

6 SOUTH AFRICAN EXPERIENCE IN THE USAGE AND REGULATION OF ASBESTOS

6.1 INTRODUCTION

This chapter is intended to provide the reader with an insight into the usage and regulation of asbestos in South Africa. Having read this chapter, the reader will have an understanding of:

- The history of asbestos mining in South Africa
- The current levels of usage of asbestos by South African manufacturing industries
- The current legislation and regulations governing the use of asbestos in South Africa, as well as the legislation that provides compensation for people diagnosed with occupational diseases
- The 1998 Asbestos Summit, and its role in prompting the undertaking of this research study

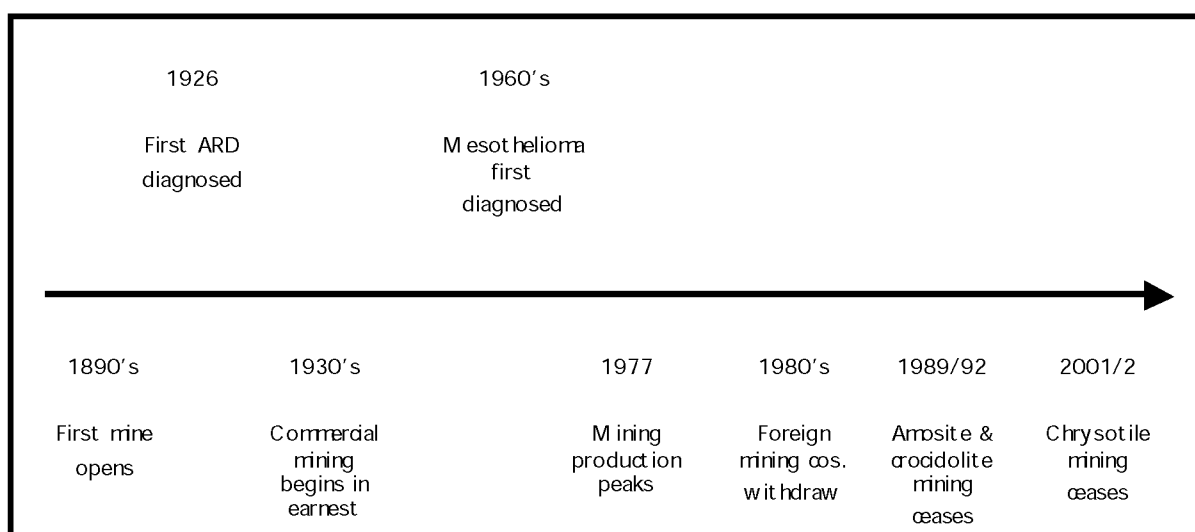
6.2 HISTORICAL USAGE OF ASBESTOS IN SOUTH AFRICA

Mining of asbestos in South Africa started around 1893 in the Northern Cape and subsequently expanded to the Northern Province and Mpumalanga¹³. Mining included all three types of commercial asbestos:

- Chrysotile, or white asbestos
- Crocidolite, or blue asbestos
- Amosite, or brown asbestos

Figure 12 reflects a timeline for the discovery and mining of asbestos in South Africa. The diagram also includes the timing of the diagnosis of asbestos related diseases in South African workers.

FIGURE 12: HISTORY OF ASBESTOS IN SOUTH AFRICA



(Source: Ergosaf Consulting Consortium)

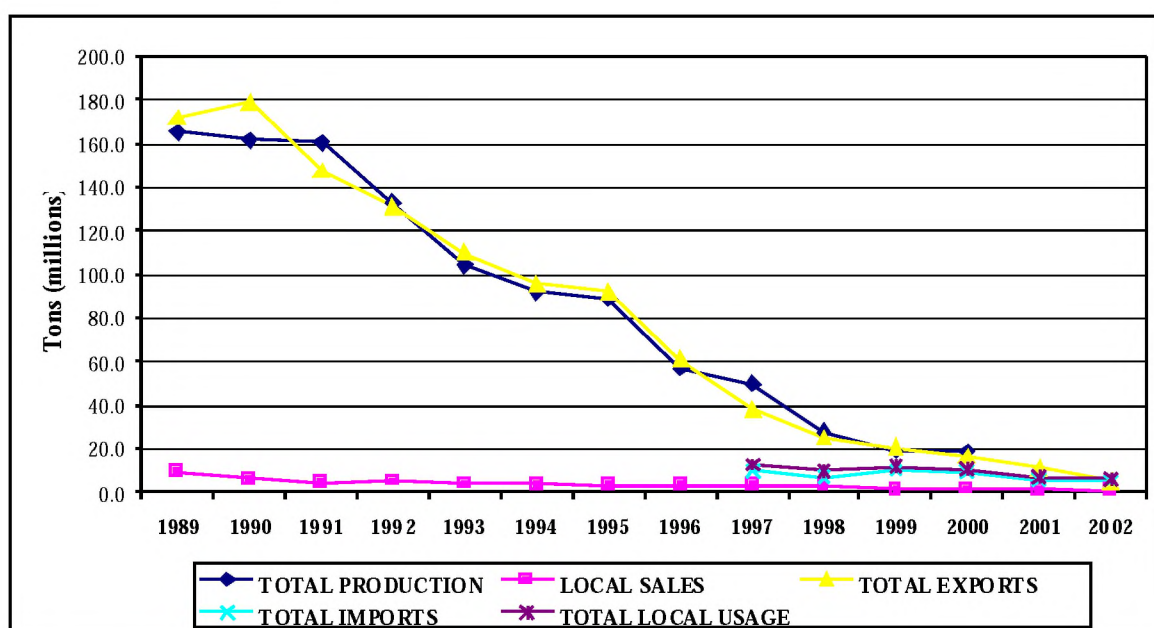
6.3 SOUTH AFRICAN ASBESTOS MINING OUTPUT

In 1977, South Africa was the third largest asbestos mining producer in the world with a peak mining production of 380 million tons per year. Most of this raw asbestos was exported.

At present, all of the blue and brown asbestos mines in South Africa have closed and the one remaining white asbestos mine no longer extracts raw fibre: this mine has significantly reduced its workforce over the past few years. Currently fewer than 20 workers are employed in rehabilitating the mine.

Figure 13 reflects the trends in asbestos mining production, exports, local consumption and imports for the 14-year period from 1989 to 2002¹⁴.

FIGURE 13: SOUTH AFRICAN ASBESTOS OUTPUT



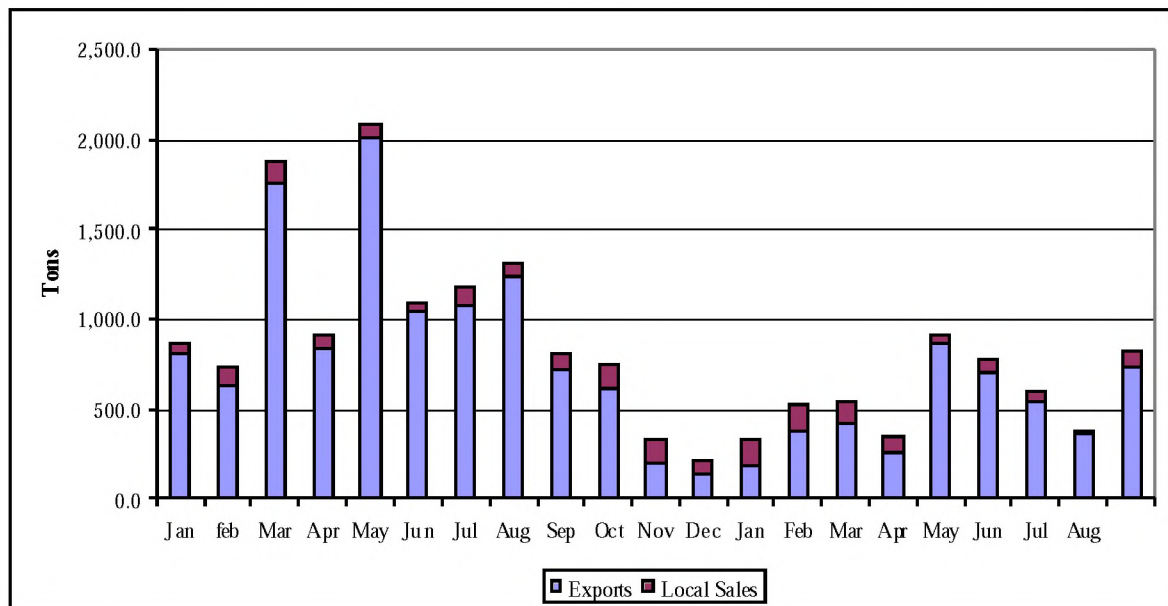
(Source: Department of Minerals and Energy. 2000/01)

This graph illustrates the fact that mining, exports, imports and total local usage of asbestos have all consistently declined in volume.

6.3.1 Current Mining Operations

All asbestos mining in South Africa effectively stopped in 2000/1 and, since then exports and local sales have been made from asbestos fibre stockpiles held at the last two mines. Figure 14 on the following page reflects the pattern of these sales for the last 20 months.

FIGURE 14: SALES FROM ASBESTOS FIBRE STOCKPILES - JANUARY 2001 TO SEPTEMBER 2002



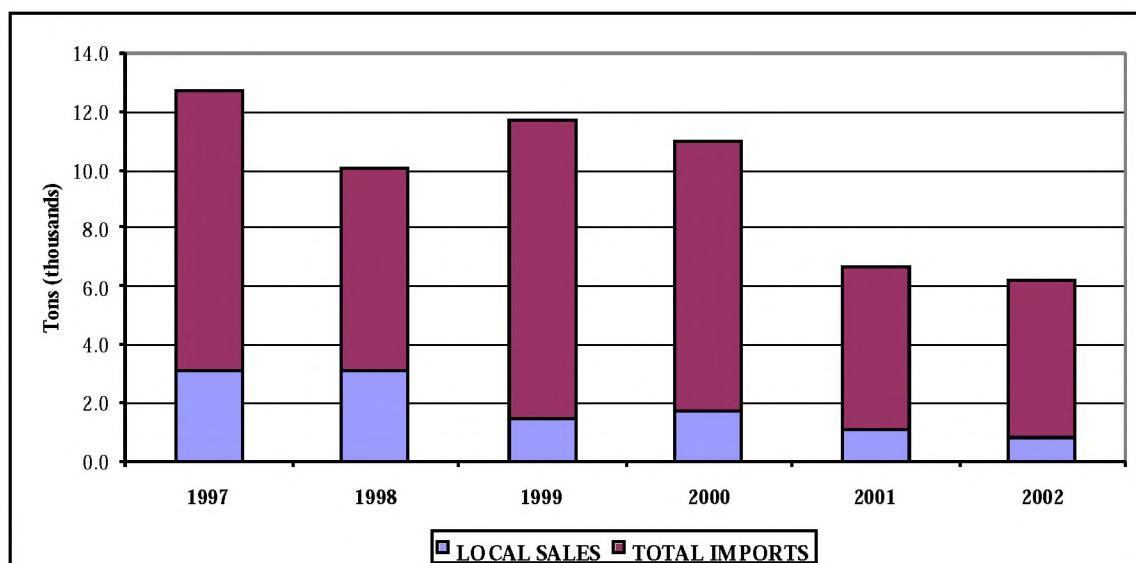
(Source: Ergosaf Consulting Consortium)

This diagram illustrates that exports account for the largest proportion of sales. At the current rate of sale, these remaining stockpiles should be depleted within 5 to 6 months (i.e. by June 2003).

6.3.2 South African Asbestos Imports

South Africa started importing chrysotile asbestos from Zimbabwe in 1997. Figure 15 illustrates the relationship between imports of asbestos fibre from Zimbabwe and local sales of fibre to local manufacturers of asbestos containing materials for this 6-year period

FIGURE 15: IMPORTS AND LOCAL SALES



(Source: Ergosaf Consulting Consortium)

This diagram clearly illustrates the significance of asbestos imports from Zimbabwe. It also illustrates the strong downward trend in asbestos usage that has taken place at a manufacturing level over the past four years. This point is discussed in more detail in the next chapter.

More detailed information on this topic can be found in appendix 6 of the accompanying ***Appendices to the Final Report*** document.

6.4 SOUTH AFRICA'S ASBESTOS REGULATIONS

In South Africa, the health and safety of employees (and the public at large) is not governed by one single statute, but rather by a number of acts, regulations, ordinances and by-laws.

From an Occupational Health and Safety point of view, the main acts are the Mine Health and Safety Act (MHSA) and the Occupational Health and Safety Act (OHSAct). There are also various other statutes that deal with air pollution, waste disposal, packaging, transport and labelling of asbestos and asbestos products.

In addition, legislation exists that governs disability and compensation for workers diagnosed with asbestos related (and other occupational) diseases.

6.4.1 Legislation Governing Asbestos Mining

The Mine Health and Safety Act (MHSA) came into effect on 15 January 1997, replacing the Minerals Act 50 of 1991 as the legal basis for regulating occupational health and safety in South African mines, including asbestos mines¹⁵.

The MHSA was enacted after an extensive policy review undertaken by the Commission of Enquiry into Health and Safety in the Mines ("the Leon Commission") which published its report and recommendations in 1995.

The Leon Commission concluded that the mining industry had taken inadequate steps to protect mineworkers from work-related health conditions. There was no evidence indicating a decline in the prevalence or severity of the major occupational diseases in the mining industry over the past 20 years. Legislation had been inadequately enforced and the State's enforcement agencies had not been able to control occupational health problems¹⁶. This Commission recommended a major legislative restructuring, coupled with improved resources for enforcing of mine health and safety standards.

The MHSA draws upon and modernises the approach in the Occupational Health and Safety Act 85 of 1993, which regulates health and safety in other sectors of the South African economy. The International Labour Organisation's Mine Health and Safety Convention 177 of 1995, adopted during the process of developing the new Act, also significantly influenced the legislation

The Act is also influenced by the Labour Regulations Act 66 of 1995, particularly in its approach to worker participation on health and safety and the resolution of disputes over the disclosure of information¹⁷.

6.4.2 Legislation Governing Asbestos Use in the Manufacturing Sector

The Occupational Health and Safety Act (No 85 of 1993) – which replaced the Machinery and Occupational Safety Act (no 6 of 1983) – governs the health and safety of employees working with asbestos in the industrial sector¹⁸.

The purpose of the OHSAct is to protect the health and safety of employees at work as well as members of the public where work activities may affect them.

The Asbestos Regulations were first published on 10 April 1987. The revised Asbestos Regulations 2001 came into effect in March 2002. These new Asbestos Regulations are comprehensive, and make provision for:

- Informing and training employees regarding the health risks of asbestos and how to work safely with the material.
- Assessment of potential exposure
- Air Monitoring
- Medical Surveillance
- Zoning of asbestos work areas
- Implementation of control measures, and
- Housekeeping

The regulations also make specific provision for the control of asbestos in the following applications:

- Asbestos that forms part of the structure of a workplace, building, plant or premises
- Asbestos cement sheeting and related products, and
- Demolition of buildings and structures that contain asbestos in its raw mineral form, including the cleaning up of any spilt asbestos

The new Asbestos Regulations make provision for an Occupational Exposure Limit of 0,2 regulated asbestos fibres per millilitre of air averaged over any continuous period of 4 hours, and a short term exposure limit of 0,6 regulated asbestos fibres per millilitre of air averaged over any 10 minutes.

6.4.3 Legislation Governing Compensation of Sufferers of Asbestos Related Diseases

The compensation of asbestos related diseases is dealt with in two independent systems. The Occupational Diseases in Mines and Works Act, No 78 of 1973 (as amended by Act 208 of 1993) (ODMWA) covers occupational lung diseases in miners¹⁹. The following asbestos related diseases are compensable under ODMWA.

- Asbestosis in asbestos miners
- Malignant mesothelioma in asbestos miners
- Pleural Plaques in asbestos miners
- Asbestos-related lung cancer in asbestos miners

The Compensation for Occupational Injuries and Diseases Act, 130 of 1993 (COIDA), covers compensation of employees for asbestos related diseases sustained in the industrial sector²⁰. The following asbestos related diseases are compensable under COIDA:

- Pneumoconiosis (asbestosis)
- Pleural thickening causing significant impairment of function
- Mesothelioma of the pleura or peritoneum, or other lung malignancy

More detailed information on this topic can be found in appendix 7 of the accompanying ***Appendices to the Final Report*** document.

6.4.4 Compliance with Existing Legislation

Exposure to asbestos fibres in South African industrial workplaces has been regulated since 1987. There is consensus amongst Occupational Health professionals that South African legislation ranks amongst the best in the world and is adequate to prevent asbestos related disease.

However, in practice, larger companies, primary manufacturers and those that have access to professional advice regarding implementation of the technical aspects of the regulations are the only businesses that follow the regulations. The regulations are often not implemented at the end user and small business level where they are needed most.

Implementation of the regulations and continued compliance with legislation is a costly affair. Some examples are provided below:

- Installation of a dust extraction unit fitted with special dust filters can cost millions of Rands. The cost of running the system and its maintenance also need to be considered
- A special vacuum cleaner for cleaning asbestos work areas costs between R15,000 and R20,000, excluding running and maintenance costs
- Annual training of asbestos workers constitutes a huge production loss
- Professional fees for Health Risk Assessments, air monitoring and medical surveillance may cost the employer as much as R1,000 per employee per year
- Respiratory protection devices have to be replaced on a daily basis. This can cost approximately R5.00 per employee per shift
- Protective clothing, disposable coveralls and laundry facilities add to the cost burden
- Special ablution facilities, with "clean" and "dirty" rooms, separate lockers and water filtration is a further cost consideration
- There is an administrative burden that is not easy to quantify, but which requires the keeping of various records
- The disposal of asbestos waste in a Class HH landfill site costs some R5.00 per kilogram

Furthermore, the control measures stipulated in the regulations are technical in nature, and are often poorly understood by laypersons. As a result, some of the regulations are not implemented, or are incorrectly implemented, thus increasing the risk of exposure and creating a false sense of security. Some examples include:

- Incorrect fitting of personal respirators due to poor training, lack of understanding or poor supervision
- Use of domestic vacuum cleaners resulting in superfine respirable asbestos fibres being reintroduced into the workplace air, increasing the risk of exposure
- Procedures for separating clean clothing from contaminated clothing are complicated and often confusing to workers. If these procedures are followed in the wrong sequence, this can lead to a significantly increased risk of exposure to asbestos

Poor levels of compliance with the regulations by small businesses and the informal sector are a significant cause for concern. Frequently, an incidence of asbestos related diseases cannot be traced back to the sufferer's place of employment. The difficulty in policing regulations in the informal sector by the Department of Labour aggravates this matter.

A study undertaken in South Africa by a group of American researchers as a follow-up to the 1998 Asbestos Summit had the following to say regarding compliance with existing regulations²¹:

"It is evident that health risks persist under the current system. According to the asbestos industry, the safety of chrysotile is predicated on its "safe and controlled use". If the safe use cannot be ensured, despite the efforts of manufacturers and inspectors, then chrysotile is inherently too dangerous for continued use in South Africa. If the human components undermine protection programmes of these industries, then production must be changed to incorporate less intrinsically hazardous substances"

One of the clear recommendations of this study was that South Africa should "ban the manufacture and importation of chrysotile-containing products".

More detailed information on this topic can be found in appendix 14 of the accompanying ***Appendices to the Final Report*** document.

6.5 THE 1998 ASBESTOS SUMMIT

Various stakeholders, including Government, affected communities, labour, industry, NGO's and an international delegation, attended the National Asbestos Summit, held in November 1998²².

The Summit acknowledged that:

- Asbestos is a hazardous substance and has caused diseases to people exposed
- The legacy of human suffering and environmental damage that we inherit from a century of mining and irresponsible use of asbestos, and the efforts of affected communities and workers to bring these to the attention of government
- Asbestos should be phased out as soon as practically possible, noting that there may be no suitable alternatives for certain applications

During the Summit, four commissions discussed the following topics:

- ***Community Development and Rehabilitation***
- ***Health Remediation and Compensation***
- ***The Regulatory System***
- ***The Asbestos Industry and Future Applications of Asbestos***

They agreed on the following requirements:

- A review of compensation and other remedial systems
- Strengthening of a comprehensive healthcare system, including a Presidential Asbestos Fund and a Parliamentary Commission of Inquiry
- Intensification of the inclusive processes of rehabilitation and sustainable development
- Establishment of research towards phasing out chrysotile asbestos and replacing it with alternatives
- Strengthening of the regulatory system of the controlled use of all chrysotile asbestos containing materials
- Ensuring an enabling integrated legislative framework, including a ban on non-chrysotile asbestos containing materials

6.6 RESPONSIBILITIES ALLOCATED TO GOVERNMENT DEPARTMENTS

Following on from the 1998 Asbestos Summit, a Cabinet Memorandum was drafted and circulated to a number of different Government departments²³. This memorandum is intended "to ensure the implementation of the Summit recommendations and action plans to address asbestos pollution and the sound management asbestos in the country, departments should incorporate asbestos pollution prevention and management into their sector policies and general government decision making".

The following Government departments are key in this regard:

- The **Department of Labour** – to "review and revise the compensation system"
- The **Department of Health** – "to establish dedicated diagnostic and compensation services at community level"
- The **Department of Trade and Industry** – "should develop a code of Best Practice for fibre and/or product alternatives", and "phase out use of asbestos as soon as practically possible, noting that there may be no suitable alternatives for certain applications. This should be negotiated by all stakeholders"
- The **Department of Minerals and Energy** – "develop a standard protocol and guidelines for asbestos rehabilitation ... when rehabilitating asbestos mine dumps"
- The **Department of Water Affairs and Forestry** – "should ensure the safe disposal of asbestos materials at landfill disposal sites" and, in collaboration with the Department of Environmental Affairs and Tourism, "develop a code of best practice for maintenance, demolition and disposal of asbestos containing materials"
- The **Department of Environmental Affairs and Tourism** – should "co-ordinate the implementation of the action plans and the broader governmental asbestos programme".

The Asbestos Summit and the subsequent Cabinet Memorandum instructing the **Department of Environmental Affairs and Tourism** to coordinate post-summit implementation of recommendations gave rise to this study to investigate the socio-economic impact of phasing out asbestos in South Africa.

6.7 CONCLUSIONS: SOUTH AFRICAN EXPERIENCE IN THE USAGE AND REGULATION OF ASBESTOS

This chapter illustrates the following:

- Asbestos mining in South Africa has already stopped
- South Africa will cease to be a supplier of raw asbestos fibre to both international and local customers by June 2003
- Local manufacturers of asbestos containing materials are dependant on imports of chrysotile asbestos fibre from Zimbabwe
- South Africa's current legislation is not aimed at restricting the use of asbestos but, rather, at controlling its use in order to protect workers from exposure to potentially dangerous health risks
- Many (if not most) South African businesses are not implementing the current asbestos regulations as set out in the latest Occupational Health and Safety Act
- The resolutions of the 1998 Asbestos Summit include a commitment to restricting and, possibly, phasing out the use of asbestos in South Africa