



## CO<sub>2</sub> leakage quantification methods: advantages and limitations

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## Objectives of the study

Identify and review the potential methods for **quantifying CO<sub>2</sub> leakages from a geological storage site** from the **ground** or **seabed surface** and discuss the level of **accuracy** that is currently required for site **permitting** and **accounting** purposes



## Specific tasks

- Identify current and emerging techniques that can measure CO<sub>2</sub> leakage on shore and off-shore from potential point as well as diffuse sources
- Provide a detailed review of the quantification performance of each method individually including operational/technical details as well as cost implications
- Evaluate the improvements in quantifying CO<sub>2</sub> leakage through the implementation of a monitoring portfolio tailored for on-shore and off-shore environments



## Specific tasks

- Review current and proposed regulations and evaluate the required CO<sub>2</sub> leakage quantification accuracy against the performance of individual leakage monitoring methods and monitoring portfolios
- Provide recommendations for best practice in using existing CO<sub>2</sub> leakage monitoring techniques for quantification purposes and provide recommendations for future research and development to address stakeholder and regulatory requirements

