

## ANNEX I

## CRITERIA FOR THE CHARACTERISATION AND ASSESSMENT OF THE POTENTIAL STORAGE COMPLEX AND SURROUNDING AREA REFERRED TO IN ARTICLE 4(3)

## Step 1: Data collection

Sufficient data shall be accumulated to construct a volumetric and three-dimensional static (3-D)-earth model for the storage site and storage complex, including the caprock, and the surrounding area, including the hydraulically connected areas. This data shall cover at least the following intrinsic characteristics of the storage complex:

- (a) geology and geophysics;
- (b) hydrogeology (in particular existence of ground water intended for consumption);
- (c) reservoir engineering (including volumetric calculations of pore volume for CO<sub>2</sub> injection and ultimate storage capacity);
- (d) geochemistry (dissolution rates, mineralisation rates);
- (e) geomechanics (permeability, fracture pressure);
- (f) seismicity;
- (g) presence and condition of natural and man-made pathways, including wells and boreholes which could provide leakage pathways.

The following characteristics of the complex vicinity shall be documented:

- (h) domains surrounding the storage complex that may be affected by the storage of CO<sub>2</sub> in the storage site;
- (i) population distribution in the region overlying the storage site;
- (j) proximity to valuable natural resources (including in particular Natura 2000 areas pursuant to Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds<sup>(1)</sup> and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora<sup>(2)</sup>, potable groundwater and hydrocarbons);
- (k) activities around the storage complex and possible interactions with these activities (for example, exploration, production and storage of hydrocarbons, geothermal use of aquifers and use of underground water reserves);
- (l) proximity to the potential CO<sub>2</sub> source(s) (including estimates of the total potential mass of CO<sub>2</sub> economically available for storage) and adequate transport networks.

---

**Status:** EU Directives are being published on this site to aid cross referencing from UK legislation. After IP completion day (31 December 2020 11pm) no further amendments will be applied to this version.

---

- (1) [OJ L 103, 25.4.1979, p. 1.](#)
- (2) [OJ L 206, 22.7.1992, p. 7.](#)