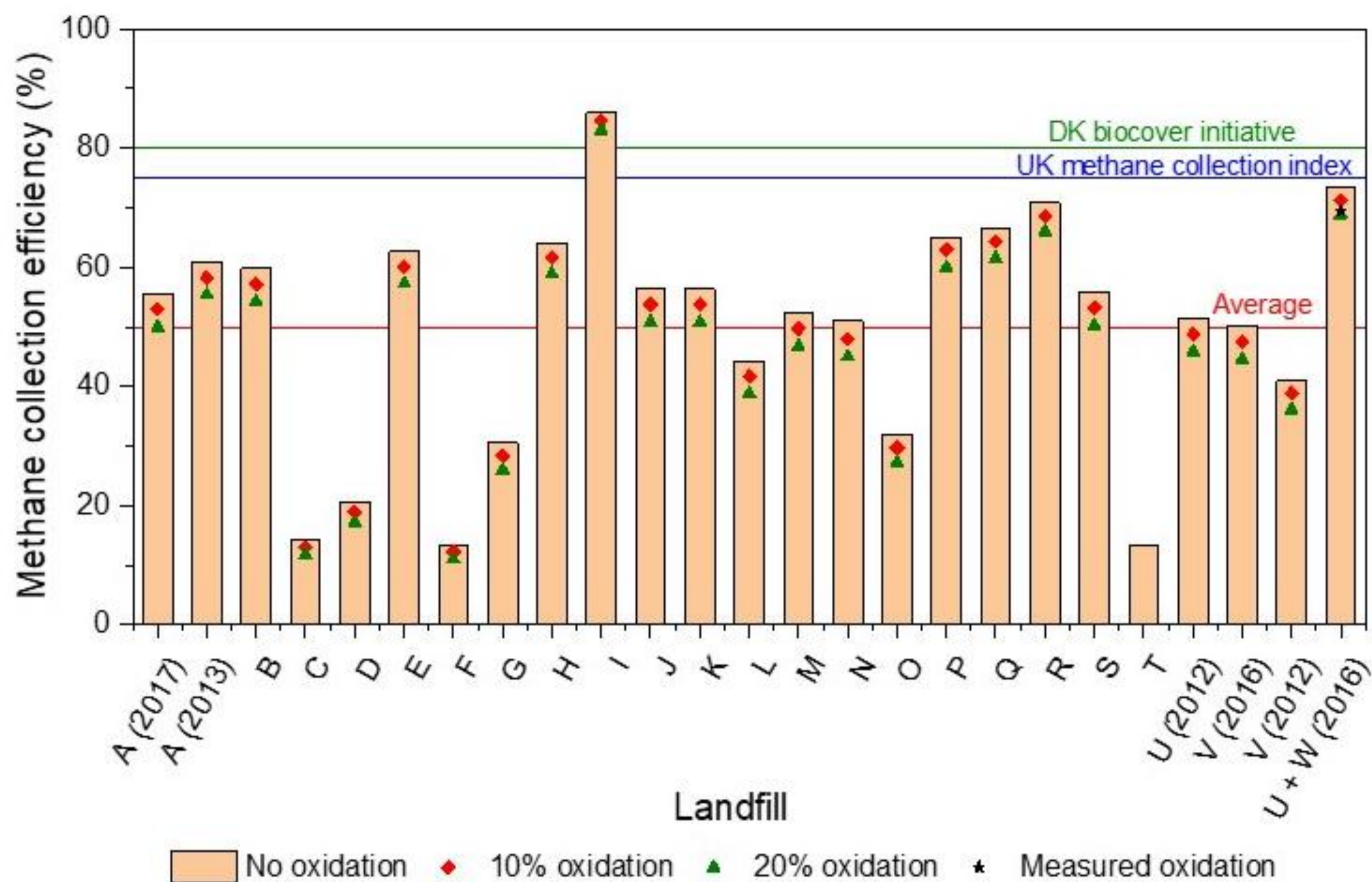


Denmark / Europe

Landfill gas collection efficiencies (%) at Danish landfills



PROJECT DESCRIPTION

- European regulations require landfill gas to be monitored and managed to reduce emissions, which can be done using gas collection and biocover systems. However, there is minimal guidance on how to monitor and assess mitigation actions. As a result, the efficiency of mitigation systems is seldom evaluated.
- This study determined gas collection efficiencies at 23 Danish landfills and compared collection efficiencies with literature values and potential limit values.
- Gas collection efficiencies were assessed based on recorded methane collection rates and measured methane emissions rates, which were quantified using the tracer gas dispersion method.

RESULTS ACHIEVED

- Gas collection efficiencies at 23 Danish sites ranged from 13% to 86% with an average of 50% – a value lower than the gas collection efficiencies in Swedish (58%), United Kingdom (UK) (64%), and United States (US) (63%) landfills.
- Only a few Danish landfills would fulfill a requirement of a gas collection efficiency of minimum 75-80%. The same goes for landfills in Sweden, the UK, and the US.
- Gas collection efficiency could be improved by reducing gas leaks from installations, improving gas collection (increasing the number and depth of wells), securing coverage of landfill surfaces, and repairing damaged cover soil.



PARTNERS INVOLVED IN PROJECT
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