

Screening of future carbon storage sites – selecting the best spots

Martin Neumaier

ArianeLogiX, Sassenfelder Str. 56, 41334 Nettetal, Germany

E-mail: m.neumaier@ariane-logix.com

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Abstract. Subsurface carbon storage can occur in depleted oil and gas fields, in water-wet structures, or in open aquifers. All three types of storage sites present advantages and inconveniences, which will be reviewed in this talk. The selection of future sites for carbon storage balances storage capacity (how much CO₂ can be stored), injectivity (how efficiently or fast CO₂ can be stored), and containment risk (how safely CO₂ can be stored). We present a rigorous uncertainty-based approach involving estimates of pore volume, pressure and temperature conditions and resulting fluid properties, and sealing and containment behaviour, to highlight areas with best potential for safe and effective carbon storage.

Keywords: carbon storage, screening, exploration, risk, storage capacity.