



Mobile surveys of anthropogenic methane emissions in Barcelona: first mapping results

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During 2018 and 2019 multiple methane mobile measurements are being performed in the urban and peri-urban area of the city of Barcelona. The surveys are carried out in different days at different times with a car equipped with a flight-ready CO₂/CH₄/H₂O cavity ring-down spectrometer.

The detection of emissions peaks and different background level values of CH₄ are dependent on the synoptic situation and the wind regime. This study considers the singularity of the wind transport in Barcelona city area, surrounded by the sea in southeast, the Collserola mountain range in the northwest and two rivers at northeast and southwest. We present preliminary maps that show emissions from gas pipeline leaks and great gas consumers as hospitals or co-generation stations and the biogenic methane emissions from municipal waste treatment and sewage system and treatment.

This research is part of the Urban Mid/Downstream CH₄ Studies from the Climate and Clean Air Coalition (UNEP).