

# **Citizen Science Lab: Air Pollution**

**22 Jan 2018 through 26 Jan 2018 @Oort**

## **Aim and Description**

The new Citizen Science Lab at the University of Leiden, Dutch Institute for Public Health and the Environment (RIVM), DesignLab at the University Twente and Waag Society have hosted a highly interactive workshop on citizen science approaches to measure and act upon air pollution.

Air pollution is an urgent scientific and societal issues in which citizen science can potentially lead to significant breakthroughs, for instance by providing measurements on a scale that cannot realistically be achieved by professional measurement equipment. One important aspect of this workshop was the aim to connect the "top-down" approach of many projects initiated by scientists, and the "bottom-up" grass-roots activities that are emerging throughout society all over the world now. We brought together an international and heterogeneous group of people active in citizen science. Participants came from all over Europe. Together we addressed many aspects of citizen science projects related to air pollution, resulting in eight pitches on plans and projects to pursue in the near future, delivered to a jury on the final day of the workshop.

## **Outcomes**

Many of the presented plans will continue in the coming months, either by being developed into proposals for specific calls, or in the form of e.g. the construction of a sensor database, Citizen Science communication guidelines, a lab for DIY sensor building, and a method for social justice in citizen science to connect scientists and communities.

## **"Aha" moments**

This workshop brought a lot of people together from different backgrounds, sharing a very positive view on citizen science. This helped to bring projects further: it helps if a specialist you consult has been working in citizen science and sees the possibilities rather than the objections.

The variety of backgrounds caused several reality checks. For example, a group of sensor specialists sat together to talk about the construction of a technical. A passing citizen scientist told them she would have no use for their database. The plans were then adapted significantly to be useful also from a less technical perspective including.

## **Organization/Format:**

Apart for the first day and the morning of the second day, that were dedicated to introductory presentations, case studies, and get-to-know activities including a World Café session, we left the program very open and adapted them according to the needs of the participants. This worked well. After plenary clustering of preliminary ideas, the participants organized themselves and set to work, with a lot of exchange between groups. The open program encouraged participants to bring in their own ideas.

One of the participants remarked that she had been to a lot of brainstorm sessions, but that this was the first time that there was enough time to continue and actually bring the idea further.

## **Other comments**

There was less attendance from citizen scientists than we wished. Possibly because citizens have to put in their private time and money. A more extensive evening program might help. This was envisioned in earlier version of the program, but was left out in the end for practical reasons.

On the last day there were pitches in front of a jury. This gave a nice focus to the process of defining project plans. However the lack of a prize diminished the importance of the jury and lessened the competition. The latter was not necessarily a disadvantage, since. exchange of ideas between different groups might have been less with more competition.

An unexpected but valuable outcome of the workshop was the variety of plans presented at the end. The original aim of the workshop was to come up with several large projects for citizen science projects on an international scale to be submitted in H2020 calls. However, many participants took the opportunity to team up for a couple of hours to join forces in knowledge exchange projects. The focus on large international projects had an unwanted effect, in that it favors the top-down approach of experts being in charge. Grass-root organizations are often more interested in small-scale projects, and in search of smaller amounts of money.

### **Publicity**

<https://www.volkskrant.nl/wetenschap/hoede-wetenschap-van-burgers-kan-leren-en-burgers-van-de-wetenschap~a4562728/>

<https://www.universiteitleiden.nl/en/news/2018/02/citizen-science-lab-launched-with-workshop-about-air-pollution>

<https://www.cs-eu.net/blog/citizen-science-lab-air-pollution-meeting-leiden>

### **Organizers**

Ivonne Jansen-Dinges (Waag Society, the Netherlands)

Frank Kresin (University of Twente, the Netherlands)

Frans Snik (Leiden University, the Netherlands)

Hester Volten (RIVM, the Netherlands)