ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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The economic cost of air pollution: Evidence from Europe

December 12th, 2019 – 40th Anniversary special session of CLRTAP

This side-event will present the results of a new OECD report, which provides empirical evidence that air pollution causes direct economy-wide reductions in market economic activity, in addition to the well-known mortality impacts.

Agenda:

9.00 Presentation of the findings
Antoine Dechezleprêtre
Senior economist, Economics Department & Environment Directorate, OECD

9.25 Q&A

9.45 End of event

Abstract:

This study provides the first evidence that air pollution causes economy-wide reductions in market economic activity based on data for Europe. The analysis combines satellite-based measures of air pollution with statistics on regional economic activity at the NUTS 3 level throughout the European Union over the period 2000-2015. An instrumental variables approach based on thermal inversions is used to identify the causal impact of air pollution on economic activity. The estimates show that a 1µg/m^3 increase in $PM_{2.5}$ concentration causes a 0.8% reduction in real GDP that same year. 95 percent of this impact is due to reductions in output per worker, which can occur through greater absenteeism at work or reduced labour productivity. Therefore, the results suggest that public policies to reduce air pollution may contribute positively to economic growth. Indeed, the large economic benefits from pollution reduction uncovered in the study compare with relatively small abatement costs. Thus, more stringent air quality regulations could be warranted based solely on economic grounds, even ignoring the large benefits in terms of avoided mortality.