

# Linking Air Pollution and Climate Change: The Challenge for Africa

## Introduction

Climate change and air pollution are interlinked – with respect to sources, atmospheric processes, and human and environmental effects. As a result, it can be much more cost-effective to develop policies designed to reduce both conventional air pollutants and greenhouse gases, than to focus on the two problems independently.

However, most countries have historically treated air quality and climate change as two separate and distinct policy issues.

Since 2004 the interaction of air pollution and climate change has therefore been a major concern of the International Union of Air Pollution Prevention and Environmental Protection Associations (IUAPPA). The Union was also the major driver in the development of the Global Atmospheric Pollution Forum, which has recently sponsored a major international conference on air pollution and climate change co-benefits in Stockholm, Sweden.

Building on the outcome of the Stockholm conference, this special session will explore options relevant to Africa for improving the development and implementation of programmes that simultaneously reduce air pollution and greenhouse gases.

## Understanding the Links

Air pollution control strategies have traditionally focused on reducing emissions of 'conventional' air pollutants, or those that are harmful to breathe or directly damage the environment, such as particulate matter, ozone, sulphur dioxide, and toxic air pollutants. Climate change policy has focused on reducing emissions of greenhouse gases, primarily carbon dioxide, but also methane and nitrous oxide.

Fossil fuel combustion from industry, energy generation, heating, cooking, and transportation is the primary source of both conventional air pollutants and greenhouse gases. Furthermore, air pollution can affect greenhouse gas

cycles, and climate change will likely influence the emissions, transport and chemical behaviour of atmospheric pollutants.

Depending on the choices made, strategies to address one set of problems may have a positive or negative effect on the other set of problems. So, for example, carefully chosen air pollution abatement policies can become an important means of securing climate change abatement, and vice-versa. The challenge is therefore to develop the science, methodologies and policies that can effectively integrate the two fields, and secure optimal economic, social and environmental outcomes.

## The Challenge for Africa

In Africa and other regions of the developing world, efforts to reduce poverty and develop employment and economies are a primary goal of national policy. Even serious air quality problems and climate change tend to fall far below poverty-related issues in terms of concern in many developing countries. Increases in energy generation and in the demand for goods and services in the developing world are both critical and inevitable.

In the absence of other measures, growth in demand for such goods and services could lead to a "lose-lose" scenario for climate and air quality policies. A number of measures can be defined that lead to a reduction of greenhouse gases and an increase in conventional air pollutants and vice versa, so called "win-lose" (reduce air pollution but increase greenhouse gases) or "lose-win" (reduce greenhouse gases, but increase conventional air pollutants). But there is also the opportunity to develop "win-win" measures that at the same time reduce both air pollutants and greenhouse gases. Because many African countries are in the early stages of considering policies to address either air pollution or climate, some excellent opportunities exist to build in strategies that tackle both problems in a cost-effective way. □