Outline for a National Programme for the Elimination of Silicosis (NPES)

The joint ILO/WHO Global Programme for the Elimination of Silicosis (GPES) is being implemented by the two agencies with a view to eliminating this occupational disease in the world. The GPES encourages countries to establish National Programmes for the Elimination of Silicosis (NPES) to engage government, national employers' and workers' organizations, as well as other partners concerned in its active implementation.

This document will assist in the development of a National Programme for the Elimination of Silicosis (NPES). The National Programme description based on this document should take into consideration the specific national and local conditions and the availability of information and other resources. This Outline describes three documents:

(1) A policy document for establishing a NPES
(2) An Action Plan for implementation of the NPES
(3) A National Silicosis Profile—a technical document.

The National Programme for the Elimination of Silicosis (NPES) and the National Action Plan for the Elimination of Silicosis are the two main documents needed to guide action in order to prevent and ultimately eliminate silicosis as an occupational disease in the country. Both the NPES and the National Action Plan should conform to the objectives of the ILO/WHO Global Programme for the Elimination of Silicosis (GPES). Participation in the GPES requires the establishment of NPES (complemented by National Action Plan) as a national action program.

The NPES represents a consensus policy document targeting the prevention of silicosis as a priority in occupational health with an aim to protect workers against this incurable and often highly disabling disease. The NPES should put forward a feasible prevention strategy designed with a due consideration of local conditions and the national situation. The following is a proposed outline for a National Programme for the Elimination of Silicosis, containing suggestions for the key areas to be addressed under each section.

I. Introduction and purpose: magnitude of the problem

This section should provide some of the public health justification for focusing on silicosis elimination as a priority and note the linkage to the ILO/WHO Global Programme for the Elimination of Silicosis.

If known, present national estimates of the number of workers exposed to harmful dusts (specifically crystalline quartz); number at risk in high exposure jobs; the incidence and/or prevalence of dust diseases; and deaths from silicosis and the other pneumoconioses may be included. In addition, the social and economic impact of the silicosis and the other pneumoconioses can be presented. Data on estimated impact on national economy resulting from sickness absenteeism, lost working days, loss of qualified labor, reduced productivity, burden on worker's compensation system due to temporary and permanent disabilities; health care costs; etc, are all relevant. This

section may also include an estimate of economic benefits that could be gained with a well-organized national prevention program.

II. National silicosis profile

A comprehensive National Silicosis Profile should be appended to the NPES document. The Profile should be a compilation of all relevant information reflecting the current situation. Described in greater detail in Annex 1, the Profile should put in one place all relevant statistical information useful for determining and tracking the progress of a preventive strategy. The Profile should be updated periodically; this section of the NPES can indicate the frequency of the update and assign responsibility for this task.

III. Definition of preventive strategy and assignment of responsibilities

3.1 The preventive strategy should be based on the ***primary*** and ***secondary prevention*** approaches. The former includes the control of silica hazard at source by the engineering methods of dust control, use of appropriate technologies, ventilation and local exhaust, process enclosure, wet techniques, substitution of less hazardous materials for silica containing materials, e.g. in abrasive blasting. The latter includes the surveillance of the working environment to assess the adequacy of dust control measures, exposure evaluation to assess the health risk for workers, and surveillance of the workers' health for early detection of the disease.

3.2 The preventive strategy should determine actions to be undertaken at the ***national and enterprise levels.***
At the national level, they should target the establishment (or revision) of specific regulations, enforcement of occupational exposure limits, an effective system of inspection; application of technical standards and safety measures; organization of the reporting system on silicosis occurrence, as well as provision of governmental advisory services to industry and workers on the application of preventive programmes and safe work practices.
At the enterprise level, they should aim at the use of appropriate technologies to avoid the formation of silica-containing dusts; use of engineering controls; compliance with exposure limits and technical standards; surveillance of the work environment and workers' health; use of personal protective equipment; worker education; dissemination of technical information and training.

3.3 The preventive strategy should also encourage voluntary efforts by industry and be based on the tripartite cooperation and consultation at national and enterprise levels. It should set up a framework for a successful implementation of NPES in the country, promote partnerships, commitments and cooperation.

3.4 Roles and responsibilities for the execution of the preventive strategy should be included here or in the next section of this document.

IV. Institutional framework and principal partners

The NPES should provide for a wide collaboration between principal stakeholders including governmental agencies, various national institutions, organizations and bodies responsible for and operating in the field of occupational safety and health. This section of the document should also include a description of the general responsibilities of each of the principle stakeholders.

Stakeholders may include:

- Governmental agencies such as Ministries of Labour, Health, Environment, Industry, Mines, Transport, Construction, Science and Technology, National Institute for Occupational Health and Safety, and other bodies with relevant responsibilities or mandates
- Employers' and Workers' organizations
- Non-governmental organizations, e.g. National Association on Occupational Health, National Safety Council, National Hygiene Association, National Lung Association, Radiological Society, other professional associations and public interest groups
- Workers' Compensation Board
- Social Security Institutions
- Academic institutions (universities, research institutes, etc).

V. Programme implementation

This section should describe the approach to national coordination of the NPES. For example, a co-ordinating body or a steering committee may be established at the national level with the task to:

(i) provide guidance on the NPES development and co-ordination;
(ii) monitor its implementation;
(iii) develop criteria for assessment;
(iv) make periodic evaluations of the results achieved; and
(v) formulate recommendations for further NPES improvement.

The committee should unite major partners of the NPES and determine methods of operation. The designation of a focal point or secretariat for national program leadership and the establishment of specific task forces may be useful.

It is advisable to include activities related to the implementation of NPES into the on-going and planned technical activities of the institutions and organizations participating in it as partners.

Particulars of the NPES implementation should be detailed in the National Action Plan (see section IX).

VI. Monitoring and evaluation of NPES

4.1 Evaluation criteria and indicators for monitoring progress in the implementation of NPES should be developed by the coordinating organization or

steering committee. This section of the plan should either describe these criteria or mandate their creation and monitoring.

4.2 Indicators may include those related to:

4.2.1 Outcome (Impact): Are the key outcomes established by the preventive strategy being met? Are over-exposures being reduced? Are dust control technologies being introduced? Are health and hazard surveillance systems established? The specific outcomes followed should be related to the overall strategy.

4.2.2 Process: Are the actions or processes supporting prevention taking place? Has there been appropriate training, information dissemination, professional certification (e.g., laboratories, IH professionals, X ray classification using the ILO 2000 System, etc.?) Is the quality and quantity of workplace inspections improving? Again, these indicators should be linked to the prevention strategy.

4.2.3 Administration: Is the program coordination and administration effective and efficient?

The coordinating or steering committee should discuss progress in the NPES execution at least annually and formulate recommendations aiming at its further improvement.

VII. National standards and international linkages

National and international standards and guidelines relevant to the prevention of silicosis and other pneumoconioses should be referenced. This section should include reference to any enforceable national occupational exposure limits and also to relevant national and international standards, ILO Conventions, Recommendations and Codes of Practice relevant to effective prevention of silicosis and other pneumoconioses. Standards and guidelines from other countries and NGOs may be helpful [e.g., PELs of OSHA and MSHA (USA), MAKs (Germany), TLVs recommended by the ACGIH or Internatioanl Chemical Safety Cards (ICSCs)].

VIII. Relationship with the protection of the general environment

This section should focus on activities related to the protection of the general environment by using dust suppression techniques, especially in the intensive dust-generating operations such as mining and quarrying, stone crushing, etc., cooperation between the Ministries of Labour, Health, Industry, and Environment and other national agencies, as well as other aspects relating to the protection of the Environment.

IX. National action plan for the elimination of silicosis

A more detailed Action Plan should be prepared for implementation of the NPES. This plan should:

- be feasible and adapted to the national situation;
- include time-sensitive objectives and the necessary mechanisms for accountability, monitoring and evaluation;
- incorporate provisions for committed national support and sufficient resources for planned activities to be carried out;
- ensure sustained action and assign responsibilities;
- be updated periodically to reflect progress or changing circumstances.

ANNEX 1

NATIONAL SILICOSIS PROFILE

(First Profile to be included in the NPES; Profile to be updated periodically)

1. Estimated total number of workers exposed to crystalline silica dusts in the country

2. Full list of industries where exposure to crystalline silica is present in the country and list of industries with the largest numbers of workers potentially exposed crystalline silica dust

3. Industries with high risk of exposure (where overexposure is documented as exceeding occupational exposure limits) and estimated total number of workers at high risk

4. Prevalence of silicosis (total number of workers with diagnosed silicosis to-date) – national, with a breakdown by industries

5. Prevalence rate (total number of workers who have silicosis at a particular time or during a particular period divided by the number of workers at risk of developing silicosis at this point of time) - national and in various industries or occupations (e.g. sandblasting)

6. Number of suspected cases of silicosis (an estimate of a total number of workers exposed to crystalline silica but never having undergone health surveillance or diagnosis made)

7. Incidence of silicosis (number of new diagnosed cases yearly), with a breakdown by industries

8. Incidence rate of silicosis (rate at which new cases of silicosis occur in the population, i.e. new cases of silicosis diagnosed during the year is the numerator and the number of total number of workers exposed is the denominator)

9. Under-diagnosis or under-reporting coefficient (where available, to make better estimate of prevalence and incidence of silicosis)

10. Acute cases of silicosis – common or uncommon, silico-tuberculosis

11. Total number of workers eligible for compensation for silicosis (per year) and the numbers of individuals compensated yearly

12. Number of deaths from silica-related diseases (per year)

13. National enforceable occupational exposure limits for crystalline silica

14. The system for inspection and enforcement of the exposure limits.

15. Estimated economic losses due to silicosis (where available)

16. Major studies on epidemiology of silica-induced diseases in the country

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