, there is an important issue of social security in terms of taking care of not only the medical expenses but also the basic day-to-day needs for survival of these workers and their immediate family members. These obligations on the part of Government agencies and employers become especially vital when the affected person has died. Most of the affected persons belong to the unorganized sector of labour and are not covered by the Employees' State Insurance Corporation (ESIC) Scheme of Ministry of Labour, Government of India. Being casual and contract workers they are deprived of various social security benefits available to organized labourers under the existing labour laws from their employers".

2.7 *"The officials of the Union/State Labour Departments across the country are not taking adequate steps to ensure the compliance of statutory requirements. It is the primary responsibility of the concerned officials of these Departments to ensure enforcement of the labour laws and make the employers accountable for their legal obligation towards workers. They also need to make all out efforts to prevent silicosis by ensuring all necessary precautionary measures through the employers. Timely diagnosis followed by appropriate medical care of affected workers too needs to be ensured...."*

2.8 *"The most disturbing feature of this problem is that in all cases, it is the poor labourer working in the unorganized sector who is the victim. The authorities have been evading the issue to provide assistance to the affected persons. This is a highly erroneous view as it contradicts the very spirit of human rights and also militates against the spirit of Article 21 which imposes an obligation on the state to safeguard life of every person. In Delhi Jal Board Vs. National Campaign for Dignity, the Supreme Court has observed thus: "Preservation of human life is thus of paramount importance".*

2.9 *"Silicosis is a health hazard which exists in almost all the States where activities such as construction, building, mining, gem cutting etc. are going on. The State apparatus is insensitive to the safety and well being of those who are, on account of sheer poverty, compelled to work under most unfavourable conditions and regularly face the threat of being deprived of their life. The fact that all the affected persons are poor who can hardly afford to seek redressal or have recourse to the*

authorities for any assistance, it becomes imperative on the part of the Commission to impress upon the Government of India.”

2.10 The three reports on the prevalence of Silicosis in Karauli and Dholpur districts of Rajasthan prepared by **the National Institute of Miners’ Health (NIMH)**, Nagpur, have been eye-openers for everybody concerned about the serious violations of human rights of mineworkers and the serious health problems they face. According to these reports, *“Silicosis is caused by inhalation of airborne dust of Silicon Dioxide or Silica in the crystalline form also known as quartz. In metal mines, workers are exposed to high concentration of silica dust almost at every stage of mining operation. However, drilling, blasting, loading – unloading of ore, crushing, etc. are some of the dustiest operations and thus, workers in metal mines are at a high risk of developing silicosis. Occurrence of silicosis is directly related to the degree of exposure to silica dust and higher and longer the exposure more is the risk of developing silicosis. Silicosis is generally seen in sub-acute and chronic form after exposure to silica dust for many years. However, very heavy exposure to silica dust is known to cause acute silicosis.”*

2.11 **“Pathogenesis:** *The precise pathogenesis of silicosis is not completely understood. The studies suggest that interactions between pulmonary alveolar macrophages and silica particles play a major role in the pathogenesis of silicosis. Surface properties of the silica particles appear to promote macrophage activation. These cells then release chemotactic factors and inflammatory mediators that elicit cellular*

responses by polymorphonuclear leukocytes, lymphocytes, and additional macrophages. Fibroblast-stimulating factors are also released which promote hyalinization and collagen deposition. The resulting pathologic lesion is the hyaline nodule which contains a central acellular zone with free silica surrounded by whorls of collagen and fibroblasts and an active peripheral zone composed of macrophages, fibroblasts, plasma cells and additional free silica."

2.12 *"The precise properties of the silica particles that evoke pulmonary response are not known. The nature and extent of biologic response is related to the intensity of exposure to silica dust but the surface characteristics of the dust also appear to be important. There is growing evidence that freshly fractured silica may be more toxic than aged silica-containing dusts perhaps because of reactive radical groups on the cleavage planes of the freshly fractured moiety. This may offer a pathogenic explanation for the more frequent observation of cases of advanced disease in sandblasters and rock drillers, in whom exposure to recently fractured silica is particularly intense."*

2.13 ***Clinical Features:** Silicosis is a largely asymptomatic disease till the onset of Progressive Massive Fibrosis (PMF). There may be no symptoms even though the radiographic appearances may suggest fairly advanced silicosis. Dyspnoea on exertion is the most frequent and directly related symptom, although it is rarely complained of in the absence of complicating diseases such as tuberculosis or bronchitis. The severity of dyspnoea increases with the progress of disease. Slight unproductive cough may be present at initial stages, however, the*

quantity of sputum increases later on. The symptoms usually resemble chronic bronchitis. Excessive sputum production is due to bronchial catarrh due to chronic dust exposure and sometimes due to secondary bacterial infection. Chest pain and haemoptysis are invariably due to tuberculosis."

2.14 "Silicosis can also occur in acute form with heavy exposure to quartz dust over a short period. Acute silicosis develops within few months after inhalation of massive quantities of fresh silica dust. It generally presents as diffuse progressive irregular fibrosis of lower zones with few typical nodular shadows of silicosis. The radiological appearance is almost similar to pulmonary oedema. There may also be acute enlargement of hilar lymph nodes. The histological findings are similar to pulmonary alveolar proteinosis. Acute silicosis presents as severe dyspnea and associated weight loss. The disease is rapidly progressive and death is invariably due to severe hypoxemic ventilatory failure".

2.15 "Chest Radiography: Chest radiography is the most important tool for the diagnosis of silicosis. There is direct relationship between degree of exposure to dust and severity of radiographic changes. In the initial stage, there is 'reticulation' of lung fields due to thickening of perivascular and inter-communicating lymphatics. However, the radiographic diagnosis of silicosis can only be made after appearance of nodules particularly in upper and middle zones of lungs. The silicotic nodules initially are 2-5 mm in diameter, homogenous in density and usually

bilaterally symmetrical. The nodules increase in number and size to "r" type and eventually cover most parts of the lungs."

2.16 *"Silicotic opacities tend to increase even after cessation of exposure to silica dust and sometimes calcification is seen in small nodules. There may also be Kerley B Lines at bases and thickening of inter-lobar fissure and pleura. Eggshell calcification of hilar lymph nodes when present is almost pathognomonic of silicosis. At later stage, the silicotic nodules frequently unite and conglomerate to form large shadows of Progressive Massive Fibrosis (PMF). These shadows initially have a multi-nodular appearance but later on consolidate into contracted dense fibrotic masses often surrounded by bullae. The cavitation of shadows may occur with or without tuberculosis infection. There is invariably extensive pulmonary fibrosis close to the PMF lesions."*

2.17 *"Lung Function Tests: Simple silicosis is rarely associated with lung function abnormalities except at the advance stage. However, there may be mixed type of lung function abnormalities due to exposure to dust. In cases of acute silicosis, restrictive type of lung function abnormalities may be seen. In late stages of progressive massive fibrosis there will always be severe mixed type of lung function abnormalities".*

2.18 *"Complications of Silicosis: Pulmonary tuberculosis is the most frequent and an important complication of silicosis, presumably due to reactivation of previously existing quiescent lesions. There may also be infection due to atypical mycobacteria. The other complications of silicosis include pneumothorax associated with combination of fibrosis*

and bullae, increased frequency of scleroderma and tendency for renal failure. Recent studies have suggested that the silica dust may be carcinogenic and there may be increased incidence of lung cancer among silicotics. There is also some evidence to suggest that silica dust exposure may increase the incidence of ischemic heart diseases.”

2.19 “Prognosis : The prognosis in silicosis depends on the degree of exposure and the rate of development of silicosis. Acute silicosis invariably carries very poor prognosis and majority of the patients die within few months. Silicosis occurring at late stage is less debilitating till the onset of progressive massive fibrosis. Development of progressive massive fibrosis at any stage invariably carries poor prognosis. ”

Types of Silicosis

2.20 Silicosis is commonly described in three forms – chronic, accelerated and acute. These clinical and pathologic expressions of the disease reflect differing exposure intensities, latency periods and natural histories. The chronic or classic form usually follows one or more decades of exposure to respirable dust containing quartz, and this may progress to progressive massive fibrosis (PMF). The accelerated form follows shorter and heavier exposures and progresses more rapidly. The acute form may occur after short-term, intense exposures to high levels of respirable dust with high silica content for periods that may be measured in months rather than years.

2.21 Chronic (or Classic) Silicosis may be asymptomatic or result in insidiously progressive exertional dyspnoea or cough (often mistakenly

attributed to the ageing process). It presents as a radiographic abnormality with small (<10 mm), rounded opacities predominantly in the upper lobes. A history of 15 years or more since onset of exposure is common. The pathologic hallmark of the chronic form is the silicotic nodule. The lesion is characterized by a cell-free central area of concentrically arranged, whorled hyalinized collagen fibers, surrounded by cellular connective tissue with reticulin fibers. Chronic silicosis may progress to PMF (sometimes referred to as complicated silicosis), even after exposure to silica-containing dust has ceased.

2.22 Progressive Massive Fibrosis (PMF) is more likely to present with exertional dyspnoea. This form of disease is characterized by nodular opacities greater than 1 cm on chest radiograph and commonly will involve reduced carbon monoxide diffusing capacity, reduced arterial oxygen tension at rest or with exercise, and marked restriction on spirometry or lung volume measurement. Distortion of the bronchial tree may also lead to airway obstruction and productive cough. Recurrent bacterial infection not unlike that seen in bronchiectasis may occur. Weight loss and cavitation of the large opacities should prompt concern for tuberculosis or other mycobacterial infection. Pneumothorax may be a life-threatening complication, since the fibrotic lung may be difficult to re-expand. Hypoxaemic respiratory failure with cor pulmonale is a common terminal event.

2.23 Accelerated Silicosis may appear after more intense exposures of shorter (5 to 10 years) duration. Symptoms, radiographic findings and physiological measurements are similar to those seen in the chronic

form. Deterioration in lung function is more rapid, and many workers with accelerated disease may develop mycobacterial infection. Auto-immune disease, including scleroderma or systemic sclerosis, is seen with silicosis, often of the accelerated type. The progression of radiographic abnormalities and functional impairment can be very rapid when auto-immune disease is associated with silicosis.

2.24 *Acute Silicosis* may develop within a few months to 2 years of massive silica exposure. Dramatic dyspnoea, weakness, and weight loss are often presenting symptoms. The radiographic findings of diffuse alveolar filling differ from those in the more chronic forms of silicosis. Histologic findings similar to pulmonary alveolar proteinosis have been described, and extrapulmonary (renal and hepatic) abnormalities are occasionally reported. Rapid progression to severe hypoxaemic ventilatory failure is the usual course.

2.25 Tuberculosis may complicate all forms of silicosis, but people with acute and accelerated disease may be at highest risk. Silica exposure alone, even without silicosis may also predispose to this infection. *M. tuberculosis* is the usual organism, but atypical mycobacteria are also seen.

2.26 Even in the absence of radiographic silicosis, silica-exposed workers may also have other diseases associated with occupational dust exposure, such as chronic bronchitis and the associated emphysema. These abnormalities are associated with many occupational mineral dust exposures, including dusts containing silica.

Silica as carcinogen

2.27 International Agency for Research on Cancer, Lyon (France), a WHO outfit, has classified crystalline silica among group 1 carcinogens to humans based on epidemiological evidence from human and animal studies. The National Institute for Occupational Safety & Health, Washington, a US Federal Agency, has also listed crystalline silica as one of the potential carcinogens.

2.28 The evaluation of epidemiological studies has demonstrated the risk of lung and other cancers in the exposed population. In some studies, increasing risk gradients have been observed in relation to cumulative exposure, duration of exposure and the presence of radiographically defined silicosis and, in one instance, to peak intensity exposure. The epidemiological findings support increased lung cancer risks from inhaled crystalline silica (quartz and cristobalite) resulting from occupational exposure. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

2.29 Apart from lung cancer, silicosis can increase the risk of other diseases like tuberculosis, atypical mycobacteria, fungal infections, bronchitis/emphysema, pneumothorax etc. The increase in risk is highly variable and depends on several factors like immune system and exposure history (for TB), and amount of lung scarring, age and smoking history (for cancer).

Chapter 3

Role of the RSHRC

3.1 The RSHRC took suo moto cognizance of the problem of silicosis after it was reported in the media. Since the Commission did not have any expertise in the field, it organized workshop on silicosis in the state secretariat on 3rd Dec, 2012 in which various stakeholder groups and the officers concerned of the Central and State government placed their valuable inputs before the Commission. Based on these, the Commission sent its first set of recommendations to Chief Secretary, Rajasthan (CS) on 24-01-2013. The Commission would like to place on record the sensitivity shown by the CS to this humanitarian problem and the prompt and positive response from him. He organized two meetings on 28-01-2013 and 10-09-2013 to discuss the issues relating to this problem in which the Member of the Commission also participated. The decisions having financial implications were formalised in three meetings of the Rajasthan Environment, Health Administrative Board (REHAB) held on 30-05-2013, 07-04-2014 and 05-09-2014. In these meetings, very important decisions were taken that resulted in systematic efforts to detect the disease, some efforts to prevent it and for the provision for a relief package to the affected persons and the families of the deceased.

3.2 The Commission has been following up these commendable initiatives through various complaints registered by it, discussions with the officers and experts concerned and the functionaries of NGOs working for the welfare of mine workers. The Commission has also

constituted an Advisory Group on Mine Workers Problems (annexure 1) to advise and assist it. The first meeting of the Advisory Group was held in the Secretariat on 30-01-2014. The Commission has so far held the following meetings in various districts, apart from those mentioned above, to sensitize the field officers about these problems, to sort out co-ordination problems and problems coming up during the implementation of the decisions already taken as well as to work out solutions at the local level:

- (i) 21-08-2013 at Karauli
- (ii) 22-08-2013 at Amarpura (dist. Karauli)
- (iii) 01-02-2014 at Balesar (dist. Jodhpur)
- (iv) 15-05-2014 of the Advisory Group at Jaipur
- (v) 20-05-2014 at Jodhpur
- (vi) 15-07-2014 at Dausa
- (vii) 06-08-2014 at Nagaur
- (viii) 10-9-2014 at Dausa
- (ix) 01-10-2014 Meeting of the Advisory Group at Jaipur

3.3 Apart from this, Dr. M.K. Devarajan, Member, RSHRC attended the following important events –

- (a) International Conference on “The Unorganized Sector in India: Extending the Debate to Mining and Quarrying.” organized jointly by the MLPC, Australian National University and Oxfam India at Jaipur on 27-28 July, 2013;
- (b) Workshop on “Empowering Mineworkers – Action Taken and the Road Ahead” organized by the Grameen Vikas Sansthan (GRAVIS), Jodhpur on 28-12-2013 at Jaipur,

- (c) "ETI Multiple Stakeholder International Round Table" organized by Ethical Trading Initiative at Jaipur on 26-03-2014;
- (d) National Consultation on "Mine Workers and the State – Imbibing Good Practices for a Nationwide Change" organized by the MLPC at Jaipur on 25-05-2014 (Shri S.C. Sinha, Hon'ble Member, NHRC also attended); and
- (e) National Conference on Silicosis organized by the NHRC on 25-07-2014.

3.4 In addition to this, the Member of RSHRC has been regularly interacting with the District Collectors, officers of the departments of Mining, Finance, Medical, Directorate General of Mines Safety (DGMS), GoI, representatives of NGOs working for the welfare of mine workers and some other experts on silicosis.

3.5 These efforts made by the Commission has resulted in –

- (i) the Commission gaining an in-depth knowledge about of the issues relating to the mineworkers;
- (ii) the government agencies concerned gradually getting sensitized about the problems and taking at least some steps to address the problems;
- (iii) amendment of Rajasthan Workmen's Compensation (Occupational Diseases) Rules, 1965, to establish Pneumoconiosis Boards in 5 more government medical colleges, apart from the one established in SMS Medical College, Jaipur in 1965;
- (iv) Making the Pneumoconiosis Boards functional;

- (v) motivating and rendering assistance to the NGOs to bring persons suspected of silicosis to the Pneumoconiosis Boards for examination, extend the field of their activities and to encourage them to launch programmes for awareness building among mine workers and work towards their rehabilitation;
- (vi) an unprecedented number of detection of silicosis cases 891 (including 57 deaths due to silicosis) in 2013 and 2014 – significantly larger than the number of such cases detected elsewhere in India;
- (vii) spreading awareness among the officers of various departments, particularly the District Collectors and functionaries of the Medical Department and mineworkers and mine owners, about silicosis, the decisions taken by the government, and the steps they can take to prevent it and detect it;
- (viii) sorting out various problems, particularly at the local level; and
- (ix) setting up of an institutional mechanism to give ex gratia payment to the silicosis-affected and to the dependents of those who died of silicosis.

3.6 Thus, the intervention of RSHRC has already resulted in accelerating the pace of detections of silicosis cases as well as putting in place institutional arrangements for the detection and grant of ex gratia payment. The Commission has been instrumental in getting several important decisions taken which, if implemented properly, can address the problems of mine workers, to a significant extent.

3.7 This report has been prepared based on the insight gained by the Commission during the last two years while working on the problems of mineworkers in the state, particularly silicosis. The Commission had the benefit of regular inputs from a core group from among its advisors who have extensive experience in dealing with various aspects of these problems. The Commission sincerely hopes that this Special Report will result in flagging the issues that need action and prompt the authorities concerned to take adequate and effective steps to resolve various issues. The suggestions made under each issue listed in chapter 5 will enable the authorities to take informed decisions. The Commission will be available for any consultation or assistance the authorities concerned require from it.

Chapter 4

Initiatives of Government of Rajasthan

Government of Rajasthan has already taken very important decisions to find solutions to various problems faced by mineworkers, particularly for dealing with the problem of silicosis.

4.2 Decisions taken in the Chief Secretary's Meeting on 28-01-2013 and progress in their implementation:

- (a) Director General, Mines Safety (DGMS), Govt. of India will, based on the details of mine owners/lease holders available on the website of the state's Mines Department, issue notices in a phased manner to all those who have not yet got their mines registered with the office of the Director General of Mines Safety (DGMS), Govt. of India . In the first phase, notices will be issued to the owners of unregistered mines of districts of Jodhpur, Bundi, Karauli, Nagaur, Bhilwara, Alwar and other districts where the number of silicosis cases are high. State Mines Department will provide them with the required details and render other assistance needed. After registration of the mines by the DGMS, it shall be ensured that mine owners maintain registers containing the details of all the mineworkers employed by them, as per the provisions of Mines Act, 1952. **(Progress: Director of Mines Safety (DMS), Ajmer, has started issuing notices.**

However, the progress is quite slow due to inadequate staff and the large number of mines in the state. So far, neither the DGMS nor the Director, Mines & Geology (DMG), GoR, has been successful in enforcing the requirement to maintain employment records and attendance register.)

- (b) In the case of persons who have died of silicosis, the District Collector shall go through available medicals records, treatment reports and the report of the CM&HO, and after satisfying himself that they were suffering from silicosis, refer the cases to Secretary, Mines Department for giving relief. **(Progress:** *Provision of Rs. 500 lakhs has been made so far by REHAB for ex gratia payments to the patients of silicosis/asbestosis and dependents those who died of these diseases. Out of this Rs. 386 lakhs have been disbursed to District Collectors. Details of ex gratia payments made so far to the victims from the CM's Relief Fund and by the REHAB are at annexure 2.))*
- (c) The issue of giving ex gratia payment to silicosis patients and those who die of silicosis out of the Environment Safety Cess being collected in the state, the amount of assistance and the procedure for disbursement of this should be kept before the next board meeting of the REHAB. The Board will also consider the welfare measures for mineworkers on the lines of those undertaken by the Welfare Board constituted under the Building and other Construction Workers Act, 1996. The Board shall also consider extending the National Health Insurance Scheme to mineworkers in the unorganized

sector. **(Progress:** *REHAB has laid down the procedure for disbursal of ex gratia payment and decided that Rs. 1 lakh will be given to mineworkers who have silicosis/asbestosis and Rs. 3 lakhs to the dependents of the deceased. There has been no progress on either welfare measures or insurance.)*

- (d) Mobile vans provided to Medical and Health Department from the Environmental Safety Cess should not be used for purposes other than medical examination of mineworkers. Regular camps in the mining areas should be organized for medical examination through mobile vans as per a time bound schedule. The doctors will be trained by the Medical and Health Department to detect silicosis as per the ILO guide lines. **(Progress:** *A budget of Rs. 2264.63 lakhs was made available to the Medical & Health Dept. out of the REHAB funds on 21-10-2013 for equipping the hospitals in mining areas to deal with the problem of silicosis. This included, inter alia, budget for purchase of 19 Mobile Medical Units. Regrettably not even a single MMU has been procured so far. No doctor has been given any training in occupational diseases so far. The REHAB has sanctioned another Rs. 25 lakhs on 05-09-2014 for Community Health Centres (CHCs) and Primary Health Centres (PHCs) in 5 most affected districts. Medical and Health Department has used considerable sums out of the Environment Safety Cess Fund for purchase of medical equipments that have no use in the detection of silicosis.)*

- (e) State Tuberculosis Officer and District Tuberculosis Officers of the Medical and Health Department will start a programme to detect prevalence of tuberculosis in the 19 mining districts. Those who are found to be having tuberculosis should also be examined for silicosis. **(Progress:** *The department has been organizing regular camps for the detection of TB; however, except in a few districts where NGOs are active in getting camps organised specially for the detection of silicosis, the camps organized by the department has not been successful in the detection of silicosis. The Commission is yet to be informed about the detection of silicosis cases in any mining area where NGOs are not active in such detection.*)
- (f) In the 19 major mining districts, the Collectors will take necessary steps for the prevention of silicosis and providing relief to the victims of silicosis. They will organize quarterly meetings with the representatives of Medical and Health Department, Central Labour Department and Director General, Mines Safety for the same. For this purpose an officer from mine department will be the nodal officer. **(Progress:** *Except for a few quarterly meetings held by Collector, Karauli and one meeting held by Collector, Jodhpur, the Commission is not aware of any such meeting held by any other Collector.*)
- (g) District Collector, Karauli shall through Medical and Health Department get the medical examination of suspected silicosis victims. He shall take steps to sanction ex gratia

payment to confirmed silicosis victims as per the government decision. For this purpose Medical Department will provide mobile vans to Collector, Karauli. **(Progress: Detection of silicosis cases is maximum from Karauli due to the efforts of DVS which is getting adequate support from the district administration.)**

- (h) Labour Department shall take urgent steps to amend the Rajasthan Workmen's Compensation (Occupational Diseases) Rules, 1965, made under the Workmen Compensation Act, 1923, to enable the government to set up one or more Pneumoconiosis Boards. After amendment, notification may be issued to establish Pneumoconiosis Boards in all the Government Medical Colleges of the State. **(Progress: Decision complied with fully. Boards established in 6 govt. medical colleges.)**
- (i) From time to time, review meetings of will be held to assess the action taken on the above decisions. **(Progress: Only one review meeting held by the CS on 10-09-2013.)**

4.3 Decisions taken in the Chief Secretary's Meeting on 10-09-2013 and progress in their implementation:

- (a) Director of Mine Safety (DMS), Ajmer Region informed that in compliance of the directions given in the previous meeting, 250 notices were issued to the lease holders, but most of them were returned undelivered. Hence, due to limited staff, the progress in the registration of mines in various districts was slow. Chief Secretary directed that

Mining Department and Director General of Mines Safety should start a campaign to update the information regarding mines and their lease holders in Rajasthan. It was also decided that in the districts Ajmer, Alwar, Bhilwara, Bundi, Jodhpur, Karauli and Nagaur, where the possibility of mineworkers having silicosis is much higher, Mines Department and Director of Mines Safety should jointly organize workshops under the chairmanship of District Collectors to make mine owners aware of their responsibilities and the need to register their mines and also to create awareness about need to prevent silicosis. In these workshops, lease holders and representatives of mineworkers and NGO's working for the prevention of silicosis should be invited. **(Progress: No campaign so far to update the information regarding mines and their lease holders. No stakeholders' meetings in the 7 districts except those organized by the RSHRC.)**

- (b) Chief Secretary directed that in the 7 districts most affected by silicosis – Ajmer, Alwar, Bhilwara, Bundi, Jodhpur, Karauli and Nagaur - Medical and Health Department and Mines Department should organize mobile medical camps to identify silicosis affected mineworkers and get them examined through Pneumoconiosis Board and if found affected by silicosis, then action should be taken as per the norms. **(Progress: No action so far from Medical & Health and Mines Departments. The funds made available by REHAB for purchase of Mobile Medical Units still unutilized.**

The camps organized for detection of TB are also shown as camps for detection of silicosis; but there is no detection of silicosis from any of these camps.)

- (c) When it was pointed out that in District Karauli, even after producing medical certificate, the Mines Department is asking the silicosis affected persons to produce a certificate of employment from the mine owner before compensation is given, the Chief Secretary directed the Mines Department to issue show cause notices to the officers concerned, ensure that silicosis affected mineworkers are not deprived of the compensation unnecessarily and expedite action for the distribution of funds as per the decisions already taken. He also directed the Finance Secretary to contact Collector Udaipur and sort out the problems in the utilization of Rs 5 lakh provided for the relief of asbestosis victims. He directed the Mines Department to contact Collectors of Jodhpur, Udaipur and Karauli districts to expedite the distribution of the compensation amount to silicosis victims. **(Progress: Distribution of ex gratia payment is going on in the three districts. However, there is inordinate delay on the part of Mining and Finance Departments in sanctioning funds asked for by District Collectors from the REHAB.)**
- (d) When it was brought his notice that compliance reports are awaited on the instructions issued vide Labour Department's order No. 4937-56, dated 19-3-2013, to the Collectors of 19 districts where maximum mining is done, to hold quarterly

meetings with Medical and Health Department, Central Labour Department and Director, Mines Safety for prevention of silicosis and providing relief to silicosis affected mine workers, Chief Secretary directed that d.o. letters should be got issued from him to the 19 District Collectors to ensure these meetings take place in time and to decide a fixed date for these meetings. **(Progress: So far there is no system of quarterly meetings in any of the districts except perhaps in Karauli.)**

- (e) It was decided that Finance Department and Principal Secretary, Medical and Health Department will get in touch the District Collectors and CM&HOs of the 19 districts that were provided funds for the improvement of medical and health services in the year 2012-13 by the Rajasthan Environment and Health Administrative Board (REHAB). It should be ensured that these funds are properly utilized to purchase equipments and to set up mobile units to detect patients of silicosis and to provide them treatment. It was also directed that these mobile units will organize medical camps at different places as per pre-scheduled programmes to detect cases of silicosis among mineworkers. **(Progress: The Commission is not aware of any fund made available to Medical & Health Department from the REHAB in 2012-13. However, REHAB had made available funds in 2011-12, 2013-14 and 2014-15.. Fund utilization is not done by CM&HOs, but by either the Director, Medical & Health or the**

Rajasthan Medical Services Corporation (RMSC). Fund utilisation by both unsatisfactory. No Mobile Medical Units has been set up.)

- (f) Medical and Health Department will take action to depute qualified doctors to all the Pneumoconiosis Boards set up in the medical colleges and fix regular meetings of these boards on a fixed day every week. **(Progress: Pneumoconiosis Boards are examining 20 patients every week on a fixed day. However, hardly any of the doctors nominated to these boards has any formal training on pneumoconiosis.)**
- (g) Labour Commissioner informed that Ministry of Labour, Govt. of India has included mineworkers were also in the National Medical Insurance Scheme (RSBY). In this scheme, 75% of the expenditure will be borne by the Govt. of India and 25% by the State Govt. The insurance company selected for the scheme will take Rs 30/- as registration amount from the mineworker and provide him a biometric smart card. The card holder and 4 nominated members of his family can get free treatment in selected hospitals up to Rs 30,000/- in a year. It was decided that the Mines Department will make available the data regarding mineworkers to the Labour Department which shall formulate a proposal to provide the 25% premium amount from the REHAB or the State's Budget. CS directed that the proposal for this will be sent to the Finance Department after examination by the Mines

Department. After approval of the proposal by the State Government, Labour Department will take action to bring mineworkers under RSBY. **(No Progress)**

- (h) Medical and Health Department will send all the members of Pneumoconiosis Boards and doctors working in the silicosis affected areas for training to detect silicosis to the National Institute for Occupational Health (NIOH), Ahmedabad or National Institute of Miners' Health (NIMH), Nagpur. **(No progress)**
- (i) Mines Department will conduct a detailed study through NIOH or NIMH regarding different problems of mineworkers, especially their health related issues. On receipt of the study report, necessary action shall be taken to improve the health of the mineworkers. **(Progress: On 07-04-2014, REHAB constituted a committee under Principal Secretary Mines (PSM) for formulation of proposals; thereafter, there is no progress and the REHAB meeting on 05-09-2014 was informed that the formation of the committee is "under process".)**

4.4 Decisions taken in the 6th Meeting of Rajasthan Environment & Health Administration Board (REHAB) on 30-05-2013:

- (a) It was decided that silicosis affected person will be given Rs. one lakh and the dependents of those who die of silicosis will be given Rs. three lakhs from the REHAB fund. **(Progress:**

Being complied with. However, there is a big backlog of cases for sanction of ex gratia payment and there is considerable time lag between certification of silicosis by Pneumoconiosis Boards and sanction of ex gratia payment.)

- (b) The payment will be made after 01-06-2013 production of a medical certificate from the Principal of the medical college concerned. **(Progress: This arbitrary cut off date fixed by the REHAB for sanction of ex gratia payments still stands despite the objections of RSHRC.)**
- (c) With a view to ensure quick disposal of the above cases, it was decided that the above ex gratia payment will be made at the district level. **(Progress: The decision to authorize District Collector stands. However, in practice the District Collector has to refer bunches of cases to the REHAB through DMG and PSM and there is inordinate delay in the release of funds to districts.)**
- (d) Rs. 200 lakhs was sanctioned for the above purpose. **(Progress: The amount has been disbursed.)**
- (e) District Collectors Jodhpur and Karauli from where proposal to give ex gratia payments silicosis have been received should be given Rs. 25 lakhs each as advance. Director, Mines & Geology was authorized to give Rs. 25 lakhs advance if proposals for ex gratia to silicosis victims are received from other districts. On receipt of the utilization certificate the above amount will be given again in the form

of a **Revolving Fund**. Mines Department will frame guidelines regarding disbursement of the above relief package by District Collectors and get the same approved by the Finance Department. **(Progress: The amounts mentioned above disbursed. However, no Revolving Fund has been created. DMG authorized to release funds only after clearance of the PSM and PSF. REHAB takes up cases for release of funds only after the utilization certificates are received from Collectors. Many silicosis patients die waiting for the ex gratia payment due to this bureaucratic delay.)**

- (f) Medical & Health Department was sanctioned Rs.22,64,63,000 for purchase of medical equipment during 2013-14. **(Progress: The amount was released on 21-10-2013. Equipments worth Rs.6,42,95,486 purchased. Rs. 1054.50 lakhs was transferred to the PD A/c of RMSCL of purchase of Mobile Medical Units and other equipments. RMSCL has not purchased even a single Mobile Medical Unit so far. Unutilized amount of Rs. 1054.50 lakh surrendered at the end of financial year. Fund utilization is very poor.)**
- (g) The cases of asbestosis received from District Collector, Udaipur and R.N.T. Medical College will be examined on file separately and put up. **(Progress: Not known).**
- (h) Mines Department will submit action plan for the utilization of the Environment & Health Cess for forming self-help groups of women for the welfare of mineworkers and

enrolment of one illiterate/semi-literate member from each family of mineworkers for skill development training with the purpose of self-employment. Proposals will be sent to the Rajasthan Skill Development & Livelihood Corporation for their training in a time-bound manner so that they can be employed in various enterprises. **(No progress)**

- (i) REHAB rules be amended to include welfare of worker and recurring expenditure in it. **(Progress: Not known.)**
- (j) Rs. one crore each was sanctioned to IIT, Jodhpur and Medical College, Jodhpur to carry out research to develop dust sampler that can attract/absorb fine dust particles emitted during cutting and mining activities as an alternative method of drilling. **(Progress: Not known.)**
- (k) Mining Department to make plans to improve the mining techniques to reduce the adverse effects of mining on environment and health. **(No progress.)**
- (l) Rs. 676 lakhs proposed by R.N.T. Medical College through Collector, Udaipur for medical equipment sanctioned. **(Progress: Not known)**

4.5 Decisions taken in the 7th Meeting of REHAB on 07-04-2014:

- (a) The proposals of Medical & Health Department for funds from REHAB Cess Fund should be confined to those needed for the hospitals in mining areas for the protection and

improvement of health of mineworkers. A detailed project for this may be made and submitted in a month. **(Progress: A proposal was put up before the 8th meeting of REHAB)**

- (b) The Environment & Health Cess Rules, 2008 lays down that the Environment and Health Cess Fund will be allocated for the implementation on environmental and health projects in mining areas. Hence, Mining Department shall, after working out scales for expenditure, put up in the next meeting of REHAB detailed guidelines regarding the utilization of these funds for environmental protection in mining areas, welfare of mine workers, health related issues and road construction. **(Progress: Guidelines prepared by the Mining Dept. were considered by REHAB in its 8th meeting. Mining Department was asked to revise the guidelines.)**
- (c) Ex post facto approval was given for disbursing Rs. 22 lakhs as ex gratia payment for the asbestosis affected mineworkers.
- (d) Looking to the expenditure of Rs. 78 lakhs already incurred from Rs. 200 lakhs sanctioned in the sixth meeting of REHAB, an additional provision of Rs.150 lakhs was made for the proposals received during 2014-15 for ex gratia payment to silicosis/asbestosis affected mineworkers. **(Progress: Rs 386 lakhs distributed to the District Collectors so far. Looking to the number of cases of silicosis/asbestosis**

detected, there is immediate need to sanction additional funds.)

- (e) The proposal of the Mining Department, based on the recommendation of the RSHRC to give ex gratia payment to mineworkers who were affected by silicosis before the cut off date of 01-06-2013 fixed by the sixth meeting of REHAB was rejected and it was decided that ex gratia payment will be given only in cases detected after 01-06-2013. **(Progress: RSHRC has taken up the issue with the Chief Secretary. The Commission is yet to hear from him. However, the 8th meeting of REHAB has again rejected RSHRC's recommendation.)**
- (j) Regarding the recommendation of the RSHRC to conduct a study about the issues relating to the health and safety of mineworkers, it was decided to constitute a committee chaired by Principal Secretary, Mines, with representatives from Medical & Health, Environment, Finance, and Labour Departments to formulate proposals for submission to REHAB. **(No Progress)**

4.6 Decisions taken in the 8th Meeting of REHAB on 05-09-2014:

- (a) In compliance of the decision in the 7th meeting, Medical and Health Department has submitted proposals for Rs.99.62 crores to its head of the department for 34 Community Health Centres and 70 Primary Health Centres in 20

silicosis/asbestosis affected districts. The proposals have not been examined by the administrative department and Mines Department. It was decided that the Medical & Health Department will submit within one month proposals for an amount up to Rs 25 crores for the CHCs/PHCs of 5 districts where the number of silicosis patients are high. The project should be prepared in consultation with the Mines Department in respect of CHCs/PHCs that have sufficient sanctioned staff and scope for installation of medical equipment.

- (b) As directed in the 7th Meeting the guidelines prepared by the Mine Department regarding the expenditures from the Environment and Health Cess Fund for environmental protection, health and welfare of mineworkers, road construction etc. were considered and Mines Department was directed to make a revised self-contained set of guidelines and place it before the next meeting of REHAB after getting them examined by Finance (Expenditure) Department.
- (c) It was decided to sanction Rs. 150 lakhs for ex gratia payment to silicosis/asbestosis affected patients and dependents of deceased of districts Jodhpur, Karauli, Udaipur and Nagaur.
- (d) In principle approval of Rs. 384 lakhs for Mining Department was given for making an online management system for implementing the budget announcement No. 99 of Hon'ble Chief Minister for eradication of environmental pollution in

mining areas, to promote zero-waste and eco-friendly mining, mapping of mining areas, ensuring proper wages to mineworkers and protecting their rights.

- (e) Rs. 5 lakh was sanctioned for launching an awareness program in the most affected areas about serious diseases related mining jointly by Mining Department, Medical & Health Department, Environment Department and the local Mine Association.
- (f) The recommendation of RSHRC in complaint No.14/23/613 to do away with the cut off date of 01-06-2013 for giving ex gratia payment to silicosis affected and the dependents of those who died of silicosis was considered and rejected again.
- (g) Regarding the decision in the 7th meeting to constitute a committee under Principal Secretary, Mines to decide about the detailed study about silicosis, it was intimated that the constitution of the committee is under process.

Chapter 5

The Current Scenario, Problems & Recommendations

5.1 In India, Rajasthan has the largest geographical area under mining with an estimated 1,07,000 hectares of land covered by mining activities, which works out to nearly 21% of land area . It has the highest number of mining leases in the country – 2587 leases for major minerals , 10,851 for minor minerals and 19,251 quarry licenses – a total of 32,689 mining leases. A majority of these are sandstone mines and quarries. Sandstone is available in several districts, the major mining areas are located in Jodhpur, Bundi, Alwar, Bhartpur, Karauli, Dholpur and Bhilwara districts. Quarrying and crushing of sandstone involve drilling, blasting, and crushing the large stones into small pieces followed by loading of the stone grit in transport vehicles. Extraction of sandstone slabs require drilling in sandstone formation leading to generation to dust containing substantial amounts of crystalline silica. In many parts of the state, large blocks of stones are manually cut and split into stone slabs of various sizes for use in roofing and floor layering. Prolonged exposure to such dust has been causing silicosis in an alarming number of workers of these mines.

5.2 Majority of sandstone mines are in the unorganized and small-scale sector and almost all of them are operating. These units cater to the growing demands of the infrastructure sector and provide employment to a large number of people in the adjoining areas. Reliable

data about the number of these workers is not available since details of employment are not maintained. DMG has estimated that 25 lakh workers are engaged in mining operations in the state. These workers are among the poorest of poor, a large majority of them belong to the Scheduled Castes and Tribes. Working conditions in the stone quarries are far from satisfactory. Most of the small mine operators are reluctant to adopt measures for the safety and health of their workers and do not comply with the provisions of the Mines Act, 1952 and the rules and regulations made there under. Enforcement of these provisions is a herculean task for the DGMS due to the large numbers and small size of the sandstone mines.

5.3 The Special Report of the NHRC dt. 23-08-2011 submitted to the Parliament, cited in chapter 2 of this report, has praised the Government of Rajasthan (GoR) for the steps it has initiated to enforce the provisions for the health of the mineworkers and to provide financial assistance to them. To quote: *“the State of Rajasthan is the only State which has taken a positive view on this issue and has not only provided financial assistance to the victims of silicosis but also created a fund for the welfare of workers belonging to the unorganized sector. The Government of Rajasthan has also introduced effective enforcement measures with a view to ensuring that workers do not inhale the dust which affects their lungs.”* Again, in the National Conference on Silicosis organized by the NHRC on 25th July, 2014, the recent initiatives taken by the State Government and State Human Rights Commission of Rajasthan were commended by the NHRC.

5.4 However, the RSHRC feels that there is no scope for complacency. The NHRC report is based on the information furnished to it by the GoR. The initiative of GoR to set up the REHAB, and the decision later to use it, inter alia, for the welfare of the mineworkers is quite laudable. So is the ex gratia payment of Rs. 500 lakhs sanctioned for the silicosis victims during the last 18 months. However, the claim of the Mines Department that it has introduced effective measures to ensure that the mineworkers do not inhale silica dust does not stand to scrutiny. The information available with RSHRC indicates that the authorities concerned have neither introduced any measure to ensure that mineworkers do not inhale silica dust nor have they displayed any will to do so. Violation of provisions of the Mines Act by mine owners is quite rampant. This is resulting in a large number of mineworkers contracting silicosis and ultimately succumbing to it. The problem of silicosis is very serious in the state – much more widespread than anticipated – and the response mechanisms of various government departments whose duty it is to prevent and detect this malady is woefully inadequate. There is also total lack of urgency and sensitivity in the release of compensation package already decided and there is no effort so far for the rehabilitation of the affected persons and their families.

5.5 Responding to the notices of the NHRC in silicosis cases, PSM, vide his two letters No. F.12(17)Mines/Gr.I/2010 dt. 25-08-2010 and 24-06-2011 and speaking in the review meeting organized by the NHRC on 10-06-2011 intimated that (i) steps have been taken by the State Medical & Health Department diagnose silicosis cases, (ii) directions have been given to the DGMS to send teams to silicosis prone areas to

ensure safe mining practices and report action taken, (iii) directions have been given to the Rajasthan State Pollution Control Board to monitor RSPM/SPM levels and ambient air monitoring, (iv) State Labour Department has been made responsible to enforce labour laws, (v) IEC activities have been planned to generate awareness, (vi) steps have been taken to upgrade medical facilities in 19 mining districts for the diagnosis and treatment of silicosis, and (vii) coordination is being done with NGOs who can work on the issue of silicosis at the ground level. In the above review meeting, Labour Commissioner informed NHRC that steps have been taken to promote wet drilling and use of masks by the workers. However, none of these assurances has translated into concrete action at the ground level. If the officers concerned of GoR had taken action to implement these assurances, many mineworkers could have been saved from contracting this incurable disease.

5.6 The work done by the RSHRC during the last 2 years is confined mainly to the prevalence of silicosis among the workers of sandstone mines of Rajasthan. This intervention has already resulted in the detection of 891 cases of silicosis, including 57 deaths from it. This is in spite of the fact that the official machinery for the detection of silicosis is yet to start functioning satisfactorily, and efforts for detection is yet to start in the majority of sandstone mining areas as well as other occupations whose workers are prone to develop silicosis. Hence, the detections already made appears to be an insignificant fraction of the actual number of persons likely to be affected by silicosis and it can be presumed that the disease has assumed endemic proportions in Rajasthan.

5.7 Though the Commission's efforts so far have yielded considerable results, there are a large number of problems that have to be sorted out to prevent the incidence of this incurable disease and to bring succour to those who have already contracted it. These problems, along with the suggestions of the Commission, are spelt out in the following paragraphs.

PROBLEMS & RECOMMENDATIONS OF RSHRC

A – Prevention of Silicosis

5.8 **Problem:** Silicosis is the oldest among the occupational diseases to be reported. In Rajasthan, thousands workers engaged in mining and several other occupations have been getting affected by silicosis and dying of it for decades. It is not possible that the government officers in the departments concerned were not aware of the problem at all. However, there was absolutely no effort on their part to take any step to prevent this malady. As pointed out above, though silicosis is an incurable disease, its incidence could have been prevented if the government departments concerned had taken preventive measures prescribed under the relevant laws. If the mine owners and the officers of the government departments concerned, both Central and the State, had not abdicated their responsibilities and had implemented the provisions in the Mines Act, 1952, the Mines Rules, 1955 and Metalliferous Mines Regulations, 1961, the incidence of silicosis could have been prevented to a great extent. The government officers have been, knowingly or unknowingly, becoming abettors to the criminal negligence on the part of mine owners which is resulting in loss of lives

of mineworkers in large numbers and affecting their health in even larger numbers.

5.9 **‘Wet drilling’** is the most important step that can prevent silicosis to a considerable extent among those working in sandstone mines and quarries. Though this is mandatory as per regulations 124(1) & (6)(b)(ii) of Metalliferous Mines Regulations, 1961, generally no arrangement for wet drilling or wetting of drill cuttings during drilling and boring operations is provided. The drilling machines generally used do not have the facility for wet drilling to prevent the atmosphere getting charged with dust. Mine owners do not bother to do wet drilling although drilling machines that can do wet drilling are available for Rs. 45,000 onwards and their existing machines can be equipped for wet drilling. Department of Mines & Geology (DMG), GoR, has been issuing instructions to the mine/quarry owners not to do dry drilling, mainly through advertisements in the print media. This is more of a formality and defense mechanism – the department has shown its total unwillingness to enforce this direction. The Commission is yet to be informed of a single case in which the department has on its own initiative either suspended or cancelled a mining lease/quarry license for not complying with the mandatory provisions for the security, safety and health of the workers. Notices for suspension/cancellation of leases are not issued by the DMG even in the case of mines in respect of which DGMS has issued prohibitory orders.

5.10 DMG has always been taking refuge under the argument that enforcement of mining laws is the responsibility of the DGMS. This

contention is unacceptable. It is beyond comprehension how the DMG is allowing mining work in the mines/quarries before the mine owners get their mines registered by filing Form 1 before the DGMS and the District Collector. In the opinion of the Commission, mining work undertaken by the mine owner in violation of Regulation 3 of Metalliferous Mines Regulations, 1961, which mandate filing of a notice of opening of mine in Form 1, is illegal mining and as such it is the duty of DMG to put a stop to this practice forthwith. It is unlawful on the part of DMG to issue transit permits (*ravannas*) for the transportation of such illegally mined produce. The DMG issues several booklets containing transit permits to the mine owner as soon as the licence fee is deposited. DMG does not bother to see whether the mine owner has filed Form 1 with the DGMS and the District Collector. This practice is unacceptable since drilling and blasting is inevitable in all sandstone mines and hence they are automatically covered under the definition of 'mining' and provisions of the Mining Act become applicable. The fact that out of more than 33,000 mining leases/quarrying licences granted by DMG, a majority of which are reported to be operating, hardly 10% are registered with DGMS, indicates the complicity of DMG in the blatant violation of mining laws and rules by mine owners.

5.11 DMG has conveniently passed on the responsibility of getting these mines registered to DGMS. It is practically not possible for the DGMS to issue notices to all unregistered mines and get them registered in the foreseeable future. The DGMS has a host of other responsibilities with respect to the mines/quarries already registered with it. DMS, Ajmer Region, having jurisdiction over 18 districts and nearly 75% of land area

of the state has about 15,000 sandstone mines in its area. It has just two inspectors, ie. one inspector per 7,500 sandstone mines which renders it practically impossible for it to discharge the responsibilities of DGMS under the Mines Act. Since GoR has issued large number of small mining/quarrying licences, it is a herculean task for the DGMS to get these large number of unregistered mines/quarries registered. Moreover, it is incomprehensible why the DGMS should deploy its limited resources to a task which can be achieved much more easily by the DMG, provided it has got the will to do so. From the interactions of the Commission with the officers of DMG, it has come to the conclusion that they are preoccupied only with maximising revenues from mining and are not bothered about the large scale violations of the provisions for the safety, security and health of the mineworkers. They are totally insensitive to loss of human lives and the widespread health hazards that have developed due to non-compliance of the legal provisions.

5.12 The attitude of the mine/quarry owners is more appalling. As per the information received by the Commission from the officers of the DGMS and DMG, as well as from the NGOs, apart from the violations mentioned above, the following other violations are also quite rampant:

- (i) Metalliferous Mines Regulations 4 and 5: Quarterly and Annual Returns of the mines are not submitted to DGMS.
- (ii) Metalliferous Mines Regulation 34 read with Section 17 of the Mines Act, 1952: A qualified Manager is not appointed in the mine for overall management, control, supervision and direction of the mine. (The Manager has several statutory responsibilities to perform under the Mines Act.)

- (iii) Metalliferous Mines Regulation 160: A blaster is not appointed in the mine though regular blasting is carried out to extract stone slabs.
- (iv) Metalliferous Mines Regulation 124(5)(b): No protective dust mask or dust respirator is provided to workers engaged in drilling operations.
- (v) Metalliferous Mines Regulation 182: Persons employed in the mines are not provided with protective footwear.
- (vi) Metalliferous Mines Regulation 182A: Persons employed in the mines are not provided with helmets.
- (vii) Mines Rule 29B: Initial and periodical medical examination of persons employed in the mines is not carried out.
- (viii) Mines Rule 33: Surface urinals and latrines are not provided for persons employed in the mines.
- (ix) Mines Rule 77 read with Section 48(1) of the Mines Act, 1952: No register of employment in Form B of persons employed in the mines is maintained.
- (x) Mines Rule 78 read with Section 48(4) of the Mines Act, 1952: No register of daily attendance in Form D and Form E of persons employed in the mines is maintained.
- (xi) Mines Rule 44: First-aid stations are not provided at the mines.
- (xii) Mines Rule 30: No arrangement for drinking water is made at the work place for the mineworkers.

5.13 The Commission realized the abject insensitivity of the mine owners when on 20-05-2014, after a meeting of all stakeholders

organized by it at Jodhpur, the President of the local Mine Owners' Association posed the following question before the Commission's Member: **"Sir, we have 70,000 mine workers here. Even if ten percent of them get silicosis, what would the proportion be?"**

The gentleman who posed this question happened to be one of the former nominated members of the REHAB!!! If this is the attitude of the mine owners and if this is the type of persons the Mining/Finance Departments of the State nominate to such an important body, the plight of the mineworkers can very well be imagined. The failure of the departments concerned to enforce the mandatory provisions of law is resulting in loss of thousands of lives of mine workers. This is criminal negligence since if these departments had bothered to enforce at least the important provisions that affect the health of the mineworkers, spread of this incurable disease could have been prevented to a considerable extent. It is also a violation of Article 21 of the Constitution which imposes an obligation of the State to safeguard the life of every person. It also violates the order of the apex court that has in Delhi Jal Board vs National Campaign for Dignity and several other judgements laid down that preservation of human life is of paramount importance.

Recommendation: 1

5.14 The Commission is of the view that there should be no compromise in enforcing the important provisions of the Mines Act, 1952, and the rules and regulations made under it for ensuring the safety, security and health of the mineworkers. The primary duty for the enforcement of these is that of DGMS. DGMS at this point caters only to large corporatized mines – whether it is celebration of safety week or

regular inspection of safety in the mines. The small lease holders have no direct contact with DGMS. Periodic inspection of mines should be made compulsory by the inspectors of DGMS and the report should be made public. It should be made a statutory requirement. Secretary, Labour & Employment, Govt. of India should be made responsible for the implementation. Deterrent punishments should be laid down for the violation of the provisions regarding the health, safety and security of mineworkers and the operation of mines without filing Form 1 before DGMS. It should be made mandatory to suspend the leases of those who violate these provisions and cancel those of repeat offenders. **(Action: Secretaries of Ministries of Mines and Labour & Employment, GoI & DGMS)**

Recommendation: 2

5.15 There is need for the DGMS to launch more prosecutions of the mine owners who are violating the provisions of Mines Act, particularly those relating to wet drilling, operating the mine without filing Form1, provision of protective masks to the workers and maintenance of employment records. **(Action: DGMS)**

Recommendation : 3

5.16 Looking to the large number and small size of the sandstone mines/quarries allotted in Rajasthan, the staff and facilities available with the four offices of Regional Directors of Mine Safety (DMS) having jurisdiction over Rajasthan (annexure-3) needs to be increased several fold. **(Action: Secretary, Min. of Labour & Employment, GoI & DGMS)**

5.17 **Problem:** Implementation the above recommendation by the Ministry of Labour & Employment is bound to take time. The State Government cannot be a mute spectator while this is being done and allow thousands more to develop this incurable disease. Moreover, experience of the DGMS in Rajasthan is that the prosecutions launched by it do not have the desired effect on the mine owners as the courts often let them off with light fines. Disobeying the provisions of the Mines Act and risking fines is a considerably cheaper option for the mine owners. Often cases filed by the Labour Enforcement Officers/DGMS get acquitted due to their failure to identify the correct mine owner. Hence, it is the considered opinion of the Commission that the Mining Department of the State Government is in a much better position to reign in the erring mine owners. There is a need for the DMG to immediately to take steps to convey a message effectively to the mine owners that they cannot treat the provisions of the law with contempt and get away with that.

Recommendation: 4

5.18 Immediate crack down on those who do not do **wet drilling** will be the ideal measure to start with. Gradually the other provisions mentioned above should also be enforced. Mine owners should be directed to strictly comply with the provisions of Regulation 124 (1) and (6) (b) (ii) of the Metalliferous Mines Regulation which makes wet drilling compulsory. Machines for wet drilling are available for Rs. 45,000 onwards. It should be made compulsory for the mine owners to use modern technology for the extraction of sandstone and other dimensional stones from mines. Use of Wire Saw Cutting Machines and

Gang Saw Cutting Machines should be made mandatory. These machines have in-built wet-cutting arrangement – a jet of water is directed at the cutting edge which prevents the dust containing free silica getting airborne. Since these machines are operated from a distance, the operator is at a safe distance. These machines are being used in the state in Kota stone and marble mines. The use of these machines in sandstone mines will minimize drilling which is the main cause of silicosis among mineworkers. Use of drilling machines without water injection system should be prohibited in mining operations and supply of such machines for mining purpose should be prohibited. DMG should also get the sandstone mines inspected through its officers to enforce this important requirement. There should also be joint inspections by the officers of both DMG and DGMS. DMG should start suspending licences of those who do not do wet drilling in their mines/quarries and cancel the leases of repeat offenders. **(Action: Secretary, Min. of Labour & Employment, GoI & DGMS PSM, DMG & DGMS)**

Recommendation: 5

5.19 Implementation of precautionary measures including the protective gears for the workers of silicosis prone industries should be ensured by the enforcement authorities concerned. Dust control devices should be installed to reduce the dust generation at the workplace. National Institute of Occupational Health (NIOH) is learnt to have developed control devices for agate, grinding and quarts crushing industries based on the principle of local exhaust ventilation. The use of wet drilling and dust extractors may be enforced by respective

regulatory authorities. The Central and State governments should encourage development and promotion of various cost-effective engineering control measures to manage silica dust through surveillance of processes or operations where silica is involved. **(Action: Secretary, Mining, GoI, DGMS, PSM, Secretary, Labour, GoR, Chief Inspector, Factories & Boilers Inspection, GoR)**

Recommendation: 6

5.20 In the opinion of the Commission, in the cases of mines/quarries against which the DMS has issued prohibitory orders under section 22(8)(2) of the Mines Act, DMG should issue notices for suspension/cancellation of the mining leases. Such mining leases/quarry licences should be suspended in cases where the mine/quarry owners who do not comply with directions given by the DMS within a reasonable time and cancelled if the relevant provisions are not complied with even after suspension. **(Action: PSM/DGMS)**

Recommendation: 7

5.21 Every lease deed/quarry licence issued should include a clause that no mine which is required to submit of Form1 can start/continue operations before filing of the above form and without complying with the provisions of Mines Act, 1952. **(Action: PSM/DMG)**

Recommendation: 8

5.22 The practice of issuing booklets of transit permits as soon as the mine owner makes payment of the lease money should be stopped

forthwith. Such booklets should be issued only after the mine owner submits Form 1 before the authorities concerned. **(Action: PSM/DMG)**

5.23 The onus of filing Form 1, reporting safety violations, occurrence of occupational diseases to the DGMS and other authorities concerned is that of the owner, manager or agent of the mine under the Mines Act and Rules. It is impractical to expect the manager, who is a paid employee of the mine owner, to report the violations. There is a possibility that the mine owner may manage to escape his responsibility by passing on the blame to the manager.

Recommendation: 9

5.24 GoI may like to look at these provisions and bring about necessary amendments, if required. **(Action: Secretary, Mines, GoI).**

5.25 Problem: Government of Rajasthan has issued leases to a large number of mines of small sizes. The size of the lease is as small as 30 m x 60 m for sandstone mines in Jodhpur district and 15 m x 20 m for marble mines in Makrana. There are around 12,000 mines operating in Jodhpur district alone. While this contributes to equitable distribution of mining leases to a wider category of people, it becomes a herculean task for the regulatory agencies like DGMS to enforce the safety provisions.

Recommendation: 10

5.26 GoR has created clusters of mines for complying with the orders of the Supreme Court for the enforcement of environmental issues. It is recommended that the functions of these clusters may be enlarged to

include the compliance of the provisions of the Mines Act also. Alternatively, cooperative societies of about a hundred or more small mines may be formed. Ownership of such clusters should be well defined as per sections 2 and 76 of the Mines Act so as they discharge the role and functions prescribed under section 18 of the Act. (**Action:** PSM)

Recommendation: 11

5.27 Consequent on the landmark Supreme Court ruling on 27th February 2012 in Deepak Kumar vs. State of Haryana, a notification was issued on 9th September 2013 to amend the Environment Impact Assessment (EIA) Notification, 2006. The latest amendment has brought *all* minor mineral leases, quarry licenses and short term permits – *irrespective of size* - under the ambit of environment regulation. Consequently holders mining leases, quarry licenses or short term permits cannot commence new operations or renew their ongoing operations without a valid environment clearance from the State Environment Impact Assessment Authority (SEIAA) for mines below 50 hectares and from the Central Government for over 50 hectares. Hence, the Rajasthan State Pollution Control Board should get actively involved in checking dust control and other pollution control measures in sandstone mines to bring down the incidence of silicosis and save the lives of the workers. If the Board does not have adequate staff to discharge this function, additional staff may be provided. (**Action:** Secretary, Environment & Forests, Secretary, Raj. State Pollution Control Board, GoR)

Recommendation : 12

5.28 There is need to give identity cards to mineworkers. In view of the endemic nature of silicosis in the state and widespread violation of provisions relating to record of employment and daily attendance, the identity card should be a biometric one that contains the record of employment and medical history of the holder. The Commission is of the view that the employment of workers, whether they are regular ones or contract/casual workers, in sandstone mines and other hazardous occupations that expose them to occupational diseases, without identity cards should be prohibited by bringing about necessary amendments to the relevant laws. Medical examination at the time of employment and periodic medical examination prescribed under the Mines Act and the Factories Act should be made mandatory also for the contract and casual labour in hazardous occupations. **(Action: CS/Secretary, Labour & Employment, GoI)**

Recommendation: 13

5.29 Many major areas where sandstone mining is done do not have any source for water even if the mine owners are willing to do wet drilling. They are unwilling to bring water from a distance through water tankers. Hence, in the opinion of the Commission, if the State Government makes arrangements for water in the mining areas, it would be easier to enforce wet drilling. Funds could be disbursed for creation of water sources either by the REHAB or from the Environmental Management Fund set up under the State Government Notification No. E-14(1) Mines/Gr.II/2011 dated 19-06-2012. State Govt. is requested to issue suitable directions in this regard. **(Action: PSM & PSF)**

Recommendation: 14

5.30 Since the mine owners of sandstone mines are conducting their operations in a manner that is injurious to the health of the workers and the general public, District Magistrates should get such mines inspected by subordinate executive magistrates or other knowledgeable persons and launch proceedings under section 133 or 144 of the Criminal Procedure Code, 1973, in appropriate cases. GoR is requested to issue directions to all the District Magistrates in this regard. **(Action: CS)**

Recommendation: 15

5.31 All the above recommendations relate to mining done in sandstone mines for which leases have been issued by the government. The problem of silicosis is likely to be much more serious among the workers of the large number of illegal mines operating in the state. Hence, it is necessary for the government to take effective steps to curb illegal mining. **(Action: PSM/DMG)**

B – Detection of Silicosis

5.32 Problem: A silicosis patient or the family members of a deceased silicosis patient, needs a final certification from the Pneumoconiosis Board to be eligible for the financial package announced by the State Government. In the meeting held by the Chief Secretary on 28-01-2013 it was decided that the certification will be done by the CM&HO. Simultaneously another decision was taken that Pneumoconiosis Boards shall be set up in all the government medical colleges. However, REHAB in its meeting held on 30-05-2013 decided that the ex gratia payment will be distributed after certification by the Pneumoconiosis Board. This

decision finds mention in the minutes of the review meeting of the Chief Secretary held on 11-09-2013 also. Experience has pointed out the need to amend this decision.

5.33 Pneumoconiosis Boards have been set up under the Rajasthan Workmen's Compensation (Occupational Diseases) Rules, 1965, made under the Workmen Compensation Act, 1923. Certification by the Pneumoconiosis Board is required for filing compensation claims before the Labour Courts set up under the above Act and Rules. Experience has revealed that the workers generally working in sandstone mines are not able to file any claim before the Labour Courts for compensation because there is no record of their employment due to the violation of mandatory legal provisions by the mine owners. Even if these provisions are fully enforced, which seems unlikely, still most of these workers may not be able to seek compensation from Labour Courts under the above mentioned provisions as most of them are contract labour or casual labour moving from one mine to another depending upon the availability of employment. Mine owners do not maintain any employment record even in respect of those workers who are regularly employed by them. In most places, they have been resorting to 'outsourcing' to evade their legal liability. That is the reason why so far no mineworker who is suffering from silicosis or the dependents of those who died of it, has approached a Labour Court for compensation. Hence, in the opinion of the Commission, the requirement of certification of silicosis by the Pneumoconiosis Board is a futile exercise as far as most of the mineworkers are concerned. Moreover, it causes considerable hardship to these indigent mineworkers who have to first appear before the

medical officers of the district for the tests and then again appear in small batches for the same tests before the Pneumoconiosis Board, the doctors of which have no special training for the detection of silicosis. Even the silicosis patients who have been certified by the NIMH, the body having maximum expertise in this field in India, have to be certified again by the Pneumoconiosis Boards that do not possess any expertise. As the Pneumoconiosis Boards are currently examining not more than 20 suspected cases of silicosis per week, there is a distinct possibility that some of the identified silicosis patients may die without being examined by the Board and without getting the ex gratia payment announced by the government. In such cases, the issue of giving ex gratia payment to the dependents of such deceased persons also will get complicated. Further, the valuable time of senior and busy specialist doctors manning the Pneumoconiosis Boards is being wasted in this avoidable exercise. The Commission had taken up this issue with the State Government and requested the Principal Secretaries of Mining, Finance, Medical & Health, Medical Education and Labour Departments to hold a meeting and sort out this issue. Regrettably, nothing concrete has been done so far. It may be pertinent to mention here that in 2010 the NHRC had recommended compensation to 21 persons who had died of silicosis based on their treatment records available in the hospitals or with the dependents and no certification from any authority was insisted upon for giving compensation.

Recommendation: 16

5.34 It is the considered view of the Commission that, as decided in the meeting of the Chief Secretary dt. 28-01-2013, the certification of

silicosis patients for disbursing the ex gratia payment announced by the State Government may be done by the medical officers at the district level. Doctors in the districts with adequate training in pneumoconiosis may be appointed as **Certifying Physicians** or a Pneumoconiosis Medical Board consisting of a group of doctors posted in the district may be authorized to issue such certificates. The existing Pneumoconiosis Boards in the Medical Colleges may be made appellate bodies against the decision of the Certifying Physicians or the District Pneumoconiosis Medical Boards. **(Action: CS, PSF, PSM, Principal Secretary, Labour Department)**

Recommendation: 17

5.35 Pneumoconiosis Boards may continue to exist in all the government medical colleges so that any patient having an occupational disease and documentary evidence of employment can approach it for certification. GoR may consider amending the Rajasthan Workmen's Compensation (Occupational Diseases) Rules, 1965, made under the Workmen' Compensation Act, 1923, to make the arrangements recommended in the preceding recommendation applicable for compensations under the above Act as well. **(Action: Principal Secretary, Labour Department).**

Recommendation: 18

5.36 It is established practice that for the proper diagnosis of silicosis/asbestosis, subject X-rays have to be compared with the standard set of chest radiographs provided by ILO and read as per the ILO classification. Presently, the Pneumoconiosis Boards in the state do not have nor use these standard set of chest radiographs provided by

ILO. It is not clear on what basis they reject a suspected case of silicosis/asbestosis, and why such rejection should be accepted unchallenged by a patient. There should be immediate steps to ensure that the Pneumoconiosis Boards acquire the standard set of chest radiographs provided by ILO and their members are properly trained in use of ILO classification in evaluation of disability. **(Action: PS ME)**

Recommendation : 19

5.37 The doctors of these Boards and those at the district level, including those at the Primary/Community Health Centre in sandstone mining areas, should be got trained for the detection and treatment of silicosis without any further delay, as decided in the meeting of Chief Secretary dated 11-09-2013. Funds have been made available for this purpose by the REHAB meeting held on 30-05-2013. **(Action: PSH, PSME)**

5.38 Problem: The basic responsibility to detect silicosis is that of the Medical Department of Rajasthan. However, the department has done precious little in this direction. The 981 cases of silicosis detected in the state so far was primarily thanks to the efforts of two NGOs – Mine Labour Protection Campaign Trust (MLPC) in western Rajasthan and Dang Vikas Sansthan (DVS), Karauli in eastern Rajasthan; the latter got unstinted support from NIMH. The first detection was done after MLPC made a complaint to the NHRC in 2009 and NHRC team visited Jodhpur for enquiry. The NHRC team was able to detect 72 cases of silicosis out of which 22 patients had passed away.

5.39 The government agencies responsible for the prevention and detection of silicosis did not follow up this detection – a step that responsible public servants should have taken – and thus lost the opportunity to prevent and detect this malady. None of the commitments made by them to NHRC were followed up by the agencies concerned. Though funds were made available by the REHAB to strengthen the medical facilities available in the 19 mining districts and equip the hospitals with capacity to detect silicosis, regrettably the Medical and Health Department has failed to utilise these funds properly, create adequate infrastructure, train its doctors in the detection and treatment of silicosis or do any detections of the disease through its own doctors where the NGOs have not intervened. The second meeting of REHAB organized on 03-06-2011 sanctioned Rs. 2581.62 for this purpose. Out of this, Rs. 1277.33 was utilised for purchasing CT Scan Machines for 7 districts and C-Arm Machines for 10 districts and some amount was utilized for purchase of medicines. The balance Rs. 1304.23 lakhs was surrendered at the end of the financial year. None of these equipments purchased is required for the detection of silicosis.

5.40 On 21-10-2013, the department got Rs. 2264.63 lakhs from REHAB for the purchase of 37 digital X-ray machines 300MA, 1 CT scan machine, 19 Mobile Medical Units, 35 Nebulizers and logistics. The department surrendered Rs. 1128.69 lakh at the end of 2013-14. Out of the remaining Rs. 6,42,95,486 transferred to the PD a/c of Rajasthan Medical Services Corporation Ltd (RMSCL), 34 Digital X-Ray Machines and 34 Spirometers were purchased. The department and RMSCL are sitting over the remaining amount on the plea that it is insufficient to

purchase 19 Mobile Medical Units, 34 Nebulizers and logistics and has moved the State Government for additional budget. It is surprising that even if the funds are not sufficient to purchase all the equipments, why the department did not purchase most needed equipments within the available budget and move for additional budget. It is incomprehensible why anyone should think of purchasing Mobile Medical Units for all the 19 mining districts at one go and why the department could not have purchased Mobile Medical Units for at least the districts most likely to be affected by silicosis. Moreover, except X-ray machines, spirometers and Medical Mobile Units, none of the other items for which the department requested for budget and purchased or is in the process of purchasing, is useful for neither detection nor treatment of silicosis. It appears that under the garb of setting up facilities for the detection of silicosis, the department is trying to get as many as medical equipments as possible required for its normal routine functioning. The Commission feels that this is misuse of REHAB funds. It is also not clear whether the department has consulted any expert on occupational diseases before deciding on the equipments to be purchased and before drawing up the specifications for the Mobile Medical Units – if this has not been done, it is quite possible that these units may not be useful for detection of silicosis.

5.41 REHAB in its meeting on 05-09-2014 agreed to give up to Rs. 25 crores to the Medical & Health Department for the upgradation of the facilities in CHCs/PHCs of 5 districts where the number of silicosis patients are high. It is not clear whether the Department intends to consult any expert on pneumoconiosis before implementing this project.

Recommendation: 20

5.42 Department of Medical & Health should consult experts on silicosis/occupational diseases before deciding on the medical equipment needed for detection of silicosis and their specifications. **This should now be done before the Mobile Medical Units are purchased.**

The department should purchase as many Mobile Medical Units as possible within the available funds without waiting for budget to purchase all the 19 units sanctioned. The funds given from REHAB to Medical Department should be utilized only for the detection and treatment of the occupational diseases suffered by mineworkers. Principal Secretaries of Finance and Medical Departments, Director, Medical & Health and MD, RMSCL should sit together and sort out the problems regarding fund utilisation as the Medical Department has not been able to fully and timely utilise funds made available from REHAB during the last three and a half years. **(Action: PSF/PSM&H/Dir. Medical & Health/MD, RMSCL).**

5.43 Problem: Some NGOs have been taking up regularly the problems of mineworkers with the government. Since the detection by the NHRC, DVS has been taking X-rays of suspected silicosis patients and sending them to the National Institute of Miners' Health (NIMH), Nagpur. It has been able to detect 400 cases of silicosis in this manner in districts Karauli, Dholpur, Bharatpur and Dausa. It has also been able to detect another 150 cases of silicosis with the help of Dr. P. K. Sishodiya, former Director, NIMH. Had these NGOs got the cooperation of the government authorities concerned, the number of detections would have been much higher. Earlier, their efforts were being ignored

by the government authorities concerned and only after this Commission's intervention they started getting breakthrough in detections. However, there are still several problems being faced by them and silicosis affected mineworkers. The role played by the District Collectors of Karauli, Jodhpur and Dausa, in the detection and prevention of silicosis and the assistance rendered by them to the above mentioned NGOs is commendable.

5.44 Detection of silicosis in Rajasthan has been only in those areas where these two organisations have been active while the prevalence of the disease is likely to be there in all areas where sandstone mining is done. Though the NGOs mentioned above have been working in Jodhpur and Karauli, they have been taking up suspected cases in some new districts at the behest of RSHRC. However, at present they do not have the capacity to undertake screening in all the affected areas due to resource constraints.

5.45 Moreover, the work of NHRC, RSHRC and the NGOs mentioned above regarding silicosis in Rajasthan has been limited only to one occupation, viz., sandstone mining. There are several other occupations where the workers are likely to be affected by silicosis. The Expert Group constituted by the NHRC has identified the following industries whose workers are at the risk of silicosis:

- All stone quarries and crushers
- Quartz mining
- Foundries
- Sand blasting

- Ceramics industries
- Gem cutting and polishing
- Slate/pencil industries
- Construction
- Glass manufacture industries
- Other mining industries

5.46 In several areas of the state large number of workers are engaged in carving and sculpting using sandstone. Compared to mineworkers, such workers are likely to develop Accelerated Silicosis in a shorter duration due to intense exposure to large amounts of fine silica dust. Generally, mineworkers with only 10 years or more of exposure have been detected with silicosis. On our request, DVS, through the NIMH, has been able to detect 53 cases of silicosis among the workers engaged in carving and sculpting of sandstones in Sikandra (distt. Dausa). During a meeting organized on the subject by the Commission at Dausa on 15-07-2014, in which Dr. P.K. Sishodiya, former Director, NIMH, was also present, from the feedback received from the owners of such units, it appears that occurrence of silicosis is very common in those who work in this industry and at least 8-10 people died due to silicosis in the recent past. After the above meeting, another 14 cases have been detected from the medical camps organized by the district administration through the local Medical Department.

5.47 Two other industries that are common in Rajasthan are stone crushers and quartz grinding. The incidence of silicosis is likely to be widespread in these industries. Though the Commission has written to

the Collectors and CM&HOs of a couple of districts to get the workers of these two types of occupations examined for silicosis, action is yet to be taken. Chief Inspector, Factories & Boilers Inspection Department, Govt. of Rajasthan has informed the Commission that the medical tests of workers organized by the department in the quartz and asbestosis processing units in the State have not revealed any case of silicosis or asbestosis. This, is quite surprising in the light of the silicosis and asbestosis cases detected in the last 2 years after the Commission took up the issue of these two diseases among mineworkers.

Recommendation: 21

5.48 Each worker working in a hazardous occupation should be examined by a trained medical officer periodically and the expenses for this should be borne by the employer where identified. Apart from the initial and periodical medical examinations, such examination should also be carried out at the time of cessation of employment. **(Action: PSM&H)**

5.49 Problem: The Mines Act, 1952 and the Mines Rules, 1955 provide for the initial and periodic medical examination of mineworkers. Rule 29 (b) provides for initial medical examination of every person to be employed in the mine and periodic medical examination once every five years of persons employed in the mines. The routine initial or periodic medical examination should include -

- ☞ General physical examination,
- ☞ A full size postero-anterior chest radiograph,
- ☞ Lung Function Tests (Spirometry)

5.50 Since the mine owners do not get the mineworkers medically examined, and there are several practical difficulties in enforcing this rule, there is need for the state authorities to launch health surveillance programmes for detection of silicosis.

Recommendation: 22

5.51 Rajasthan is rich in minerals and has thousands of mines and mineral based industrial units, a large numbers of workers, approximately 30 lakhs, are potentially exposed to silica dust and are at the risk of developing silicosis and other pneumoconiosis. Also, studies conducted by National Institute of Miners' Health (NIMH), Nagpur; National Institute of Occupational Health, Ahmedabad; NGOs, etc., have shown high prevalence of silicosis and other pneumoconiosis among persons employed in mines and mineral based industries. Hence, the Commission is of the view that there is urgent need for launching a comprehensive **"Rajasthan State Pneumoconiosis Control Programme"**. The programme should include compulsory health surveillance of persons potentially exposed to silica and other dusts, monitoring of dust levels at workplaces, rehabilitation of persons affected by silicosis and other occupational diseases, awareness and education programmes, etc.

Recommendation: 23

5.52 The present healthcare system under state Medical and Health Department that is already overburdened with numerous responsibilities is unlikely to be able to undertake the additional responsibilities to

satisfactorily implement "Rajasthan State Silicosis / Pneumoconiosis Control Programme". Therefore, the Commission is of the view that there is need to set up an agency solely dedicated to the programme with expertise, sufficient manpower and infrastructure for the implementation of the programme. Hence, it is recommended that GoR may consider setting up a **"Rajasthan State Institute of Occupational Health"** for developing and implementing strategies to prevent detect and treat occupational diseases, for capacity building among the doctors and para-medical staff, to undertake research etc. The "Rajasthan State Pneumoconiosis Control Programme" and the Rajasthan State Institute of Occupational Health" may be funded from "Rajasthan Environment and Healthcare Cess Fund" administered by the REHAB or from other sources. A concept note on the proposed institute is attached at annexure 4. **(Action: CS, PSM&H)**

Recommendation: 24

5.53 Until a final decision is taken on the above recommendation and the modalities are worked out, GoR may, as an interim measure consider outsourcing the functions of the above Institute to an expert agency/individual in view of the seriousness of the problem of occupational diseases in the state. There is urgent need to identify "Hot Spot Areas" of mines and industries with potential risk of silicosis and conduct pilot studies to determine the prevalence of silicosis. **(Action: CS, PSM&H)**

Recommendation: 25

5.54 The Commission has been told that the Union Government has indicated its intention to eliminate silicosis by the year 2030. Hence the

State Government should implement its programme in collaboration with various departments concerned of the Union Government and the industries concerned. Both the governments should strengthen their enforcement and regulatory agencies with adequate manpower and infrastructure facilities for enforcement of the relevant legal provisions. These agencies should have trained officers for workplace monitoring and health surveillance. The industry professionals should also be trained in monitoring of dust level. **(Action: Secretaries, Ministries of Mining, Labour & Employment, Health & Family Welfare, GoI, DGMS, PSM&H)**

5.55 **Problem:** The suggestion of RSHRC, made during the meeting of Chief Secretary on 10-09-2013 that the government should conduct a detailed survey through NIMH or NIOH regarding the different problems faced by mineworkers, especially their health related issues was approved and Mines Department was directed to take necessary action to conduct this survey. This suggestion was made since no one has any idea about the actual extent of the problem, the occupations that cause silicosis, and the areas affected in the absence of which formulation of effective policies to deal with the problem is not possible. The REHAB in its 7th meeting on 07-04-2014 decided to constitute a committee under PSM with representatives of Departments of Medical & Health, Finance & Labour to formulate proposals for submission to REHAB. So far no progress has been made in this respect. REHAB meeting on 05-09-2014 was informed that action for the constitution of the committee is *'under process'*. The pace at which this important decision is being dealt with exemplifies the insensitivity of the government departments concerned

to the serious problems faced by mineworkers and workers of other hazardous industries.

Recommendation: 26

5.56 This decision needs to be implemented at the earliest. In view of the detection of silicosis in some other occupations and possibility of asbestosis in asbestosis processing units, the scope of the study needs to be made more comprehensive. The study should cover both the existing workers and those who have left after working for a sufficiently long time to make them susceptible to contract an occupational disease. The government may like to consult some experts and RSHRC also while formulating the proposal for the study, and involve them in guiding and supervising the study. **(Action: CS, PSM, PSF).**

Recommendation: 27

5.57 As announced by the Hon'ble Health Minister in the Rajasthan *Vidhan Sabha* on 17-09-2014, while responding to a question on silicosis, Health Department should without any lose of time launch an ICE (information, communication and education) campaign in mining areas and also in areas where industries whose workers are at the risk of silicosis are located. The campaign should make the mine/industry owners and workers aware of the relevant legal provisions, both the owners and workers should be sensitized about the preventive steps including wet drilling, use of protective gear and other dust control measures, educate the workers about lifestyle changes required and emphasize on the need for initial and periodical medical examination. Since the mineworkers are mostly illiterate and poor, folk media (*lok*

kala), audio-visual programmes including street plays, pantomimes, films, puppet shows etc will be more effective than just briefing, issue of advertisements and distribution of literature. Government Departments do not have the capacity to organize such ICE programmes effectively and hence the department will have to outsource this job to good non-governmental organizations and adequately finance them. Electronic media can also be used effectively for the purpose. This should be done on a regular basis in the mining areas and the places where the industries concerned are concentrated. **(Action: CS, PSM&H)**

5.58 Problem: Silicosis is a notified disease under Mines Act 1952 and the Factories Act 1948. As such, all District/Primary Health Centres/Hospitals/Pneumoconiosis Boards in the country will have to report the cases/suspected cases of silicosis to the relevant authorities. Section 25 of the Mines Act lays down that-

- (1) Where any person employed in a mine contracts any disease notified by the Central Government in the official Gazette as a disease connected with mining operations the owner, agent or manager of the mine, as the case may be, shall send notice thereof to the Chief Inspector and to such other authorities in such form and within such time as may be prescribed.
- (2) If any medical practitioner attends on a person who is or has been employed in a mine and who is or is believed by the medical practitioner to be suffering from any disease notified under sub-section(1), the medical practitioner shall without delay send a report in writing to the Chief Inspector stating –

- (a) the name and address of the patient,
- (b) the disease from which the patient is or is believed to be suffering, and
- (c) the name and address of the mine in which the patient is or was last employed.

5.59 In a situation where the mine owners do not maintain any record of their employees, circumvent legal obligations by disguising their employees as contractual/casual labor, do not appoint managers of mines and merrily violate all provisions relating to the health and security of the mineworkers, they cannot be expected to notify the authorities about occupational diseases. Surprisingly, none of the doctors who have been detecting/treating silicosis or asbestosis patients has notified DGMS or the Collector about these cases. In many cases this may be due to their ignorance about this legal obligation; at least in some cases it is due to the reluctance to point out pneumoconiosis due to various reasons. A case of reluctance of a board constituted by one of the apex institutes in the country to give a definite diagnosis of pneumoconiosis has come to the notice of this Commission. In a large number of cases, due to lack of training, silicosis is misdiagnosed and treated as tuberculosis creating further complications for the patient. Until ex gratia payments were announced by GoR, the workers themselves have not been reporting cases of silicosis for the fear of losing their jobs.

Recommendation: 28

5.60 Departments of Medical & Health and Medical Education should immediately bring the above mentioned legal provisions regarding the

reporting of pneumoconiosis to the notice of doctors and instruct them to notify them to the authorities concerned without fail. All concerned should be advised to report the cases even if the particulars of employers of the affected persons are not available. A list of the offices of Regional Directors of DGMS having jurisdiction in the state is at annexure-4. The doctors who detect silicosis can send report to the office having jurisdiction over the district in which the patient has been working. **(Action: PSM&H, PSME)**

Recommendation: 29

5.61 The doctors posted in the Pneumoconiosis Boards, District Chest Hospitals and Primary/Community Health Centres/Hospitals in the sandstone mining areas and other areas having industries whose workers are at the risk of silicosis should be trained in the prevention, detection and treatment of silicosis and other occupational diseases. It has been alleged that the doctors in the state are creating complications for the patients of silicosis by giving them treatment for tuberculosis. The interaction of the Commission with these doctors has revealed that they, including those who are manning the Pneumoconiosis Boards, have neither any expertise nor formal training about these aspects. As per the directions given in the meetings conducted by the Chief Secretary, funds have been provided by the REHAB on 30-05-2013 to the Directorate of Medical & Health, for purchasing equipments and the training of doctors in pneumoconiosis, but training of not even a single doctor has been undertaken so far and the funds have lapsed. Looking to the likelihood of silicosis in this State having the largest geographical as well as mining areas, there is also necessity to develop Master

Trainers to impart training to all public health doctors/paramedics for early diagnosis and detection of silicosis. After discussions with various authorities, it appears that not many trained professionals are available in detection of silicosis and use of ILO Classification in the state. The Commission is of the view that training of medical doctors in detection of silicosis/pneumoconiosis is an urgent requirement and may be entrusted to NIMH, NIOH or any other expert. **(Action: PSM&H)**

Recommendation: 30

5.62 Since there is need to involve the paramedical staff posted in villages in mining areas in the detection and tracking of silicosis to detect silicosis among the workers who have left their workplaces due to ill health, there is need to train them also apart from the doctors. (Action: PSM&H, DM&H)

Recommendation: 31

5.63 The Central and State Govts. may consider bringing silicosis under the National Rural Health Mission (NRHM). GoR may also like to involve Panchayats in the detection of silicosis and awareness building programme. With proper briefing from the district level medical authorities, the village and panchayat level employees of the medical and health and rural development departments will be in a position to identify suspected cases of silicosis and send them to the hospitals equipped to detect them. Revenue functionaries also can be sensitized to do this. **(Action: CS, PSM&H).**

Recommendation: 32

5.64 Given the extensive reach of the National Tuberculosis Control Programme, and the high prevalence of TB in silicosis patients, it is time to work on an integrated approach whereby the vast network of grassroots staff under the TB programme can be effectively used to monitor vulnerable populations exposed to silica dust. The District Tuberculosis Officers may be directed to document the occupational history and periodically monitor workers at risk from silica exposure in their districts. **(Action: Secretary, Min. of Health & Family Welfare, GoI, PSM&H, GoR)**

Recommendation: 33

5.65 Since silicosis patients routinely approach the Primary Health Centers/Community Health Centers/Chest Hospitals/Medical College Hospitals for treatment, there are lot of cases of silicosis available in the records of these hospitals. Lists of these patients needs to be prepared by all such hospitals and these patients brought to the certifying doctors/Pneumoconiosis Boards with the help of district administration, village level workers and NGOs. **(Action: Chief Secretary, PSM&H, PSME).**

Recommendation: 34

5.66 GoR may like to circulate chapter 2 and annexures 5 and 6 of this report to all the medical officers concerned. **(Action: PSM&H, Dir. Medical & Health)**

5.67 Problem: Lack of proper training to diagnose silicosis often results in contradictory medical reports. Some cases have been brought to the notice of this Commission in which the patient has been undergoing regular treatment for silicosis in the district chest hospitals, but were given negative diagnosis by the Pneumoconiosis Board for silicosis. Similar negative reports have been given in some cases of silicosis detected even by NIMH. When such patients die, the dependents face problem in getting the relief package announced by the State Government.

Recommendation: 35

5.68 When a victim suffering from an occupational disease dies, if the victim has not already been certified for pneumoconiosis by the competent authority, the family members should have an option to get a post mortem examination of the body done to ascertain pneumoconiosis. The request for the post mortem should be made to the District Magistrate, Additional District Magistrate, Sub-divisional Magistrate, CM&HO, Superintendent of the Medical College, or the in-charge of the Government Hospital concerned and the authority getting such request shall get the post mortem done by a medical board. Since the post mortem reports conducted generally in Rajasthan fail to come up with definite conclusions about the cause of death in a majority of cases, the post mortem in pneumoconiosis cases should be done, as far as possible, by a board consisting of the doctors trained in the detection of pneumoconiosis and the findings of this board shall be final as far as evidence of pneumoconiosis is concerned. A simple post mortem examination can detect silicosis, in doubtful cases a histo-pathological

examination can result in a correct diagnosis. **(Action: PSM&H, Principal Secretary Medical Education)**

Recommendation: 36

5.69 The Central and State Governments may like to introduce of special courses on "Environment & Occupational Health" for the junior doctors and interns. **(Action: Secretary, Ministry of Health, GoI, and PSME, GoR)**

Recommendation: 37

5.70 Though silicosis is not an infectious disease, its occurrence is endemic in mining and other areas of mineral processing industry. It is therefore suggested that silicosis and other pneumoconiosis may be made notified diseases under the Rajasthan Epidemic Diseases Act, 1957 till such time the Public Health Act based on the draft Model Public Health Act 1987 prepared by Central Bureau of Health Intelligence, Union Ministry of Labor is enacted for Rajasthan. **(Action: PSM&H)**

C – Financial Assistance

5.71 After the team deputed by the NHRC to enquire into a complaint of the MLPC detected 72 cases of silicosis, including 22 cases of death, on NHRC's recommendation, Government of Rajasthan had in 2010 sanctioned Rs. three lakhs each to the affected families out of the Chief Minister's Relief Fund. Taking this as a benchmark, on the recommendation of RSHRC, the meeting held by the Chief Secretary on 28-01-2013 and the follow up meeting held by the REHAB on 30-05-2013 decided to sanction Rs. three lakhs each to dependents of

mineworkers and Rs. one lakh each to those who were detected with the disease. As per the minutes of the above REHAB meeting "these payments were to be made after 01-06-2013." The Mining and Finance Departments have interpreted the above decision to mean that the above ex gratia payment will be given only in the silicosis cases detected after 01-06-2013 and silicosis patients who die after 01-06-2013. There was no such cut off date decided in the meeting chaired by the Chief Secretary. The REHAB in its 7th and 8th meetings on 07-04-2014 and 05-09-2014 considered and overruled the objection raised by this Commission to this arbitrary cut off date it had fixed.

5.72 This would mean that the dependents of silicosis patients who died before 01-06-2013 will not be eligible for any ex gratia payment from the REHAB. Similarly, the patients who were detected with silicosis before the above date may have to undergo a fresh medical examination (Considering the negative attitude shown at certain levels of the Mining and Finance Departments towards the sanctioning of ex gratia payment to silicosis victims, the possibility cannot be ruled out that they may even deny ex gratia payment to those who contracted the disease before 01-06-2013, even if they produce a fresh certification!) It may be pertinent to mention here that in some cases of silicosis which were detected before 01-06-2013 and some deaths which occurred before that date, the State Government has already distributed ex gratia payment. In view of the fact that since 2010 the Government has been sanctioning ex gratia payment to the dependents of those who died of silicosis, it is doubtful whether fixing of the above arbitrary cut off date would stand scrutiny if any of the interested parties challenge the

decision in a court as it is arbitrary, without any logical basis and violates the right to equality guaranteed under Article 14 of the Constitution.

5.73 The legal responsibility for payment of compensation to the silicosis affected persons is that of the employer. However, since the mine owners, in violation of the provisions, are not keeping the record of people employed by them, the affected persons are not able to file cases under the Workmen's Compensation Act. The Mines Rules, 1955, makes it mandatory for the mine owner to maintain a register of employees (rule 77) and to maintain an attendance register (rule 78). Enforcing these provisions will be a very difficult task since the mine owners will try all means to circumvent these provisions as a large number of cases of silicosis and death from it are being detected and this would make the employers liable to pay large amounts in compensation. The fact that many of the mineworkers are employed either on short term informal contract or on job basis and there is a tendency among the workers also to keep changing their workplace would make it easy for the mine owners to circumvent the legal provisions and avoid paying compensation.

Recommendation: 38

5.74 The alarming number of silicosis cases that have been detected and are likely to be detected in future is due to the total failure of the Central and State Government departments concerned. The manner in which the mine owners in the state are blatantly violating every provision in the rule book is endangering thousands of lives. The failure

of the government authorities to reign them in have made it impossible for the affected workers to seek legal remedy under the Workmen's Compensation Act. The ultimate responsibility for this will lie with the state that has granted the leases/licences and failed to keep a check on the irresponsible behaviour of the mine owners. Hence, if the failure of the government to give any ex gratia payment to the affected persons is challenged in a higher court, it is doubtful whether the government can escape legal liability in view of the constitutional obligation under Article 21 of the Constitution, that imposes a duty on the state to safeguard the life of every person. Hence, the decision of Government of Rajasthan to give ex gratia payment to the affected persons is a sound one and it is the duty of a welfare state like ours to look after the interests of the exploited mineworkers who are among the poorest of poor. Hence, the Commission is of the view that this decision to give ex gratia payment should continue until a better package is worked out and approved. The decision should be implemented without any arbitrary cut off date.

(Action: CS/PSM/PSF)

Recommendation: 39

5.75 In view of the above facts, it is recommended that the State Government may continue to pay ex gratia payment to the silicosis affected mineworkers and the dependents of those who die of it. The Commission also feels that there is a strong case for increasing the financial package. The ex gratia amount of Rs. 3 lakh was decided in the year 2010. It may be pertinent to mention here the NHRC's Special Report dt. 23-08-2011 to Parliament has attached an annexure for calculation of compensation based on Disability Adjusted Life Year

(DALY) developed by the World Health Organization. This calculation has arrived at a compensation of Rs. 13 lakhs to a silicosis patient. It may be pertinent to mention here that Rs. 5-10 lakh compensation and a government job is often given to the families of those who get killed in police firing during public order problems though at least some of those killed may be actively involved in violence. Vide GoR order No. F.2(1)(26)/Accts/Uttarakhand/2013/12441-73 dated 06-09-2013 a financial package of Rs. 5 lakhs each was given to the dependents of those who died or went missing in the floods in Uttarakhand in 2013. In view of these, the State Government may take a liberal view towards silicosis victims, who contract this disease while toiling in an activity that earns considerable revenues for it and also considering the fact the failures of the government departments on several fronts are to a great extent responsible for the incidence of this disease. **(Action: CS, PSM, PSF)**

Recommendation: 40

5.76 The evaluation of disability in silicosis/pneumoconioses remains a matter of opinion among experts as no uniform standards are available and practices vary from country to country. No guidelines have been issued by the central or state governments for evaluation of disability and calculation of compensation and there is wide variation among various companies and government agencies. Therefore, the Commission is of the opinion that an expert group may be setup to formulate guidelines for evaluating disability and prescribing rates of compensation/ex gratia payment in pneumoconiosis cases. Alternatively, the compensation could be calculated based on Disability Adjusted Life

Year (DALY) developed by World Health Organisation (annexure 5). The attached annexure 6, prepared by Dr. P. K. Sishodiya, former Director, NIMH, could be used as a reference for calculating compensation.

(Action: PSM/PSM&H/PSF)

5.77 Problem: There is lot of delay in the disbursement of ex gratia payment to the victims of silicosis. Ideally, as soon as the District Collector gets the certificate confirming silicosis, the ex gratia payment should be made available. The REHAB meeting held on 30-05-2013 had authorized District Collectors to disburse ex gratia payment to silicosis/asbestosis victims. However, in practice, the decision to disburse ex gratia payment still rests with the State Government as there is unwillingness on the part of officers of the Mining and Finance Departments to really delegate full powers to disburse ex gratia payment to the District Collectors. The Collectors obviously cannot move each and every individual case to the government and wait until a bunch of cases are ready. Requests for further funds will be processed only after the above funds sanctioned are fully disbursed by the Collector and utilization certificates sent to the government. This causes considerable delay. The Collectors have to route every letter through the DMG thus adding another unnecessary tier and avoidable delay. The REHAB meeting held on 30-05-2013 mentions about the creation of a **Revolving Fund** of Rs. 25 lakhs with the District Collectors for this purpose, but this decision seems to have been overlooked by the Mines and Finance Departments. The delay in ex gratia payment defeats the purpose for which the provision was made, causes avoidable difficulties

for the patients and some of the patients pass away waiting for the ex gratia payment.

Recommendation: 41

5.78 The decision to authorize the District Collectors to sanction ex gratia payments should be implemented in letter and spirit. Ex gratia payments should be disbursed within two weeks of receipt of the medical certificate by the Collector. As already decided, **Revolving Funds** should be created for this purpose with the Collector of every district from where silicosis cases have been reported. The Collectors of districts Karauli and Jodhpur, from where maximum cases of silicosis cases have been reported, should have a Revolving Fund of Rs. 50 lakhs each and districts Dholpur, Bundi, Nagaur, Bharatpur and Dausa should have Revolving Funds of Rs. 25 lakhs each. The size of these funds should be increased in case large number of cases gets detected in these districts. Revolving Funds with adequate amounts should be set up in other districts also as and when cases of silicosis get detected. There should also be no need for the Collectors to route their proposals for ex gratia/additional funds through the DMG. **(Action: PSM & PSF)**

5.79 Problem: At the time of holding of the meetings mentioned in Chapter IV that made provision for ex gratia payment to victims of silicosis and asbestosis, neither the RSHRC nor the State Government had any knowledge of silicosis or asbestosis cases among workers engaged in occupations other than mining. That is why the financial packages decided in the above meetings were made applicable to only mineworkers. Efforts made by this Commission have already resulted in

the detection of 67 cases of silicosis among the workers employed in sculpting and carving of sandstone in Sikandra (dist. Dausa). They are not mineworkers. The Commission has been told about the existence of several industries that process quartz crystals and asbestosis in various parts of the state. Further, stone crushers that are spread in several parts of the state are other major potential sources of silicosis. The workers of these occupations detected with silicosis and asbestosis will not be able to seek ex gratia payment from the State Government under the above-mentioned decisions. It is quite likely that many such workers will also not be able to approach the Labour Courts for compensation under the Workmen Compensation Act, due to problems similar to those faced by the mineworkers.

Recommendation: 42

5.80 In view of the provisions regarding right to equality guaranteed under Article 14 of the Constitution, it is recommended that the decision for award of ex gratia payment to silicosis/asbestosis afflicted mineworkers may be extended to such patients engaged in other occupations also, if it is found that they are not in a position to get compensation from their employers under the Workmen Compensation Act or the Employees State Insurance Act. **(Action: Chief Secretary, PSF)**

Recommendation: 43

5.81 Those who are engaged in mining of minor minerals such as sandstone, marble etc. pay cess that goes into Environment Management Fund administered by the District Level Environment

Committee chaired by the District Collector. At present those who are engaged in mining of minor minerals are not required to pay Environment and Health Cess as per the notifications issued under Section 16 of the Rajasthan Finance Act, 2008 and the entire fund available with REHAB comes from cess paid by merely those mining six major minerals. The ex gratia payment for silicosis/asbestosis victims and the funds needed for upgradation of medical facilities and several other requirements relating to mining and mining areas are being disbursed by the REHAB from this fund. Looking at the large number of silicosis cases being detected and the fact that the problem of silicosis and environmental degradation is caused by the negligence of the mine owners of minor minerals, the government may consider levying Environment & Health Cess from all those mining minor minerals as well instead of restricting to six major minerals. **(Action: PSM & PSF)**

5.82 Problem 3: It has been brought to the notice of the Commission that ex gratia payment given by the government is not saved by many affected persons/dependents due to their debts and other urgent financial needs.

Recommendation: 44

5.83 It would be preferable to put in place a scheme for payment of a pension to the silicosis affected as well as the dependents of the deceased. The State Government may like to appoint a committee to look into this and formulate proposals. Representatives of all stakeholder groups may be consulted by the committee. This recommendation should not be used as an excuse to discontinue the ex gratia payments

in force. **The current system payment of ex gratia payment should be continued until an alternative and better system is implemented.** The victims of silicosis should be rehabilitated by offering an alternative job or a sustenance pension if they are unable to work. **(Action: CS, PSM, PSH)**

D – Rehabilitation

5.84 REHAB in its meeting on 30-05-2013 directed the Mines Department to submit an action plan for the utilization of the Environment & Health Cess for forming Self Help Groups of women for the welfare of mineworkers, enrolment of one illiterate/semi-literate member from each family of mineworkers for skill development training with the purpose of self-employment, and send the proposals to the Rajasthan Skill Development & Livelihood Corporation for their training in a time-bound manner so that they can be employed in various enterprises. Nothing seems to have been done in this regard.

Recommendation: 45

5.85 Formation and strengthening of Self Help Groups, and federating these SHG groups and skill development seem to be very good approaches to rehabilitate the families of mineworkers. Hence, it is recommended that GoR should take immediate necessary action for the implementation of the above decision. However, before finalising proposals for rehabilitation, the experience of the NGOs that are working for the welfare and rehabilitation of mineworkers may be taken into account and the representatives of mineworkers unions consulted. In 6 districts, ARAVALI has piloted Family Livelihood Resource Centres that

include widows of mineworkers at Karauli. DVS has been persuading over 100 families that got ex gratia payment from GoR to invest at least a part of the amount in livestock (goats) so that they have an additional source income. For enhancing coverage of government schemes and entitlements, local youth from mining communities can be trained as entitlement-facilitators. GRAVIS has successfully organized Self Help Groups in different sections of population in Jodhpur Division and is also working for mineworkers' welfare. Feedback about their ground level experience would make the government's rehabilitation plan more practical and beneficial. The emphasis, however, should be on a family based approach wherein the whole family is not dependent entirely on work in the mines; they should have additional alternative livelihood opportunities that are viable in their respective areas. It is also the considered view of the Commission that as far as rehabilitation is concerned, GoR should strive for maximum involvement of good NGOs for optimum results. **(Action: Chief Secretary, PSM, PSF)**

Recommendation: 46

5.86 ARAVALI, an institution established by GoR, has already established a State Level Forum of various stakeholders from the stone industries, Community Based Organisations, national and international NGOs, development professionals, trade union representatives, workers, subject experts, importers and other stone supply chain actors. This state forum has organized four meetings during the last one year. A note containing the objectives and activities of the State Forum, made available by ARAVALI, is at annexure-7. State Government may consider utilizing the services of the State Level Forum to reach out to the mine

workers and undertake some innovative pilot projects in the various mining clusters for health, safety, rehabilitation etc. of mineworkers.

(Action: CS, PSM, PSF)

Recommendation: 47

5.87 A simple and effective way to take care of silicosis patients and their families will be to declare them as below poverty line (BPL) families. NHRC has issued a directive to this effect to all State Governments. This would make them entitled to the benefits of several schemes meant for BPL card holders, without necessitating any changes in legislation. **(Action: CS)**

Recommendation: 48

5.88 Since silicosis is a notified disease and considered as a 100% disability under the Workmen's Compensation Act, benefits and rehabilitation packages available to disabled persons in the state should be extended to all silicosis patients also. **(Action: CS)**

Recommendation: 49

5.89 Every major mining area with cluster of mines should have mine workers vocational training center to train mineworker in Occupational Health and safety measures once every 5 years as stipulated by DGMS. The REHAB fund and the Environment Management Fund can be utilised to do these trainings. NGOs and other stakeholders can also be encouraged to set up satellite vocational training centres as provisioned for in the Mines Act 1952. **(Action: DGMS and PSM)**

Recommendation: 50

5.90 In the meeting held by the Chief Secretary on 10-09-2013, Labour Commissioner had informed that GoI has brought mineworkers also under the National Medical Insurance Scheme (RSBY). It was decided that proposals should be made and submitted to the government to cover mineworkers of the state under the scheme by providing the 25% premium amount from the REHAB or the state budget. It needs to be examined, in consultation with the representatives of unions of mineworkers and NGOs working for their welfare, whether the proposal is cost effective and useful to the mineworkers in view of the free medicine scheme of GoR. **(Action: PSM, PSF, Labour Commissioner)**

Recommendation: 51

5.91 GoR has given a quota of 5% mineworkers in the allotment of mines. The Commission feels that there is a strong case for having a quota of at least 20% for silicosis victims in the allotment of mines. It would be better to form cooperative societies of such victims and make these allotments rather than allotting to individuals. **(Action: PSM)**

E – Other Issues

5.92 Problem: Mining is a state subject, whereas mine workers are a Union subject. Thus the safety social security of the mineworkers is the responsibility of the Central Government departments, while the allotment of mines and collection of revenue are done by the State Government. Enforcement of labour laws is a Central subject, yet there is no system to monitor the labour situation in the mines and quarries. The primary responsibility for the enforcement of provisions for the

safety and health of mineworkers is that of DGMS while the detection and treatment of silicosis and rehabilitation of the affected workers is the responsibility of the State Government. Naturally, the multiplicity of agencies involved poses several practical difficulties as far as the prevention of silicosis, its detection and subsequent steps are concerned. The agencies concerned are more interested in passing the buck than trying to do what they can. Neither the Central nor the State Governments has any comprehensive policy that encompasses preventive, curative and rehabilitative measures that could be taken for the benefit of silicosis victim. At present there is no mechanism for either coordination or monitoring at the Central or State Government level and that is why the problem of silicosis has assumed endemic proportions.

Recommendation: 52

5.93 Looking to the possibility of the high prevalence of silicosis in Rajasthan, there is need to set up effective institutional mechanisms for the monitoring and coordination between various departments concerned. The Commission is of the view that a **Monitoring Committee** should be constituted under the Chief Secretary. The Committee should consist of the Principal Secretaries and the heads of departments in charge of Mines, Medical & Health, Medical Education, Finance, Pollution Control, Labour and Industries Departments of the State Government, senior officers representing the Central Ministries of Mining, Health and Labour, nominees DGMS, DG FASLI, NIMH and NIOH, representatives of NGOs working for the welfare of mineworkers and workers of industries whose workers at the risk of contracting

silicosis. The Committee should meet once in a quarter for at least a couple of years until the major issues are sorted out; the frequency of the meetings can be reduced to once in 4-6 months later. The Committee should sort out the coordination problems among the various agencies, take steps to enforce the provisions in the Mines Act, 1952 and the Factories Act, 1948, for the safety, security, welfare and health of the workers, particularly those that will reduce the incidence of occupational diseases. The implementation of various labour laws may also be reviewed by the Committee. Time bound targets should be given to the departments concerned to implement the decisions regarding the prevention and treatment of occupational diseases, provisions for compensation/ex gratia payment, rehabilitation, free treatment including free medicine and free ambulance services and social security schemes and ICE activities. **(Action: CS)**

Recommendation: 53

5.94 It is also necessary to constitute similar District Level Committees under the Collector in all districts where the problem of silicosis and other occupational diseases are likely to be significant. **(Action: CS)**

Recommendation:54

5.95 In view of the widespread violation of the provisions and the failure of the existing enforcement authorities, there is need to have flying squads, in major mining districts, consisting of officers of Mining and Pollution Control Departments. They should operate under the overall supervision and control of the District Collector. **(Action: CS, PSM, Secretary, Pollution Control)**

5.96 Problem: Today, due to increase pressure from Supreme Court, the State is forced to look into environmental regulations, but no such concern has been shown for the welfare of the labour. There is also lack of clarity about the role of the Central and State Labour Departments as far as the welfare of mining workers is concerned. According to the State Labour Department, its role is limited to settling claims filed under the Workmen's Compensation Act. As per the feedback given to the Commission by Dy. Chief Labour Commissioner (Central), Ajmer, the role of his office is confined to enforcement of a few legislations pertaining to minimum wages, child labour, contract labour, building and other construction workers etc. and the provisions relating to the health and safety of mineworkers is enforced entirely by the DGMS. It is quite surprising that though silicosis is a major issue affecting not only the welfare of the mineworkers but also their health and life, at present neither the Central nor the State Labour Departments, play any role in dealing with this serious problem.

5.97 There is also no enforcement of provisions relating to minimum wages, child labour bonded labour etc in the mines due to inadequate number of Labour Enforcement Officers in the Central Labour Department. One Labour Enforcement Officer is in charge of around 4 districts, which in Rajasthan would require one Labour Enforcement Officer to look after the welfare of approximately 2 lakh mineworkers in addition to his other responsibilities.

Recommendation: 55

5.98 The health hazards faced by the mineworkers due to the callousness of the employers should also be brought specifically under the purview of the Central and State Labour Departments. There should be a requirement for obtaining NOC from the Labour Department also before a mine can be operated. The NOC should be issued only after the mine owner has registered his mine with the DGMS and made arrangements for wet drilling. There should be regular inspections by the Labour Department to see all aspects regarding the welfare of the mineworkers, including the compliance of provisions of the Mines Act for the safety, security and health of mineworkers and provisions regarding record of employment and attendance. **(Action: Secretaries, Ministries of Mines & Labour)**

5.99 Problem: Of late, dynamite blasting has been replaced with a non explosive demolition mortar, called Sino Crack. The mine owners have asked the workers to use gloves, but that apart no other precautionary measures have been taken. Many mineworkers who are handling this material are complaining of eye related problems.

Recommendation: 56

5.100 It is necessary to assess the safety aspects this material the use of which is becoming increasingly common. Instructions for undertaking adequate safety precautions should be made mandatory. **(Action: Secretary, Ministry of Labour & Employment, GoI, DGMS)**

5.101 The Mines Act is probably the only Act that exists today without any major amendment. Hence, often violators plead guilty because they know that they can get away with negligible fines. For instance, any registered medical practitioner who diagnoses an occupational disease and fails to inform the DGMS can be punished with a mere fine of Rs. 50 under section 25 of Mines Act 1952. However, the penalty of not doing so is Rs. 50. Moreover, the Mines Act, 1952 and the rules and regulations made under it appears to have been made keeping in mind the conditions existing in large corporatized mines and it becomes difficult to apply many of these provisions to smaller mines. The Act originally seems to have been made keeping in mind the situation obtaining in coal mines and need change.

Recommendation: 57

5.102 It is necessary to have a fresh look at the Mines Act, 1952 and the rules and regulations made under it keeping in view the problems pointed out in this report and bring about amendments to solve these problems and effectively deal with the violators so that the problem of the alarming incidence of occupational diseases can be contained. **(Action: Secretaries, Ministries of Mining, Labour & Employment, GoI)**

Recommendation: 58

5.103 MLPC has vide their letter dated 31 May, 2013 submitted a proposal for the formation of Mine Workers Welfare Board (annexure 8) to the Chief Secretary. In view of the enormity of this humanitarian issue, lack of sensitivity shown by the authorities concerned to prevent

silicosis among mineworkers, in spite of the prevention being fairly simple, the need to have an integrated approach to the prevention, detection and rehabilitation of not only the mineworkers, but also others who are exposed to the risk of contracting occupational diseases, the Commission feels that there is need for a independent body to deal with all the issues contained in the above proposal. However, the Commission feels that to deal with the problem effectively the proposed body should be a statutory one invested with adequate power. MLPC's proposal can be starting point for examination and the structure and effectiveness of such agencies existing in Odisha and Madhya Pradesh may be studied and all stakeholders and RSHR consulted before taking a final decision. **(Action: CS)**

Recommendation: 59

5.104 REHAB has a provision for nominate members. It is recommended that GoR may consider nominating an expert on pneumoconiosis and a representative of an NGO working for the welfare of mineworkers to REHAB rather than nominating the representatives of mine owners. **(Action: PSM/PSF)**

Chapter 6

Summary of Recommendations

A – Prevention of Silicosis

1 There should be no compromise in enforcing the important provisions of the Mines Act, 1952, and the rules and regulations made under it for ensuring the safety, security and health of the mineworkers. Deterrent punishments should be laid down for the violation of such and the operation of mines without filing Form 1 before DGMS. It should be made mandatory to suspend the leases of those who violate these provisions and cancel those of repeat offenders. **(Action: Secretaries of Ministries of Mines and Labour & Employment, GoI & DGMS)** (para 5.14)

2 There is need for the DGMS to launch more prosecutions of the mine owners who are violating the provisions of Mines Act, particularly those relating to wet drilling, operating the mine without filing Form1, provision of protective masks to the workers and maintenance of employment records. **(Action: DGMS)** (para 5.15)

3 Looking to the large number and small size of the sandstone mines/quarries allotted in Rajasthan, the staff and facilities available with the four offices of Regional Directors of Mine Safety (DMS) having jurisdiction over Rajasthan needs to be increased several fold. **(Action: Secretary, Min. of Labour & Employment, GoI & DGMS)** (para 5.16)

4 Immediate crack down on those who do not do **wet drilling** will be the ideal measure to start with. Gradually the other provisions meant to ensure the safety, security and health of the mineworkers should also be enforced. Use of drilling machines without water injection system should be prohibited in mining operations and supply of such machines for mining purpose should be prohibited. DMG should also get the sandstone mines inspected through its officers to enforce this important requirement. There should also be joint inspections by the officers of both DMG and DGMS. DMG should start suspending licences of those who do not do wet drilling in their mines/quarries and cancel the leases of repeat offenders. **(Action: Secretary, Min. of Labour & Employment, GoI, DGMS PSM, DMG & DGMS)** (para 5.18)

5 Implementation of precautionary measures including the protective gears for the workers of silicosis prone industries should be ensured by the enforcement authorities concerned. Dust control devices should be installed to reduce the dust generation at the workplace. The Central and State governments should encourage development and promotion of various cost-effective engineering control measures to manage silica dust through surveillance of processes or operations where silica is involved. **(Action: Secretary, Mining, GoI, Secretary, Min. of Labour & Employment, GoI & DGMS,, PSM, Secretary, Labour, GoR, Chief Inspector, Factories & Boilers Inspection, GoR)** (para 5.19)

6 In the cases of mines/quarries against which the DMS has issued prohibitory orders under section 22(8)(2) of the Mines Act, DMG should

issue notices for suspension/cancellation of the mining leases. **(Action: PSM/DGMS)** (para 5.20)

7 Every lease deed/quarry licence issued should include a clause that no mine which is required to submit of Form1 can start/continue operations before filing of the above form and without complying with the provisions of Mines Act, 1952. **(Action: PSM/DMG)** (para 5.21)

8 The practice of issuing booklets of transit permits (*ravannas*) as soon as the mine owner makes payment of the lease money should be stopped forthwith. Such booklets should be issued only after the mine owner submits Form 1 before the authorities concerned. **(Action: PSM/DMG)** (para 5.22-23)

9 GoI may like to look at these provisions making managers of mines responsible for reporting of violations and bring about necessary amendments, if required. **(Action: Secretary, Mines, GoI)** (para 5.24)

10 GoR has created clusters of mines for complying with the orders of the Supreme Court for the enforcement of environmental issues. The functions of these clusters may be enlarged to include the compliance of the provisions of the Mines Act also. Alternatively, cooperative societies of about a hundred or more small mines may be formed. Ownership of such clusters should be well defined as per sections 2 and 76 of the Mines Act so as they discharge the role and functions prescribed under section 18 of the Act. **(Action: PSM)** (para 5.26)

11 Consequent on the Supreme Court ruling on 27th February 2012 and notification issued on 9th September 2013 to amend the Environment Impact Assessment (EIA) Notification, 2006, *all* minor mineral leases, quarry licenses and short term permits – *irrespective of size* – have been brought under the ambit of environment regulation. Hence, the Rajasthan State Pollution Control Board should get actively involved in checking dust control and other pollution control measures in sandstone mines to bring down the incidence of silicosis and save the lives of the workers. If the Board does not have adequate staff to discharge this function, additional staff may be provided. **(Action: Secretary, Environment & Forests, Secretary, Raj. State Pollution Control Board, GoR)** (para 5.27)

12 There is need to give identity cards to mineworkers. The identity card should be a biometric one that contains the record of employment and medical history of the holder. Employment of workers, whether they are regular ones or contract/casual workers, in sandstone mines and other hazardous occupations that expose them to occupational diseases, without identity cards should be prohibited. Medical examination at the time of employment and periodic medical examination prescribed under the Mines Act and the Factories Act should be made mandatory for the contract and casual labour also in hazardous occupations. **(Action: CS/Secretary, Labour & Employment, GoI)** (para 5.28)

13 State Government should make arrangements for water in the mining areas. This would make it easier to enforce wet drilling. Funds

could be disbursed for creation of water sources either by the REHAB or from the Environmental Management Fund. **(Action: PSM & PSF)** (para 5.29)

14 Since the mine owners of sandstone mines are conducting their operations in a manner that is injurious to the health of the workers and the general public, District Magistrates should get such mines inspected by subordinate executive magistrates or other knowledgeable persons and launch proceedings under section 133 or 144 of the Criminal Procedure Code, 1973, in appropriate cases. GoR is requested to issue directions to all the District Magistrates in this regard. **(Action: CS)** (para 5.30)

15 Since the problem of silicosis is likely to be much more serious among the workers of the large number of illegal mines operating in the state, it is necessary for the government to take effective steps to curb illegal mining. **(Action: PSM/DMG)** (para 5.31)

B – Detection of Silicosis

16 Certification of silicosis patients for disbursing the ex gratia payment announced by the State Government may be done by the medical officers at the district level. Doctors in the districts with adequate training in pneumoconiosis may be appointed as **Certifying Physicians** or a Pneumoconiosis Medical Board consisting of a group of doctors posted in the district may be authorized to issue such certificates. The existing Pneumoconiosis Boards in the Medical Colleges

may be made appellate bodies against the decision of the Certifying Physicians or the District Pneumoconiosis Medical Boards. **(Action: CS, PSF, PSM, Principal Secretary, Labour Department)** (para 5.34)

17 Pneumoconiosis Boards may continue to exist in all the government medical colleges so that any patient having an occupational disease and documentary evidence of employment can approach it for certification. GoR may consider amending the Rajasthan Workmen's Compensation (Occupational Diseases) Rules, 1965, made under the Workmen' Compensation Act, 1923, to make the arrangements recommended in the preceding recommendation applicable for compensations under the above Act as well. **(Action: Principal Secretary, Labour Department)** (para 5.35)

18 The Pneumoconiosis Boards should immediately acquire the standard set of chest radiographs provided by ILO and their doctors should be trained in use of ILO classification in evaluation of disability. **(Action: PS ME)** (para 5.36)

19 The doctors of these Boards and those at the district level, including those at the Primary/Community Health Centre in sandstone mining areas, should be got trained for the detection and treatment of silicosis without any further delay, as decided in the meeting of Chief Secretary dated 11-09-2013. Funds have been made available for this purpose by the REHAB meeting held on 30-05-2013. **(Action: PSH, PSME)** (para 5.37)

20 Department of Medical & Health should consult experts on silicosis/occupational diseases before deciding on the medical equipment needed for detection of silicosis and their specifications. **This should now be done before the Mobile Medical Units are purchased.** The department should purchase as many Mobile Medical Units as possible within the available funds without waiting for budget to purchase all the 19 units sanctioned. The funds given from REHAB to Medical Department should be utilized only for the detection and treatment of the occupational diseases suffered by mineworkers. Fund utilisation by the department needs to be expedited and improved. **(Action: PSF/PSM&H/Dir. Medical & Health/MD, RMSCL)** (para 5.42)

21 Each worker working in a hazardous occupation should be examined by a trained medical officer periodically and the expenses for this should be borne by the employer where identified. Apart from the initial and periodical medical examinations, such examination should also be carried out at the time of cessation of employment. **(Action: PSM&H)** (para 5.48)

22 & 23 Looking to the likelihood of widespread prevalence of silicosis and other pneumoconioses in the state among mineworkers and workers of several other occupations, there is urgent need for launching a comprehensive **"Rajasthan State Pneumoconiosis Control Programme"**. Since, the Medical and Health Department does not have the capacity to implement such a programme, GoR may consider setting up a **"Rajasthan State Institute of Occupational Health"**

for developing and implementing strategies to prevent detect and treat occupational diseases, for capacity building among the doctors and para-medical staff, to undertake research etc. **(Action: CS, PSM&H)** (para 5.51-52)

24 Until a final decision is taken on the above recommendation and the modalities are worked out, GoR may, as an interim measure consider outsourcing the functions of the above Institute to an expert agency/individual in view of the seriousness of the problem of occupational diseases in the state. There is urgent need to identify "Hot Spot Areas" of mines and industries with potential risk of silicosis and conduct pilot studies to determine the prevalence of silicosis. **(Action: CS, PSM&H)** (para 5.53)

25 Both the Union Government and the State Government should implement the programme to eliminate silicosis, in collaboration with the industries concerned, and strengthen their enforcement and regulatory agencies with adequate manpower and infrastructure facilities for enforcement of the relevant legal provisions. These agencies should have trained officers for workplace monitoring and health surveillance. The industry professionals should also be trained in monitoring of dust level. **(Action: Secretaries, Ministries of Mining, Labour & Employment, Health & Family Planning, GoI, DGMS, PSM, PSM&H)** (para 5.54)

26 This decision taken in the Chief Secretary's meeting on 10-09-2013 to conduct a detailed study about the problems of mineworkers, particularly those relating to their health, needs to be implemented at

the earliest. In view of the detection of silicosis in some other occupations and possibility of asbestosis in asbestosis processing units, the scope of the study needs to be made more comprehensive. The study should cover both the existing workers and those who have left after working for a sufficiently long time to make them susceptible to contract an occupational disease. The government may like to consult some experts and RSHRC also while formulating the proposal for the study, and involve them in guiding and supervising the study. **(Action: CS, PSM, PSF)** (para 5.56)

27 The announcement of the Hon'ble Health Minister in the Rajasthan *Vidhan Sabha* on 17-09-2014, that ICE campaign will be launched in mining areas needs to be implemented early. The campaign should also cover industries whose workers are at the risk of silicosis. The campaign should make the mine/industry owners and workers aware of the relevant legal provisions, both the owners and workers should be sensitized about the preventive steps including wet drilling, use of protective gear and other dust control measures, educate the workers about lifestyle changes required and emphasize on the need for initial and periodical medical examination. Since the mineworkers are mostly illiterate and poor, folk media (*lok kala*), audio-visual programmes including street plays, pantomimes, films, puppet shows etc will be more effective than just briefing, issue of advertisements and distribution of literature. Government Departments do not have the capacity to organize such ICE programmes effectively and hence the department will have to outsource this job to good non-governmental

organizations and adequately finance them. Electronic media can also be used effectively for the purpose. **(Action: CS, PS, M&H)** (para 5.57)

28 Departments of Medical & Health and Medical Education should immediately bring the legal provisions regarding the reporting of pneumoconiosis to the notice of doctors and instruct them to notify them to the authorities concerned without fail. All concerned should be advised to report the cases even if the particulars of employers of the affected persons are not available. **(Action: PSM&H, PSME)** (para 5.60)

29 The doctors posted in the Pneumoconiosis Boards, District Chest Hospitals and Primary/Community Health Centres/Hospitals in the sandstone mining areas and other areas having industries whose workers are at the risk of silicosis should be trained in the prevention, detection and treatment of silicosis and other occupational diseases. **(Action: PSM&H, PS, ME)** (para 5.61)

30 Since there is need to involve the paramedical staff posted in villages in mining areas in the detection and tracking of silicosis to detect silicosis among the workers who have left their workplaces due to ill health, there is need to train them also apart from the doctors. **(Action: PSM&H, DM&H)** (para 5.62)

31 The Central and State Govts. may consider bringing silicosis under the National Rural Health Mission (NRHM). GoR may also like to involve Panchayats in the detection of silicosis and awareness building

programme. With proper briefing from the district level medical authorities, the village and panchayat level employees of the medical and health and rural development departments will be in a position to identify suspected cases of silicosis and send them to the hospitals equipped to detect them. Revenue functionaries also can be sensitized to do this. **(Action: CS, PSM&H)** (para 5.63)

32 Given the extensive reach of the National Tuberculosis Control Programme, and the high prevalence of TB in silicosis patients, it is time to work on an integrated approach whereby the vast network of grassroots staff under the TB control programme can be effectively used to monitor vulnerable populations exposed to silica dust. The District Tuberculosis Officers may be directed to document the occupational history and periodically monitor workers at risk from silica exposure in their districts. **(Action: Secretary, Min. of Health & Family Welfare, GoI, PS&MH, GoR)** (para 5.64)

33 Since silicosis patients routinely approach the Primary Health Centers/Community Health Centers/Chest Hospitals/Medical College Hospitals for treatment, there are lot of cases of silicosis available in the records of these hospitals. Lists of these patients needs to be prepared by all such hospitals and these patients brought to the certifying doctors/Pneumoconiosis Boards with the help of district administration, village level workers and NGOs. **(Action: Chief Secretary, PSM&H, PSME)** (para 5.65)

34 GoR may like to circulate chapter 2 and annexures 5 and 6 of this report to all the medical officers concerned. **(Action: PSM&H, Dir. Medical & Health)** (para 5.66)

35 When a victim suffering from an occupational disease dies, if the victim has not already been certified for pneumoconiosis by the competent authority, the family members should have an option to get a post mortem examination of the body done to ascertain pneumoconiosis. The request for the post mortem should be made to the District Magistrate, Additional District Magistrate, Sub-divisional Magistrate, CM&HO, Superintendent of the Medical College, or the in-charge of the Government Hospital concerned and the authority getting such request shall get the post mortem done by a medical board. **(Action: PSM&H, Principal Secretary Medical Education)** (para 5.68)

36 The Central and State Governments may like to introduce of special courses on "Environment & Occupational Health" for the junior doctors and interns. **(Action: Secretary, Ministry of Health, GoI, and PSME, GoR)** (para 5.69)

37 Though silicosis is not an infectious disease, its occurrence is endemic in mining and other areas of mineral processing industry. It is therefore suggested that silicosis and other pneumoconiosis may be made notified diseases under the Rajasthan Epidemic Diseases Act, 1957 till such time the Public Health Act based on the draft Model Public Health Act 1987 prepared by Central Bureau of Health Intelligence,

Union Ministry of Labor is enacted for Rajasthan. **(Action: PSM&H)**
(para 5.70)

C – Financial Assistance

38 The decision of GoR to give ex gratia payment should continue until a better package is worked out and approved. The decision should be implemented without any arbitrary cut off date of 01-06- 2013 fixed by the REHAB on 30-05-2013. **(Action: CSPSM/PSF)** (para 5.74)

39 The Commission also feels that there is a strong case for increasing the existing financial package to silicosis victim. **(Action: CS, PSM, PSF)**
(para 5.75)

40 The evaluation of disability in silicosis should be based on Disability Adjusted Life Year (DALY) developed by World Health Organisation. **(Action: PSM/PSM&H/PSF)** (para 5.76)

41 The decision taken by REHAB on 30-05-2013 to authorize the District Collectors to sanction ex gratia payments should be implemented in letter and spirit. As already decided, **Revolving Funds** should be created for this purpose with the Collector of every district from where silicosis cases have been reported. The Collectors of districts Karauli and Jodhpur, from where maximum cases of silicosis cases have been reported, should have a Revolving Fund of Rs. 50 lakhs each and districts Dholpur, Bundi, Nagaur, Bharatpur and Dausa should have Revolving Funds of Rs. 25 lakhs each. There should also be no need for

the Collectors to route their proposals for ex gratia/additional funds through the DMG. **(Action: PSM & PSF)** (para 5.78)

42 In view of the provisions regarding right to equality guaranteed under Article 14 of the Constitution, the decision for award of ex gratia payment to silicosis/asbestosis afflicted mineworkers may be extended to such patients engaged in other occupations also, if it is found that they are not in a position to get compensation from their employers under the Workmen Compensation Act or the Employees State Insurance Act. **(Action: Chief Secretary, PSF)** (para 5.80)

43 Looking at the large number of silicosis cases being detected and the fact that the problem of silicosis and environmental degradation is caused by the negligence of the mine owners of minor minerals, the government may consider levying Environment & Health Cess from all those mining minor minerals as well instead of restricting it to six major minerals. **(Action: PSM & PSF)** (para 5.81)

44 Instead of making ex gratia payments, GoR may consider putting in place a scheme for payment of a pension to the silicosis affected as well as the dependents of the deceased. The State Government may like to appoint a committee to look into this and formulate proposals. **The current system payment of ex gratia payment should be continued until an alternative and better system is implemented.** The victims of silicosis should be rehabilitated by offering an alternative job or a sustenance pension if they are unable to work. **(Action: CS, PSM, PSH)** (para 5.83)

D – Rehabilitation

45 REHAB in its meeting on 30-05-2013 had directed the Mines Department to submit an action plan for the utilization of the Environment & Health Cess for forming Self Help Groups of women for the welfare of mineworkers, enrolment of one illiterate/semi-literate member from each family of mineworkers for skill development training with the purpose of self-employment, and send the proposals to the Rajasthan Skill Development & Livelihood Corporation for their training in a time-bound manner so that they can be employed in various enterprises. The decision should be implemented quickly. GoR should strive for maximum involvement of good NGOs for optimum results and consult them before finalizing the rehabilitation scheme. **(Action: Chief Secretary, PSM, PSF)** (para 5.85)

46 ARAVALI, an institution established by GoR, has already established a State Level Forum of various stakeholders from the stone industries, Community Based Organisations, national and international NGOs, development professionals, trade union representatives, workers, subject experts etc. Government may consider utilizing the services of the State Level Forum to reach out to the mine workers and undertake some innovative pilot projects in the various mining clusters for health, safety, rehabilitation etc. of mineworkers. **(Action: CS, PSM, PSF)** (para 5.86)

47 A simple and effective way to take care of silicosis patients and their families will be to declare them as below poverty line (BPL)

families. NHRC has issued a directive to this effect to all State Governments. This would make them entitled to the benefits of several schemes meant for BPL card holders, without necessitating any changes in legislation. **(Action: CS)** (para 5.87)

48 Since silicosis is a notified disease and considered as a 100% disability under the Workmen's Compensation Act, benefits and rehabilitation packages available to disabled persons in the state should be extended to all silicosis patients also. **(Action: CS)** (para 5.88)

49 Every major mining area with cluster of mines should have mine workers vocational training center to train mineworker in Occupational Health and safety measures once every 5 years as stipulated by DGMS. The REHAB fund and the Environment Management Fund can be utilised to do these trainings. NGOs and other stakeholders can also be encouraged to set up satellite vocational training centres as provisioned for in the Mines Act 1952. **(Action: DGMS and PSM)** (para 5.89)

50 The direction given in the Chief Secretary's meeting on 10-09-2013 to bring mineworkers also under the National Medical Insurance Scheme (RSBY) needs to be reconsidered, in consultation with the representatives of unions of mineworkers and NGOs working for their welfare, to see whether the proposal is cost effective and useful to the mineworkers in view of the free medicine scheme of GoR. **(Action: PSM, PSF, Labour Commissioner)** (para 5.90)

51 GoR has given a quota of 5% mineworkers in the allotment of mines. The Commission feels that there is a strong case for having a quota of at least 20% for silicosis victims in the allotment of mines. It would be better to form cooperative societies of such victims to make these allotments rather than allotting to individuals. **(Action: PSM)** (para 5.91)

E – Other Issues

52 A state-level **Monitoring Committee** should be constituted under the Chief Secretary. The Committee should consist of the Principal Secretaries and the heads of departments in charge of Mines, Medical & Health, Medical Education, Finance, Pollution Control, Labour and Industries Departments of the State Government, senior officers representing the Central Ministries of Mining, Health and Labour, nominees DGMS, DG FASLI, NIMH and NIOH, representatives of NGOs working for the welfare of mineworkers and workers of industries whose workers at the risk of contracting silicosis. **(Action: CS)** (para 5.93)

53 It is also necessary to constitute similar District Level Committees under the Collector in all districts where the problem of silicosis and other occupational diseases are likely to be significant. **(Action: CS)** (para 5.94)

54 In view of the widespread violation of the provisions and the failure of the existing enforcement authorities, there is need to have flying squads, in major mining districts, consisting of officers of Mining

and Pollution Control Departments. They should operate under the overall supervision and control of the District Collector. **(Action: CS, PSM, Secretary, Pollution Control)** (para 5.95)

55 The health hazards faced by the mineworkers due to the callousness of the employers should also be brought specifically under the purview of the Central and State Labour Departments. There should be a requirement for obtaining NOC from the Labour Department also before a mine can be operated. The NOC should be issued only after the mine owner has registered his mine with the DGMS and made arrangements for wet drilling. There should be regular inspections by the Labour Department to see all aspects regarding the welfare of the mineworkers, including the compliance of provisions of the Mines Act for the safety, security and health of mineworkers and provisions regarding record of employment and attendance. **(Action: Secretaries, Ministries of Mines & Labour)** (para 5.98)

56 It is necessary to assess the safety aspects of 'Sino Crack' powder, the use of which is becoming increasingly common in stand stone mines. Instructions for undertaking adequate safety precautions should be made mandatory. **(Action: Secretary, Ministry of Labour & Employment, GoI, DGMS)** (para 5.100)

57 It is necessary to have a fresh look at the Mines Act, 1952 and the rules and regulations made under it keeping in view the problems pointed out in this report and bring about amendments to solve these

problems and effectively deal with the violators so that the problem of the alarming incidence of occupational diseases can be contained.

(Action: *Secretaries, Ministries of Mining, Labour & Employment, GoI*)

(para 5.102)

58 GoR may like to set up a statutory body invested with adequate powers to deal with the problems of mineworkers effectively. **(Action:**

CS) (para 5.103)

59 GoR may consider nominating an expert on pneumoconiosis and a representative of an NGO working for the welfare of mineworkers to REHAB. **(Action:** *PSM/PSF*) (para 5.104)

Chapter 7

Conclusion

This Special Report has been necessitated due to the lack of preparedness in the various departments of the Central and State Governments to deal with the problem of silicosis which has become endemic in Rajasthan. Had the officers concerned shown sensitivity to the problems of the workers engaged in sandstone mining and other occupations that expose them to silica dust, a majority of workers could have been saved from contracting this incurable disease.

7.2 The Rajasthan State Human Rights Commission is deeply concerned about the widespread violation of legal provisions meant for the security, health and welfare of mineworkers. It is a matter of great concern that even a small measure like wet-drilling that can prevent the spread of silicosis to a considerable extent is not being done. Equally alarming is the lack of awareness, capability and preparedness of the state's Medical and Health Department about the problem of occupational diseases.

7.3 The Commission wants to place on record its appreciation for the sensitivity shown at the highest levels of Government of Rajasthan to the problem of mineworkers. Several of the decisions taken by the State Government are worthy of emulation by others. However, the officers who are responsible to implement these decisions and to enforce the legal provisions need to be more sensitive to these problems. Moreover,

there is need to take a holistic view of the entire gamut of problems and evolve feasible solutions rather than a band-aid approach.

7.4 It appears that so far no exhaustive report covering all aspects of the problem of silicosis has been placed before the State Government. It is hoped that this report will bridge this gap and throw light on the ground realities, highlight the problems and offer suggestions to the government authorities to formulate solutions to the problem of silicosis – to prevent its incidence, to speed up the detection in a systematic manner, to render necessary assistance to those who are suffering from it and to rehabilitate the families of those who have died of it. Action on the initiatives suggested in this report by the authorities concerned will go a long way in ameliorating the sufferings of large number of workers. The Commission seeks the cooperation of all authorities concerned to effectively address these issues that have serious implications for the life, health, social security and human rights of the mineworkers. The Commission will be available for any consultations required by the authorities concerned.

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Annexure 1

List of Members of Advisory Group on Mineworkers' Problems

Constituted by RHSRC :

1. Shri M.M. Sharma, Former Director General, Mines Sefty, now residing at Flat No. 603, Emerald Akshita, A-38, Tilak Nagar, Jaipur - 302 004, Rajasthan, Mo.- 97999 91100, e-mail: manm999@hotmail.com,
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021, Rajasthan, Phone: 0141-2359038, Mo.- 98290 65830, e-mail: singhsn2010@gmail.com

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8. Smt. Shasi Tyagi, Secretary, Gramin Vikas Vigyan Samiti (GRAVIS), 3/437, 458, M.M. Colony, Pal Road, Jodhpur - 342 008, Rajasthan, Phone: 0291-2785116/2785317, Fax: 0291-2785116, Mo.- 9828379007, e-mail: email@gravis.org.in, shashityagi@icloud.com

Special Invitees :

1. Representative of Director General, Mine Safety, Dhanbad, Jharkhand-826 001
2. Representative of Mines Department, Govt. of Rajasthan, Govt. Secretariat, Jaipur
3. Representative of Finance Department, Govt. of Rajasthan, Govt. Secretariat, Jaipur
4. Representative of Medical and Health Department, Govt. of Rajasthan, Govt. Secretariat, Jaipur
5. Representative of Medical Education Department, Govt. of Rajasthan, Govt. Secretariat, Jaipur
6. Representative of Director, Medical and Health Services, C-Scheme, Rajasthan, Jaipur

7. Representative of Director, Mines and Geology, Govt. of Rajasthan, Udaipur
8. Representative of Rajasthan State Pollution Control Board, 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur, Rajasthan-302 004
9. Representative of Labour Commissioner, Room No. 17, Shram Bhavan, Shanti Nagar Colony, Hasanpura Road, Jaipur, Rajasthan
10. Representative of Deputy Central Labour Commissioner, Kendriya Shram Sadan, Haribhau Upadhyay Nagar (Ext.), Pushkar Road, Ajmer, Rajasthan-305 004

Annexure 2

**Details of Ex-gratia Payments Made by Rajasthan Government
to Victims of Silicosis/Asbestosis ***

Year	District	Fund Name	Affected/ Deceased	Help Rs.	Total Rs.
2010	Jodhpur	C.M's Relief Fund	21 Dead	3 Lakhs	63 Lakhs
2012-13	Jodhpur	REHAB	7 Dead	----do----	21 Lakhs
	Karauli	----d0----	5 Dead	----do----	15 Lakhs
2013-14	Jodhpur	REHAB	2 Dead	----do----	6 Lakhs
	Jodhpur	----d0----	7 Affected/ 6 Deceased	3 Lakhs for deceased 1 lakh for affected	25 Lakhs
	Karauli	----d0----	16/3	----d0----	25 Lakhs
	Karauli	----d0----	128/-	----d0----	128 Lakhs
	Udaipur	----d0----	16/-	----d0----	16 Lakhs
2013-14	Jodhpur	REHAB	-	----do----	70 Lakhs
	Karauli	----d0----	-	----d0----	80 Lakhs
Total – 449 Lakhs					

* Supplied by Mines Department, Govt. of Rajasthan

Annexure 3**List of Regional Directors under Director General, Mines Safety,
having jurisdiction over Rajasthan ***

Sl. No.	Address of Office	Jurisdiction
1	Director of Mines Safety Gaziabad Region Room No. 201-203, CGO Complex Hapur Road, Gaziabad (U.P.) Mail id: dir1.gzr@dgms.gov.in m.satyamurti@nic.in Ph: 0120 2711597 Fax : 0120 2711597	Districts Alwar, Bharatpur, Dholpur and Karauli
2	Director of Mines Safety Gwalior Region House no. 23, Nehru Colony, Thathipur Gwalior- 474 001 (M.P.) Mail id: upsdirdgms@gmail.com Ph: 0751 2239656 Fax : 0751 2239656	Districts Kota, Baran and Jhalawar
3	Director of Mines Safety Udaipur Region Jhamar Kotra Road, Sector-6 Hiran Magri, Udaipur (Raj.) Ph: 0294 2461925 Fax : 0294 2465513	Districts Jalore, Sirohi, Rajasmand, Udaipur, Dungarpur, Chittorgarh, Pratapgarh and Banswara
4	Director of Mines Safety Ajmer Region Anna Sagar Link Road, Ajmer (Raj.) Pin- 305 001 Ph: 0145 2425537 Fax : 0145 2425792	Districts Ajmer, Barmer, Bhilwara, Bikaner, Bundi, Churu, Dausa, Hanumangarh, Jaipur, Jaisalmer, Jhunjhunu, Jodhpur, Nagour, Pali, Swai Madhopur, Sikar, Sri Ganganagar and Tonk

**Concept Note on
'Rajasthan State Institute of Occupational Health' ***

Rajasthan the largest state in the country is endowed with rich mineral deposits of all type including metals, lignite and oil. The state is also getting rapidly industrialised. Mining is the third largest source of income in the state and provides direct employment to more than 3 million persons. Stone mining, stone carving and other construction activities remain the main employment opportunities for masses. However, little attention has been given to the health hazards associated with these industries suffering of persons employed as most of the work is carried out in unorganised sector and small scale industries. Very little information is available on prevalence of occupational diseases among workers with the state government. Recent surveys conducted by National Institute of Miners' Health has revealed very high prevalence of silicosis among persons engaged in stone mining and more than 900 cases have already been detected. The studies have also shown that the workers affected by silicosis and other lung diseases spend large proportion of their income on medical treatment which pushes them to deeper poverty. This is mainly due to absence of quality research and diagnosis facility in the state.

2 The state authorities and medical fraternity is blissfully unaware of the working conditions and plight of workers and cases of occupational lung diseases are misdiagnosed as pulmonary tuberculosis. There are no training facilities for employers, employees and even medical doctors in occupational health.

3 Therefore there is need to establish an state of the art well equipped institution provide technical expertise and input to state government in planning strategies in detection and prevention of occupational diseases and protecting health of workers. The institute will conduct prevalence studies for occupational diseases, research on occupational health issues, provide training to the medical doctors, create awareness among employers, employees and general public, etc.

4 The main objectives of the institute shall include;

- 1. To be the nodal agency for state government in planning strategies in detection and prevention of occupational diseases**
- 2. To conduct applied research on occupational health issues of workers**
- 3. To assist enforcement agencies and industry in compliance with statues and international standards**
- 4. To provide quality technical support services in Evaluation, Monitoring and Control of workplace hazards**
- 5. To conduct training programmes for medical professional and others in occupational health**
- 6. To promote and conduct awareness programmes for prevention of occupational diseases.**
- 7. To provide quality door step services to mines and industries in health surveillence and workplace monitoring.**
- 8. To create a state level data base on health status of workers and prevalence of occupational diseases.**

9. To provide diagnostic, treatment and rehabilitation services to miners workers affected from occupational and environmental health problems.

5 As the main focus of the state government has been in development of mining industry which employs large number of persons and studies conducted by various agencies have shown that a large number of mine workers in the state are suffering from occupational diseases, the institute should focus its area of activities in mining area and health problems of mine workers. The institute can be established on Public Private Partnership (PPP) basis.

6 This Institute should have state-of-art infrastructural facilities and expertise for conducting Airborne Respirable Dust, Heat Stress, Vibrations, Noise Monitoring & Mapping, Illumination, ergonomic, etc. surveys in underground and opencast mines and routine & specialized health surveillance of persons employed in mines as per provisions of Mines Act, 1952 and subordinate legislations and mandated for concurrent action research with local organisations on issues related to occupational health.

7 The institute should initially work towards;

- **State level programme for prevention and control of Silicosis and other pneumoconiosis.**
- **Identification of "Hot Spot" areas for silicosis and other pneumoconiosis**
- **Health surveillances of persons employed in stone mines in unorganised**

- **Personal exposure assessment studies for noise, dust, vibration, heat stress, ventilation & humidity.**
- **Work environment evaluation for dust, noise, vibration, presence of toxicants, etc as required under MMR 1961/CMR 1957.**
- **Evaluation of Mining Machineries for vibration, noise, dust emission etc**
- **Detection of occupational diseases among workers.**
- **Evaluation of Mining Machineries for vibration, noise, dust emission etc.**
- **Health awareness and promotion programme on occupational health issues with active partnership with NGOs.**
- **Training programme for medical doctors in use of ILO Classification for detection of pneumoconiosis**
- **Conduct research for finding solutions and identifying gaps related to health of workers.**

* Prepared by Dr. P.K. Sishodiya, Former Director, NIMH

WHO Calculation of Compensation for Silicosis Victims based on Disability Adjusted Life Year Lost *

WHO adopted strategy of the burden of disease essentially looks into the new metric of the Disability Adjusted Life Year (DALY) lost due to the disease. The DALY is a summary measure of population health that combines in a single indicator years of life lost from premature death and years of life lived with disabilities. One DALY can be thought of as one lost year of 'healthy' life and the burden of disease as a measurement of the gap between current health status and an ideal situation where everyone lives into old age free of diseases and disability. DALMS for a disease or health condition are calculated as the sum of the years of life lost (YLL) due to premature mortality in the population and the years lost due to disability (YLD) for incident cases of the health condition.

2 With due consideration of different estimates, it might be possible to arrive at DALY value b associated to the silicosis. As a hypothetical example, a calculation to arrive at the DALY values for silicosis, some observations of NIOH studies are shown herewith. During the period from 1981 to 2004, 12 studies have been conducted at NIOH and different work processes such as slate pencil workers, agate workers, quarry workers, ceramic and pottery workers. The prevalence of silicosis has been reported in the range of 12 to 54% in different occupational groups. The average age of workers ranged from 27 to 43 with the duration of exposure varied from 5 to 19 years.

3 It is a model calculation. Wherever possible the data for the local population should be used.

4 Let us consider that the total number of workers exposed to silica in India with potential risk to contract with silicosis is 30 lakhs and the onset of silicosis is at the age of 27 years and the duration of exposure when silicosis reported is 8 years. The survival time data regarding silicosis patients in India after diagnosis of the disease are not available. The literature reported mean survival time (Lou and Zhou, 1989) of silicosis patients after diagnosis is 12.2 years. With the detailed calculation method available for DALY one can arrive at average age of death of 40 yrs is 31.5 yrs and taking discount of 3% into consideration, the life expectancy at the age of 40 yrs becomes 21.82 yrs. Taking the prevalence of silicosis at 32% , the total workers that might have contracted silicosis 9.6 lakhs. Current data regarding mortality due to silicosis in india are not available. For the purpose of the calculation the mortality due to silicosis is taken as 2.3% (Nakagawa, et.al 1985). That means the mortality number is twenty two thousand. The summated YLL and YLD yielded the DALY value as 520262 yrs., and accordingly the total number of years lost per silicosis patient can be arrived at 23 years. With minimum income of a worker of Rs. 36,000/- per annum, the estimated amount of compensation to a silicosis patient might be arrived at Rs. 13 lakhs due to disability adjusted life year lost of 23 years.

Limitations

5 This approach of estimation of compensation has certain limitations due to the non-availability of some basic estimates such as the total exposed population, prevalence estimate based on large scale study, survival time of silicosis patient after diagnosis disability weights, etc. In the above hypothetical calculation the disability weight for silicosis patients is taken as 0.006.

Abbreviation

DALY	:Disability Adjusted Life Year
ESI	:Employee State Insurance
NIOH	:National Institute of Occupational Health
OHSC	:Occupational Health and Safety Committees
YLD	:Years Lost due to Disability
YLL	:Years of Life Lost

*Extracted from special Report of NHRC at 23-08-2011

**A proposal for Guidelines for Disability Evaluation in
Pneumoconiosis ***

1.0 Introduction

Pneumoconiosis is the most important occupational disease of workers in mining and other industries where airborne dust is a major health hazard. At present there is no universally accepted definition of pneumoconiosis. The problems of defining pneumoconiosis is further complicated due to legal interpretation of the term depending on the philosophy of compensation and social security system in various countries.

There are no recognised guidelines for Disability Evaluation and Compensation in pneumoconioses. Hence, it is all the more important that a group of experts should be constituted to formulate guidelines for disability evaluation based on scientific evidence and practices which can be used by various medical boards not only in Rajasthan but all over the country.

2.0 Disability and Disability Evaluation

Disability is defined as any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human-being. Disability reflects disturbances at the level of person, concerning customarily expected activity, performance and behavior.

The permanent disability/disablement is defined as loss or reduction of biological earning capacity due to virtually permanent

consequences of a pathological event causally related to an occupational accident or disease.

Diseases	->	Impairment	->	Disability	->	Disablement
Pneumoconiosis	->	Reduced Lung Functions	->	Breathlessness	->	Inability to work

The evaluation of disability due to occupational diseases, such as pneumoconiosis is far more difficult than disability due to injury. Because, quantification of disability entails not only diagnosis but also the severity of diseases. Hence, it is not possible to draw schedules for pneumoconiosis similar to injuries. The assessment of disability will depend on the information available and to certain extent subjective qualities of assessor.

3.0 Statutory Provision regarding disability evaluation & compensation

Pneumoconiosis is a notified disease under section 89 of factories Act 1948 and Section 25 of Mines Act 1952 and as per No. 4 in Schedule II of Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. It is also a compensable disease under Section 3 of Workman Compensation Act. 1923 and Section 52 (ii) of ESI Act, 1948

3.1 Section 3 - Employer's Liability for compensation:

(2) If a workman employed in any employment specified in Part A of Schedule III contracts any disease specified therein as an occupational

disease peculiar to that employment, or if a workman whilst in the service of an employer in whose service he has been employed for a continuous period of not less than six months (which period shall not include a period of service under any other employer in the same kind of employment) in any employment specified in Part B of Schedule III, contracts any disease specified therein as an occupational disease peculiar to that employment, or if a workmen, whilst in the service of one or more employers in an employment specified in Part C of Schedule III for such continuous period as the Central Government may specify in respect of each such employment, contracts any disease specified therein as an occupational disease peculiar to that employment, the contracting of the disease shall be deemed to be an injury by accident within the meaning of this section and, unless the contrary is proved the accident shall be deemed to have arisen out of, and in the course of the employment :

[Provided that if it is proved –

- (a) That a workman whilst in the service of one or more employers, in any employment specified in Part C of Schedule III, has contracted a disease specified therein as an occupational disease peculiar to that employment during a continuous period which is less than the period specified under this sub-section for that employment, and
- (b) That the disease has arisen out of and in the course of the employment, the contracting of such disease shall be deemed to be an injury by accident within the meaning of this section :

Provided further that if it is proved that a workman who having served under any employer in any employment specified in Part B

of Schedule III or who having served under one or more employers in any employment specified in Part C of that Schedule, for a continuous period specified under this sub-section for that employment and he has after the cessation of such service contracted any disease specified in the said Part B or the said Part C of the Schedule, as the case may be, an occupational disease peculiar to the employment and that such disease arose out of the employment, the connecting of the disease shall be deemed to be an injury by accident, within the meaning of this section.]

(2-A) If a workman employed in any employment specified in Part C of Schedule III contract any occupational disease peculiar to that employment the contracting where of is deemed to be an injury by accident within the meaning of this section, and such employment was under more than one employer all such employers shall be liable for the payment of the compensation in such proportion as the Commissioner may, in the circumstances, deem just.

Schedule III, Part C

- | | |
|--|--|
| 1. Pneumoconioses caused by sclerogenic mineral dust (Silicosis, anthracosilicosis, asbestosis) and silico-tuberculosis : provided that silicosis is an essential factor in causing the resultant incapacity or death. | All work involving exposure to the risk concerned. |
|--|--|

3.2 Draft Rules – Workmen’s Compensation Rules, 1961.

1. (e) “Pneumoconiosis” means silicosis or coalminers pneumoconiosis or asbestosis or bagassosis or any of those diseases accompanied by pulmonary tuberculosis;.

(5) Medical conditions under which pneumoconiosis may be considered to be an occupational disease -

(1) The diagnosis of pneumoconiosis shall be carried out with all the necessary technical guarantees. Proof of the degree of development of the pathological or anatomical changes in the respiratory and cardiac systems shall be furnished by the radiographic record and other laboratory records, which shall be accompanied by the report of a full clinical examination, including a report of the industrial history of the person concerned, the record of all occupations in which he has been employed, the nature of the harmful dusts to which he was exposed and the duration of such exposure.

(2) For entitlement to compensation, silicosis and coal miners’ pneumoconiosis shall fulfill the following radiological and clinical conditions:

(a) The radiological examination of the workmen must reveal –

(i) The appearance of generalised micronodular or nodular fibrosis covering a considerable part of both lung fields whether accompanied or not by signs of pulmonary tuberculosis: or

- (ii) In addition to a marked accentuation of the pattern of both lungs, the appearance of one or several pseudotumoral fibrotic formations, whether accompanied or not by signs of pulmonary tuberculosis; or
 - (iii) The appearance of both of these types of fibrotic lesions at once, whether accompanied or not by signs of pulmonary tuberculosis;
- (b) Serial radiological pictures taken over a period during periodical medical examinations shall, as far as possible, be considered in making definite diagnosis in cases where doubt exists;
- (c) Radiological interpretation shall be based on the standard International classification laid down by the International Labour Organisation (Geneva Classification).
- (d) The clinical examination of the workman concerned must reveal a decrease or deterioration of the respiratory function or cardiac function, or a deterioration of the state of general health, caused by the pathological processes specified above.

4.0 Evaluation of disablement –

- (1) The evaluation of disablement shall be made by reference to the physical (anatomical, physiological, and functional) and mental capacity

for the exercise of the necessary functions of a normally occupied life which would be expected in a healthy person of the same age and sex. For such assessment, recognised cardio-respiratory function tests shall be used to assess the degree of cardio-respiratory function impairment.

(2) It shall be determined whether the disablement is temporary or permanent and also the percentage loss of function as it pertains to the loss of working capacity for receiving compensation.

(3) Assessment of disablement shall be proportionate to the loss of earning capacity, total disablement being taken to be 100% loss of earning capacity.

5.0 Diagnosis, Disability Evaluation and Compensation

The present system of diagnosis and disability evaluation varies from organization to organization, as there are no definite guideline prescribed. From the information available in literature it does seem very difficult to lay down strict criteria for assessment of disability due to pneumoconiosis. It depends on the experience of the assessor and information available to him.

Present state of knowledge suggests that simple pneumoconiosis and category a type large shadow due to progressive Massive Fibrosis (PMF) cause little disability and there is very little reduction in life expectancy. Significant disability invariably starts when PMF progresses to category B. The disability in simple pneumoconiosis is mostly due to chronic bronchitis and emphysemas. Studies suggest that occurrence of chronic bronchitis and emphysema are related to degree of exposure to respirable dust. There is a significant decrease in lung functions both

FEV 1 and FVC which is related to dust exposure. Occurrence of centriacinar emphysema is also related to dust exposure in persons with simple pneumoconiosis and progressive massive fibrosis.

The probability of developing progressive massive fibrosis (PMF) is directly related to degree of dust exposure. It is estimated that a person with double the dust exposure is 3 times more likely to develop PMF. Over a period of five years, a person with category 3 pneumoconiosis is 12 times more likely to develop PMF than category 0 with same degree of dust exposure; one out of every 6 persons with category 3 pneumoconiosis is likely to develop PMF. Over all higher is the category of simple pneumoconiosis more is the chance of developing PMF.

6.0 Model System of Disability Evaluation and Compensation

The present system of disability evaluation and compensation has many shortcomings in the light of scientific facts. There is much confusion and controversies not only in our country but in other countries as well. It is indeed extremely difficult to prescribe strict norms in the form of normograms, or tables for disability rating in pneumoconiosis. This is true for all occupational diseases. While evaluating reduced working capacity it is essential to determine both the extent of pathological manifestation and their repercussion on the person. Allowance should be made for preexisting factors that may affect the significance of the diagnosis. The person's current physical condition should also be taken into account depending on the type of job. All these factors require reliable methods of investigations and considerable experience.

Compensation of pneumoconiosis only for profusion greater than 2/2 is based more on tradition than scientific facts. The standard was primarily adopted to prevent progressive massive fibrosis due to Coal Workers Pneumoconiosis. It was believed at that time that PMF did not develop before category 2 simple pneumoconiosis. The pneumoconiosis could also be diagnosed much more reliably at category 2 and it was believed that simple pneumoconiosis did not cause any disability. Chronic bronchitis and emphysema are not related to pneumoconiosis and are due to smoking only. However, we now know that these assumptions are no more true. Scientific studies suggests

- i. Early pneumoconiosis can be reliably diagnosed at profusion 1/0 in trained hands.
- ii. Occurrence of pneumoconiosis is directly related to degree of exposure to dust.
- iii. Risk of developing PMF is directly related to degree of dust exposure.
- iv. PMF can develop at lower category of pneumoconiosis but higher the category of pneumoconiosis greater is the risk.
- v. Exposure to dust causes significant reduction in Lung Functions, e.g. FEV₁, FVC and FEV₁/FVC ratio.
- vi. Exposure to dust causes chronic bronchitis and centriacinar emphysema in presence of pneumoconiosis.

Proposed Scheme for Disability Evaluation

In view of the lack of uniformity and short comings of present system of disability evaluation and compensation, there is need to evolve a system based on anatomical and functional disabilities.

The present system of disability evaluation and compensation has many shortcomings in the light of scientific facts. There is much confusion and controversies not only in our country but in other countries as well. It is indeed extremely difficult to prescribe strict norms in the form of normograms, or tables for disability rating in pneumoconiosis. This is true for all occupational diseases. While evaluating reduced working capacity it is essential to determine both the extent of pathological manifestation and their repercussion on the person. Allowance should be made for preexisting factors that may affect the significance of the diagnosis. The person's current physical condition should also be taken into account depending on the type of job. All these factors require reliable methods of investigations and considerable experience.

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In the proposed system due weightage is given to the anatomical disability as manifested in radiological changes, functional disability as manifested in radiological changes, functional disability as manifested in reduction of lung functions and clinical disability. ILO (1980) International Classification of Radiographs of Pneumoconiosis, although

originally not devised for use in disability evaluation and compensation, provides a relatively quantitative assessment of anatomical derangement as manifested in chest radiographs. (8) For the purpose of assessing anatomical disability, the radiograph may be classified into following categories depending on the profusion of small opacities irrespective of the type of opacities on 12 point ILO scale, and a following disability rating may be given;

Category	Profusion	Disability rating
Cat. 1	1/0, 1/1, 1/2	10 %
Cat. 2	2/1.2/2, 2/3	20 %
Cat. 3	3/2, 3/3, 3/+	30 %
Cat. 4a	any category of pneumoconiosis With A type large opacities.	40 %
Cat. 4b	any category of pneumoconiosis With B or C type large opacities.	40-100 %

The functional disability may be assessed primarily on the basis of abnormalities of spirometric lung functions such as FEV1 and FVC or both. However if required other lung functions such as Diffusion Capacity and Closing Volume may also be taken into account. Lung

function disability may be classified as restrictive, obstructive or mixed type. The disability rating may be given as follows:-

FEV1	FVC	Disability Rating	(%of Predicted normal Value)
Mild	60-70 %	60-80 %	10 %
Moderate	40-60 %	40-60 %	20-30 %
Severe	40 %	40 %	40-60 %

In case of mixed type of lung function defect meaning thereby reduction in both FEV1 and FVC, the maximum reduction of either of the functions should be taken as the parameter and a further 10 % may be added. An additional disability rating of 10-20 % may be given depending on the clinical disability. A further 10% disability rating may be given if there is fibrosis due to any cause involving area larger than right upper zone provided clinical disability rating has not been given.

The total disability should be calculated by addition of radiological, lung function abnormalities and clinical disability. The total disability should not exceed 100 % . Any person with disability rating of more than 60 % may not be employed in underground mine or in any surface operation where significant dust exposure is likely to occur.

It must be emphasised here that the above scheme for disability evaluation is only empirical and needs to be tested scientifically and may only be adopted as guidelines.

8.0 End note

The disability evaluation and compensation in pneumoconiosis is still a controversial and confusing issue the world over. This is not only because of the technical difficulties in evaluating disability but because of varying interpretation of the term pneumoconiosis and associated issues depending on the socioeconomic and legal practices prevalent in various countries. The disability evaluation should be based not only on radiological changes but should also take into account the lung function abnormalities, degree of clinical disability and disability due to any other disease. The proposed scheme provides disability rating system taking into consideration the radiological, lung function and clinical abnormalities.

* Prepared by Dr. P.K. Sishodiya, Former Director, NIMH

**Details of State Level Forum of Various Stakeholders of
ARAVALI to Address the Issues of Mineworkers in
Sandstone Sector ***

Objectives:S

- Identifying the challenges and bottleneck involved in the supply chain for the overall development of the natural sand stone sector focusing on workers
- Setting up a *Common knowledge resource centre* at state level by collating various studies, research papers, case studies, good practices, new ideas & innovations, and other relevant data and documents
- Developing training and communication material to raise awareness and build capacity of variety of stakeholders to address various issues in the supply chain e.g. Health and Safety issues, Child education, Income generation activities etc.
- Establishing a dialogue between various stakeholders inviting various government agencies like; health, labour, human rights, mines, education etc. along with business community, NGOs and other reputed institutions
- Identifying the policy level gaps in planning and its implementation and advocating the same with government through collaborative efforts.

Progress so far

- Forum has organized four multi-stakeholder forum meetings in Jaipur participated by different supply chain actors, exporters, NGOs, CBOs, development professionals, including importers from Europe. No government representation till date.

- Forum has been successfully sensitizing different stakeholders on the occupational diseases and standard employment practices
- Forum has initiated their work on developing various awareness material for the workers and different supply chain actors on occupational hazards. The forum has found that such awareness material is not available with the government department and hence, taken the initiative to build the capacity of the concerned departments and for the benefit of the workers
- Forum is building capacity of the grass root level NGOs like DVS Karauli , Manjari Bundi, GSVS Bhilwara, Grameen Swadesh Parbatsar to facilitate their work and linkages with different agencies
- Forum has been successfully sensitizing various supply chain actors including exporters and importers to bring a change in their business practices to save workers. Forum has been reported about the commitments and changes incorporated by these actors
- Forum has been invited by different organizations to develop new partnerships to bring convergence to the on-going work for better results
- Forum is playing a vital role in communicating the issues of workers at the bottom of the supply chain to the higher authorities to influence the policy level decisions.

* Supplied by ARAVLI

**Proposal of Mine Labour Protection Campaign Trust
for Mine Workers' Welfare Board:**

Mining is a state subject whereas Mineworkers are a Union subject. Thus mineworkers are deprived all state welfare schemes and are not eligible for central schemes like ESIS. They remain unaccounted and outside the purview of State or Central social welfare benefits. There are no records maintained of the number of mineworkers working in the state. Mineworkers themselves can never prove their employment status and hence have no access to legal recourse. Thus there is a need for a Mine Workers Welfare Board (MWWB) akin to the construction workers welfare board {Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and Other Construction Workers' Welfare Cess Act, 1996}. Though there are welfare boards for mineworkers they are not all encompassing - they are restricted to major minerals and other specific minerals, and hence not available to minor mineral mineworkers, which is under the State Department of Mines and Geology.

OBJECTIVE:

- To provide welfare measures to mine workers
- To provide identification to all mineworkers
- To provide ex gratia payment to mineworkers and their dependents
- To promote all government schemes to all mine workers.

FUND ALLOCATION:

The Board will be funded from the existing Mining cess collected by the State.

DEFINITION OF MINE WORKERS:

Any worker, above the age of 18 years and working in the mines or quarries, irrespective of the size of the mine or quarry; irrespective of the nature of work engaged in.

SCOPE of the BOARD:

For mineworkers working in minor mineral mines in the State of Rajasthan

COMPOSITION OF BOARD:

Permanent Members:

- Joint Secretary, Ministry of Labour, New Delhi
- Principal Secretary, State Labour Department, State
- Principal Secretary, Department of Mines and Geology, State
- Principal Secretary, Health Department, State
- Director General, DGMS, Ministry of Labour
- Representative from a mining prone

Nominated Members (for a term of 3 years each):

- One member from Trade Union of mine workers
- One member from Civil society working on mining issues
- One member from the Mine Owners Association
- One member from a renowned academic institution – a professor working on labour issues and mining issues

REGISTRATION:

Registration of Workers – will be done in the following ways – either in conjunction or individually depending on availability of records:

1. Form 1 submitted to DGMS by Mine owner and labour records submitted annually. Ministry of Labour will issue registration to each worker from this annual record submitted
2. All workers will avail a form from the local DMG office situated in their area and register their details, through self attestation.

Issuance of Identity Card

1. A smart photo identity card along with a Unique Registration number will be issued by the Board to each mine worker
2. The information on each individual will be updated by the mine worker through sms sent from his/her registered mobile number to one mobile number maintained by the Board
3. All benefits given to the mineworker will be informed through sms to the registered mobile number
4. Database will be on a common server maintained by Ministry of Labour and accessed by the Board

Eligibility for Registration:

1. Any mineworker who has attained the age of 18 years, irrespective of gender, class or caste, or geographic origin
2. Any mineworker who has been engaged in mining or quarrying related work for more than 3 months in any part of the country.

SCHEMES:

Schemes provided by the Board will be under these 2 categories:

Preventive Measures	Protective easures
Registration of mine workers	Life Insurance
Issuing of identity cards	Medical insurance for long term and serious illnesses
Occupational Health Surveillance 1. Mobile health units 2. Training of Doctors	Old age pension
Vocational Training	Disability benefits in case of accidents & occupational diseases
Awareness Programmes	Widow Pension
	Maternity benefits
	Educational support for children
	Housing loan

PROTECTIVE MEASURES

Life Insurance schemes

In this a beneficiary will be given life insurance of INR. 5,00,000 available to the next of kin of mineworker upon his death.

Widow Pension Schemes

The widow of a mineworker registered with the Board, will be eligible to apply for mining leases or quarry licenses as per the MMCR.

She will be eligible of the pension schemes as provided by the State government or any other scheme.

Old Age Pension

Any mineworker above the age of 45 will be eligible to a pension of INR 1000 per month as long as he lives.

Disability Pension

INR 300 per month payable to a beneficiary who is permanently disabled due to accident in mines or suffering from any occupational diseases.

Medical insurance for long term and serious illnesses

Mineworker suffering from any disease or disability will be provided free hospitalization in any hospital recognized by the government as and when needed.

Medical insurance of INR 50,000 including will also be provided to the registered worker and any 2 of his immediate family members.

Maternity benefits

An amount of INR 8000 will be given for each child birth and restricted upto 2 children; provided the age of the woman mine worker at the time of pregnancy is minimum 21 years age.

Education schemes for the Children (maximum 2 children – either two daughters, or one son and one daughter)

In this the children will be give education assistance from Class X onwards till they complete graduation provided they get 65% or more marks in every exam.

Housing loan schemes

In this scheme the mineworker will get up to INR. 5,00,000 loan at a nominal interest of 5% per annum.

PREVENTIVE MEASURES:

Registration of Mine workers by the Board

The registration card provided by this Board will be considered as proof of employment acceptable in the court of law for any case related to labour rights violation/compensation/ or benefits on humanitarian grounds given by any government or private organization

Occupational Health Surveillance

1. Mobile health units – to be provided in mining areas for diagnosis of occupational diseases and palliative care since most occupational diseases are incurable.
2. Vocational Training – Every registered mineworker will be eligible for DGMS certified training free of cost every 5 years or as stipulated by DGMS.
 - b) Safety Training – as provided by DGMS or any other
 - c) Skill upgradation trainings
3. Awareness Programmes: Every 6 months awareness programmes will be undertaken by the Board on various issues affecting the mine workers at their place of work. The issues will range from wet drilling; prevention of occupational disease; safety measures; labour rights; equal and fair wages and so on.