

## ► Our Stories



► Christine Van Wunnik (second from left) with just some of the members of her citizen science group

### Mapping air quality in Brussels while cycling to work

#### Colleagues join citizen science project

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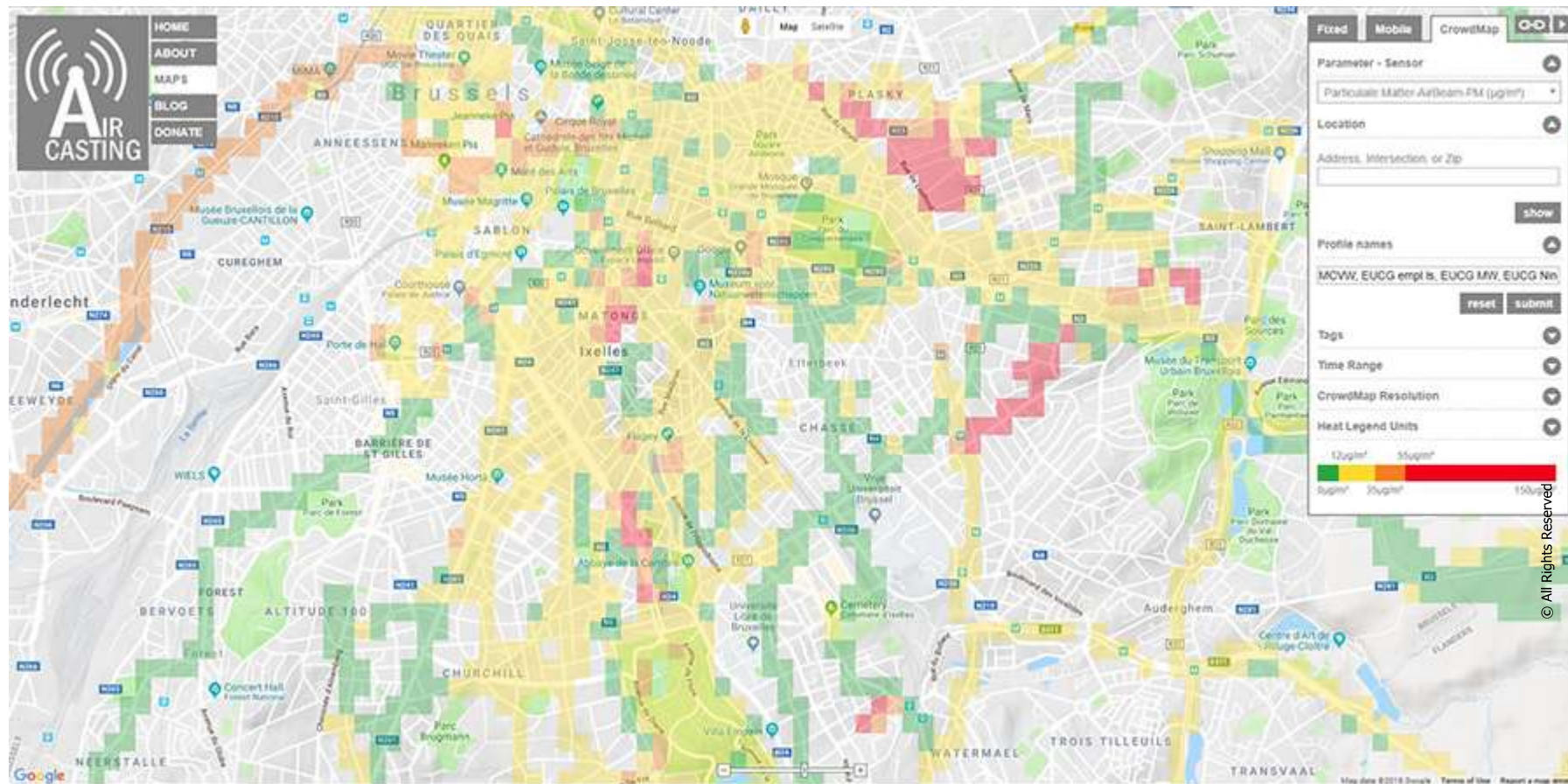
**Christine van Wunnik, a senior project adviser in the H2020 Environment and Resources unit of EASME, is one of several colleagues who collect air quality data in Brussels during her daily cycling commute. The measurements are part of a citizen science project called AirCasting Brussels, and early results were presented this month in the context of VéloMai. Commission en direct met her to find out the details.**

#### **What is the AirCasting Brussels project?**

AirCasting Brussels is a citizen science project that is managed by the ULB - COSMOPOLIS Centre for Urban research, and BRAL - Citizens Action Brussels. The project helps groups of citizens to measure and - possibly - address air quality in Brussels. I am a member of a citizens group that consists of about 15 members working for the EU that mostly cycle to work. We were 'recruited' through the EU cycling group (EUCG).

## How do you contribute?

Me and other members of the group commute wearing a sensor that measures fine dust, called 'particulate matter 2.5' or 'PM2.5'. This refers to very small particles - two and a half microns or less in width. By comparison, the diameter of a human hair is 50–70 microns. The sensor device is connected to a smart phone and this smart phone uploads the data to the Aircasting platform which presents it in aggregated form on the Aircasting crowd map. Because all members upload their PM 2.5 measurements to the same database, we have been able to produce a rather interesting map of PM 2.5 pollution in Brussels (see map).



► The Aircasting map shows measurements collected by the different group members at different moments in time

## What inspired you to get involved?

In my unit in EASME, we implement the part of Horizon 2020 that actually funds air quality research and also citizen science projects. Participation in AirCasting Brussels offered an opportunity to see how these types of projects work in practice, for citizens. Moreover, I find air pollution a very worrying phenomenon and I wanted to learn more about it. The type of data we provide is not collected by any other means at the moment. Our measurements

can provide input to debates that influence the future air quality in Brussels, such as the development of the new mobility plan for the European Commission.

### **Are other EU staff involved?**

You would maybe expect the majority of the members to work for DG ENV or DG RTD, but the group consists of colleagues coming from a great variety of DGs, from SCIC to DGs COMP and ECFIN. There are four of us from EASME, which has a strong cycling community - this is where the VéloMai cycle to work initiative started back in 2016. The Aircasting group is a cross-institutional group - one of the members works for the European Parliament.

### **So where are the pollution hotspots in Brussels?**

What I noticed is that it is not so easy to indicate fixed hotspots; air pollution depends a lot on weather and temperature. However, going from Arts-Loi to Place Madou was often the worst part of my commute in terms of PM 2.5 concentrations. Fortunately, our offices on the top floor of the Madou tower were remarkably clean. If you are interested in learning more, the Brussels Centre Observatory has published a brief guide to the air of Brussels, and official air quality data is published by Bruxelles Environnement (links below).

### **What have you learned from your involvement with this project?**

I learned that smell is not necessarily an indication for fine dust pollution and that it is useful to – literally - stay a few metres away from cars and buses. The exchanges with the other 'citizen scientists' showed that exposure to air pollution in other modes of transport than the bike can be just as bad, in particular in the car and the metro.

**Air Casting platform** (<http://aircasting.org>)

**A brief guide to the air of brussels** (<http://bco.bsi-brussels.be/a-brief-guide-to-the-air-of-brussels/>)

**Qualité de l'air – Bruxelles Environnement** (<https://qualitedelair.brussels/>)

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