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Evaluation of oil and gas methane emissions in Romania using mobile measurements

Ilona Velzeboer¹, Antonio Delre², Arjan Hensen¹, Pim van den Bulk¹, and Charlotte Scheutz²

¹TNO, EMSA, Petten, Netherlands (ilona.velzeboer@tno.nl)

²Technical University of Denmark, Department of Environmental Engineering, Denmark

Romania has been a pioneer country in oil and gas (O&G) exploration in Europe and is the largest producer of O&G in Central and Eastern Europe. However, many installations are old and production levels are decreasing. The ROMEO measurement campaign was carried out in Romania to evaluate methane emissions from onshore O&G operations in Romania in 2019 (ROMEO, 2019). In this program, Technical University of Denmark (DTU) and TNO used mobile-van-based measurements in combination with tracer release to quantify emissions. A total set of 200 oil and gas wells, and facilities were evaluated and emissions were quantified. Methane emission rates ranged largely between about 0.02 and 38 g s⁻¹, following a “heavy-tailed” lognormal distribution. A small number of sites (5%) were responsible for 55% of the total emission. Decreasing emissions only from the few high-emitters would effectively decrease methane emissions from the investigated area. This shows the value of site-specific evaluation from the ground. In this presentation, the mobile measurement equipped vans will be shown and methodological issues will be addressed. Also the results in terms of the emission distribution will be presented. The outcome of this study can help the Romanian O&G companies to set priorities in leak repair, which can then lead to a quick win in emission reduction.

References

ROMEO, 2019. ROMEO - ROmanian Methane Emissions from Oil & gas. URL <http://romeo-memo2.wikidot.com/> (last accessed 13.01.21).