

6. Air Quality Management

6.1 Introduction

Basic principles guide international and national policies for the management of all forms of air pollution. An important global initiative occurred in 1983 when the UN General Assembly established the World Commission on Environment and Development, headed by Gro Harlem Brundtland. The report produced by the Commission, *Our Common Future*, was presented to the UN General Assembly in 1987 and endorsed by it. It has been influential in bringing environmental issues into the global arena, and in expressing some concepts that have been influential in air quality management (WCEDC 1987).

The Brundtland Commission suggested that sustainable development would be required to meet the legitimate aspirations of the world population without destroying the environment. It defined **sustainable development** as: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This concept has been embraced as an apparent means of integrating environmental policy and economic development.

Following the Brundtland Commission, the UN Conference on the Environment and Development was held in Rio, in 1992 (UNCED 1992). The aim was to ensure that practical foundations for sustainable development were put in place. The Agenda 21 document and the Rio declaration were the most obvious results of this conference. Agenda 21 is a document covering sustainable development, which is not binding on countries. However, national implementation is reviewed by the Sustainable Development Commission and the UN General Assembly. Agenda 21 supports a number of environmental management principles on which some government policies are based, including air quality management. These include:

precautionary principle - where it is clear that a proposal will damage the environment, action should be taken to protect the environment without awaiting scientific proof of damage.

polluter pays - the full costs associated with pollution (including monitoring, management, clean-up and supervision) should be met by the organization responsible for the source of the pollution.

In addition, many countries have adopted the principle of **pollution prevention**, which aims to reduce pollution at sources.

The responsibility of national governments for international reporting on the environment of their country has enabled greater exchange of air quality information around the world.

Strategy for air quality management

The goal of air quality management is to maintain a quality of air that protects human health and welfare. This goal recognizes that air quality must be maintained at levels that protect human health, but must also provide protection of animals, plants (crops, forests and natural vegetation), ecosystems, materials and aesthetics, such as natural levels of visibility (Murray 1997). And to achieve this air quality goal, it is necessary to develop policies and strategies.