

Recommendation on Best Available Techniques in the Paper Making Industry

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The Commission,

recalling Paragraph 1 of Article 2 of the Danube River Protection Convention in which the Contracting Parties shall strive at achieving the goals of a sustainable and equitable water management, including the conservation, improvement and the rational use of surface waters and ground water in the catchment area as far as possible;

recalling also Paragraph 2 of Article 2 of the Danube River Protection Convention according to which the Contracting Parties pursuant to the provisions of this Convention shall cooperate on fundamental water management issues and take all appropriate legal, administrative and technical measures, to at least maintain and improve the current environmental and water quality conditions of the Danube River and of the waters in its catchment area and to prevent and reduce as far as possible adverse impacts and changes occurring or likely to be caused;

recalling further Paragraph 2 b of Article 5 of the Danube River Protection Convention in which the Contracting Parties shall separately or jointly adopt legal provisions providing for requirements including time limits to be met by waste water discharges;

recalling further Paragraph 1 of Article 7 of the Danube River Protection Convention in which the Contracting Parties taking into account the proposals from the International Commission shall set emission limits applicable to individual industrial sectors or industries in terms of pollution loads and concentrations and based in the best possible way on low- and non-waste technologies at source.

Where hazardous substances are discharged, the emission limits shall be based on the best available techniques for the abatement at source and/or for waste water purification;

recalling further Part 1 of Annex 1 of the Danube River Protection Convention in which best available techniques are defined;

recommends to the Contracting Parties of the Danube River Protection Convention that the following measures should be applied in Paper Industry:

1. Technical In-Plant Measures for the Reduction of Waste Water Volume and Abatement of Pollution Load

Waste water should only be discharged if waste water volume and pollution load are minimised by in-plant measures using best available techniques, i.a.

- use of process technologies with less waste water generation;
- multiple use of process waste water e. g. after purification by filtration, flotation or sedimentation collection and reuse of clean cooling and sealing waters or separate discharge;
- separate pre-treatment of coating waste waters;
- substitution of potentially harmful substances by less harmful alternatives;
- chlorinated hydrocarbons, benzene, toluene and xylenes should not be discharged with the waste water;
- temporarily generated high pollution loads by e. g. changes in production or cleaning processes should be avoided by intermediate storage or controlled discharge of the waste water.

2. Reduction of Pollution Loads

After implementation of relevant measures listed under 1., plants of the papermaking industry discharging to water bodies.

The limit value for AOX should also be met by plants of the papermaking industry that discharge via a sewer into municipal waste water treatment plants.

Suspended solids	50 mg/l
COD	200 mg/l *)
BOD	30 mg/l
AOX	0,5 mg/l **)
tot-N	10 mg/l
tot-P	2 mg/l

*) Dependent on the type of paper, production specific limit values in the range of 2 - 9 kg/t could be permitted

***) Dependent on the type of paper, production specific limit values up to 0.1 kg/t could be permitted

BOD = BOD₅ = five-day biochemical oxygen demand consumption with suppression of nitrification

COD = COD_{cr} = chemical oxygen demand consumption using the dichromate method

Values are based on 24 h-, 8 h- or 2 h-sampling or on grab sampling.

Internationally accepted standardised sampling, analysing and quality assurance methods (e.g. CEN-standards, ISO-standards, DIN-standards and OECD-Guidelines) should be used whenever available.

Recommends also that this Recommendation should be implemented for new plants (starting operation after 1 January 2002) as from 1 January 2002 and for existing plants from 1 January 2006.

Recommends further that the Contracting Parties should report (see Annex 1) to the Commission on implementation of this Recommendation in 2003 and thereafter every three years.

Reporting Format for Recommendation on Best Available Techniques in the Papermaking Industry

Country: _____ Year: _____

The following data have to be reported for every plant of the papermaking industry which discharges into water bodies. For plants which discharge into municipal waste water treatment plants via sewer only item 4) should be reported.

- 1) Name of the plant, its location and the river into which the discharges occurs.
- 2) Description of type of plant, production capacity and production technology.
- 3) Waste water volume (m³/d, m³/a) and characterisation of waste water treatment.
- 4) General description of AOX-discharges for plants which discharge via sewer into municipal waste water treatment plants.
- 5) Information on measures taken according to item 1. of the Recommendation.
- 6) Methods of sampling (grab to 24h-sampling) and analyses.
- 7) Effluent characteristics:

	Annual load (kg/t)	Annual mean concentration (mg/l)
Suspended solids		
COD		
BOD		
AOX		
tot-N		
tot-P		