

Science for Environment Policy

Up-to-date knowledge must be used to assess policy objectives

The most up-to-date knowledge and data must be used to assess policy objectives, new research confirms. Studying air pollution environmental quality targets set by the National Emission Ceilings (NEC) Directive¹, a new study has shown that if 2001 data are used to assess progress, most such targets appear to have been met. However, more recent and accurate current data show that this may not be the case.

The NEC Directive was adopted in 2001 and sets national emission ceilings for all Member States for 2010 which may not be exceeded, covering emissions of sulphur dioxide, nitrogen oxides, ammonia, and volatile organic compounds. The ceilings are set to largely achieve a number of interim environmental objectives designed to limit acidification, and health and vegetation related ground level ozone exposure, caused by these [atmospheric pollutants](#).

However, the quality of the data used to assess whether such environmental targets have been met is vital to the conclusions drawn with regard to the achievement of the interim environmental objectives. In this study the authors highlight the fact that the interim 2010 targets were set based on 'old' knowledge (from 2001) and that more up-to-date data, 'new' knowledge, now exists. For example, the data available in 2001 provided only average depositions and concentrations for some air pollutants in 150x150 km² grid cells, and only for 15 Member States. In contrast, new scientific knowledge (from 2012) now allows for a more detailed picture to be provided over 50x50 km² grid cells and across all 27 Member States.

In this study the researchers tested whether using 'old' knowledge to assess progress towards the 2010 interim objectives would give the same result as if 'new' knowledge was used.

When using old knowledge to assess progress, the objective to reduce the risk of acidification by more than 50% in each grid cell in comparison to 1990 levels was met almost everywhere - only four areas did not meet the target. Using new knowledge on ecosystem sensitivity and detailed patterns of deposition, however, showed that considerably more areas failed to meet the acidification target, particularly in western and eastern EU countries.

According to old knowledge, the objective of reducing risks of eutrophication by 30% in the EU area was also achieved, with risks reduced to 30% of the EU-15 area and 34% of the EU-27. In contrast, new knowledge showed that this objective had in fact not been met; 22.8% in the EU-15 area and 22.5% in the EU-27 area.

In contrast, the ground-level ozone interim objective regarding human health is in the most part met, according to both new and old knowledge. The exceptions are a small number of areas in Spain, Portugal, Norway and Italy. The ground-level ozone objective concerning crops and semi-natural vegetation was also mostly met using both old and new knowledge on threshold concentrations defined in the directive, with exceptions in Spain and Portugal. However, ozone levels in [forests](#) largely failed to meet targets using both old and new knowledge, apart from in parts of northern and eastern Europe and the UK.



24 July 2013
Issue 347

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Source: Hettelingh, J-P., Posch, M., Velders, G.J.M. *et al.* (2013). Assessing interim objectives for acidification, eutrophication and ground-level ozone of the EU National Emission Ceilings Directive with 2001 and 2012 knowledge. *Atmospheric Environment*. 75: 129-140.
DOI:10.1016/j.atmosenv.2013.03.060.

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To cite this article/service: "Science for Environment Policy": European Commission DG Environment News Alert Service, edited by SCU, The University of the West of England, Bristol.

1. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001L0081:EN:NOT>