Overview of geological storage options

1. Deep coal seams

In these formations, CO_2 is stored via a mechanism that leads to the release of methane. Substantial technical concerns related to the injection of CO_2 and subsequent storage processes limit the immediate attractiveness of these sites.

2. Depleted oil and gas reservoirs

These reservoirs tend to be the best characterised of all available storage options. However, the multiple bore holes and wells drilled to find and extract oil and gas can increase the leakage risk for storage operations.

3. Enhanced Oil Recovery (EOR)

EOR involves injecting CO_2 into geological formations to achieve greater oil recovery. EOR sites are ultimately too few and too geographically isolated to accommodate much of the CO_2 from widespread capture operations.

4. Deep saline formations (a) onshore (b) offshore

Deep saline aquifers are porous rock, which contain very saline water. The major obstacles to full exploitation of this storage option are accurate characterisation and demonstration that safety and environmental protection can be assured.