CONVENTION ON THE PROTECTION OF THE MARINE
ENVIRONMENT OF THE BALTIC SEA AREA

HELSINKI COMMISSION - Baltic Marine
Environment Protection Commission

HELCOM 18/97
14/1
Annex 4

18th Meeting
Helsinki, 11-13 March 1997

HELCOM RECOMMENDATION 18/2*)

Adopted 12 March 1997
having regard to Article 13, Paragraph b)
of the Helsinki Convention

OFFSHORE ACTIVITIES

THE COMMISSION,

RECALLING that according to Article 10 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1974 (Helsinki Convention), each Contracting Party shall take all appropriate measures in order to prevent pollution of the marine environment of the Baltic Sea Area resulting from exploration or exploitation of its part of the seabed and its subsoil or from any associated activities thereon, and ensure that adequate equipment is at hand to start an immediate abatement of pollution in that area,

RECALLING ALSO that the regulations in Annex IV to the Helsinki Conventions 1974 and 1992 apply to fixed and floating platforms to the extent discharges and emissions relating to the normal operation of ships are concerned,

RECALLING ALSO that the discharge regulations in Annex IV to the Helsinki Conventions 1974 and 1992 do not apply to the release of harmful substances directly arising from the exploration, exploitation and associated offshore processing of seabed mineral resources,

RECALLING ALSO that offshore exploration and offshore exploitation of oil and gas are the activities likely to result in discharges of oil and noxious substances which cause pollution of the marine environment,

RECALLING ALSO that offshore exploration and offshore exploitation of oil and gas are the activities likely to result in emissions to the atmosphere of substances and groups of substances such as PAHs, organic micro-pollutants, $N0_x$ and other substances which cause pollution of the marine environment,

RECALLING ALSO HELCOM Recommendation 17/1, paragraph III.7, calling for limitation of sulphur content in diesel fuel,

RECOGNIZING the increasing interest in offshore activities in the Baltic Sea Area,

*) This Recommendation supersedes HELCOM Recommendation 9/5 as from 1 January 1998 for new installations and as from 1 January 2001 for existing installations.

DESIRING to prevent pollution from offshore activities by eliminating or reducing the associated discharges and emissions by means of Best Available Technology and Best Environmental Practice,

DESIRING ALSO to have adequate information on the impact on the Baltic Sea Area of offshore activities,

TAKING INTO ACCOUNT that the provisions in Article 12 and Annex VI of the Helsinki Convention 1992, relating to the exploration and exploitation of the seabed and its subsoil, have to be implemented by the Contracting Parties when the Convention enters into force,

RECOMMENDS that the Governments of the Contracting Parties, as from 1 January 1998 for new installations and as from 1 January 2001 for existing installations, take measures as follows:

a) the exploration or exploitation activity in the Baltic Sea Protected Areas (BSPA) should be excluded;

b) the area in which any offshore exploration or exploitation activity is proposed to begin, should be environmentally assessed before the activity is permitted to start. In the case of exploitation the outcome of this assessment should be notified to the Commission. While offshore exploration or exploitation activities are in progress, the sea-bed, water column and benthos around the site should be monitored as appropriate in view of the environmental conditions of the area concerned (see para a) of the Attachment to this Recommendation);

c) the use of oil-based drilling muds should be avoided. If this is not possible, the oil-based drilling muds and cuttings arising form the use of oil-based drilling muds should not be discharged in the Baltic Sea Area but taken ashore for final treatment and/or disposal in an environmentally acceptable way;

d) drilling cuttings arising from the use of water-based drilling muds should preferably be treated in waste water treatment plants ashore. Discharges of drilling cuttings arising from the use of water-based drilling muds are not permitted in specifically sensitive parts of the Baltic Sea Area (see para e) of the Attachment to this Recommendation). Discharge of such cuttings in other parts of the Baltic Sea Area could be permitted only provided that:

   (i) the mud has been shown to be of low toxicity in accordance with paragraph b) of the Attachment to this Recommendation;

   (ii) none of the substances listed in Annex II to the Helsinki Convention 1974 and in Annex I, paragraph 1.2 to the Helsinki Convention 1992 are deliberately added as a constituent to the mud;

   (iii) the content of heavy metals in the mud is minimized; the concentration of Hg and Cd does not exceed 1 mg/kg in the whole mud; and

   (iv) the mud residues of cuttings are reduced and recycled using the best available solids control technology;

e) the use of diesel oil-based muds should be prohibited.

   However, diesel oil may be added to drilling muds in the following exceptional circumstances and on the condition that the mud used is disposed of ashore:

   (i) in work-over operations (see para c) (i) of the Attachment to this Recommendation);

   (ii) in well stimulation and completion techniques (see para c) (ii) of the Attachment to this Recommendation); and

(iii) in emergency drilling operations with water-based muds (see para c) (iii) of the Attachment to this Recommendation) ;

f) the discharge of production water and displacement water should be prohibited unless the oil content is less than 15 mg/l (see para d) of the Attachment to this Recommendation).

If compliance with this limit value cannot be achieved by the use of Best Environmental Practice and Best Available Technology, the appropriate national authority may require adequate additional measures to prevent possible pollution of the marine environment of the Baltic Sea Area and allow, if necessary, a higher limit value which should, however, be as low as possible and in no case exceed 40 mg/l; the oil content should be measured as provided in sub-paragraph b) above.

The BOD of the production water should be monitored and the need for treatment to reduce BOD in specifically sensitive areas carefully assessed;

g) all chemicals and materials should be taken ashore and may be discharged only exceptionally.

A permit should be required for each specific discharge category. Permits should only be issued after an evaluation of the discharge category, the environment around the discharge location and after toxicity testing where appropriate;

h) all ship and air traffic to offshore installations should be planned with due regard to animals sensitive to disturbance;

i) the incineration of gas in torches should be such that the emission of total carbon and oil droplets into the atmosphere is minimized,

RECOMMENDS FURTHER that the Contracting Parties should report to the Commission on implementation of this Recommendation in the year 1999 and thereafter every 3 years,

DECIDES that the provisions on the sulphur content in fuel oils used on offshore units will be agreed upon by HELCOM 19 in 1998,

DECIDES ALSO that this Recommendation should be reconsidered in 1999, especially concerning reduction of pollution regarding internal combustion engine facilities and the classification of chemicals used in platforms.

a) The environmental sensitivity of the area around an installation should be assessed before, during and after the operation with respect to the following:

(i) the importance of the area for birds and marine mammals;

(ii) the importance of the area for fishing or as spawning grounds for fish and shellfish, and for aquaculture;

(iii) the recreational importance of the area;

(iv) the characteristics of the sediment measured as grain size distribution, dry matter, ignition loss, total hydrocarbon content and Ba, Cr, Pb, Cu, Hg and Cd content;

(v) the abundance and diversity of benthic fauna and the content of selected aliphatic and aromatic hydrocarbons.

If relevant information on the site for a new installation already exists, no new advance assessment is necessarily required (particularly in relation to a) (i) - (iii). As regards the provisions in a) (iv) and (v), sampling is suggested to be performed at distances of 100, 500 and 1000 m on both sides of the installation in the prevailing current direction and at right angles to this.

As regards exploration activities the studies prescribed in a) (iv) should be carried before and after the operation; the studies prescribed in a) (v) are not required.

As regards exploitation activities the studies prescribed in a) (iv) and (v) should be carried out before operation starts, at appropriate intervals during operation and after finishing it.

These requirements should be regarded as a minimum requirement and may be made more stringent if the nature of the area so requires.

b) The toxicity of water-based muds should be assessed by testing the effect of the water-soluble fraction of the whole mud prepared by stirring for 20 hours in a closed system, followed by 2 hours rest to allow separation and then sampling from the middle layer on:

- photosynthesis in one species of marine algae (e.g. *Skeletonema costatum)*;
- growth of the larvae of a marine bivalve (e.g. *Mytilus edulis*);
- reproduction of a marine crustacean (e.g. *Acartia tonsa*);
- egg-larvae test with a marine fish (e.g. *Clupea harengus*).

The EC_{50} 96 h for any of these tests should exceed 10 000 mg/kg.

The following supplementary tests are also recommended:

- biodegradability test (according to OECD guidelines);
- bioaccumulation test (detection of lipophilic substances with a chromatographic method).

c) (i) Work-over operations:

Producing wells sometimes require remedial measures, e.g. additional preparation of the casing or modifications to the lining or casing, for which oils are necessary. These operations do not involve drilling or the production of cuttings.

(ii) Well stimulation and completion techniques:

When a well has been drilled it is necessary to perforate the casing into the reservoir and sometimes to open up fissures within the reservoir. These operations are carried out at pressure and solid-free fuel oils are often necessary.

(iii) Emergency drilling operations:

If stuck pipe conditions occur with water-based muds then diesel oils may be used to free the drill string.

d) The oil content in discharges should be measured using the IR-technique at the three absorption maxima at approximately 2925, 2960 and 3025 cm^{-1}. Analyses should be made on the non-polar part of the extract.

e) Below are examples of areas which should be regarded as specifically sensitive parts of the Baltic Sea Area:

(i) confined or shallow areas with limited water exchange;

(ii) areas characterized by rare, valuable or particularly fragile ecosystems.

REPORTING FORMAT FOR HELCOM RECOMMENDATION 18/2 CONCERNING OFFSHORE ACTIVITIES

Lead Country: **Germany**

Reporting country: _____

Year: _____

If any offshore drilling or production activity has taken place, the following information should be reported to the Commission (separate reports for each site):

I Country and location of the activity

The location should be specified by giving the latitude and longitude. It should be reported if the site in question is located in a sensitive area.

II Nature of the activity

It should be stated whether it is an exploration or exploitation activity.

III Environmental assessments made

Results of the environmental assessments made in accordance with para b) of the Recommendation should be reported.

The report should be supplemented with appropriate graphics.

IV Drilling muds used

1. Results of toxicity tests made in accordance with para b) of the Attachment to the Recommendation should be reported.

2. The constituents of the mud(s) used should be reported, as far as possible, with the correct technical names.

3. The concentrations of Hg and Cd in the whole mud should be reported.

V Chemicals used

For each chemical used the following information should be given as far as possible:

- amount
- trade name
- major components
- toxicity data (LC_{50}, biodegradability, potential for bioaccumulation).

VI Limit values in permits given

An "x" means that a limit value exists in the Recommendation

Parameters	Production Water	Displacement Water	Drainage Water	Sewage Water

Oil, mg/l	x	x		
BOD_5, mg/l				
Other parameters, e.g. COD, mg/l				

VII Measures taken to reduce discharges

A description of control measures taken for production, displacement, drainage and sanitary waters as well as for drilling cuttings should be given.

Methods for the disposal of different wastes should also be reported.

VIII Discharges

The total annual discharged waste water from the operation and the concentration and load values for oil and BOD should be reported wherever indicated within the following table:

	m^3/a	**Oil**		**BOD**	
		mg/l	**t/a**	**mg/l**	**t/a**
Production water	x	x	x	x	x
Displacement water	x	x	x	-	-
Drainage water* (machinery space and offshore processing drainage)	x	x	x	-	-
Sewage water	x	-	-	x	x

*Normally only estimates

IX Emissions into the atmosphere

The sulphur content of fuel oil used in internal combustion engine facilities should be reported.

X Any use of oil-based muds or of diesel oil

If oil-based muds or diesel oil have been used, the reason behind such a use and measures taken should be reported in accordance with paras c) and d) of the Recommendation.

XI Physical-chemical properties of oils produced

This information is of importance when combatting oil spills:

Specific gravity: (g/cm^3 at 10^oC, at 20^oC)
Viscosity: (cSt or mm^2/s at 10^oC, at 20^oC)
Flash point:
Solidifying point:

Asphaltene content: