

OSPAR CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT OF THE
NORTH-EAST ATLANTIC

MEETING OF THE OSPAR COMMISSION (OSPAR)

REYKJAVIK: 28 JUNE – 1 JULY 2004

**REPORT FROM THE GROUP OF JURISTS AND LINGUISTS ON
PLACEMENT OF CARBON DIOXIDE IN THE OSPAR MARITIME AREA**

This document sets out the initial views of the Group of Jurists and Linguists on the legal compatibility with the OSPAR Convention of possible placements of carbon dioxide in the OSPAR maritime area.

Introduction

1. The Group of Jurists and Linguists (JL) was asked by the meeting of the OSPAR Commission in Amsterdam in June 2002 for advice on the legal compatibility with the OSPAR Convention of possible placements¹ of carbon dioxide (CO₂) in the maritime area². A preliminary paper, based on a discussion in (but not agreed by) JL(1) 2003 attended by a small number of Contracting Parties,³ was considered by OSPAR 2003. JL was asked to revise this and agree a report on their initial views.
2. The remit to JL did not, of course, involve anything other than the legal aspects. Assessment of any impacts on the marine environment of any such placement must be for others.
3. This report has been agreed by JL following a discussion on 18 May 2004 in London.⁴

Structure of the OSPAR Convention

4. When the OSPAR Convention was negotiated in 1992, issues relating to the sequestration of CO₂ by its placement in the sea or the seabed had not arisen. In drafting the Convention, therefore, no specific consideration was given to the placement of CO₂ in the maritime area.
5. The OSPAR Convention, as adopted in 1992, spells out the implications of its general obligations relating to the prevention and elimination of pollution⁵ through three annexes, addressing in turn:
 - (a) pollution from land-based sources (Annex I);
 - (b) pollution by dumping or incineration (Annex II); and
 - (c) pollution from offshore sources (Annex III).
6. The structure of the Convention indicates that:
 - (a) each of these three annexes is intended to provide a distinct régime for the control and regulation of a separate set of potentially polluting activities; and

¹ “Placement” is used in this document to cover all forms of deliberate introduction of CO₂ into the marine environment, by whatever method and for whatever purpose.

² The “maritime area” is defined as the internal waters and territorial seas of the Contracting Parties, the sea beyond and adjacent to the territorial sea under the jurisdiction of the coastal state to the extent recognised by international law and the high seas, including the bed of all those waters and its sub-soil, within the geographical limits laid down in the Convention.

³ Germany, the Netherlands, Norway, the United Kingdom.

⁴ Germany, the Netherlands, Norway, Spain, the United Kingdom.

⁵ “Pollution” is defined by the OSPAR Convention in terms of the introduction by man, directly or indirectly, of substances or energy into the maritime area which results, or is likely to result, in hazards to human health, harm to living resources and marine ecosystems, damage to amenities or interference with other legitimate uses of the sea.

- (b) there is intended to be no overlap between the areas of activity covered by the requirements of each of the annexes – that is, no activity is intended to be regulated by more than one régime.

7. It is therefore necessary to consider any potential activity which relates to the placement of CO₂, and which may give rise to pollution, separately in regard to each of these three régimes.

8. In addition, through Annex V⁶, the OSPAR Convention addresses human activities resulting, or likely to result in adverse effects on the marine environment other than pollution. Given the wide definition of “pollution” it seems likely that any controls on the placement of CO₂ in the maritime area would be provided by, or should be developed under, the relevant anti-pollution annex, rather than under Annex V. But the possible applicability of Annex V cannot be ruled out.

Thresholds for action under the OSPAR Convention

9. It follows from the requirements of the OSPAR Convention that, in applying the Convention to placements of CO₂ in the maritime area, evidence that there is a possibility of pollution or of some other adverse effect from the placement will often be relevant. In assessing such evidence, the precautionary principle must be applied. The OSPAR Convention’s formulation of this principle requires action where there are reasonable grounds for concern, even though scientific proof of any causal linkage has not been achieved. Some participants in JL noted that the possible effect on the marine environment from placement directly into the water column and from placement into geological structures in the subsoil will be basically different. Hence, these participants drew attention to the argument that, to the extent that placement of CO₂ into the maritime area does not result in pollution, there is no prohibition on such placement under Annexes I, II or III, and that, if CO₂ is injected into a geological structure in the subsoil in such a manner that it is unlikely to escape, such an injection will therefore fall outside the scope of these Annexes. Other participants considered that there is a prohibition in general on the dumping of wastes and other matter, and that therefore, irrespective of whether there is a “pollution” as defined in the Convention or not, these activities fall within the scope of Annex II. Some further participants drew attention to the general obligations under the Convention to develop programmes and measures and to define and apply Best Available Techniques and Best Environmental Practice in relation to them.

10. Some participants in JL thought that “pollution” can be taken to refer not only to possible results from the placement of CO₂ in the maritime area as part of the practice of carbon sequestration, but also to the impacts of anthropogenic CO₂ absorbed into the water column through the process of climate change.

The maritime area

11. The control régimes (and the monitoring and assessment requirements) established by the OSPAR Convention apply to the whole of its maritime area. This area includes not only the water column of the sea within the area covered by the Convention, up to the freshwater limit, but also the sea-bed and all the underground strata⁷ below the seabed in that area. The anti-pollution régimes and the Annex V régime therefore apply to all these areas.

12. It is therefore necessary to consider the implications of a range of possible locations for any placement. These include:

- a. placement in the water column;
- b. placement onto the sea-bed;
- c. placement in underground strata under the sea-bed – here the possibilities include:
 - i. placement in a reservoir from which hydrocarbons have been, or are being, extracted (which is likely to be relatively well contained by impervious layers);
 - ii. placement in an aquifer (which may, or may not, be contained by impervious layers).

⁶ Adopted in 1998 and coming into force for the first set of Contracting Parties in 2000. It has now come into force for all except three Contracting Parties.

⁷ The Convention refers to this as the subsoil of the sea-bed. Given the use of the term “subsoil” in the UN Convention on the Law of the Sea, this term seems to be intended to cover all underground strata below the sea-bed.

In the rest of this document, “placement in the maritime area” includes all these possibilities. Nevertheless, there may well be substantially different environmental effects from placement in different parts of the maritime area or in different underground strata or aquifers. These possibly different effects must be considered, both in assessing whether the thresholds for applying the Convention have been reached and in developing possible programmes or measures.

Possible methods and purposes of placement

13. JL can envisage five possible routes for the placement of CO₂ in the maritime area:
- a. ***a pipeline pure and simple:*** a pipeline could take the CO₂ from somewhere on land and deliver it to the point in the maritime area where it is to be placed;
 - b. ***a pipeline working with a structure in the maritime area:*** a pipeline could take the CO₂ from somewhere on land and deliver it to a structure placed in the maritime area, from where it could then be pumped to the point of placement in the maritime area (a "pipeline system"). Under the Convention, it will make a difference if the structure is an offshore installation⁸ (subject to resolution of the question raised under paragraph 18(b)). All placements from offshore installations are therefore considered under sub-paragraph (e) below;
 - c. ***shipment in a vessel for placement from the vessel:*** CO₂ could be compressed and loaded on a vessel, which could then take it out to sea and deliver the CO₂ into the maritime area;
 - d. ***placement from a structure in the maritime area:*** This would cover placement from a structure which is neither part of a pipeline system nor an offshore installation;
 - e. ***placement from an offshore installation:*** this would cover placement in the maritime area of:
 - i. CO₂ arising from offshore activities⁹ on the offshore installation from which the placement is made, and CO₂ arising from offshore activities on another offshore installation that is transported to the offshore installation from which the placement is made; and
 - ii. CO₂ arising from activities other than offshore activities, either on the offshore installation from which the placement is made or elsewhere and transported to that offshore installation.
14. JL considers that the range of purposes for placement of CO₂ in the maritime area which need to be reviewed include:
- a. placement for the purposes of scientific experiment;
 - b. placement for the purposes of facilitating or improving the production of oil or gas
 - c. placement for the purposes of mitigating the effects on climate change;
 - d. placement for the purposes of mere disposal, other than placement covered by sub-paragraph (c).

These purposes need to be considered separately for the purposes of the OSPAR Convention, but there may be possibilities of combined purposes. A placement will cease to be for the purpose of mere disposal if the placement as a whole is justifiable for another purpose.

Considerations relating to the land-based sources régime

15. Discharges to the maritime area from land-based sources are consistent with the Convention, provided that, in accordance with Annex 1, they are strictly subject to authorisation or regulation by the competent authority of the relevant Contracting Party. Such authorisation or regulation must implement relevant decisions of the OSPAR Commission which bind that Contracting Party.

⁸ An offshore installation is a man-made structure, plant or vessel (or parts thereof), whether floating or fixed to the seabed, placed within the maritime area for the purpose of the exploration, appraisal or exploitation of liquid and/or gaseous hydrocarbons (see article 1(l) and (j)).

⁹ “Offshore activities” means activities carried out in the maritime area for the purposes of the exploration, appraisal or exploitation of liquid and gaseous hydrocarbons (see article 1(j)).

16. Under the definition of land-based sources¹⁰, such sources include:
- a. sources associated with any deliberate disposal under the sea-bed made accessible from land by a tunnel, pipeline or other means, and
 - b. sources associated with man-made structures placed in the maritime area under the jurisdiction of a Contracting Party, other than for the purpose of offshore activities¹¹

as well as point and diffuse sources on land from which substances or energy reach the maritime area by water, through the air or directly from the coast (though this limb of the definition is not likely to be relevant in the case of the placement of CO₂).

17. All placements from land-based sources, as so defined, are covered by these provisions, whatever their purpose. Placements of CO₂ from land-based sources, as thus defined, for the purposes of scientific experiment and for the purposes of mitigating the effects on climate change of CO₂ are therefore consistent with the Convention, but must be strictly regulated or authorised in the way mentioned in paragraph 15.

18. There are, however, some further questions that could merit consideration about the installations in the sea that can be regarded as (part of) a land-based source:

- a. can an installation which was originally placed in the maritime area as an offshore installation for the purposes of the offshore activities be converted into a structure of the kind described in paragraph 16(b)? Since any such conversion is likely to involve substantial structural change, some participants in JL take the view that a change is possible if as a result the structure ceases to be used for the exploration, appraisal or exploitation of oil or gas;
- b. can a structure of the kind described in paragraph 16(b) be located on an offshore installation (as defined in the Convention)? Some participants in JL take the view that it cannot (since offshore installations are subject to a different régime), but others consider the opposite point of view a possibility;
- c. is the existence of a physical link (such as a pipeline or tunnel) between the land and an installation in the maritime area necessary for it to meet the requirements mentioned in paragraph 16(b)? Some participants in JL consider that in some circumstances an installation without such a physical link might be within the definition of a land-based source. Others consider that placement from such an installation should be regarded as within the definitions of “dumping” from “a vessel”, and thus subject to the provisions of Annex II (dumping).

Considerations relating to the dumping régime

19. For the purposes of the Convention, and in relation to vessels, “dumping” means any deliberate disposal of wastes or other matter from vessels¹². It does not include the placement of matter for a purpose other than the mere disposal thereof (provided that the other relevant requirements of the Convention are observed)¹³. Subject to certain qualifications, dumping is prohibited by Annex II.

20. There seems no doubt that the placement of CO₂ in the maritime area for the purposes of mitigating its effects on climate change is a deliberate disposal. Shipment in a vessel for placement from the vessel would therefore be prohibited under Annex II, since none of the exclusions of specific materials from the definition of “wastes or other matter” or from the ban on dumping seem relevant. The same would apply to any other placement for the purposes of mere disposal.

21. Placement from a vessel for the purposes of scientific experiments can be regarded as “a placement of matter for a purpose other than the mere disposal thereof”. It is not therefore prohibited under Annex II, but other requirements of the Convention will be relevant.

¹⁰ See article 1(e).

¹¹ See footnote 8 for the definition of “offshore activities”.

¹² See Article 1(f).

¹³ Article 1(g)(ii) of the Convention excludes from the definition of dumping “placement of matter for a purpose other than the mere disposal thereof, provided that, if the placement is for a purpose other than that for which the matter was originally designed or constructed, it is in accordance with the relevant provisions of the Convention”.

22. “Vessels” is defined to include, as well as ships, floating craft and hovercraft, “other man-made structures in the maritime area” other than offshore installations. As noted in paragraph 18(c), there is scope for considering the relationship between this definition and the definition of a land-based source. To the extent that a man-made structure in the maritime area falls within the definition of a vessel, shipment in a vessel for disposal from such a structure would also be prohibited. (Shipment from land in a vessel to an offshore installation for mere disposal would also be prohibited – see the next section).

Considerations relating to offshore-installations régime

23. The definition of dumping under Annex III (offshore installations) is the same. Dumping of wastes and other matter from offshore installations is prohibited by Article 3(1) of that Annex. Again, none of the exclusions is relevant to the placement of CO₂.

24. Discharges and emissions from offshore sources (offshore installations and offshore pipelines) are excluded from that prohibition by Article 3(2). CO₂ arising on an offshore installation from its normal operation can be regarded as in the same position as produced water arising from such operations and can therefore be treated in the same way as produced water for the purposes of discharge or emission from an offshore installation. Any such discharge or emission is strictly subject to authorisation or regulation if it may reach and affect the maritime area¹⁴.

25. In addition, where CO₂ is injected in a genuine attempt to facilitate or improve the production of hydrocarbons, it should be treated on the same basis as any other substance used for production purposes. This applies regardless of the source of the CO₂. It would, of course, be subject to meeting the requirements of any relevant decisions, and to taking into account any relevant recommendations, under the OSPAR Convention relating to the use and discharge of chemicals offshore.

26. Placements of CO₂ in the marine environment for the purposes both of the disposal of offshore arisings of CO₂ (paragraph 24) and of enhancing hydrocarbon production (paragraph 25) can thus be regarded as part of the normal operation of an offshore installation. They are therefore not prohibited by the Convention, subject to meeting the requirements of the Convention and any relevant applicable decisions, and to taking into account any relevant recommendations.

27. In contradistinction to such placements, however, the placement

- in the maritime area
- from an offshore installation
- of CO₂ **not** arising from an offshore source
- for the purposes of climate mitigation

is prohibited by Annex III. Some participants in JL emphasise that this is the case whether it reaches the offshore installation by vessel or pipeline¹⁵.

28. Placement for the purposes of scientific research is not prohibited by Annex III (for the same reasons as it is not prohibited by Annex II), but is subject to other requirements of the Convention.

29. Some participants in JL note that a floating production facility is included in the definition of an offshore installation, and that a ship of this kind, while it is being used for offshore activities¹⁶ would therefore be subject to the rules of Annex III in the same way as a fixed offshore installation. When it is not being used for the purposes of offshore activities in the maritime area, it is in the same position as any other vessel and is therefore controlled by Annex II (see paragraphs 19 – 22).

Conclusions

30. The appendix to this document summarises the conclusions reached by JL on the status of the different methods and purposes of placing CO₂ in the maritime area to which the Convention applies, as discussed in paragraph 9. It must be read in the light of the above explanations – it is not complete in itself.

¹⁴ Under Article 4(1) of Annex III.

¹⁵ Subject to, in the view of other participants in JL, any possible argument in paragraph 18(b), that might allow a structure associated with a land-based source to be located on an offshore installation.

¹⁶ See footnote 8 for the definition of “offshore activities”.

31. Some participants in JL would wish to emphasise that the conclusions drawn here are solely within the framework of the OSPAR Convention; other obligations of the Contracting Parties (especially the 1996 Protocol to the London Convention 1972) are also likely to be relevant.

32. Since the OSPAR Convention contains, in effect, three separate régimes, the results it produces are complex. Since the applicable régime is determined by the method and purpose of placement, and not by the effect of placement on the marine environment, the results of the application of the Convention régimes may well be that:

- a. placements with different impacts on the environment (for example, placement in the water column and placement in underground strata) may not be distinguished; while
- b. different methods of placement having the same impact (for example, from a specially built structure at sea linked to land by a pipeline and from a vessel equipped with special equipment) may be treated differently (with the former permissible and the latter not).

33. This suggests that further consideration is needed of the interrelations between the current legal position, the possible physical impacts of the placement of CO₂ on the marine environment, and the appropriate regulatory approach.

SUMMARY OF THE CONCLUSIONS IN PARAGRAPHS 15 - 29 ON METHODS AND PURPOSES OF POSSIBLE PLACEMENTS OF CO₂

METHODS OF PLACEMENT IN THE MARITIME AREA	PURPOSES OF PLACEMENT*	APPLICABLE OSPAR ANNEX	CONCLUSION
By pipeline pure and simple	(a) Experiment (c) Mitigating climate change (d) Other mere disposal	Annex I	Placements for purposes (a), (c) and (d) are not prohibited but are strictly subject to authorisation or regulation.
By pipeline working with an structure in the maritime area that is not an offshore installation	(a) Experiment (c) Mitigating climate change (d) Other mere disposal	Annex I	Placements for purposes (a), (c) and (d) are not prohibited but are strictly subject to authorisation or regulation.
By shipment in a vessel for placement from the vessel	(a) Experiment (c) Mitigating climate change (d) Other mere disposal	Annex II	Placements for purpose (a) are not prohibited, provided that they are in accordance with relevant provisions of the Convention. Placements for purposes (c) and (d) are prohibited.
By placement from a structure in the maritime area that is neither part of a pipeline system nor an offshore installation	(a) Experiment (c) Mitigating climate change (d) Other mere disposal	Annex II	Placements for purpose (a) are not prohibited, provided that they are in accordance with relevant provisions of the Convention. Placements for purposes (c) and (d) are prohibited.
By placement from an offshore installation	(a) Experiment (b) Improving hydrocarbon production (c) Mitigating climate change (d) Other mere disposal	Annex III	<i>In respect of CO₂ arising from offshore activities:</i> Placements for purpose (a) are not prohibited, provided placement is in accordance with relevant provisions of the Convention. Placements for purposes (b), (c) or (d) are not prohibited, but are strictly subject to authorisation or regulation. <i>In respect of CO₂ arising from activities other than offshore activities:</i> Placements for purpose (a) are not prohibited, provided placement is in accordance with relevant provisions of the Convention. Placements for purpose (b) are not prohibited, but are strictly subject to authorisation or regulation. Placements for purposes (c) or (d) are prohibited.

* The purposes of placement considered in this table are those set out in paragraph 14:

- a. placement for the purposes of scientific experiment ("experiment");
- b. placement for the purposes of facilitating or improving the production of oil or gas ("improving hydrocarbon production").
- c. placement for the purposes of mitigating the effects on climate change ("mitigating climate change");
- d. placement for the purposes of mere disposal, other than placement covered by sub-paragraph (c) ("other mere disposal").

.Purposes that could not arise are not included in the table.