Positive Side-effect of Climate Change Policies on Air Quality

According to a recent study by the European Environment Agency, tackling climate change in Europe through climate change policies could make a substantial contribution to improving air quality as well. The predicted additional benefits include the improvement of Europe's air quality, a fall in premature deaths associated with air pollution, and the saving of up to 10 EUR billion annually in air pollution control costs by 2030.

Air pollution is a trans-boundary, multi-pollutant, multi-effect environmental problem that damages human health and the environment. Several actions have been taken at both national and EU level and also through active participation in international conventions. In spite of the numerous efforts and significant improvements, serious air pollution impacts still persist. The EU Thematic Strategy on air pollution seeks to improve Europe's air quality by 2020.

A recent report by the European Environment Agency (EEA) looks further ten years into the future and brings together two major policy changes: climate change and air pollution. The report analyses projected changes in European air quality up to 2030, and explores the possible benefits of climate policies on air quality and the cost of air pollution abatement. The EU Environment Council has not yet agreed greenhouse gas emission reduction targets beyond 2012 (Kyoto Protocol target), but has concluded that developed countries should reduce emissions to about 15-30% below the base year (1990) level by 2020 and about 60-80% below by 2050. The report assumed EU greenhouse gas emission reduction targets of 40% below the 1990 level by 2030 for the analysis. It also assessed the effects of a set of scenarios on air pollution in the EU-25, notably the EEA and Air Strategy baseline scenarios (expanded to 2030), the Air strategy (to 2020) and the Climate action scenario (to 2030).

The study shows that EU efforts to meet its long-term EU climate change objectives could make a substantial contribution to reducing air pollution. In particular, benefits of climate change policies would lie in:

- A reduction of the cost of controlling air pollutant emissions (about €10 billion per year); reducing greenhouse gas emissions, by burning smaller amounts of fossil fuels, will mean less air pollution. As a result the cost of tackling air pollution will be cut significantly.
- Less damage to public health (more than 20,000 fewer premature death per year) and ecosystems. The reduction of greenhouse gases introduced by climate change policies would lead to a fall in air pollutants from fossil fuel combustion (most notably oxides of nitrogen, sulphur dioxide, and particles), and their associated health effects.

Such benefits are expected to be more significant in 2030 than in 2020 since a longer period of time will be necessary for implementing measures and for changes to occur in the energy system. Nevertheless, climate change policies will reduce the overall cost of the air pollution abatement measures needed to meet the objectives of the Thematic Strategy on Air Pollution by 2020.

However, the report also states that in order to meet the EU's long-term objectives for air pollution, significantly greater efforts will still be necessary in the form of further targeted air pollution abatement measures. For example, reductions in emissions from non land-based sources, especially shipping, would be necessary to reduce health effects to targeted levels.

Overall, the current study highlights the positive side-effect of climate change policies on the effectiveness of existing air pollution abatement policies. It also acknowledges that a specific air pollution policy will still be needed.


Theme(s): Air pollution, climate change and energy, sustainable development and policy assessment, Environment and health

Opinions expressed in this News Alert do not necessarily reflect those of the European Commission