



Appendix A

Kontor/afdeling
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Guidance for environmental impact assessments of CO₂-storage projects

This document presents a list of topics relating to the environmental impact assessment (EIA) process for CO₂ storage applications. The purpose of this document is to support applicants in preparing their EIAs by providing guidance on key aspects and thereby reducing unnecessary time spent on revisions to the EIA. The guidance provided in this document should therefore be regarded as advice intended to support the planning and execution of EIA processes for CO₂ storage projects. The topics presented below relate primarily to the level of detail and quality of the information and data provided in the EIA.

Monitoring programme

As part of the environmental impact assessment of a storage project, it is recommended to submit sufficient information to enable the granting of approvals for activities planned to be undertaken during the period leading up to, during, or shortly after the permit is issued, concurrently with the issuance of the storage permit. Such activities may include baseline studies which can then be assessed at the same level of detail and as part of the same process as the rest of the project. For seismic surveys, this information should include a detailed description of the specific equipment to be employed in these activities, as well as acoustic modelling of the particular seismic survey, both of which must be incorporated into the EIA.

Acoustic modelling

For all acoustic models prepared for the EIA, it is essential that they are as specific as possible with regard to the equipment and the impact. This means, for example, that for the first seismic monitoring activity (baseline), the modelling should be based on the actual acoustic impact expected to occur in connection with this activity.

Calculations concerning the impact on marine fauna should be presented in the acoustic modelling both with and without the proposed mitigation measures - including soft-start procedures. This entails an assessment that can determine whether Temporary Threshold Shift (TTS) or Permanent Threshold Shift (PTS) is expected to occur with the planned soft-start procedure, as well as an evaluation of the influence of vessel speed, accompanied by a justification for the specific speed.

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Furthermore, the modelling should explain why the selected airgun size and total volume are considered necessary. The soft-start procedure must be described in as much detail as possible, including the initial sound level at start-up and the time interval between shots.

Acidification – relevant for offshore projects

The EIA should evaluate the potential effects of a possible blow-out, including acidification resulting from a major release of CO₂ based on the best available knowledge. This assessment should include consideration of how acidification may affect physicochemical conditions and the subsequent effects, including direct impacts on marine flora and fauna.

Cumulative impacts

According to the Danish Law on environmental assessment¹, appendix 7, the environmental assessment should not only address direct and indirect impacts but also secondary, cumulative, transboundary, short-, medium- and long term whether they be permanent or temporary, positive or negative. The EIA should therefore include a thorough assessment of any cumulative effects with other activities, projects, and plans, both current and future. The evaluation should be based on the existing environmental conditions, taking into account current stressors and their expected development. The assessment must also consider the applicant's own plans and activities in the area, including those not covered by the storage application. The DEA can assist with information on approved or ongoing projects in the area.

Updates to legislation, protected areas etc.

If the site at hand is designated as a Natura 2000 area, it is important that the basis for site designation, as assessed and presented in the EIA, is accurate and that all species and habitat types are addressed separately in the assessment. This also applies to the presentation of plans for water bodies, marine spatial plans, marine strategy, etc., all of which must reflect the most recent versions. It is therefore essential, in connection with any revisions and updates to the EIA - such as those prompted by comments from the Danish Energy Agency - to continuously monitor whether any of these have changed.

Information on equipment

Equipment and methods must be described as specifically as possible. If several alternative methods are available, these should be detailed, and the environmental impacts of each method should be assessed. If the specific equipment is not known (e.g. because a supplier contract has yet to be concluded) the planned use and the resulting environmental impacts must be described and assessed. Thus, it is not critical whether the equipment is a model A or B (e.g. which specific model of

¹ LBK nr 4 af 03/01/2023



echosounder) but rather how it is planned to be used and which environmental impacts it will cause.

Description of current state

The section of the EIA describing the current state must provide an account of the environmental conditions prior to the implementation of the project. The topics addressed in this section must be relevant and clearly connected to the project and the environmental impacts assessed later in the report.

The section presenting the assessment of impacts

There must be a clear connection between the section on current state and the assessment of impacts on the relevant flora or fauna. For example, if a species is described in the section describing the current state, this must be clearly reflected in the section presenting the assessment of impacts, with a justification of the significance of the impact - e.g. why an impact is considered negligible.

The assessment of environmental impacts must also be well-founded and supported by relevant and up-to-date scientific sources (e.g., articles and reports). If older references are used, there must be an explanation for why they are still considered valid and whether they constitute a current knowledge base.