

## **NATIONAL CONFERENCE ON SILICOSIS**

**Date** : **25 July 2014**  
**Venue** : **India International Centre,  
Multipurpose Hall, Max Mueller Marg, New  
Delhi-110 003**

### **BACKGROUND NOTE**

Silicosis is a fibrotic lung disorder caused by inhalation, retention and pulmonary reaction to crystalline silica, as a result of exposure during mining, stone crushing and quarrying activities. The most common form of silica is quartz. Exceptionally high exposure of silica can cause silicosis within a month with a significant impairment of lungs within few years. The major silicosis prone industries are:

- (i) All stone quarries and crushers
- (ii) Quartz mining
- (iii) Foundries
- (iv) Sand blasting
- (v) Ceramics industries
- (vi) Gem cutting and polishing
- (vii) Slate/pencil industries
- (viii) Construction
- (ix) All mining industries
- (x) Glass manufacture industries

2. As per the report of Indian Council for Medical Research (1999), there are about 30 lakhs worker in India who are at a high risk of exposure to silica. Out of these, 17 lakhs are in mining/quarrying activities, 6.3 lakhs in glass and mica industry and 6.7 lakhs in metals industry. In addition, 53 lakhs construction workers are also at the risk of silica exposure.

3. According to the WHO Declaration on Occupational Health, 1994, there are around 100 million workers getting injured and 200,000 die each year in occupational accidents. Around 150 million new cases of occupational diseases are attributed to hazardous exposure or work load. Such high number of severe health outcomes accounts for the most important impact on health of the world population. Occupational injuries and diseases are more predominant in the developing countries. These occupational injuries and diseases profoundly affect the work productivity, economic and social well being of workers, their families and dependents

4. While framing and amending the legislations concerning occupational safety and health, the Government of India, as one of the founding members of the International Labour Organisation (ILO) derives conclusive guidelines from the conventions, recommendations and codes of practices framed by ILO in this regard. The ILO has so far adopted 182 conventions and 190 recommendations encompassing subjects such as workers' fundamental rights, protection, social security, labour welfare, occupational safety and health and related issues of women and child labour, migrant labour, indigenous and tribal population, etc. In the field of occupational safety, health and working environment, ILO has framed 13 conventions and equal number of recommendations so far. Out of these, Government of India has ratified 2 conventions namely Radiation Protection Convention (No.115), 1960 and Benzene Convention (No.136), 1971.

5. The Constitution of India provides for ensuring health, safety and welfare of persons employed in various occupations. Some of the important constitutional provisions related to welfare and safety of persons employed in various occupations includes **Article 24** which prohibits employment of child below 14 years for work in any factory or mine or in any hazardous employment; **Article 39** requires the State to direct its policy to ensure that the health and

strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter a vocations unsuited to their age or strength. **Article 42** directs the State to make provision for securing just and humane conditions of work and maternity relief. The Seventh Schedule of the Constitution lists the jurisdiction of the Centre and the State Governments to legislate in particular subject matters. In terms of List-I under this Schedule, the Central Government is exclusively authorized to make laws for regulations of labour and safety in mines (vide Item No.55 in the list) and for safety of workers employed in major ports (vide Item No. 27 in the list). In the list of Concurrent subjects welfare of labour (vide No. 24 in the list) and factories (vide No. 34 in the list) have been included.

6. The Supreme Court of India on 5/3/2009, in a Writ Petition (Civil) No. 110/2006, People's Rights & Social Research Centre (PRASAR) v/s. Union of India & Others observed that:

“NHRC has conducted a Survey regarding problem of Silicosis, which is affecting a large number of people working at the premises of stone crushers, stone quarry construction work, glass factories, quartz crushing factories, stone mines and other silicon dust producing plants. The preliminary report of NHRC shows that the problem of Silicosis is prevalent in many states and further survey is to be conducted in this regard and since the Ministry of Health and Ministry of Labour, Union of India to extend further assistance to the NHRC for further action in this regard.

NHRC may take up the specific and confirmed cases of persons, who are suffering from Silicosis and shall recommend to provide immediate medical relief to them through the concerned authorities and in case of those persons who died because of Silicosis, may provide for compensation through the concerned authorities”.

7. The NHRC is of the view that the occupational hazard of silicosis is preventable if the working conditions are properly regulated and proper warning and protective equipments are used. Once a worker or any other person is afflicted by silicosis, it becomes a constitutional obligation on part of the State to take appropriate short-term and long-term measures from the point of view of providing medical facilities and rehabilitation of the victims.

8. In a meeting convened in the NHRC on 1 May 2008, it was reiterated that silicosis is an occupational hazard and could only be prevented if the working conditions of workers are properly regulated and needful precautions are adhered to by the employers, both in the organized and unorganized sector. It was further observed that none of the States/Union Territories have a policy that encompasses preventive, curative and rehabilitative measures that could be taken for the benefit of silicosis victims. Accordingly, NHRC directed that the Union Government and the States/Union Territories should furnish complete information with regard to the following points:

- (i) What steps the Government is taking to prevent and ultimately eliminate the problem of silicosis, within how much time-frame and how it proposes to monitor its actions?
- (ii) Whether the Government has undertaken any survey regarding the prevalence of silicosis? If yes, the total number of victims identified and the status of their treatment.
- (iii) How many complaints have been received by the States/Union Territories regarding the problem of silicosis and what steps have been taken by the Government?
- (iv) What steps have been taken to implement Schedule No. XIII prepared by the Directorate General Factory Advice Service and

Labour Institute under model Rule 120 framed u/s 87 of the Factories Act, 1948?

- (v) How many Hospitals/Treatment Centres exist for diagnosis and treatment of the occupational disease – silicosis?
- (vi) Whether a policy has been formulated for simplifying the procedure to enable the workers to file claims for compensation?
- (vii) Whether the States/Union Territories have paid any compensation to the victims of silicosis? If yes, the details of such persons and the amount paid.
- (viii) What steps are contemplated by the Government to ensure that the workers employed in industries/ factories/quarries/mines receive compensation?
- (ix) Whether the Government has evolved any policy for prevention and cure of silicosis and payment of compensation to the persons working in the unorganized sector?
- (x) Whether the Government proposes to constitute any Board or set-up any fund for the rehabilitation and insurance of all the workers affected by silicosis?

9. The Commission in 2009, constituted an Expert Group on Silicosis to assist in devising strategies for dealing with this occupational hazard and to evolve necessary preventive, remedial, rehabilitative measures to alleviate the problem faced by the affected workers and their families. Based on the advice of the Expert Group, the Commission has prepared a set of recommendations on Preventive, Remedial, Rehabilitative and Compensation aspect of Silicosis.

**(Annexure I)**

10. The Commission on 1 March 2011 organized a National Conference on Silicosis in New Delhi. Its objective was to assess the action taken by the States/Union Territories on the recommendations made by the NHRC with regard to preventive, remedial, rehabilitative and compensation aspects. Besides , NHRC wanted to know from the States/Union Territories, the action taken on the ten points made by it in the meeting convened on 1 May 2008. The other objective was to discuss the present status with various non-governmental organizations and technical institutions dealing with the issue of silicosis. The important recommendations that emerged from the National Conference are annexed. **(Annexure II)**

11. One of the major recommendations of the Conference was to convene review meetings with concerned officials of States/Union Territories in groups every two months. The Commission till date has organized four regional review meetings. The first regional review meeting was held in New Delhi on 10 June 2011 and covered the Northern States of Haryana, Gujarat, Madhya Pradesh, Rajasthan and N.C.T. of Delhi. The second regional review meeting covering the southern States/Union Territory of Karnataka, Andhra Pradesh, Tamil Nadu, Kerala and Puducherry was organized in Bengaluru on 18 November 2011. The third regional review meeting covering the Eastern States of Bihar, Chattisgarh, Jharkhand, Odisha and West Bengal was organized in the Commission on 14 February 2012. A review meeting covering the States of Uttar Pradesh, Maharashtra, Himachal Pradesh, Goa, Uttarakhand and Punjab was organized in the Commission on 4 May 2012. Apart from the participation of State Government officials, the review meetings were attended by the representatives of technical institutions and civil society organizations. During these meetings, the need for serious action by State Governments to address this problem through proper survey and other preventive, rehabilitative and compensatory measures was reiterated by the Commission.

12. In order to draw the attention of the Government and the Parliamentarians towards the inhumane conditions faced by all those ailing from silicosis including their immediate family members, the Commission also prepared a Special Report on Silicosis and forwarded it to the Ministry of Home Affairs, Government of India for laying it before the Parliament.

13. In order to discuss the status of action taken by Union Ministry of Labour & Employment and States on the earlier recommendations made by the NHRC in the prevention, detection, and eventual elimination of Silicosis, the Commission is organizing a one-day **National Conference on Silicosis** at **India International Centre (IIC), 40 Max Mueller Marg, New Delhi – 110 003** on **25 July 2014**.

### **Participants**

14. The participants will include concerned officials/representatives of Central Government and State Governments/Union Territory Administrations, National Commission's, State Human Rights Commissions, health experts and health scientists, legal experts, representatives of non-governmental organizations, civil society and technical organizations who deals with the problem of silicosis.

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**Recommendations of National Human Rights Commission on  
Preventive, Remedial, Rehabilitative and  
Compensation Aspect of Silicosis**

**Preventive Measures:**

1. The occupational health survey and dust survey on half yearly basis may be made mandatory in suspected hazardous industries. All the enrolled workers must be medically examined before entering into the employment. The workers should be clinically examined with Chest radiography and pulmonary function test to rule out any respiratory disorder.
2. State/UT 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.
3. Implementation of precautionary measures including the protective gears for the workers of silicosis prone industries may be made mandatory by the concerned enforcement authorities.
4. Dust control devices should be installed to reduce the dust generation at the workplace. National Institute of Occupational Health (NIOH) has 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.
5. The workers vulnerable to silicosis need to be made aware of the disease through wide publicity campaigns with the use of electronic and print media. This will also improve self responding of cases and facilitate early detection.
6. Silicosis is a notified disease under Mines Act 1952 and the factories Act 1948. Silicosis may also be made a notifiable disease under the Public Health Act. As such all district/primary health centres/hospitals in the



country will have to report the cases/suspected cases of silicosis to the Government.

7. There is a necessity to develop Master Trainers to impart training to all public health doctors/paramedics for early diagnosis and detection of silicosis.
8. Less hazardous substitutes to silica should be found out for use in place of silica.
9. Industrial units which are silica prone should have an **Occupational Health and Safety Committees (OHSC)** with the representation from workers and Health Care Providers.
10. Silicosis control programme should be integrated with already existing Revised National Tuberculosis Control Programme (RNTCP).
11. A mechanism to have intersectoral coordination among departments such as Ministry of Health & Family Welfare, Ministry of Labour & Employment, Directorate General of Factory Advice Services Labour Institute, national Institute of Occupational Health, Tuberculosis Association of India and civil society organizations to evolve an appropriate strategy to deal with the dual problems of silicosis and tuberculosis may be set up at the center and state level.

### **Remedial Measures:**

1. In each of the district where silicosis prone industry, quarrying or a big construction projects are on, there is a need to identify a facility for diagnosis of silicosis.
2. The District Tuberculosis Officer must collect and maintain accurate information and documentation on number of workplaces and workers at risk from silica exposure.
3. The accountability for the implementation and control over the rules & regulation of Laws must be reviewed time to time.
4. The National /State Social Security Board set up under The Unorganized Worker's Social Security Act, 2008 should recommend welfare schemes to be formulated for the welfare of the unorganized workers who are at

the risk of contracting silicosis as well as those already affected and their families.

5. The Central Government may consider extending the Rashtriya Swasthya Bima Yojna, a health insurance scheme for BPL families and extended subsequently to some other vulnerable groups, to the workers at risk of contracting silicosis and their families.

### **Rehabilitative Measures:**

1. The treatment cost of the silica affected person including permanent, temporary or contractual worker should be borne by the employer. The district administration should ensure its implementation and treatment.
2. The victims of silicosis should be rehabilitated by offering an alternative job or a sustenance pension if they are unable to work.
3. NGOs should be involved in monitoring and implementation of the programmes initiated for the benefit of silica exposed workers.
4. Appropriate Counseling should be provided to the person affected by silicosis.

### **Compensation:**

1. The silica affected person should be adequately compensated.
2. Silicosis is a compensable injury enlisted under the ESI Act and the Workmen's' Compensation Act. Therefore a separate Silicosis Board similar to the one set up by the Government of Orissa may be formed in every State. The guidelines and model calculation of compensation may be framed under the ESI Act and the Workmen's Compensation Act.
3. The Board can carry out surveillance of silicosis cases and assessment of disability/loss of earning capacity resulting from the diseases for the purpose of compensation and rehabilitation.
4. The compensation could be calculated based on Disability Adjusted Life Year (DALY) developed by World Health Organisation. The attached annexure could be used as a reference for calculating compensation.

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**Recommendations of the National Conference on Silicosis  
held on 1 March 2011**

- All State Government should complete a detailed survey of the industries within 6 months, unless specific period indicated by the Commission as in case of some States.
- The Commission to call review meetings of concerned officials of few States in batches every two months.
- Silica detection equipment should be provided to factory inspectorate to identify industries producing silica.
- Survey should be divided into two parts. Apart from survey of workers, in silica producing factories, quarries etc, survey of ex-workers is needed.
- Silicosis Board of Mandasor pattern should be extended to affected districts of all States.
- Need to differentiate between relief and compensation
- In MP, the status of victims is very poor and ill and therefore, NHRC recommendation of granting sustenance pension should be implemented early.
- All affected persons should be treated as BPL.
- Separate programme specially targeting silicosis victims should be designed which should cover health education as well as livelihood /social security.
- Earlier recommendations made by CPCB and DGFASLI made on behest of NHRC should be implemented.
- When a victim suffering from Occupational Disease dies, ESIC is to be notified before last rites are performed to ascertain cause of death. They also want post mortem to be done. It is difficult for the people from poor

strata of the society to follow the process involving police. Also, it is not in line with the culture to keep the body for long time before funeral. This stipulation, therefore, requires change.

- Method of diagnosis should involve: 1<sup>st</sup> Step-Screening of persons who worked in silica dust producing factories and have symptoms like cough-breathlessness. 3 simple questions -(a) Are you breathless? (b) Have you worked in a "high risk industry"- to be defined; (3) Did you have the symptoms before starting work? 2<sup>nd</sup> Step-Medical examination and chest X-rays by doctor at designated "X-ray" center. 3<sup>rd</sup> step- Sending of X-rays to expert readers for final opinions.
- Comprehensive strategy to check migration should be designed which can include modifications in the MGNREGA scheme to provide more number of wage days.
- Many hazardous factories are still working, they should be closed.
- State should initiate criminal proceedings against the factories under the provisions of IPC and Factories Act where the labourers have contracted silicosis.
- DGFASLI should give standard questionnaire to all States. This should include name, address etc, work history- worked/is working in identified industries, duration of work, hours of work each day, type of work done, level of dust exposure, wages received, symptoms related to chest, wasting, weight loss, record of employment etc.
- Silicosis is a public health issue and it should be taken up at national level.
- Govt. of MP has done some relocation of industry from residential area to industrial area successfully. This may be replicated elsewhere.
- Gujarat High Court has passed order to the effect that all cases of Silicosis be given 100% disability. ESIC should resolve to make it a rule.
- All State Factory Inspectorate should have at least one Industrial Hygiene Expert.

- ESI Act is applicable to units employing less than 10 in Mandstaur. This should be extended to whole of India.
- All civil hospitals should have OPD for occupational diseases.
- Moreover, a worker may not have required legal documents to support his employment like identity card or attendance card or pay slip as well as length of exposure, when he is out of employment. This stipulation, therefore, requires change.
- Functioning of separate cell under NRHM / state health department should be started.
- Introduction of special courses of "Environment & Occupational Health" for the Junior Doctors and interns which has to be initiated by the State Government
- Immediate recruitment of certified surgeons, radiologists and chest specialists and their capacity building & training arrangement to be made on dust diseases as per WHO & ILO standard.
- Setting up of the Occupational Disease Diagnosis Centre (ODDC) at district level ESI, Government hospitals and NRHM centers at different location.
- Limiting exposure to harmful dusts can be achieved further by suppressing dust generation, filtering or capturing dust particles, diluting the concentration with fresh air, and using personal protective respiratory equipment as further possible means of the preventing silicosis.
- All the workers migrating to one State to Other state could be given identity cards to make it easier for the treating doctors to get the history of the work place, their exposure to the silica dust, working conditions and health conditions of the workers.

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