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# OBSERVING, MEASURING AND TACKLING AIR POLLUTION WITH CITIZENS AND ELECTED OFFICIALS

## The case of public policy and Technical democracy about PM issue in Montpellier, Fce

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## INTRODUCTION

In the context of a double democratic and environmental crisis, participatory action-research has multiplied in recent years with increased attention from institutions. Our paper presents the first results of a participatory science project, BREATHE in France.

## PRINCIPAL GOALS

(1) The project aims at analyzing the implication and the effects of the Citizen Science device "co-constructing" at micro-scales a cartography of fine particles concentrations (PM 10 - PM 2.5 - PM 1 - PM 0.1) while discriminating the source and modeling the dispersion phenomena. (2) On the political level, it aims to analyze the institutionalization process of the device and its effects on the "co-production" of public policies and strategies (EPZ, PCAET, Mobility Plan, etc.)

## PROTOCOL

The project is based on a participatory science protocol based on participation engineering. Our fieldwork covers three targets: (a) the incinerator (waste recovery center) - (b) a highways around a small town; (c) a street canyon, city of Montpellier, south of France. We hybridized data collection methods: participant observation, participatory workshops, interviews with key actors, analysis of scientific and media corpus, analysis of public policies...

## ANALYSIS

We analyzed the effects of BREATHE and the measures made with citizens on current political strategies, on official air pollution measurement indicators and on official cartographies chosen by elected officials to target their policies on the highway and cars as the only polluter to be fought.



## MAIN RESULTS

Non-regulatory measurements from Breathe have not been adopted by elected officials. They have maintained an ambitious Low Emission Zone despite the feedback from the participatory workshops. The PM measurements in the vicinity of the freeway have allowed the deployment of R&D programs with Vinci Autoroutes. We note an instrumentalization of research and expertise by elected officials and citizens not for the purpose of improving air quality or knowledge on the subject but for the purpose of achieving personal interests.



## CONCLUSION & PERSPECTIVES

The complex intertwining of technical and political issues related to air quality metrology, the importance and difficulties of standardization of measurements and of a real development of metrology at relevant levels of scale when it comes to supporting public action and addressing health issues reinforces us in the idea of developing this project and observing how "unregulated" measurement can modify the existing French system How can a citizen science program on air quality take into account the complexity of measurement, scientific uncertainty and modify the expertise framework that governs public policies on air pollution control? Today, BREATHE has allowed to strengthen links with private actors and serves as a field of analysis for a thesis in Political Science and STS on the co-production of air pollution.

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