

FIVE THINGS WE LEARNT WHEN 20,000 BELGIANS BECAME AIR POLLUTION SCIENTISTS


 [ANTON LAZARUS \(HTTPS://META.EEB.ORG/AUTHOR/ANTONLAZARUS/\)](https://meta.eeb.org/author/antonlazarus/) · **OCTOBER 4, 2018** · [AIR \(HTTPS://META.EEB.ORG/CATEGORY/AIR/\)](https://meta.eeb.org/category/air/)



Photo: Voogd075 / Wikipedia

The biggest ever citizens' investigation into air pollution has produced some interesting results about air quality in Europe.

Here, META brings you five things we've learnt from this groundbreaking project which we [first reported about back in May \(https://meta.eeb.org/2018/05/24/how-20000-citizen-scientists-are-sniffing-out-their-air-pollution-problem/\)](https://meta.eeb.org/2018/05/24/how-20000-citizen-scientists-are-sniffing-out-their-air-pollution-problem/).

1. People care about air

There were 20,000 '*Curieuze Neuzen* (<https://curieuzeneuzen.be/in-english/>)' testing stations stuck to the front of homes, schools and offices across Flanders, Belgium. The name is a play on words that can be literally translated as 'curious noses' but is used to mean 'people that are interested'.

The scale of the project was unprecedented anywhere in the world.

Unlike more complicated traditional air quality measuring equipment, the *Curieuze Neuzen* tests consisted of small tubes strapped to the inside of a cardboard sign.



CurieuzeNeuzen
@Curieuze_Neuzen 

Veel vragen van toegewijde #CurieuzeNeuzen! Is dat meetbord nu niet fout gedrukt? Nee! Snel demo-filmpje gemaakt Geen nood als uw pakket er nog niet is, pakketten worden de hele week verzonden voor start meting op zaterdag 28/4! @AnaNPianist



3:51 p.m. · 24 apr. 2018



Participants contributed €10 towards the cost of their testing kits.

With demand outstripping supply, the final locations were selected in order to provide a fair spread of results.

 **Bart Sturtewagen** 
@BartSturtewagen 

Voor de wetenschap en luchtkwaliteit [#curieuzeneuzen](#)



12:11 p.m. · 28 apr. 2018 

 14  2  Deze Tweet delen

The volunteer 'scientists' then measured the pollution in front of their homes by leaving the open tubes exposed to the air for a month in Spring this year.

The project grabbed the attention of people across the region as the distinctive cardboard signs peppered the landscape. This tweet from the project team shows all 20,000 locations plotted onto a map of Flanders:



 **CurieuzeNeuzen**
@Curieuze_Neuzen 

Hoe zou de kaart van [#CurieuzeNeuzen](#) eruit zien volgens Google Earth? Zo dus! Mooi beeld, toch?





2:28 p.m. · 23 mei 2018 




More than 99% of participants removed their test tubes and returned them on time for the results to be analysed.

 **CurieuzeNeuzen**
@Curieuze_Neuzen 

Tienduizenden meetbuisjes onderweg naar het laboratorium! Zijn er #CurieuzeNeuzen die hun buisjes herkennen ;)



10:33 a.m. · 30 mei 2018 

 85  5  Deze Tweet delen

After checking the results, scientists at the University of Antwerp finally shared their findings last weekend.

You can see how people reacted on [Facebook](https://www.facebook.com/search/top/?q=curiezeneuzen) (<https://www.facebook.com/search/top/?q=curiezeneuzen>), [Twitter](https://twitter.com/search?q=%23curiezeneuzen&src=typd) (<https://twitter.com/search?q=%23curiezeneuzen&src=typd>) and [Instagram](https://www.instagram.com/explore/tags/curiezeneuzen/?hl=en) (<https://www.instagram.com/explore/tags/curiezeneuzen/?hl=en>).

2. If you live in a city, you are probably facing dangerous levels of air pollution

While the project only took part in the Flemish region of Belgium, the results are likely to be similar to what would be found if the tests were conducted in other areas of Europe.

EU air pollution limits are being breached across Europe, with 23 out of the 28 member states failing to meet the requirements set in law to protect human health and the environment.

The project's testing kits were developed to detect nitrogen dioxide in the air.

Nitrogen dioxide – or NO₂ – is a harmful air pollutant that is linked to a host of health conditions including asthma, bronchitis and host of respiratory problems.

While NO₂ gets into the air as the result of a variety of activities, including heavy industry, coal-burning power plants and intensive agriculture, the biggest sources leading to high concentrations in inner-city areas are dirty diesel cars and trucks.

According to experts at the European Environment Agency more than 75,000 lives end prematurely each year in Europe because of NO₂ pollution alone and a hard-hitting video about the health impact of air pollutants like nitrogen was shared by the [European Public Health Alliance \(https://epha.org/epha-calls-on-meps-to-protect-public-health-from-transport-related-air-pollution/\)](https://epha.org/epha-calls-on-meps-to-protect-public-health-from-transport-related-air-pollution/) this week.

This is what air pollution is doing to us



The European Commission has recently [launched legal action against governments \(https://meta.eeb.org/2018/05/17/breaking-eu-governments-in-the-dock-after-air-quality-breaches-on-a-continental-scale/\)](https://meta.eeb.org/2018/05/17/breaking-eu-governments-in-the-dock-after-air-quality-breaches-on-a-continental-scale/) that have failed to guarantee their citizens' rights to clean air.

Margherita Tolotto, Air Quality Policy Officer at EEB, said:

"People all over Europe are being robbed of their health as governments fail to meet EU requirements for clean air. These latest results will shock people everywhere, especially given air pollution's impact on the quality of life of some of the most vulnerable people in society."

3. But the threat depends on your city

De Standaard newspaper, which was a major partner in the project, announced the results under the headline: *"Antwerp is coloured dark red, Ghent breathes a sigh of relief"*.

(<https://i0.wp.com/meta.eeb.org/wp-content/uploads/2018/10/antwerpghent.png?ssl=1>).

The local government in Ghent has recently introduced a traffic management plan that 'cuts' streets in the city centre to discourage all through traffic.

Antwerp has taken another approach by opting for a Low Emissions Zone that targets only the dirtiest old vehicles.

Professor Filip Meysman who led the scientific team behind the project at the University of Antwerp told *De Standaard*:

"You can read the results of traffic planning and transport policy on these maps."

4. ...and even your street

Strong variations between NO₂ (<https://i1.wp.com/meta.eeb.org/wp-content/uploads/2018/10/leuven-1.png?ssl=1>) concentrations were also revealed within short distances of one another, and even on the same street.

Local conditions like the flow of vehicles, urban corridors between high buildings and start-stop traffic at crossings and lights, all lead to higher NO₂ concentrations.

Professor Filip Meysman told *De Standaard*:

"We already knew about the effect of 'street canyons' but the big surprise is the impact of traffic stopping at lights and roundabouts."

Maysman also pointed out that air pollution hot spots were not only found in the biggest cities. Narrow streets led to some of the worst results being found elsewhere, including in the touristic centre of medieval Bruges.

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ANTON LAZARUS (HTTPS://META.EEB.ORG/AUTHOR/ANTONLAZARUS/)

Anton was the Editor of META and the European Environmental Bureau's Head of Communications until 2020.

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