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DEVELOPMENT OF A NATIONAL PROGRAMME FOR ELIMINATION OF ASBESTOS-RELATED DISEASES IN MACEDONIA

Introduction

The Fifth Ministerial Conference on Environment and Health, held in 2010 in Parma, Italy, endorsed the Parma Declaration on Environment and Health that was signed by the Ministers of Health of the WHO Europe Member States. By adopting this declaration including its fourth regional priority goal that aims at preventing disease arising from chemical, biological and physical environments, the countries committed to develop national programmes for elimination of asbestos-related diseases by 2015, in collaboration with the World Health Organization (WHO) and the International Labor Organization (ILO).

Background and importance of the problem

Exposure to asbestos and asbestos-caused diseases

The term asbestos is used to designate a group of naturally occurring minerals (chrysotile, amos-

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ite, crocidolite, tremolite, anthophyllite, and actinolite) that have been or are still being used for commercial purposes due to their physicochemical properties (mechanical strength, low thermal conductivity, relative resistance to chemical agents, etc.).

The exposure to asbestos can cause many diseases including lung cancer, mesothelioma, asbestosis and benign pleural diseases (pleural plaques, thickening and effusions). Research results confirm that exposure to asbestos is a risk factor for laryngeal and ovarian cancer and most probably for other localizations of malignancies. Asbestos exposure occurs most often in the occupational environment but also in the environment (communal or residential exposure), i.e. asbestos-related diseases can be acquired in both occupational and living settings.

International activities to eliminate asbestos-related diseases

The activities aimed at eliminating asbestos-related diseases have international character that emanates primarily from ILO interventions, WHO recommendations and multilateral environmental protection agreements. The most important documents of the International Labor Organization regulating the elimination of asbestos exposure are: The Occupational Cancer Convention, 1974 (No. 139), The Asbestos Convention, 1986 (No. 162), The Chemical Convention, 1990 (No. 170) and The Resolution on Asbestos endorsed in 2006 at the 95th session of the International Labor Conference.

In order to provide guidelines that would help the Member States to eliminate asbestos-related diseases, the WHO and the ILO have jointly presented in 2011 the Outline for the Development of National Programmes for Elimination of Asbestos-Related Diseases. The first step for each Member State to take in the development of a national programme, as defined in this document, was the elaboration of a national asbestos profile. The participants in the WHO meeting held in Bonn in June 2011 (including the representative of the Republic of Macedonia and member of the expert team of the Institute of Occupational Health of the Republic of Macedonia - WHO Collaborating Center) agreed to elaborate national asbestos profiles according to the recommendations provided within the WHO/ILO Outline, with the support of the WHO Secretariat.

The national asbestos profile is a summary of all relevant data regarding the current situation with asbestos in the particular country. The national asbestos profile defines the basic situation at a national level in terms of use of different types of asbestos, subpopulations at risk due to their past and current exposure to asbestos (considering that certain types of asbestos

are limited or forbidden but not all of them), prevalence of diseases caused by asbestos, etc. The national asbestos profile should be periodically updated to provide insight into the implementation progress of the National Programme for Elimination of Asbestos-Related Diseases.

According to the recommendations of the Outline for the development of national programmes for elimination of asbestos-related diseases using the WHO/ILO methodology, when preparing the national profile, a particular attention should be given to data sources (institutions, documents, etc.) and data collection methods. Additionally, it is underlined that these methods should be applied to the available data only since some data (e.g. total number of workers with past or current exposure to asbestos, total amount of asbestos in the soil, health monitoring of workers with past exposure to asbestos, asbestos exposure in the environment, etc.) cannot be found nor relevant assessments can be made. This refers in particular to former socialist countries (including the Republic of Macedonia) that have passed or are still going through the transitional process from one social system to another. Data scarcity should not hinder the development of an efficient National Programme for Elimination of Asbestos-Related Diseases in the given country. On the contrary, it is supposed to bring into focus the critical points that require more attention and action.

The National programme for Elimination of Asbestos-Related Diseases is a strategic document endorsed by the government which underlines the aspects of the asbestos problem in the country as well as the strategies for elimination of asbestos-related diseases. This document defines **the long-term goals, the institutional framework for action, the mechanisms for action and evaluation of achieved results, the role of ministries as well as the leadership and teamwork needed for problem solution.**

Furthermore, this document introduces the inter-sectoral mechanisms for preparation and implementation of the National Programme for Elimination of Asbestos-Related Diseases. The Action Plan for Elimination of Asbestos-Related Diseases is the instrument that operationalizes the goals defined within the National Programme for Elimination of Asbestos-Related Diseases.

National asbestos profile for the Republic of Macedonia

According to the recommendations of the Outline for the development of national programmes for elimination of asbestos-related diseases, the national asbestos profile should contain the following basic elements: legislation on asbestos exposure and health protection from asbestos exposure, import of asbestos and asbestos materials, domestic production of asbestos and asbestos materials, industries with the highest number of workers exposed to asbestos, storage of asbestos waste, maximum permitted concentration of asbestos in the working environment, burden of asbestos-related diseases, prevalence of asbestosis, incidence of pleural mesothelioma, incidence of lung cancer in workers exposed to asbestos, health records of asbestos-caused diseases, compensation for workers affected by asbestos-related diseases, inspection and monitoring system for occupational exposure to asbestos, asbestos exposure in the environment, assessment of the economic impact of asbestos-related diseases and national epidemiological research on asbestos-related diseases.

The National asbestos profile for the Republic of Macedonia has been developed by the expert team of the Institute of Occupational Health of the Republic of Macedonia, Skopje - WHO Collaborating Center in collaboration with the Ministry of Health and the WHO Country Office in Skopje within the 2014 National Annual Public Health Programme in the Republic of Macedonia that was approved by the Ministry of Health of the Republic of Macedonia. Its development followed the Meeting of the WHO Regional Office for Europe (WHO/Europe) titled National programmes to eliminate asbestos-related diseases: review and assessment, held in 2011 in Bonne, Germany, and was closely monitored and evaluated at the WHO/Europe meetings organized in 2012, 2013 and 2014 in Bonne, Germany as well as at the Second meeting of the South-East European Work Place Academy (SEEWA) within the South-East European Network on Workers' Health (SEENWH) held under the auspices of the WHO/Europe in June 2013 in Belgrade, Serbia.

The development of national profiles and programmes for elimination of asbestos-related diseases is among the key priorities of the SEENWH Action Plan for the upcoming two-year period.

The national profile builds upon the consultations with relevant national (Ministry of Health, Ministry of Labor and Social Policy, Ministry of Environment and Physical Planning, Ministry of Transport and Communications, State Labor Inspectorate, State Statistical Office, etc.), health (Institute of Occupational Health of the Republic of Macedonia and Occupational health services (OHS), Institute for Public Health of the Re-

public of Macedonia, University Clinic of Pulmonology and Allergy, Institute of Radiotherapy and Oncology, etc.) and educational institutions (Medical faculty, Ss. Cyril & Methodius University - Skopje; Faculty of Mechanical Engineering, Ss. Cyril & Methodius University - Skopje; Institute of Chemistry, Faculty of Natural Sciences and Mathematics, Ss. Cyril & Methodius University - Skopje; GAUSS Institute – Bitola, Faculty of Natural and Technical Sciences, Goce Delchev University of Shtip, etc.) as well as with professional associations (Macedonian Society of Occupational Health, Macedonian Respiratory Society, Macedonian Occupational Safety and Health Association (MOSHA)), companies for control and monitoring of living and working environments (TehnoLab doo, Skopje) and non-governmental organizations (*Journalists for Human Rights, Women in Europe for a Common Future (WECF)*, etc.). Also undertaken was a desk review of the relevant legislation and of existing diseases and hospital registries, research project reports, academic papers, etc.

The most important regulations in the Republic of Macedonia on prevention of and health protection from asbestos exposure are: Chemicals Law (2010), Law on Occupational Health and Safety (2007), Law on Waste Management (2004), Law on Environment (2005), Law on Health Record (2009), etc. Particular aspects of this issue are separately regulated by bylaws. The body of valid legislative acts and bylaws is harmonized with the current international standards in the field.

Asbestos has not been exploited in the Republic of Macedonia for a long time as the asbestos mine in the village of Bogoslovec, Sveti Nikole was shut down in the mid-1950s due to low asbestos levels in the ore; the production of asbestos products (asbestos cement) was discontinued in the 1990s while the factory's production using imported asbestos ceased in the first decade of the 21st century. **According to the Decision on Allocation of Goods to Forms of Export and Import, the import of asbestos in the Republic of Macedonia has been forbidden since 2013. According to the List of restrictions and prohibitions concerning the use of chemicals adopted in 2011, the use of all types of asbestos including chrysotile is banned.** Periodical mapping (inventory) of materials and products containing asbestos in the Republic of Macedonia has been undertaken in accordance with the *Rules on minimum safety requirements for workers from the risks related to occupational exposure to asbestos* adopted in 2009 but the results aren't satisfactory due to problems regarding the collection and processing of data from various responsible institutions.

The management of asbestos waste has been legally regulated under the *Rules for handling asbestos waste and waste of asbestos-containing products* adopted in 2006. A separate section at the Drisla landfill site in Skopje has been intended for disposal and storage of asbestos waste, which is not the case with the landfills in other Macedonian cities where asbestos waste is disposed along with other types of waste. Illegal landfill sites are a major problem as they store waste material generated during demolition and renovation of residential buildings.

In terms of exposure to asbestos in the workplace, there is a difference between workers with current and with past occupational exposure to asbestos. Those with current occupational exposure to asbestos are construction workers and workers dealing with maintenance and demolition of private and public buildings made out of asbestos-containing materials (such are almost all buildings built in the second half of the 20th century), workers responsible for asbestos waste storage and for maintenance of motor vehicles containing components that include asbestos (the number of such vehicles in the Republic of Macedonia is still considerably high).

The health protection of these workers from the current occupational exposure to asbestos is regulated under *The Rules on minimum safety requirements for workers from the risks related to occupational exposure to asbestos* adopted in 2009. However, this regulation does not protect those workers that are not covered by social insurance. On the other hand, the number of workers with past occupational exposure to asbestos remains unknown (mainly construction workers) as the majority was dismissed during the transitional period when many companies – as in other European countries - were or are currently being closed down.

The maximum allowable airborne concentration of asbestos in the working environment is 0.1 fibers/cm³ per 8 hours (according to *the Rules on minimum safety requirements for workers from the risks related to occupational exposure to asbestos* adopted in 2009). The implementation of the commitments emanating from the current legislation falls within the competence of relevant inspectorates such are the State Labor Inspectorate, the State Sanitary Inspectorate and others. The insufficient flow of information among the state inspectorates themselves as well as between them and other key partners (e.g. the employers) is the biggest challenge in this domain due to which the responsible ministries lack complete information to implement measures preventing asbestos exposure to the fullest.

The continuous medical supervision of employees exposed to asbestos has been introduced in the 1950s. The current relevant legislation comprises *The Rules on minimum safety requirements for workers from the*

risks related to occupational exposure to asbestos, adopted in 2009, and The Decree on the type, manner and scope of the medical examinations of employees endorsed in 2013.

The asbestos-related diseases (asbestosis, pleural diseases, lung cancer and mesothelioma) are included in the 2004 Macedonian List of Occupational Diseases. The research results obtained in the Republic of Macedonia in the past five decades indicate that the prevalence rate of asbestosis in workers exposed to asbestos is 5%. The incidence of lung cancer and pleural mesothelioma is estimated at 17-35 cases i.e. 6-10 cases per year respectively. There is no official evidence regarding the prevalence of diseases caused by asbestos in the living environment. Furthermore, there is no data on the economic impact of asbestos-related diseases at a national level.

Keeping records of asbestos-related diseases is a legal obligation as per the 2009 Law on Health Record. The Republic of Macedonia has developed registries for these diseases that are maintained by the national Institute for Public Health. Although already established, the function of the Cancer Registry and the Registry of Occupational Diseases is not appropriate. The unequal access to diagnosis as well as the verification and reporting of asbestos-related diseases hinder data collection due to which keeping relevant health records is not at the satisfactory level.

National programme for elimination of asbestos-related diseases in the Republic of Macedonia

Within the 2015 National Annual Public Health Programme in the Republic of Macedonia, as approved by the Ministry of Health, and in relation to the development of a National Programme for Elimination of Asbestos-Related Diseases, the Institute of Occupational Health of the Republic of Macedonia - WHO Collaborating Center shall implement the following activities:

- Organization of an inter-sectoral meeting in collaboration with the Ministry of Health and the WHO Country Office in Skopje to initiate the development of a National Programme for Elimination of Asbestos-Related Diseases in the Republic of Macedonia;
- Preparation and promotion of the National Programme for Elimination of Asbestos-Related Diseases in the Republic of Macedonia that will involve representatives of all relevant and competent institutions in the country;
- Organization of a public debate about the prepared document.

The development of the National Programme for Elimination of Asbestos-Related Diseases in the Republic of Macedonia shall engage representatives of the Ministry of Health, the Institute of Occupational Health of the Republic of Macedonia - WHO Collaborating Center, the Ministry of Labor and Social Policy, the Ministry of Environment and Physical Planning, the National Council for Safety and Health at Work, the State Labor Inspectorate, the Institute for Public Health of the Republic of Macedonia as well as of relevant associations, local authorities, workers and employers organizations, non-governmental organizations and the media.

The National Programme shall be based upon the data provided in the National asbestos profile for the Republic of Macedonia i.e. the document that provides insight in both the current situation with asbestos exposure and the health effects of asbestos exposure in the country.

The National Programme for Elimination of Asbestos-Related Diseases will comprise the following elements:

I. Introduction and goals – this part of the Programme will determine the dimensions of the problem caused by asbestos-related diseases by underlining their importance to public health through its health, economic and social aspects;

II. Political and legal grounds – this part will include all policy documents, both international (WHO, ILO, etc.) and national ones, as well as the legislations and bylaws that directly or indirectly legalize the actions for elimination of asbestos-related diseases;

III. Strategy for elimination of asbestos-related diseases – this part of the Programme will define the strict implementation of the ban on usage and production of all types of asbestos, the replacement of asbestos-containing materials, the strict control of exposure and implementation of medical preventive examinations for early detection of health symptoms and signs of asbestos-caused disorders, the introduction of registries of affected workers, etc. The strategy will be implemented through strategic actions at all levels (national, local and company level) accompanied by a detailed activities guide;

IV. Institutional framework and key partners – the National Programme for Elimination of Asbestos-Related Diseases should be developed, implemented and evaluated in collaboration with relevant governmental agencies, national institutions, organizations and bodies working in the fields of occupational safety and health, public health and environmental protection and should provide description of the obligations for each key partner;

V. Knowledge management – this part of the Programme incorporates the National asbestos profile as well as all information and data that could provide strategic guidance towards mobilization of all resources and capacities for elimination of asbestos-related diseases;

VI. Programme implementation – The coordination of the Programme development as well as the Programme implementation and evaluation should be ensured through both inter-sectoral mechanisms and a national committee (commission). Using step-by-step approach, the Programme will be implemented in three phases (preparatory, initial and second phase) for all defined key issues related to the elimination of asbestos-related diseases;

VII. Monitoring and evaluation – Evaluation criteria and indicators for monitoring of the Programme implementation progress will ensure the monitoring and assessment of the efficiency of all undertaken strategic measures and actions.

The inter-sectoral and multidisciplinary approach to both the development of the National Programme and the implementation of the National Action Plan for Elimination of Asbestos-Related Diseases, which serves as an operational tool for implementation of the Programme objectives in collaboration with the WHO Regional Office for Europe, should provide an optimal solution to the issue of asbestos-related diseases in the Republic of Macedonia.

The efficient Programme implementation should be based upon the principles of the European health policy framework Health 2020 through the whole-of-government approach and action from local to central level as well as through the whole-of-society approach and the involvement of private and civil society sectors, community and individuals in a joint action. The Programme should be part of the National Health 2020 Strategy of the Republic of Macedonia.

Executive summary

The exposure to asbestos can cause many diseases including lung cancer, mesothelioma, asbestosis and benign pleural diseases (pleural plaques, thickening and effusions). Research results confirm that exposure to asbestos is a risk factor for laryngeal and ovarian cancer and most probably for other localizations of malignancies. Asbestos exposure occurs most often in the occupational environment but also in the environment (communal or residential exposure), i.e. asbestos-related diseases can be acquired in both occupational and living settings.

The policy brief addressing the issue of asbestos-related diseases and the situation with asbestos in the Republic of Macedonia has been prepared to initiate the development of a National programme for elimination of asbestos-related diseases using the WHO/ILO methodology. The document builds upon the principles of WHO Health 2020 – the new European health policy framework and strategy for the 21st century - and contributes to the development of a National Health 2020 Strategy in the Republic of Macedonia.

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