

Minimal Benefits from Further pan-European VOC Legislation

Ground Level Ozone & Air Quality

On 9 June 1999, the European Commission adopted key proposals for directives on national emission ceilings and ground-level (tropospheric) ozone air quality targets. The proposal for ozone sets a new EU target value of $120 \mu\text{g}/\text{m}^3$ (60 ppb), whilst the proposal for a national emission ceiling directive sets emission targets for NH_3 , SO_x , NO_x and VOCs for each member state. The Commission estimates the implementation costs for these two proposals at an extra E7.5 billion per year on top of the E 58 billion per year already committed through existing legislation and proposals.

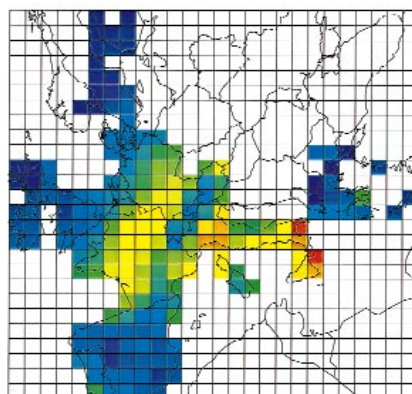
In a parallel process, discussions on the same issues were also taking place within the framework of the UN-ECE in Geneva. In December 1999, the UN-ECE protocol to abate acidification, eutrophication and ground-level ozone, which has different emission targets to those of the National Emissions Ceilings proposal, was signed by over 30 nations.

UNICE, the European employers' federation, is engaged in dialogue to ensure that targets for air quality are balanced and effective.

Current Status of European Ground-Level Ozone

Atmospheric modelling is undertaken for the European Commission by the International Institute for Applied Systems and Analysis (IIASA), using the Regional Air Pollution Information and Simulation (RAINS) model, which provides a consistent framework for the analysis of emission reduction strategies. IIASA's 7th Interim Report to the Commission in January 1999 on the 'Cost Effective Control of Acidification and Ground Level Ozone', indicated that substantial progress had been made since 1990 through existing legislation, and that, rather than being a European problem, ground-level ozone was now a regional issue confined to certain parts of central Northwest Europe.

Map 1- Situation in 1990 (base case)



Maps indicate number of days with ozone above 60ppb
0 10 20 30 40 50 60 70

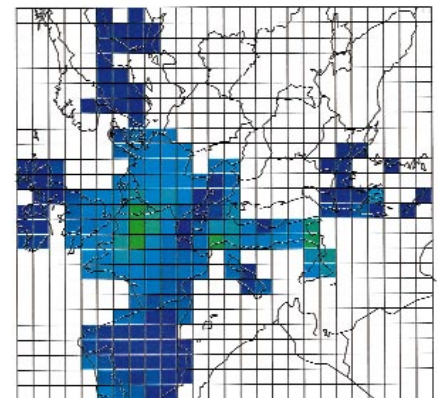
This situation is illustrated by Maps 1 and 2. Using a grid system covering the area of Europe, ground-level ozone is mapped according to colour (ranging from red indicating a high number of days above the target value to dark blue indicating a low number of days above the target value). Map 1 shows the base scenario of 1990, where there are a number of days across the EU where the target value of 60ppb was exceeded. Map 2 is a projection of levels of ozone in 2010, which would be achieved on the basis of current legislative measures (including the Solvent Emissions Directive). It can be seen that, with these measures, there is a significant improvement in ozone air quality from the 1990 basecase.

Further EU Legislation – is it needed?

Of relevance to the solvents industry, two cost-benefit studies have been undertaken for the Commission by independent consultants on product-based approaches for regulating the vehicle refinish and decorative paints sectors. Both reports are now available. One of the key objectives of the studies set out by the Commission is to evaluate the environmental impact of such regulatory measures on tropospheric ozone. ESIG has recently carried out an assessment of the ozone reduction achieved by such measures across Europe.

The assessment indicates that additional regulation of solvent-using industries will make a negligible contribution to ozone reduction, except for a very small reduction confined to central Northwest Europe. Ozone reductions could therefore be achieved far more effectively through local measures rather than through further pan-European legislation. These results in terms of minimal environmental improvement from further regulation are endorsed by the RAINS report. Map 3 shows that moving to the emission targets set in the Commission's National Emissions Ceilings proposal makes almost no impact on ozone on top of current legislative measures.

Map 2 - Situation in 2010 with current legislative measures



Map 3 - Situation in 2010 with the proposed EU National Emissions Ceilings directive

