9th IWA Odour & VOC/Air Emission Conference
26-27 October 2021 Bilbao, Spain

ABSTRACT

THE ITALIAN PILOT FOR THE HORIZON 2020 D-NOSES PROJECT: COMBINING CITIZEN SCIENCE AND DISPERSION MODELLING TO IDENTIFY ODOUR SOURCES IN THE MUNICIPAL AREA OF CASTELLANZA

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Summary

The overall aim of the H2020 D-NOSES project is to develop and validate a methodology for odour pollution management based on a bottom-up approach. This approach focuses on using participatory strategies for citizen involvement, engagement with a broad set of quadruple helix stakeholders, and the co-creation of practical and balanced solutions.
Within the frame of this project, 10 pilot studies are being carried out in 10 different countries in order to develop and validate the methodology.
In the case of Italy, the pilot study involves 3 small Municipalities located in Northern Italy: Castellanza, Olgiate Olona, Marnate, comprising a total of ca. 35'000 inhabitants. In the area between these Municipalities, an odour problem has been lamented for years. A non-organized collection of complaints started already in 2016: the number of complaints clearly shows that there is an unsolved (an non-identified) odour problem on the territory.
As a first step of the project, 4 industries were identified as potential sources of the lamented odour nuisance: a chemical plant, the municipal WWTP, a textile and dying industry, and the WWTP connected to the dying industry.
As a background for this study, it has to be considered that, although in Italy there is not a national regulation on odours, in the region of Lombardy (where the 3 municipalities are located) there is a specific regional guideline regarding the management of odour issues since 2012. This guideline foresses the execution of olfactometric analysis followed by dispersion modelling in order to quantify odour emissions and their impact on the territory.
Thus, in order to manage the odour problem in this situation, it was proposed to combine the application of the D-NOSES methodology with the "traditional" way involving olfactometric measurements and dispersion modelling. This is very important on one hand to follow the principles of the guideline, but also to provide scientific sound experimental data to validate the D-NOSES methodology.
This work will present and discuss the application of this integrated approach for the specific objective of identifying the source of the problem and co-creating a possible solution to it.

Indicate preference of kind of presentation

- ✙ Oral Communication
- ☐ Poster

Indicate topic of your work for the conference:

- ☐ Policy and associated regulations for odour and air quality.
- ✙ Odour/VOC measurement, monitoring&sensor technologies.
- ☐ Odour/VOC perception, impact, formation and dispersion.
- ☐ GHG emissions particulate matter and industrial emissions.
- ☐ Source characterization and odour/VOC mapping.
- ☐ Odour/VOC abatement, mitigation and neutralization.
- ☐ Odour/VOC from waste water, sewer systems and livestock.
- ☐ Air emissions and sustainable solutions for waste handling
- ✙ Community engagement, social media and citizen action.
- ☐ Other (suggest a new topic):

The scientific committee can examine the kind of presentation and session where authors propose to include their works.