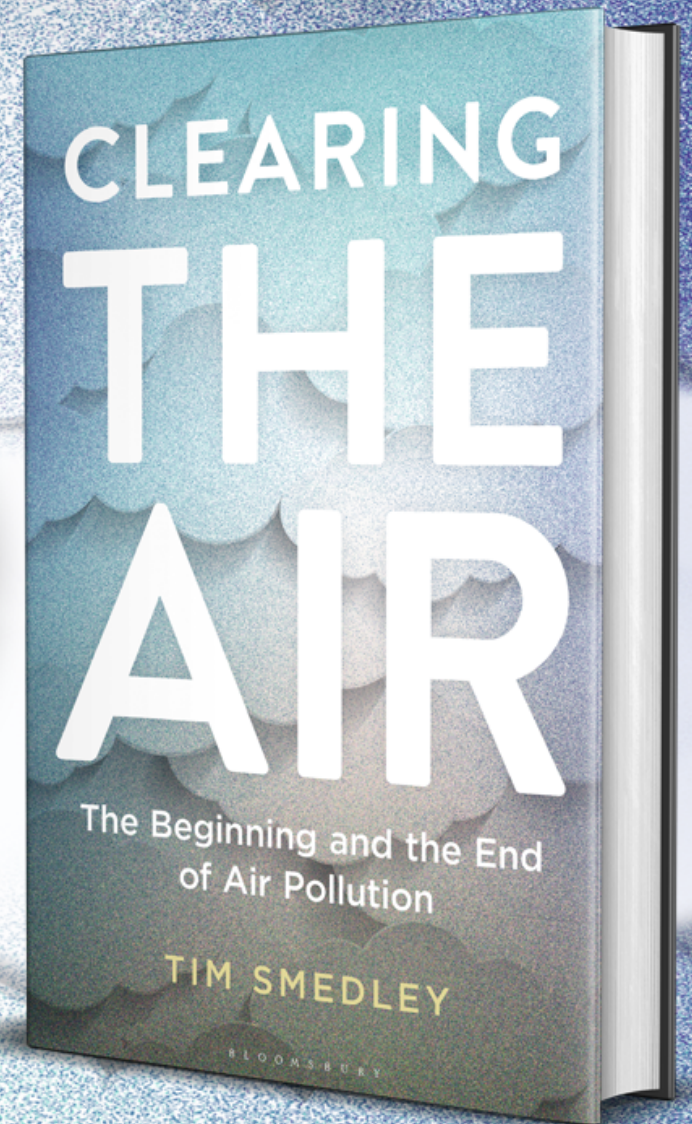


# Tim Smedley: Clearing The Air



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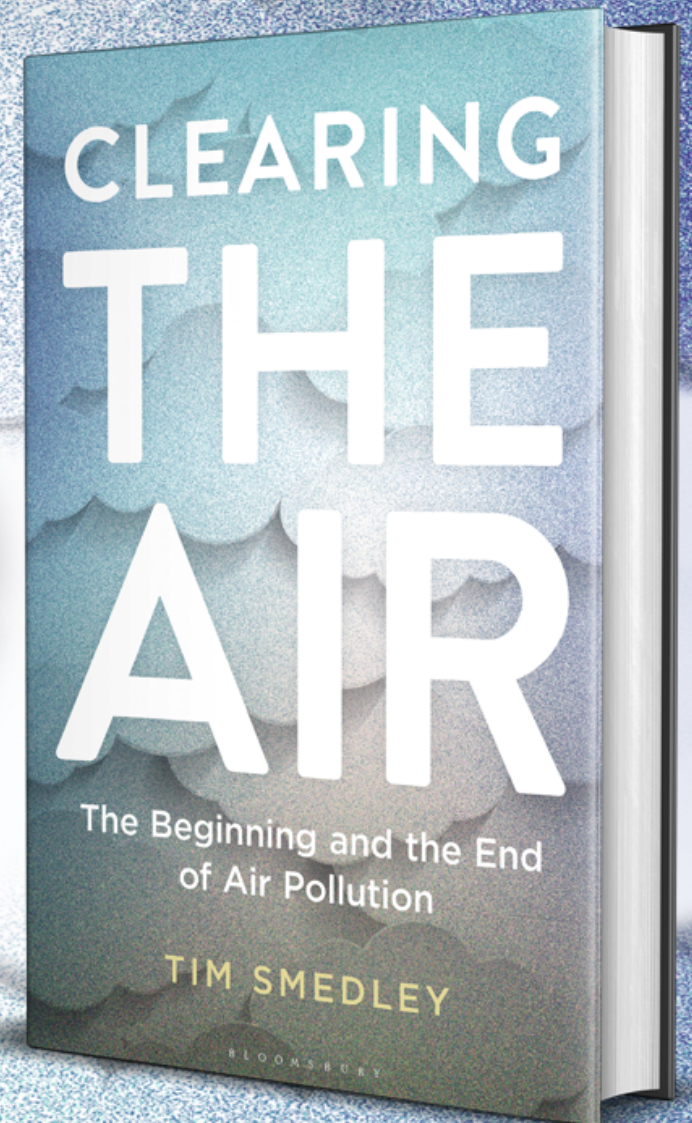


**‘READ THIS BOOK AND JOIN  
THE EFFORT TO TERMINATE  
POLLUTION’**

**ARNOLD SCHWARZENEGGER**



**THE ROYAL SOCIETY**  
INSIGHT INVESTMENT  
**SCIENCE BOOK PRIZE**



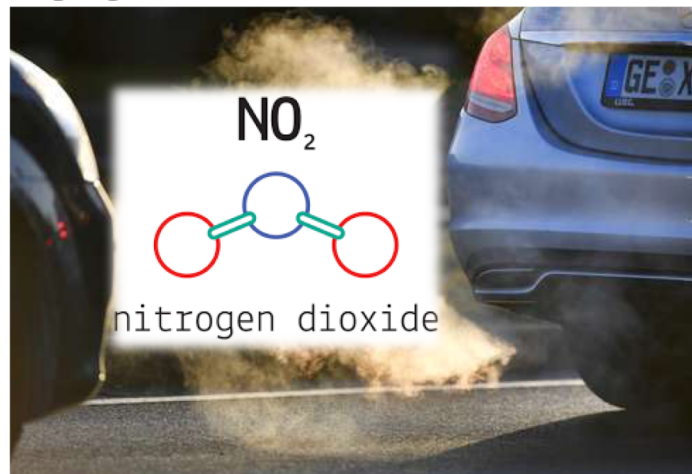
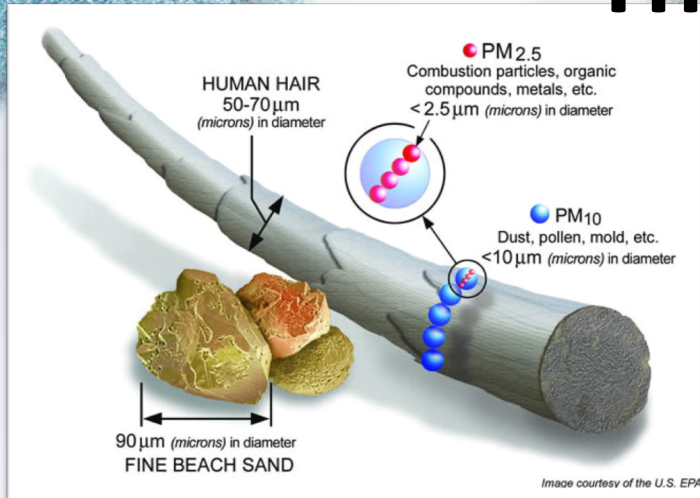


The background of the slide features a stylized, layered cloud design. The clouds are rendered in various shades of blue, from light sky blue to a deeper cerulean, with a fine, grainy texture. They are arranged in a way that creates a sense of depth, with some clouds appearing to float in front of others. The central area of the slide is a clean, white space where the text is located.

# **1. WHAT IS AIR POLLUTION?**



# Air pollutants: The Big Three



**Particulate  
Matter: PM<sub>2.5</sub>**

**Nitrogen  
Dioxide:  
 $\text{NO}_2$  /  $\text{NO}_x$**

**Ozone**



# Nanoparticles



**1-5 metres:**  
**1million – 100,000**  
**particles**

**5-10 metres:**  
**Down to 10,000-1,000**  
**particles**

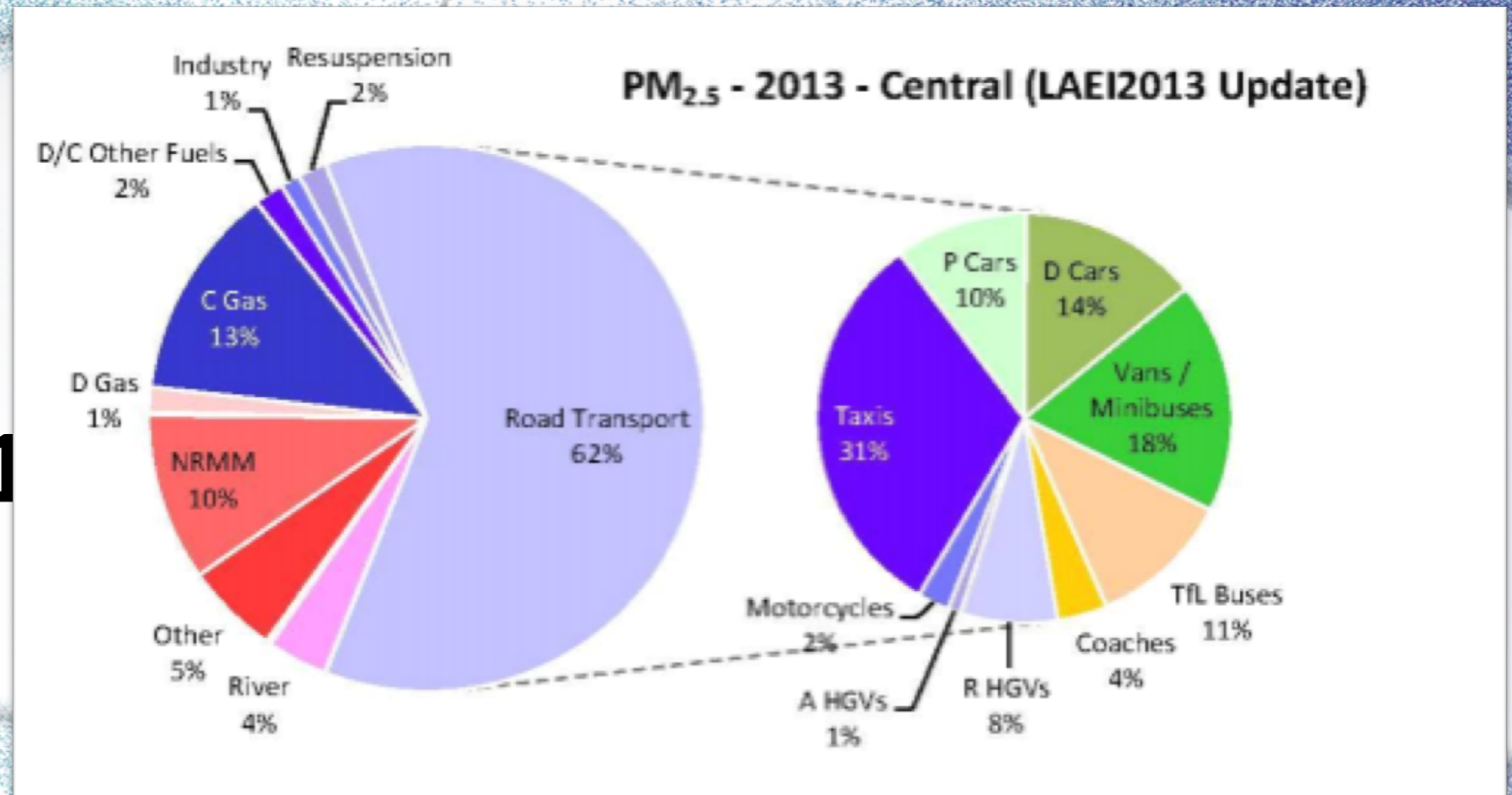


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## **2. WHERE DOES IT COME FROM?**



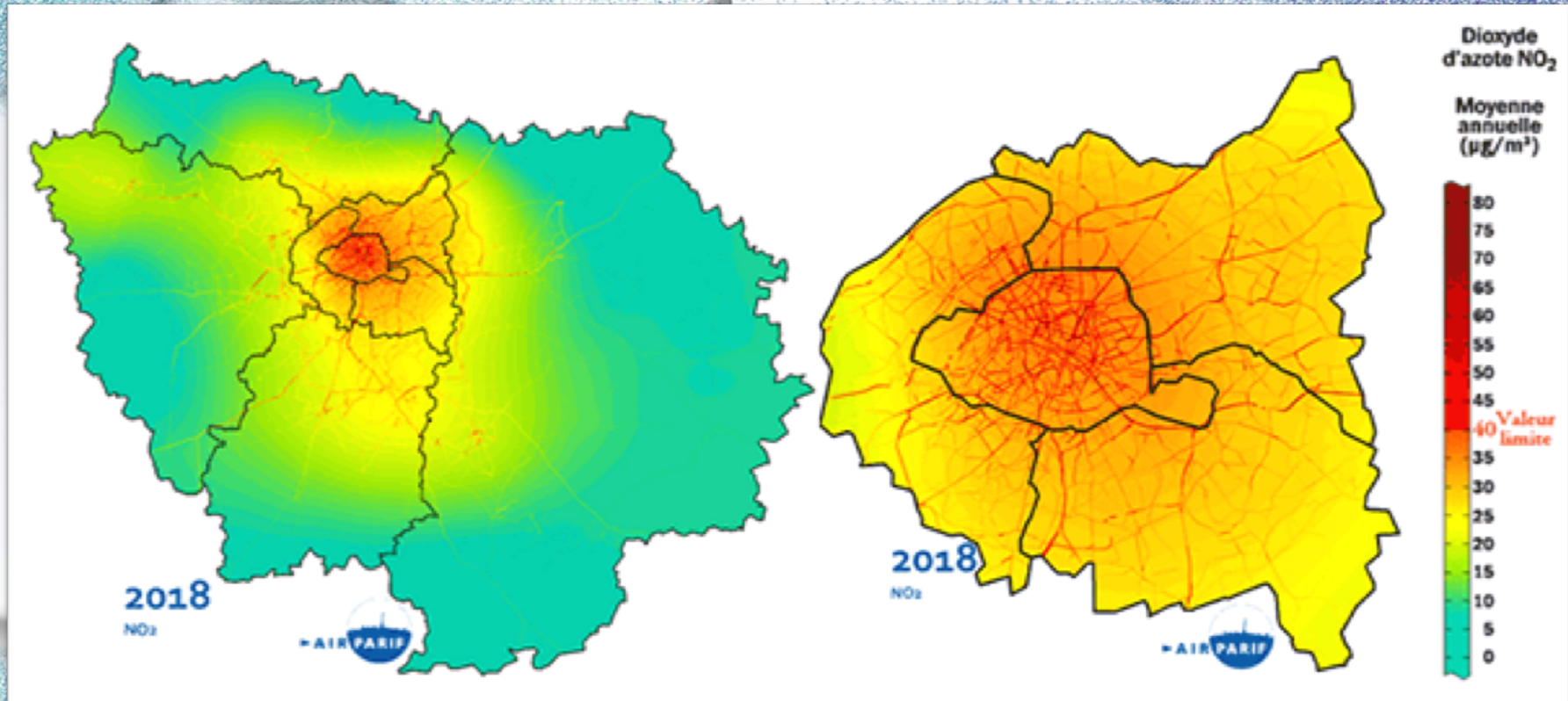
# PM<sub>2.5</sub>: London, 201



*Source: London Environment Strategy: Evidence Base, May 2018*



# NO2 Map – Paris



Source: AirParif. [www.airparif.asso.fr/etat-air/bilan-annuel/](http://www.airparif.asso.fr/etat-air/bilan-annuel/)





# **3. WHAT DOES IT DO TO US?**



# HOW IS AIR POLLUTION DAMAGING OUR HEALTH?



**#CLEARINGTHEAIR**

**OUT NOW**

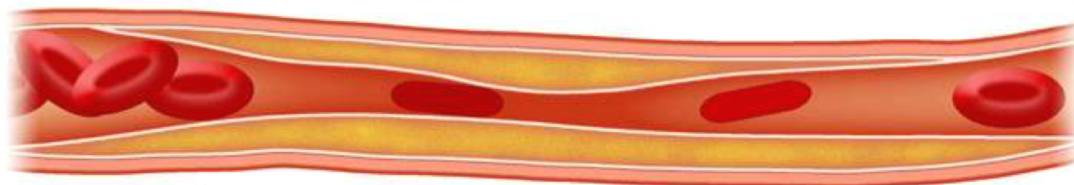






# World Health Organization

Inhaling particulates leads to a higher risk of dementia and causes one-third of all deaths from stroke, lung cancer and heart disease, according to the World Health Organisation.







# **4. WHAT CAN WE DO ABOUT IT?**



The background of the slide features a stylized, layered cloud pattern. The clouds are rendered in various shades of blue and white, with a soft, painterly texture. The clouds are arranged in a way that creates a sense of depth, with some appearing closer and more detailed than others. The overall effect is a clean, modern, and visually appealing backdrop for the text.

# **How to solve air pollution:**

- **Stop burning stuff**
- **Active transport**
- **Electrification**
- **Greening (more parks and trees)**
- **That's it!**
- **So... how do we do that, then?**



# Electric cars: the good news

Electric vehicle adoption improves air quality and climate outlook

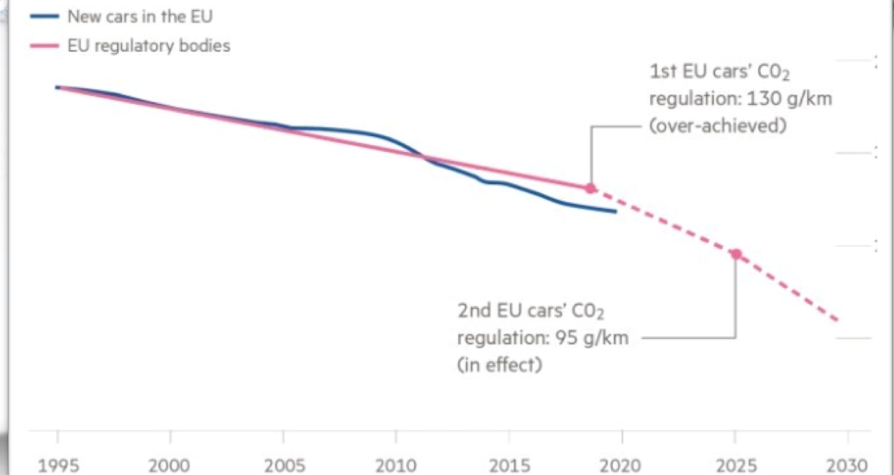
Ozone pollution reduced even when electricity is produced by combustion sources

April 12, 2019 | Julianne Beck and Amanda Morris



## Europe gets tougher on emissions

Average grammes of CO<sub>2</sub> per kilometre



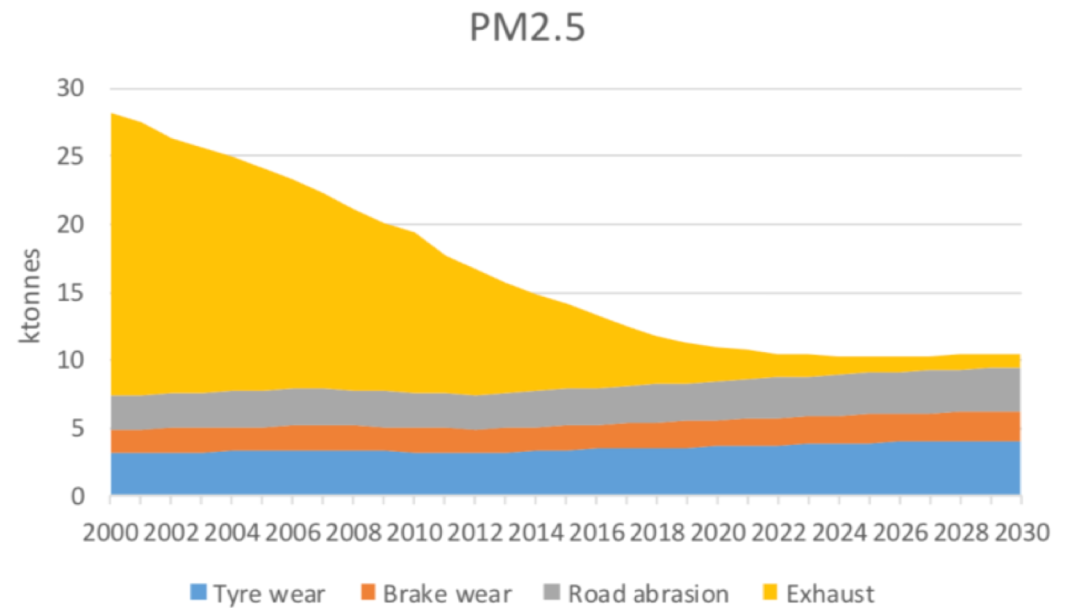
Source: ICCT

Climate goals mean Europe will overtake US in electric cars

by David Mchugh



# Electric cars: the bad news



Source: UK Air Quality Expert Group © Crown copyright 2019



# Active Transport



*Source, Dublin City Council: <https://consultation.dublincity.ie/traffic-and-transport/liffey-cycle-route/>*



# KEEPING STREETS MOVING

One car takes up the  
same space  
as...



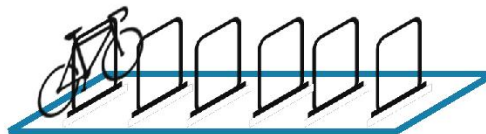
5 people cycling

or



20 people  
walking

or



12 cycle parking  
spaces

The average car in  
London carries:



**1.56** people

Source: London Travel Demand Survey



# Electric shared transport





# THE TIMES

IRELAND AND THE WORLD



Love, lie detectors and buff bodies

Behind the scenes of Love Island Times2

Hango drinks through Times2



Home crowd The Liverpool team were greeted yesterday by up to 750,000 fans in the city after winning the Champions League final. Pages 1, 46 The Game, pullout

## Air pollution alerts have already topped all of 2018

## Dublin air pollution breaching EU limits, EPA warns

Increased levels of nitrogen dioxide caused by traffic in capital can have health effects

# THE AIR THAT WE BREATHE

Diesel cars making Galway air quality amongst the worst in country

## School air pollution scandal

● Millions of children breathing dangerous levels ● Times launches campaign urging new legislation

**18 MILLION BREATHING TOXIC AIR**

US 'disgust'

**THE TIMES**  
CLEAN AIR FOR ALL

Ben Webster Environment Editor  
Ryan Watts

Millions of children attend schools in Britain with dangerous levels of air pollution, an investigation by The Times has found.

Days after the High Court ordered a new inquest into the death of a London girl whose mother claims she was killed by exhaust fumes from clogged roads, it can be revealed that about 6,500 schools educating 2.6 million children are in areas where fine particles in the air exceed the World Health Organisation recommended limit of ten microgrammes per cubic metre.

Fine particles, known as PM 2.5, are the most dangerous form of air pollution because their microscopic size allows them to penetrate deep into the lungs and enter the bloodstream.

Every school in London is over the WHO limit. Some 234 schools in Birmingham exceed it, as well as more than 100 in large cities such as Leicester and Nottingham.

The total includes 3,900 nursery and primary schools, where the younger children are most vulnerable to air pollution because their lungs are developing and their relative size means that they are closer to vehicle exhaust emissions.

The Times is launching a campaign for a new Clean Air Act to give everyone the right to be protected from the toxic air that contributes to an estimated 40,000 early deaths a year and particularly threatens the young, the elderly and people with lung conditions. Our online coverage includes an interactive search tool for parents, allowing them to check the level of particulates that children are subjected to at school.

The government claimed to be tackling air pollution under a clean air strategy published in January. Analysis of official projections revealed, however, that almost 4,700 schools with 1.9 million pupils will still be over the limit by 2030. The strategy included a target of halving the number of people who are living in areas above the WHO limit by 2025 but did not give the baseline for the target and did not set a clear plan for achieving it.

Close inspection of government projections on air quality by The Times shows that, despite gradual improvements in recent years, more than nine million people will still be living in areas above the limit in six years from now.

Michael Gove, the environment secretary, promised in January to set "a new, ambitious, long-term target to reduce people's exposure to PM 2.5" and to "publish evidence early in 2019 to examine what action would be needed" to meet the WHO limit. He has yet to publish either the target or the evidence.

Last week the High Court granted the mother of Ella Kissi-Debrah the right to a new inquest into her daughter's death after years of campaigning. Rosamund Kissi-Debrah says that the nine-year-old girl, ill from asthma and fatal

Continued on page 2, col 3

Air pollution is a "public health emergency", according to the World Health Organisation, which warns that

90%

through the [lungs], are readily picked up by cells, and carried via the bloodstream to various organs all over

## Air pollution damages 'every organ in the body'

Damian Carrington  
Parliament editor

Air pollution is a "public health emergency", according to the World Health Organisation, which warns that

90%

through the [lungs], are readily picked up by cells, and carried via the bloodstream to various organs all over



[www.clearingtheairbook.com](http://www.clearingtheairbook.com)



[@TimSmedley](https://twitter.com/TimSmedley)

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