

Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006 (Text with EEA relevance)

## CHAPTER 1

### SUBJECT MATTER, SCOPE AND DEFINITIONS

#### *Article 1*

##### **Subject matter and purpose**

- 1 This Directive establishes a legal framework for the environmentally safe geological storage of carbon dioxide (CO<sub>2</sub>) to contribute to the fight against climate change.
- 2 The purpose of environmentally safe geological storage of CO<sub>2</sub> is permanent containment of CO<sub>2</sub> in such a way as to prevent and, where this is not possible, eliminate as far as possible negative effects and any risk to the environment and human health.

#### *Article 2*

##### **Scope and prohibition**

- 1 This Directive shall apply to the geological storage of CO<sub>2</sub> in the territory of the Member States, their exclusive economic zones and on their continental shelves within the meaning of the United Nations Convention on the Law of the Sea (Unclos).
- 2 This Directive shall not apply to geological storage of CO<sub>2</sub>, with a total intended storage below 100 kilotonnes, undertaken for research, development or testing of new products and processes.
- 3 The storage of CO<sub>2</sub> in a storage site with a storage complex extending beyond the area referred to in paragraph 1 shall not be permitted.
- 4 The storage of CO<sub>2</sub> in the water column shall not be permitted.

#### *Article 3*

##### **Definitions**

For the purposes of this Directive the following definitions shall apply:

1. 'geological storage of CO<sub>2</sub>' means injection accompanied by storage of CO<sub>2</sub> streams in underground geological formations;
2. 'water column' means the vertically continuous mass of water from the surface to the bottom sediments of a water body;

3. 'storage site' means a defined volume area within a geological formation used for the geological storage of CO<sub>2</sub> and associated surface and injection facilities;
4. 'geological formation' means a lithostratigraphical subdivision within which distinct rock layers can be found and mapped;
5. 'leakage' means any release of CO<sub>2</sub> from the storage complex;
6. 'storage complex' means the storage site and surrounding geological domain which can have an effect on overall storage integrity and security; that is, secondary containment formations;
7. 'hydraulic unit' means a hydraulically connected pore space where pressure communication can be measured by technical means and which is bordered by flow barriers, such as faults, salt domes, lithological boundaries, or by the wedging out or outcropping of the formation;
8. 'exploration' means the assessment of potential storage complexes for the purposes of geologically storing CO<sub>2</sub> by means of activities intruding into the subsurface such as drilling to obtain geological information about strata in the potential storage complex and, as appropriate, carrying out injection tests in order to characterise the storage site;
9. 'exploration permit' means a written and reasoned decision authorising exploration, and specifying the conditions under which it may take place, issued by the competent authority pursuant to the requirements of this Directive;
10. 'operator' means any natural or legal, private or public person who operates or controls the storage site or to whom decisive economic power over the technical functioning of the storage site has been delegated according to national legislation;
11. 'storage permit' means a written and reasoned decision or decisions authorising the geological storage of CO<sub>2</sub> in a storage site by the operator, and specifying the conditions under which it may take place, issued by the competent authority pursuant to the requirements of this Directive;
12. 'substantial change' means any change not provided for in the storage permit, which may have significant effects on the environment or human health;
13. 'CO<sub>2</sub> stream' means a flow of substances that results from CO<sub>2</sub> capture processes;
14. 'waste' means the substances defined as waste in Article 1(1)(a) of Directive 2006/12/EC;
15. 'CO<sub>2</sub> plume' means the dispersing volume of CO<sub>2</sub> in the geological formation;
16. 'migration' means the movement of CO<sub>2</sub> within the storage complex;
17. 'significant irregularity' means any irregularity in the injection or storage operations or in the condition of the storage complex itself, which implies the risk of a leakage or risk to the environment or human health;
18. 'significant risk' means a combination of a probability of occurrence of damage and a magnitude of damage that cannot be disregarded without calling into question the purpose of this Directive for the storage site concerned;
19. 'corrective measures' means any measures taken to correct significant irregularities or to close leakages in order to prevent or stop the release of CO<sub>2</sub> from the storage complex;

20. 'closure' of a storage site means the definitive cessation of CO<sub>2</sub> injection into that storage site;
21. 'post-closure' means the period after the closure of a storage site, including the period after the transfer of responsibility to the competent authority;
22. 'transport network' means the network of pipelines, including associated booster stations, for the transport of CO<sub>2</sub> to the storage site.