EU Ecolabel criteria revision for Paper products: copying and graphic paper, tissue paper, and newsprint paper

7-9 June 2016, Seville

JRC IPTS:
Renata Kaps, Shane Donatello, Malgorzata Kowalska, Oliver Wolf, Miguel Game Cordero
Activities in support of Product Policy

IPTS supports the development and implementation of Sustainable Product Policies, amongst them the EU Ecolabel Regulation, the Green Public Procurement Communication, the Ecodesign for Energy Related Products Directive and the Energy Labelling Directive.

The Product Bureau carries out the analysis of a broad range of product groups and development of environmental criteria with focus on techno-economic as well as environmental aspects.

Criteria Development for “Paper products group”

1. Stakeholders can provide comments on working document up to 1st of July, 2016;
2. Comments need to be submitted in BATIS
3. A draft criteria proposal for EU Ecolabel criteria will be prepared and published ahead of next AHWG
4. Second AHWG to take place in Brussels;
5. 3 weeks deadline for comments after 2nd AHWG
6. 2017 final draft criteria available

Using the BATIS system

Criteria revision process
1st AHWG (7-8th of June)
AGENDA Day 1: Tuesday, 7th June 2016

1. Welcome and introduction
   Work programme and timeline, summary of scope and preliminary evidence base.
   Summary of the main findings from Preliminary report
   09:30 – 11:00

2. Coffee break
   11:00 – 11:15

3. Paper product groups scope and definitions
   11:15 – 12:15

4. General hazardous substance/mixture criteria: Draft criterion 4
   12:15 – 13:30

5. Lunch break
   13:30 – 14:30

6. General hazardous substance/mixture criteria: Draft criterion 4 (continued)
   14:30 – 15:15

7. Energy use: Draft criterion 2
   15:15 – 16:00

8. Coffee break
   16:00 – 16:15

9. Energy use: Draft criterion 2 (continued)
   16:15 – 17:00

10. Waste Management: Draft criterion 5
    17:00 – 17:30

AGENDA Day 2: Wednesday, 8th June 2016

1. Emissions to water and air – draft criterion 1
   09:30 – 11:30

2. Coffee break
   11:30 – 11:45

3. Emissions to water and air – draft criterion 1 (continued)
   11:45 – 13:00

4. Lunch break
   13:00 – 14:00

5. Emissions to water and air – draft criterion 1 (continued)
   14:00 – 15:30

6. Fitness for use criteria, consumer information – draft criteria 6, 7 and 8
   15:30 – 16:45

7. Coffee break
   16:45 – 16:00

8. New proposed criteria areas (water consumption control, EDTA and DTPA, Optical Brighteners)
   16:00 – 17:15

9. Summary and closure of the meeting
   17:15 – 17:30

AGENDA Day 3: Thursday, 9th June 2016 – Focus on GPP criteria

1. Introduction to GPP
   09:00 – 10:00

2. Scope and definition
   10:00 – 10:30

3. Criteria on energy consumption and water consumption
   10:30 – 11:15

4. Coffee break
   11:15 – 11:30

5. Bleaching and hazardous substances
   11:30 – 12:00

6. Criteria on fibre sourcing
   12:00 – 13:00

7. The environmental benefits of lower grammage paper?
   13:00 – 13:30

8. Summary and closure of the meeting
   13:30 – 14:00

Summary of the main findings from Preliminary report
1. Commission Statements
2. Update of best available techniques (BAT) levels;
3. Addressing the main environmental "Hot spots"
4. Analysis of the product best practices present on the market
5. Harmonization with so called "horizontal approach" in line with EU Ecolabel Regulation (EC) 66/2010
6. Analysis of other existing ecolabels and initiatives, industry associations, as NGO and private label scheme criteria;
7. Synergies within the revised product groups;
8. Relation to the revision of EU Ecolabel criteria for converted paper, and printed paper.

**EU Ecolabel statistics**

<table>
<thead>
<tr>
<th>Product Group</th>
<th>Number of Licences</th>
<th>Number of Products</th>
<th>Awarding Competent Bodies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tissue Paper</td>
<td>135</td>
<td>9 959</td>
<td>Austria (1), Belgium (1), Bulgaria (2), Czech Republic (2), Denmark (1), Finland (1), France (1), Germany (40), Italy (38), Lithuania (1), the Netherlands (2), Poland (12), Portugal (2), Slovakia (2), Slovenia (1), Spain (14), Sweden (6) and United Kingdom (7)</td>
</tr>
<tr>
<td>Copying and Graphic Paper</td>
<td>60</td>
<td>3 921</td>
<td>Austria (6), Finland (9), France (8), Germany (20), Ireland (1), Italy (2), the Netherlands (2), Norway (2), Poland (2), Portugal (1), Romania (1), Slovenia (1), Spain (4), Sweden (7) and United Kingdom (1)</td>
</tr>
<tr>
<td>Newsprint Paper</td>
<td>5</td>
<td>32</td>
<td>Austria (1), Finland (2), France (1) and Spain (1)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>192</strong></td>
<td><strong>9 546</strong></td>
<td><strong>20 Countries</strong></td>
</tr>
</tbody>
</table>

C&G, NE, and TS represent 9.5% (licences), and 21% (products) of the total EU Ecolabel uptake.

**Commission statement (1)**

*Copying and graphic paper criteria:*
- Strengthen the energy use and CO2 requirements (refer to the most up to date BREF documents);
- Include newsprint paper in the scope of the criteria with a mandatory criterion on minimum amount of recycled fibres;
- Evaluate the requirement on emissions (refer to the most up to date BREF document);
- Evaluate the criterion on certified fibres;
- Evaluate whether the criterion on surfactants used in deinking could apply to all surfactants.

**Commission statement (2)**

*Newsprint paper:*
- Investigate the suitability of establishing a compulsory share of recycle fibres;
- Find a more principle approach in defining "sustainable forestry";
- Evaluate the quality of the certification schemes FSC and PEFC referred in the A&V of the current criteria;
- Define minimum requirements to which equivalency can be measured, when referring to FSC and PEFC or equivalent.
Tissue paper:
✓ Compactness of the product;
✓ Investigate higher content of recycled paper;
✓ Focus on energy use and CO2 emission;
✓ Focus on the best emission values on BREF document.

<table>
<thead>
<tr>
<th>Pulping Processes</th>
<th>Data separation mechanisms</th>
<th>Yield</th>
<th>Pulp properties</th>
<th>Typical products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical</td>
<td>Mechanical energy</td>
<td>High (15-95%) lignin preserved</td>
<td>Short, weak, unstable, high opacity fibres, good print quality</td>
<td>Newsprint, writing paper, magazines, books, container board</td>
</tr>
<tr>
<td>Chemical</td>
<td>Chemicals and heat</td>
<td>Lower (45-50% for bleached pulp; 70% for brown paper)</td>
<td>Long, strong, stable fibres</td>
<td>Kraft: bags, wrapping, liner board, newspapers, graphic, printing paper, Sulfite: fine paper, tissue, glassing, newsprint</td>
</tr>
<tr>
<td>Semi-chemical</td>
<td>Combination of chemical and mechanical treatments</td>
<td>Intermediate (55-85%)</td>
<td>“Intermediate” pulp properties</td>
<td>Corrugated board, food packaging, newspapers, magazines</td>
</tr>
<tr>
<td>Recycled</td>
<td>Mechanical energy with some heat and chemicals</td>
<td>Depends on waste paper source, up to 50% for waste packaging, and 60% for waste hygiene products</td>
<td>Mixture of fibre grades, properties depend on waste paper source</td>
<td>Newsprint, writing paper, tissue, packaging</td>
</tr>
</tbody>
</table>

Steps involved in the manufacturing of pulp and paper

### Market data

Regional paper and paperboard production and net trade

The world paper and paperboard production increased from 371 in 2009 to almost 397.6 million tons of paper in 2013.

On average about 57 kilos of paper is consumed per capita in the world.

Source: FAO
### Types of pulp

<table>
<thead>
<tr>
<th>Type of pulp</th>
<th>Total production ('000 Tonnes)</th>
<th>Share (%)</th>
<th>Total consumption ('000 Tonnes)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical &amp; semi-chemical</td>
<td>10 360</td>
<td>28.4%</td>
<td>10 186</td>
<td>24.8%</td>
</tr>
<tr>
<td>Sulphite</td>
<td>1 683</td>
<td>4.6%</td>
<td>1 428</td>
<td>3.5%</td>
</tr>
<tr>
<td>Sulphate</td>
<td>28 568</td>
<td>77.4%</td>
<td>29 076</td>
<td>70.8%</td>
</tr>
<tr>
<td>Total chemical pulp</td>
<td>26 264</td>
<td>71.9%</td>
<td>30 504</td>
<td>74.3%</td>
</tr>
<tr>
<td>Total wood pulp for manufacturing</td>
<td>16 372</td>
<td>45.6%</td>
<td>48 890</td>
<td>65.1%</td>
</tr>
<tr>
<td>Other pulp</td>
<td>172</td>
<td>0.5%</td>
<td>361</td>
<td>0.9%</td>
</tr>
<tr>
<td>Total pulp</td>
<td>36 545</td>
<td>100%</td>
<td>41 051</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Market data**

**Total pulp production in CEPI countries in 2014**

Source: CEPI

**World production of different paper products (million tonnes)**

**Production of paper and board by grade in CEPI countries in 2014**

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### LCA screening (1)

**LCA screening study**

- EU Ecolabel criteria should target the hot-spots in the life cycle of the PG.
- Necessary to:
  - Understand the life-cycle of the product group
  - Review the relevant LCA literature
  - Identify any relevant Product Category Rules (PCRs)
  - Identify any relevant Environmental Product Declarations (EPDs).
- Decide upon scope and boundaries.
- Where PCRs exist, pay attention to LCAs that respect them
- Where EPDs exist, pay attention to claims verifiable

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### LCA screening (2)

**Paper LCA:**

- CO2 + CO2 → H2O
- Land and nutrients
- Forest
- CO2
- Transport
- Sawmill
- Timber
- Wood-chips, scrap wood and cut-offs
- Pulping plant
- Transport chemicals
- Fuel/electricity
- Pulp
- Paper mill
- H2O
- Wastewater
- Mother reels
- Air emissions
- TP
- NP
- C+G
- WWTP
- Transport wastewater
Preliminary LCA screening study
- 62 LCA studies identified
- 3 sets of PCRs identified
  - PEF study for intermediate paper products
  - International EPD system (Environdec)
  - Paper Profile (these may only be rules for EPD, not LCA)
- Around 100 relevant EPDs identified:
  - 90 for paper products under “Paper Profile”
  - 12 for processed paper and paperboard (UN CPC 3214) under “Environdec”
- Need to create a screening test and scoring system for LCAs
- Will be based on quality factors and compliance with both ISO 14040 framework and relevant PCRs.

Hot spots identified (1)
- Forest destruction and potential loss of biodiversity from sourcing of raw materials;
- Emissions to air during pulp and paper production (especially CO2, SO2 and NOx);
- Emissions to water during pulp and paper production (especially COD, AOX and P);
- Energy consumption during production (mainly fuel for pulp mills and electricity for paper mills);
- Water consumption during pulp and paper production;
- Energy and ecotoxicity due to the production and uses of chemicals during pulp and paper production;

Hot spots identified (2)

Identification of most relevant impact categories for a representative graphic paper intermediate product (Source: PEFCR screening study)

Best practices
1. Fibre sourcing: virgin, recycled and non-wood:
   - Use of wood from sustainably managed sources; and optimize the use of fibre from recycling;
2. Fuel and electricity consumption, CO2 emissions and climate change:
   - Substitute coal or fuel oil for natural gas, substitute natural gas for biomass;
   - Replace traditional boilers with Combined Heat and Power (CHP) units; upgrade recovery boiler units to gasification combined cycle technology
3. Water consumption:
   - Optimize the closure of water circuits; and minimize water consumption, use of water savings techniques;
5. Emission to water:
   - Use environmentally benign bleaching sequences;
   - Minimize the use of poorly biodegradable organic substances; Optimize the dosing of N and P to wastewater treatment processes;
6. Solid waste:
   - Implement integrated waste management plan, minimize waste generation and maximize recycling and waste recovery;
Current criteria

Structure of the current criteria

Key changes proposed
- To merge the scope for copying and graphic paper with newsprint paper;
- To expand the scope for Tissue Paper;
- To update current emission limits in line with the new BREF ranges and to discuss what specific benchmark to use;
- To reduce current CO2 emission limits;
- To consider a more restrictive approach to the use of EDTA in ECF pulp mills;
- To introduce a common ambition level for fibre sourcing;
- To discuss a possible new water minimisation criterion based on process and pulp type;
- To address waste management.

Stakeholder survey profiles (56):

Questionnaire

EU Ecolabel criteria revision for Paper products: copying and graphic paper, tissue paper, and newsprint paper
**Product groups scope and definition**

<table>
<thead>
<tr>
<th>Product Group</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tissue Paper</strong></td>
<td>Comprise sheets or rolls of tissue paper to be used for personal hygiene, absorption of liquids and/or cleaning of soiled surfaces. The tissue product consists of creped or embossed paper in one or several plies. The fibre content of the product shall be at least 90%. The product group does not comprise any of the following: (a) wet wipes and sanitary products; (b) tissue products laminated with other materials than tissue paper; (c) products as referred to in Directive 76/768/EEC.</td>
</tr>
<tr>
<td><strong>Copying and Graphic Paper</strong></td>
<td>Comprise sheets or rolls of not converted, unprinted blank paper and not converted boards up to basis weight of 400 g/m². It shall not include newsprint paper, thermally sensitive paper, photographic and carbonless paper, packaging and wrapping paper as well as fragranced paper.</td>
</tr>
<tr>
<td><strong>Newsprint Paper</strong></td>
<td>Comprise paper made from pulp and used for printing newspapers and other printed products. It shall not include copying and graphic paper, thermally sensitive paper, photographic and carbonless paper, packaging and wrapping paper as well as fragranced paper.</td>
</tr>
</tbody>
</table>

**Methodology: Cross-analysis**

1. European Standards and references: (CEN/TC, ISO, CEPI)
2. Paper industry terminology and classifications (intended use)
3. Product categorization: Other environmental schemes of relevance: (Blue Angel, Nordic Swan, Eco Mark, ...)
4. Preliminary market analysis: (segmentation, trades)
5. Technical aspects and process differences (pulping, paper making)
6. Preliminary Life Cycle Assessment consideration (functional unit)
7. Stakeholders interaction
8. Questionnaire

**SCOPE- Key aspects**

**Copying and graphic paper**

*Possible merging to one product group: definition, pros & cons analysis; To extend the scope (e.g. investigate inclusion of paper board)*.

**Newsprints paper**

*Product group definition: ISO 12525:* 
- Inclusion of tablecloths, mats etc.;
- Relevance of keeping in the scope printed, colour and fragranced tissue paper.

**Tissue Paper**

*B2B approach*
• 75% of participants – industry stakeholders (54% license holders)

Paper is a generic term for a range of materials in the form of a coherent sheet or web (…) Whereas board / paperboard is a generic term applied to certain types of paper frequently characterized by their relative high rigidity.

Graphic paper classes
CEPI, ISO 4046: Paper, board, pulps and related terms.

Market features

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic papers</td>
<td>44,490</td>
<td>39,783</td>
<td>38,953</td>
<td>-2.1</td>
</tr>
<tr>
<td>Newsprint</td>
<td>9,657</td>
<td>8,323</td>
<td>7,813</td>
<td>-6.1</td>
</tr>
<tr>
<td>Uncoated mechanical paper</td>
<td>7,737</td>
<td>6,477</td>
<td>6,233</td>
<td>-3.8</td>
</tr>
<tr>
<td>Uncoated woodfree paper</td>
<td>9,274</td>
<td>9,406</td>
<td>9,393</td>
<td>-0.1</td>
</tr>
<tr>
<td>Coated papers</td>
<td>17,988</td>
<td>15,577</td>
<td>15,514</td>
<td>-0.4</td>
</tr>
<tr>
<td>Sanitary and household paper</td>
<td>7,098</td>
<td>7,411</td>
<td>7,598</td>
<td>2.4</td>
</tr>
<tr>
<td>Packaging materials</td>
<td>45,717</td>
<td>47,472</td>
<td>47,963</td>
<td>1.0</td>
</tr>
<tr>
<td>Case materials</td>
<td>65,717</td>
<td>67,472</td>
<td>67,062</td>
<td>-0.7</td>
</tr>
<tr>
<td>Coated printing papers</td>
<td>36,417</td>
<td>37,059</td>
<td>36,973</td>
<td>-0.5</td>
</tr>
<tr>
<td>Other paper and board</td>
<td>5,152</td>
<td>5,280</td>
<td>5,327</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Other schemes

- Blue Angel:
  - RAL UZ 5: Sanitary Paper
  - RAL UZ 72: Printing and publication papers (NS included)

- Nordic Swan - Basic Module, Chemical Module, Supplementary module (product specific):
  - Nordic Tissue Paper
  - Nordic Graphic and Printing Paper (NS included);

- Umweltzeichen
  - UZ 02: Graphic Paper (NS included)

- Green Seal
  - (GS)-1 Sanitary Paper;
  - (GS)-15 Newsprint;
  - (GS)-7 Printing and writing paper;
Product intended use

1. Informative use:
   - Newspapers: used for printing newspapers, magazines, hand bills, etc. Paper is not sized, highly absorbent, it absorbs the relatively liquid inks used on printing process. It is supplied in sheets or reels either machine finished or glazed.
   - Printed graphic paper: paper must be receptive to ink and have reasonable strength, opacity and colour. A certain minimum strength is required for the actual printing operation and fitness for use for intended destination during the lifetime.
2. Packaging: corrugated medium (paper, paperboard, cardboard), kraft medium, textured, liquid board, packaging, carton, etc.
3. Hygienic: tissue paper, toilet paper, kitchen paper, etc.
4. Specialty: Filter paper, thermal paper, fire or water resistant papers, official papers, stamps, and other specific applications.

Characteristics of newsprints and graphic papers

<table>
<thead>
<tr>
<th>Grade Fibre content</th>
<th>Format</th>
<th>Use</th>
<th>Weight (g/m²)</th>
<th>Brightness and colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsprint</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0. Not defined; 1. Mechanical; 2. Recovered paper; 3. Chemical Pulp</td>
<td>0. Not defined; 1. Reels; 2. Sheets</td>
<td>0. Not defined; 1. For newspapers; 2. Catalogue and magazine printing; 3. For other kinds of printing</td>
<td>0. Not defined; 1. &lt;40; 2. 40-45; 3. &gt;45 – 48.8; 4. &gt;48.8</td>
<td></td>
</tr>
<tr>
<td>0. Not defined</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphic papers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tissue paper – Based on ISO 12625

Tissue papers, lightweight, dry or wet creped and some “non-creped” papers.

Tissue products can be made of one or several plies, each ply being of one or several layers (prepared as sheets or rolls ?). Products of such a kind derive from a single-ply, semi-finished, wet-laid tissue-base paper that is predominantly composed of natural fibres. The origin of fibres may be virgin or recycled, or a mixture of both. A typical grammage of single-ply tissue-base papers ranges from 10 to 30 g/m².

The properties of the tissue-base paper: a good textile-like flexibility, surface softness, low bulk density and high ability to absorb liquids. Commonly used for hygienic and industrial purposes.

Nonwovens are not classified as tissue, even if one subgroup of the nonwovens is manufactured in a wet-laid manner according to a process similar to the tissue making process.

Proposed Scope

<table>
<thead>
<tr>
<th>Product group</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tissue Paper</td>
<td>Complex sheets or rolls of tissue paper to be used for personal hygiene, absorption of liquids and for cleaning of soiled surfaces. Tissue paper in base paper taken from the tissue machine before conversion (typically between 16 g/m² and 50 g/m²) while “tissue product” is “tissue paper that has been converted into a finished product for end-use purposes.” It will include bleached, printed and/or fragranced tissue paper products. It will include tablecloths, mats and non-sanitary napkins, and other such products.</td>
</tr>
<tr>
<td>Copying and Graphic Papers</td>
<td>Paper suitable for printing or other graphic purposes. Complex sheets or rolls of not converted, unprinted stock paper. It will include paper made from pulp and used for writing, printing newspapers and other printing products.</td>
</tr>
</tbody>
</table>

Product | Grade |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsprint</td>
<td>0. Not defined; 1. Mechanical; 2. Recovered paper; 3. Chemical Pulp</td>
</tr>
</tbody>
</table>
### Questions C&G, NS

**Q:** Should the scope and definition of newsprint paper be merged with that of copying and graphic paper as proposed?

**Q:** Should the weight based upper grammage be removed?

**Q:** Should 'not converted board' also be removed from the scope for copying and graphic paper merged with newsprint paper?

**Q:** Is the new proposed name for the merged copying, graphic and newsprint paper product group of 'Paper suitable for printing or other graphic purposes' suitable and appropriate?

### Questions TS

**Q:** Should the scope of tissue paper be expanded to include non-coated mats, tablecloths, non-sanitary napkins and other such products?

**Q:** Should the scope of tissue paper continue to include printed, coloured and/or fragranced tissue paper products?

**Q:** If the scope for tissue paper will continue to include printed tissue paper products, should additional wording be proposed on the printing inks (as is currently the case in the Commission Decision 2012/481/EU on the EU Ecolabel criteria for printed paper under Criterion 2 on Excluded or limited substances and mixtures, part (f) on Printing inks, toners, varnishes, foils and laminates (European Commission, 2012b))?

**Q:** Should the scope of tissue paper be clarified to clearly exclude tissue paper products such as disposable diapers that are absorptive undergarments making reference to the Commission Decision 2014/763/EU?

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### B2B Labelling

**Objectives:**
1. Facilitate B2B communication;
2. Possible increase the EU Ecolabel uptake

**Proposals:**

**Option I** - Introducing a new independent set of criteria specific to pulping process
- Possible consumer confusion - pulp is not a consumer good
- Most provisions would be identical for different paper products.

**Option II** - Including a provision for business-to-business (B2B) communication on intermediate products within the existing paper product criteria
- Pulp cannot be awarded EU Ecolabel but can be recognised/certified as manufactured according to EU Ecolabel provisions
- Organising verification of pulping process and certification of the compliance with the criteria
- Organising information flow between pulp and paper manufacturer (e.g. specific website under EU Ecolabel)
- How to handle integrated pulp and paper mills

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### Nordic Swan Approach – Modular System

1. **Basic Module** – fibre sourcing, emissions to air and water and energy use;
2. **Chemical Module** – chemicals used in the process and general restrictions that are placed on those chemicals;
3. **Supplementary Module** (product specific)

Pulping process needs to meet requirements of modules 1 and 2

It is not permitted to use the Nordic Ecolabel logo on the market pulp so as to avoid any confusion, because technically it is not a final product.

Paper producers that apply for the Nordic Ecolabel are provided a list of approved pulps. Pulps that have been inspected and approved by the Nordic Ecolabel can be marketed as such in product catalogues and on websites.
Questions

1. Which is degree of interest from market pulp suppliers about this?
2. What is the opinion of Competent Bodies about separate pulp mill audits? Would it follow existing fee structures for licenced products?
3. The key roles and responsibilities for maintaining any central database of approved pulp suppliers?

Criterion 4. Excluded or limited substances and mixtures

Materials used in paper production

General - 1

General - 2

Materials used in paper production

Chemical pulp, wood
Chemical pulp, noncellulose
Recovered paper
Mechanical pulp

Chemical additions

- Specialty chemicals
- At compounding
- Starch
- Basic and bleaching chemicals

- 20 %
- 10 %
- 8 %
- 6 %

General - 1

Materials used in paper production

General - 2

Functional chemicals

- Mineral fillers/pigments (talc, kaolin, calcium carbonate, clay etc.)
- Starch
- Dyes (basic, Direct, pigment dispersions)
- Optical brightening agents
- Synthetic brightening agents
- Surfactants
- Biological agents
- Cleaners

- 20 %
- 10 %
- 8 %
- 6 %

Optimise process stages
- Not intended to remain in final product

Optimise paper properties
- Often intended to remain in final product

Optimise process stages
- Not intended to remain in final product

Optimise paper properties
- Often intended to remain in final product

Optimise process stages
- Not intended to remain in final product

Optimise paper properties
- Often intended to remain in final product
Parts a) and b): CLP and SVHC restrictions: (Link to articles 6(6) and 6(7) in Regulation 66/2010)

6(6): cannot award EU Ecolabel to goods containing substances or mixtures that are toxic, hazardous to the environment, CMR or with Article 57 properties.

- Problematic requirement: new for tissue paper (pre-2010)
- How to verify?
- What if substances react / change their properties during processing?
- Need for a common interpretation → haz. subs. task force

6(7): makes scope for derogation from 6(6) but only if no less hazardous and technically viable alternative exists.

- Case by case basis.
- Distinguishes between haz. substances (more open) & SVHCs (stricter).
How to deal with parts a) and b) in reality

- Draw up list of chemical products used and appropriate data (i.e. SDS).
- Does the restricted chemical change its properties during processing such that restricted hazards no longer apply?
- Does the restricted chemical only remain in the paper product in concs. <0.1% w/w?
- Does scientific evidence / arguments provided support this?
- Provide proof of compliance with conditions.

Questions a) and b)

Q. Are any license holders / Competent Bodies willing and able to share lists of chemicals used in the paper production process?
Q. Any interested stakeholders who could actively contribute to a small sub-group focused solely on chemical criteria? Principal tasks would be:
- Identify chemicals of greatest concern in process
- Consider the need for possible derogations
- Consider how to define when a chemical is considered to have undergone sufficient changes during processing so as to no longer exhibit the original restricted hazards and/or no longer be present in the paper product at concentrations >0.1%.

Q. In what group (1, 2 or 3) should the following hazard statements be placed: EUH029, EUH031, EUH032, EUH059 and EUH070?
Q. Should the restriction of SVHCs be extended to mixtures used during processing (easier to verify) or only to those mixtures where SVHCs are likely to remain in the final product?

Criterion 4c) Chlorine

Chlorine gas shall not be used as a bleaching agent. This requirement does not apply to chlorine gas related to the production and use of chlorine dioxide.

Assessment and verification:
The applicant shall provide a declaration from the pulp producer(s) that chlorine gas has not been used as a bleaching agent. Note: while this requirement also applies to the bleaching of recycled fibres, it is accepted that the fibres in their previous life-cycle may have been bleached with chlorine gas.

- No change from existing criteria
- i.e., ECF or TCF pulp is okay
- Market data suggests TCF is not emerging or displacing ECF

Criterion 4d) APEOs

Alkylphenol ethoxylates or other alkylphenol derivatives shall not be added to cleaning chemicals, de-inking chemicals, foam inhibitors, dispersants or coatings. Alkylphenol derivatives are defined as substances that upon degradation produce alkyl phenols.

Assessment and verification:
The applicant shall provide a declaration(s) from their chemical supplier(s) that alkylphenol ethoxylates or other alkylphenol derivatives have not been added to these products.

Criterion 4e) Acrylamide

Acrylamide shall not be present in coatings, retention aids, strengtheners, water repellents or chemicals used in internal and external water treatment in concentrations higher than 700 ppm (calculated on the basis of their solid content).

Assessment and verification:
The applicant shall provide a declaration of compliance with this criterion, together with appropriate documentation (such as Safety Data Sheets).

No change to APEO exclusion
**Criterion 4e) Acrylamide**

Criterion has been simplified by removing 100ppm limit for all "residual monomers". Main reasons for this:

- Concentration limits for residual classified monomers in the existing criteria are very low (100ppm) and unlikely to have any influence on the CLP classification of the mixture;
- They are below the general threshold set in the criterion on presence of hazardous substances in the final products (0.10% weight by weight);
- The extent to which the residual monomers will remain in the final product is considered to be extremely small;
- By going significantly beyond the minimum requirements of CLP and REACH legislation, additional verification efforts will be needed;
- The criterion appears to be especially stringent on residual monomers with the less severe hazard classifications such as H412 and H413.

**Questions: c), d) & e)**

**Chlorine**
- Should ECF bleaching only be permitted in line with the use of certain technologies and/or chlorate monitoring? Or can this be considered to be already controlled to a satisfactory extent by AOX criteria?
- Based on energy and chemical requirements, are there any LCA-based arguments that can be used to justify/dismiss the exclusion of ECF in favour of TCF?
- Are there any technical arguments (in terms of pulp or paper quality) that could be used to justify the continued use of ECF?
- Would it be feasible to require TCF (or PCF) for Newsprint Paper based on current market trends and industry practice?

**Acrylamide**
- How is "calculated on the basis of their solid content" interpreted in applications?
- What residual monomers were targeted by this original 100ppm limit?

**Criterion 4f) Surfactants**

All surfactants used shall demonstrate ready or inherent ultimate biodegradability (see test methods and pass levels below).

**Assessment and verification:**
- The applicant shall provide a declaration of compliance with this criterion together with the relevant safety data sheets or test reports for each surfactant which shall indicate the test method, threshold and conclusion stated, using one of the following test method and pass levels:
  - For ready biodegradability: OECD No 301 A-F (or equivalent ISO standards) with a percentage degradation (including absorption) within 28 days of at least 70% for 301 A, B, C, D and F.
  - For inherent ultimate biodegradability: OECD 302 A-C (or equivalent ISO standards), with a percentage degradation (including adsorption) within 28 days of at least 70 % for 302 A and B, and of at least 60 % for 302 C.

**Criterion 4g) Biocidal products**

The active substances in biocidal products used to counter slime-forming organisms in circulation water systems containing fibres shall not be potentially bioaccumulative.

**Assessment and verification:**
- The applicant shall provide a declaration of compliance with this criterion together with the relevant material safety data sheet or test report which shall indicate the test method, threshold and conclusion reached, using the following test methods: OECD 107, 117 or 305 A-E.

- Only minor changes with terminology (e.g. biocidal products) and to make a clear distinction from CLP definition for bioaccumulative.
### Questions: i), g) & h)

#### Surfactants
- Q. Can all surfactants used in the paper production process be readily/inherently biodegradable?
- Q. From experience, are there any issues with biodegradability testing, especially with OECD 301?
- Q. Is there any experience with the reporting of results from equivalent ISO standards?

#### Biocides
- Q. What is the minimum value of requesting that active substances and biocidal products used must be approved or currently under evaluation in accordance with the BPR (EC) No 528/2012?
- Q. With tissue paper, added value of this text (or similar): "The biocidal products shall be applied to the Tissue Paper product with the intention of providing a disinfective effect on the final product"?
- Q. Can biocidal products commonly used during the shipment and storage of mother reels and market pulp?

#### Dyes, dyestuffs and pigments
- Q. Any experience with testing paper products for restricted aromatic amines?
- Q. Is it reasonable to expand the list of restricted metals in dyes and pigments to align with the metals banned as ionic impurities in dyestuffs?
- Q. With the limits for ionic impurities, limits are expressed as ppm. Should this be interpreted as mg/kg, mg/l or µL/L (i.e. w/w, w/v or v/v)? What is normal practice?
- Q. Are phthalates a concern in dyes, dyestuffs and pigment dispersions? If so, are any classified phthalates used in these applications?
- Q. Any experience with testing paper products for restricted aromatic amines?
Criterion 4k) Residual substances

Where tissue paper is manufactured entirely or partially from de-inked pulp, the final tissue paper shall not contain more than:

1 mg/dm² formaldehyde according to EN 1541 (cold water extract test).

1.5 mg/dm² glyoxal according to DIN 54603

2 mg/kg pentachlorophenol (PCP) according to EN ISO 15320 (cold water extract test).

Assessment and verification:
The applicant shall provide a declaration of compliance with this criterion, supported by relevant laboratory test reports.

No major changes proposed but has been significantly restructured (i.e. product safety + has subs + fitness for use).

Need to clarify more details of the test conditions (i.e. cold or hot)

Questions: i), j) & k)

Wet strength agents (WSAs)

Q. Would a stricter limit on ECH etc. better reflect current best practice in Tissue Paper production?

Q. Are WSA criteria applicable to Copying and Graphic Paper or Newsprint Paper? The Nordic Chemical Module has a general requirement of 0.01% for ECH, DCP and CPD, which is more stringent than what they have for Tissue Paper (0.05%)?

Q. Since 2009, have any other substances in WSAs been identified which should also be restricted?

Softeners, lotions and fragrances

Q. What is the range of softeners, lotions and fragrances typically used in Tissue Paper products, at what stages of production are they added and what % of the product weight do they represent?

Q. Should fragrances continue to be permitted in EU Ecolabel Tissue Paper? If YES, what is the most up to date and relevant legal framework for fragrances? Should a specific 0.01% limit should or could be applied to all Annex III substances?

Q. What are the challenges with implementing this criterion in existing Tissue Paper licences?

Residual substances

Q. Should this apply equally to CGP and NP if recycled fibres used? Or is it an exposure issue only?

Q. Should the hot or cold extraction method be specified for formaldehyde and PCP?

Q. Are there any international equivalents to DIN 54603 that could be used for glyoxal analysis?

Q. Should testing only be triggered above a set minimum recycled content (e.g. 25%) and/or only when certain grades of recovered paper are used?

Q. When deemed that testing should be carried out, what would be an appropriate sample frequency (either per unit time or per production volume/batch)?

Criterion 2. Energy use

Energy use–current criterion(1)

(a) Electricity

For integrated mills, if only a combined figure (pulp and paper) is available, the electricity values for pulp(s) shall be set to zero and allocated to paper production.

(b) Fuel (heat)

For integrated mills, if only a combined figure (pulp and paper) is available, the fuel values for pulp(s) shall be set to zero and allocated to paper production.
Criterion 2. Energy use – reference values

- Pulp and paper industry has a large potential for creating energy savings. In Europe, the industry produces about 51% of the electricity it consumes, most (95.2%) from combined heat power installations (CHP);
- The total energy consumption decline since 2006 whereas paper and pulp production has increased;
- Limited comparability between different installations due their specificity;
- Benchmarking at process level by the comparison of specific energy consumption (SEC) of similar processes within different paper mills.

BREF defines “Best practice energy benchmarking” as the process of comparing actual steam and energy consumption with the levels of best practice used in the mills that apply similar processes and manufacture similar products.

EU-28 Energy Statistics- total energy consumption of paper, pulp, and print (Mtoe)

Energy consumption (2)

- Order of power consumption: TMP > PGW/GW > RCF
- Energy intensity is related to the technical requirements of final product:
  - GW - C&G paper 2 200 kWh/t ; Newsprint 1 600 kWh/t;
  - TMP - C&G 3 600 kWh/t ; Newsprint 2 500 kWh/t;
- Heat recovery in TMP can lead to lower overall energy consumption than GW pulping.

Production of tissue paper requires the lowest intensity in mechanical refining, copying and printing paper the highest and newsprint paper requires some 40% less electricity than production of copying and printing paper.

Level of integration:
- GW and TMP pulp mills use to be integrated with a paper mill;
- Integrated TMP enables to reuse the heat from refiners for the production of steam and better energy efficiency.
- CTMP is often produced in connection with a paper or board mill due to the possibility to reuse the heat from refiners for the production of steam and better energy efficiency. However, CTMP is in some cases (approximately 10 mills in Europe) manufactured as market pulp.

Criterion 2. Energy use – reference values

Energy consumption (3)

- Methodology:
  - Comparison of Ecolabel and Nordic Swan energy reference values with the benchmark values included in ETS and BREF;
  - Proposal: to align reference levels for chemical pulp and paper-grade with the Nordic Swan requirements;
  - Mechanical pulp–differences in energy consumption within pulping technique, lack of available data.
Criterion 1. Energy use – calculation formula

Fuel Consumption = fuel generated + fuel purchased – fuel sold

Q: What multiplication factors represent? (Reference to boiler efficiency? Promoting CHP and wastes utilization?)

Q: Is the formula complete? (e.g. heat recovered from mechanical pulping supplied to paper machine)

Current calculation

Two parts (fuel consumption = a + b):

1) Fuel consumed = fuel generated + fuel purchased – fuel sold
   Logical, understandable

2) Fuel consumed = 0.8 steamCHP + 0.8 wastesonsite + 1.25 steamelectrode boiler
   - 1.25 power prodonsite = heat sold

Allocation

Assuming the factor 1.25 refers to boiler efficiency of 80%, possible modification should be discussed:

- For fuel utilized in CHP: electric efficiency for high pressure steam systems in modern pulp mills is approximately 35%. Taking into account a boiler efficiency of 75% fuel requirement per unit of produced electricity would amount to 1/(35% x 75%) = 3.4 GJ/GJe;
- For fuel utilized in condensing steam cycles or gas turbines/gas engines without heat recovery, the modified factor should be related to the actual net electric efficiency;
- The mandatory allocation rule for calculating fuel consumption is not related to actual CHP unit efficiencies, fuel consumption related to 'internal generation of electricity' may be greatly underestimated. CHP units has a 1.25/0.8 = 1.56-fold higher allocation factor than heat;
- For heat supplied to external consumers, no recalculation factor for associated fuel consumption is included;
- Possible modification of allocation rule:

   - Based on actual efficiencies of boilers, furnaces and co-generation units
   - The actual boiler efficiency (approximately 75%) is proposed to be applied for calculating fuel consumption.
ETS rules for - larger mills already report under ETS:

- Efficiency benchmark for heat generation (stand alone boiler)
- CHP: heat benchmark as reference for produced heat
- Heat sales: heat benchmark as reference for supplied heat

Part b of fuel consumption would become:

\[ b) \text{Fuel consumed} = \left(\frac{\text{steam}_{\text{CHP}}}{1,11}\right) + \left(\frac{\text{wastes}_{\text{onsite}}}{1,01}\right) + \left(\frac{\text{steam}_{\text{electrode boiler}}}{1,11}\right) \]

For recovery boiler/bark boiler benchmark of 75% (or 80%) efficiency is representative, for electrode boiler 99% to 99.9%, 90% efficiency (see ETS) for other boilers.

**Difficult to implement?**

- Ecolabel: The applicant shall provide detailed calculations showing compliance with this criterion, together with all related supporting documentation.
- ETS Decision: Member States should ensure that data collected from the operators and used for allocation purposes is complete, consistent and presents the highest achievable accuracy.

**Example: ETS consistent calculation rule**

ETS rules for - larger mills already report under ETS:

- Efficiency benchmark for heat generation (stand alone boiler)
- CHP: heat benchmark as reference for produced heat
- Heat sales: heat benchmark as reference for supplied heat

Part b of fuel consumption would become:

\[ b) \text{Fuel consumed} = \left(\frac{\text{steam}_{\text{CHP}}}{1,11}\right) + \left(\frac{\text{wastes}_{\text{onsite}}}{1,01}\right) + \left(\frac{\text{steam}_{\text{electrode boiler}}}{1,11}\right) \]

**Allocation methodology for attribution of emissions and fuel consumption for CHP?**

a) Fuel consumption:

\[ \frac{[0,8 \times \text{steam}_{\text{CHP}}] + [1,25 \times \text{power prod}_{\text{onsite}}]}{1} \rightarrow \frac{\text{ratio power}}{\text{heat}} = \left[\frac{1,25}{0,8}\right] = 1,56 \times 1 \]

b) Emissions related to CHP with electricity sales:

\[ \frac{2 \times \text{MWh}_{\text{el}}}{2 \times \text{MWh}_{\text{el}} + \text{MWh}_{\text{th}}} \rightarrow \frac{\text{ratio power}}{\text{heat}} = 2 \div 1 \]

- If adopting ETS calculation rules, per unit of fuel (e.g. GJ) for CHP with \( \eta_{\text{th}} \) and \( \eta_{\text{e}} \) efficiencies:

\[ 1,1 \times \eta_{\text{th}} \rightarrow \text{rest of fuel consumption to electricity.} \]

- Example for 1 GJ fuel, \( \eta_{\text{th}} = 50\% \), \( \eta_{\text{e}} = 35\% \)

\[ 1,1 \times 0,5 = 0,55 \text{ of emissions to heat, 0,45 to electricity} \]

**Questions**

Q: The question may be put forward whether waste water treatment (and air/flue gases) should not be included in the calculation of electricity consumption.

Q. Shall energy calculation methodology be re-design including modified factors which should be based on the actual thermal and electric efficiencies of heat producing equipment?

Q. Should allocation methodology for attribution of emissions and fuel consumption for CHP be re-design?
Waste Handling and Minimisation

All pulp and paper production sites shall demonstrate to have a system for handling of waste arising from the production of the licensed product.

The application should provide a comprehensive waste minimisation and management plan that shows the system and includes information on the following points:

- Procedures for waste prevention;
- Procedures for waste separation, reuse and recycling;
- Procedures for the safe handling of hazardous waste;
- Continuous improvement objectives and targets.

Assessment and verification:

The applicant shall provide a waste minimisation and management plan for each of the sites and a declaration in compliance with the criterion. The declaration should inform about the amount of waste generated per each classification:

<table>
<thead>
<tr>
<th>Source</th>
<th>Waste type</th>
<th>Waste characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater treatment plant</td>
<td>Sludge</td>
<td>- Organic fraction: wood fibres, biosludge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inorganic fraction: clay, calcium, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 20-60% solid content</td>
</tr>
<tr>
<td>Paper mill</td>
<td>Sludge</td>
<td>Colour waste, fibre clay including slowly biodegradable organic substances such as cellulose, lignin</td>
</tr>
<tr>
<td>Rejects</td>
<td>Sludge</td>
<td>Green liquor dregs consisting of non-reactive metals and insoluble materials, lime mud</td>
</tr>
</tbody>
</table>

Questions:

- Is it feasible to set maximum waste disposal limits?
- Is there justification for having a higher limit for RCF pulp production?
- Is it feasible to provide waste limits on an end product basis as well as a pulp type basis?
Criterion 1. Emission to Water

Emission to water and air

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>No limitations specified</td>
</tr>
<tr>
<td>AOX</td>
<td>Shall not exceed 0.17 kg/ADT</td>
</tr>
<tr>
<td>Tissue paper</td>
<td>Shall not exceed 0.17 kg/ADT</td>
</tr>
<tr>
<td>Newsprint (2011/332/EU)</td>
<td>Shall not exceed 0.17 kg/ADT</td>
</tr>
<tr>
<td>Copying and Graphic papers</td>
<td>Shall not exceed 0.17 kg/ADT</td>
</tr>
</tbody>
</table>

Monitoring

- BAT is to monitor emissions in accordance with EN standards. If EN standards are not available, ISO, national or other international standards which ensure the provision of data of an equivalent scientific quality should be used.
- For COD several Member States use national standards for regulatory purposes: e.g. NEN 6633 in NL, NF T 90 101 in FR, or DIN 38409-41 in DE
- The JRC Reference Report on Monitoring (ROM) of emissions to air and water from IPPC installations (Final draft) is available online (EIPPC website).
- Continuous methods for air emission analysis: EN 14792:2005

Calculation methodology

- Emission is expressed for each parameter in terms of points calculated on the base of reference values.
- Scores for each parameters shall be lower than 1.5, and the total number of points shall not exceed 4.0.
- When various pulps are mixed, the individual contribution from each pulp should be expressed as weighted share.
- For integrated mills if combined figures are available the emission shall be allocated to the paper mill (including pulp and paper production).

Example

\[ P = \frac{\text{COD}_{\text{emissions}}}{\text{COD}_{\text{reference}}} \times \frac{\text{Pulp}_{\text{1}}}{\text{Total Pulp}} \times \frac{\text{Pulp}_{\text{2}}}{\text{Total Pulp}} + \text{COD}_{\text{reference}} \]
Q. Should we under revised criterion refer to test methods listed in ROM Document?

Chemical Oxygen Demand

Current and proposed new reference levels for specific emissions of COD (kg COD /ADt)

<table>
<thead>
<tr>
<th>Pulp types</th>
<th>NP</th>
<th>CP</th>
<th>TP</th>
<th>NP</th>
<th>CP</th>
<th>TP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleached sulphate pulp</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>7 - 16</td>
<td>7 - 16</td>
<td>7 - 16</td>
</tr>
<tr>
<td>Bleached sulphite pulp</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Unbleached chemical pulp</td>
<td>25</td>
<td>18</td>
<td>18</td>
<td>2,5 - 8</td>
<td>2,5 - 8</td>
<td>2,5 - 8</td>
</tr>
<tr>
<td>CTMP</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>12 - 15</td>
<td>12 - 15</td>
<td>12 - 15</td>
</tr>
<tr>
<td>TMP/ground wood pulp</td>
<td>-</td>
<td>0,9 - 3</td>
<td>-</td>
<td>0,9 - 3</td>
<td>-</td>
<td>N.R.</td>
</tr>
<tr>
<td>Recovered fibre pulp</td>
<td>-</td>
<td>0,9 - 3</td>
<td>-</td>
<td>0,9 - 3</td>
<td>-</td>
<td>N.R.</td>
</tr>
<tr>
<td>Paper production</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0,5 - 2</td>
<td>0,5 - 2</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Current reference level: 1,2

Proposed new reference levels: 0,1 - 3,0

COD

Total COD emission load from bleached Kraft pulp mills after biological treatment

<table>
<thead>
<tr>
<th>Pulp types</th>
<th>NP</th>
<th>CP</th>
<th>TP</th>
<th>NP</th>
<th>CP</th>
<th>TP</th>
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<td>7 - 16</td>
<td>7 - 16</td>
</tr>
<tr>
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<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Unbleached chemical pulp</td>
<td>25</td>
<td>18</td>
<td>18</td>
<td>2,5 - 8</td>
<td>2,5 - 8</td>
<td>2,5 - 8</td>
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<td>12 - 15</td>
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<tr>
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<td>-</td>
<td>0,9 - 3</td>
<td>-</td>
<td>0,9 - 3</td>
<td>-</td>
<td>N.R.</td>
</tr>
<tr>
<td>Recovered fibre pulp</td>
<td>-</td>
<td>0,9 - 3</td>
<td>-</td>
<td>0,9 - 3</td>
<td>-</td>
<td>N.R.</td>
</tr>
<tr>
<td>Paper production</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0,5 - 2</td>
<td>0,5 - 2</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Current reference level: 1,2

Proposed new reference levels: 0,1 - 3,0
**COD - chemical and CTMP**

Current and proposed new reference levels for specific emissions of COD (kg COD/ADt)

<table>
<thead>
<tr>
<th></th>
<th>Current reference levels</th>
<th>Proposed new reference levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NP</td>
<td>CGP</td>
</tr>
<tr>
<td>Bleached sulphate pulp</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Bleached sulphite pulp</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Unbleached chemical pulp</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>CTMP</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>TMP</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Recovered mass</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Non-integrated mills</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other mills</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**COD**

Mechanical

- 3 kg COD/ADt is representative for approx. 50% of mills;
- BAT - AELs with deinking on site: 0.9 – 4.5 kg COD/ADt;
- Proposal: 0.9-3.0 kg COD/ADt

Paper mills

- BAT-AELs (non-integrated) 0.15-1.5 kg/ADt. For tissue paper the upper value is suggested to be raised to 1.5 kg COD/ADt

**Water Framework Directive 2000/60/EC** defined the risk concentration level for direct discharge of at 0.15 mg P/l. A limit of 0.15 mg P/l combined with a BAT waste water volume of 9 – 16 m3/ADt would suggest emission threshold of 0.0015 – 0.0025 kg
Phosphorous

**P – Sulphate**

- BAT-AELs: Bleached 0.01-0.03 kg P/ADt; 0.02-0.11 kg P/ADt (Eucalyptus pulp);
- BAT-AELs: 0.01 – 0.02 kg/ADt (unbleached);
- Proposal: 0.01 – 0.03 kg P/ADt for bleached kraft pulp, and 0.01 – 0.02 kg P/ADt for unbleached.

The specific emission threshold for eucalyptus pulp mills should be further discussed with industry stakeholders.

**P – Sulphite/Mechanical**

<table>
<thead>
<tr>
<th>Pulp types</th>
<th>Proposed new reference levels</th>
<th>NP</th>
<th>CGP</th>
<th>TP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleached sulphate pulp</td>
<td>0.045 0.045 0.045 0.01-0.03 0.01-0.03 0.01-0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unbleached chemical pulp</td>
<td>0.04 0.04 0.01 0.01-0.02 0.01-0.02 0.01-0.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMP</td>
<td>0.01 0.01 0.01 0.001-0.01 0.001-0.01 0.001-0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground wood pulp</td>
<td>0.001 0.001 0.001 0.001-0.01 0.001-0.01 0.001-0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recovered fibre pulp</td>
<td>0.01 0.01 0.01 0.001-0.01 0.001-0.01 0.001-0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P – RCF/Paper mills**

- BAT-AELs: RCF without deinking - 0.001 – 0.005 kg P/AD.
- BAT-AELs with deinking on site are - 0.002 – 0.01 P/ADt; 0.002 – 0.015 kg/ADt for tissue paper;
- Nordic Swan - 0.01 kg/AD;
- Proposal: 0.001 – 0.01 kg P/AD kg

RCF

- Controlled by dosage of phosphates to the biological waste water treatment;
- BAT AELs: RCF without deinking - 0.001 – 0.005 kg P/AD.
- BAT: AELs with deinking on site are - 0.002 – 0.01 P/ADt; 0.002 – 0.015 kg/ADt for tissue paper;
- Nordic Swan - 0.01 kg/AD;
- Proposal: 0.001 – 0.01 kg P/AD kg

Paper mills

- Comparable with CTMP mills;
- BAT-AELs: 0.003 – 0.012 kg P/AD;
- Proposal: 0.003 – 0.01 kg P/AD.
Q. Which is the most appropriate emission reference value?

Absorbable Organic Halogens

The BAT – AELS into water for AOX address ECF bleached pulps and are established as follows:
- Bleached kraft pulp mill 0,0 - 0,2 yearly average kg/ADt;
- Bleached sulphite and magnefite grade paper 0,5-1,5 yearly average kg/ADt;
- RCF 0,05 for wet strength paper yearly average kg/ADt;
- Integrated kraft, sulphite, CTRMP and CMIP pulp and paper mills, Non-integrated paper and board mill (excluding speciality paper), for decor and wet strength paper yearly average kg AOX/ADt 0,05;
- Nordic Swan threshold for the weighted average of AOX at 0.17 kg/tonne paper, and for each individual 0.25 kg/tonne.
- Test method EN ISO 9562: 2004 / monitoring frequency once a month for bleached kraft pulp, once every two months for bleached sulphite and magnefite paper grade pulp, and integrated production of paper and board from recycled fibres pulp;

In 2008/2009 around 50% of European mills that took part in the questionnaire met the AOX emission level of 0,15 AOX/kg ADt, and 27% less than 0,1 AOX/ADt;
- Proposal : 0.1 - 0.15 kg AOX/ADt.
AOX emission - proposal

<table>
<thead>
<tr>
<th>Pulp types</th>
<th>Current reference levels</th>
<th>Proposed new reference levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NP</td>
<td>GGP</td>
</tr>
<tr>
<td>Bleached sulphate pulp</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Bleached sulphite pulp</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Unbleached chemical pulp</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Sheal</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Other chemical wood pulp</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Ground wood</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Recovered fibre pulp</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Paper production</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>Non-integrated mills</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>Other mills</td>
<td>0.001</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Q. Which is the most appropriate emission reference value?

Criterion 1. Emission to Air

Sulphur
Approx. 90% of mills met existing EU Ecolabel reference value of 0.6 kg S/ADt.
- 55% of the reporting mills reported values of 0.1-0.4 kg S/ADt.
- Almost 30% plants reported emission load lower than 0.1 kg S/ADt.
- Proposal: 0.1-0.4 kg S/ADt.

Nordic Swan 0.2 S ref/ADt; Paper production
- Nordic Swan 0.3 S ref/ADt for paper machine (coated and uncoated paper), and 0.5 S ref/ADt for paper machine for speciality paper;
- Estimated benchmark at the level of 0.003-0.18 S kg/ADt (based on ETS).

Q. Which is the most appropriate reference?

NOx
Current and proposed reference levels for specific emissions of NOx (kg/ADt):

<table>
<thead>
<tr>
<th>NOx</th>
<th>Current reference levels</th>
<th>Proposed new reference levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
<td>1.6</td>
<td>1.0-1.5</td>
</tr>
<tr>
<td>CGP</td>
<td>1.6</td>
<td>1.0-1.5</td>
</tr>
<tr>
<td>TP</td>
<td>1.6</td>
<td>1.0-1.5</td>
</tr>
</tbody>
</table>

**Mechanical/CTMP/RCF**

- Nordic Swan 0.25 NOx ref/ADt;
- Combining NOx BATs emission level for gas fired boilers with the above fuel requirements gives:
  - 0.015 kg NOx/ADt for recovered fibre production in an integrated paper mill;
  - 0.085 kg NOx/ADt for market pulp.

**Paper production**

- Nordic Swan 0.7 NOx ref/ADt;
- Estimated benchmark at the level of 0.03-0.24 NOx kg/ADt (based on ETS).

Questions

1. Which is the most appropriate emission reference value?
2. How to set the most appropriate ambition level EU Ecolabel benchmarks in the context of the ranges reported for BAT-AELs in the 2014 BREF document. Specific data from existing licence holders is requested to use as a starting point for discussions;
Emissions to water and air

1. CO2, Nitrogen Oxides (NOx), Sulphur (S), Phosphorous (P).

   • None of the individual points PCOD, PS, PNOx, PP shall exceed 1.5. The scoring system is based on referenced values.
   • The total number of points shall not exceed 4.0.

2. AOX (Absorbable Organic Halogen)

   • Shall not exceed 0.17 kg/ADT < 0.12 kg/ADT paper the weighted average from the pulps production.
   • < 0.25 kg/ADT pulp per each individual pulp.

3. CO2

   • CO2 emissions from non-renewable sources shall not exceed 1,000 kg/tonne of paper produced.
   • For non-integrated mills the emissions shall not exceed 1,100/tonne.
   • Calculated as the sum of the emissions from the pulp and paper production.

Pulp and paper industry is covered by Emission Trading Directive 2009/29/EC;
Direct emission accounts for 2% of the emissions under EU ETS; Indirect emissions are caused by purchased electricity (around 62 % of the total electricity consumption);
In Europe, the industry produces about 51 % of the electricity it consumes;
55 % of the energy used come from biomass, and 36.2 % from natural gas (2011);
General trend to reduce CO2 intensity of the sector
There are no established BAT-AELS for CO2.

EU-28 fuel-based Electricity/Heat Emission Factors for CO2

- The EU average carbon intensity of the electricity grid, according to MEErP methodology - 0.384 tCO2/MWhe = 0.107 tCO2/GJe (MEErP).
- Proposed update: 380 g CO2 fossil/kWh

Nordic Swan (considers differences in energy intensity of pulping processes):

- 1,000 kg CO2/tonne paper for paper made from 100 % DIP/recycled pulp
- 900 kg CO2/tonne paper for paper made from 100 % chemical pulp
- 1,600 kg CO2/tonne tissue paper.

For paper comprising of a mixture of cellulose pulp, a weighted limit value is calculated, based on the proportion of each pulp type.

The comparison between Nordic Swan and current EU Ecolabel requirements for CO2 emission
Proposal based on EU ETS benchmark values:

The on-site emissions of carbon dioxide from non-renewable sources shall not exceed the EU ETS benchmark standards per tonne of paper produced.

Carbon dioxide emissions related to off-site energy supply (heat, power) shall be consistent with reference values for energy consumption (see next criterion), assuming:

a) An emission factor of 60 kg CO2/GJ for steam (reference: gas fired boiler);

b) An emission factor of 95 kg CO2/GJ for power (reference: gas fired combined cycle power plant).

The provided information would be in line with or will consist of the information provided to the emission authorities under the EU ETS Framework.

The emissions of carbon dioxide from non-renewable sources shall not exceed xxx kg per tonne of paper produced, including emissions from the production of electricity (whether on-site or off-site).

For non-integrated mills (where all pulps used are purchased market pulps) the emissions shall not exceed xxx kg per tonne. The emissions shall be calculated as the sum of the emissions from the pulp and paper production.

**Assessment and Verification:**

The applicant shall provide detailed calculations showing compliance with this criterion, together with related supporting documentation.

The applicant shall provide data on the air emissions of carbon dioxide. This shall include all sources of non-renewable fuels during the production of pulp and paper, including the emissions from the production of electricity (whether on-site or off-site).

The following emission factors shall be used in the calculation of the CO2 emissions from fuels:

<table>
<thead>
<tr>
<th>Fuel</th>
<th>CO2 emission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>96 g CO2 fossil/MJ</td>
</tr>
<tr>
<td>Crude oil</td>
<td>73 g CO2 fossil/MJ</td>
</tr>
<tr>
<td>Fuel oil</td>
<td>81 g CO2 fossil/MJ</td>
</tr>
<tr>
<td>LPG</td>
<td>66 g CO2 fossil/MJ</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>56 g CO2 fossil/MJ</td>
</tr>
<tr>
<td>Grid Electricity</td>
<td>380 g CO2 fossil/kWh</td>
</tr>
</tbody>
</table>

**Questions**

Q. Considering legal requirements (EU ETS), should emission requirement for CO2 be maintained under the EU Ecolabel criteria?

Q. Should the criterion be changed referring to the EU ETS benchmark?

Q. Should the EU Members States that rely on carbon intensive fuel (grid) be given more flexible approach?

Q. In case, the criterion is preferred to be kept in the current form, shall the reference value remain unchanged?

Q. Should the same criterion apply to all product groups?
Criterion 3. Fibre sourcing

Fibre sourcing -1

**Fibre sourcing**

- At least the 70% (w/w) of recovered fibres.
- The proportion of uncertified material shall not exceed 50%.
- The proportion of uncertified virgin fibre shall not exceed 50%.

**Key aspects:**

1. Lot of opposition for minimum recycled fibre content;
2. Push for higher sustainable % for virgin fibre fractions;
3. Push for a more uniform yet flexible approach;
4. Concerns raised about verification and “accounting” of fibres;
5. Pressure to directly embed SFM principles in criteria.

Recycled content has obvious environmental benefits but opposition to mandatory minimum recycled contents in EU Ecolabel have been raised because,

- Is it better to transport recovered paper 1000 km when SFM certified forests are located within 100 km of mill?
- High paper production in Nordic countries but low volume of locally recovered paper due to low population.
- Not all recovered paper grades suitable for CGP, NP and TP. Packaging is the dominant destination for recovered paper.
- Consumption of CGP and NP is decreasing in Europe.
- Improved recovery rates of paper in Europe means:
  - that fibre life cycles are increasing (3.5 vs 2.4)
  - fibre quality is decreasing...
- See current market situation.....

Fibre sourcing -2

Recycled content has obvious environmental benefits but opposition to mandatory minimum recycled contents in EU Ecolabel have been raised because,

- Is it better to transport recovered paper 1000 km when SFM certified forests are located within 100 km of mill?
- High paper production in Nordic countries but low volume of locally recovered paper due to low population.
- Not all recovered paper grades suitable for CGP, NP and TP. Packaging is the dominant destination for recovered paper.
- Consumption of CGP and NP is decreasing in Europe.
- Improved recovery rates of paper in Europe means:
  - that fibre life cycles are increasing (3.5 vs 2.4)
  - fibre quality is decreasing...
- See current market situation.....

Fibre sourcing -3

**Recycled paper - constraints**

It is estimated that the demand for recycled paper will exceed supply by 1.5 million tonnes (1.65 tons) of recycled pulp per year by 2018....

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsprint</td>
<td>25</td>
<td>8</td>
<td>7.189</td>
<td>59</td>
<td>7.045</td>
<td>14.2</td>
<td>7.895</td>
</tr>
<tr>
<td>Other Graphic</td>
<td>154</td>
<td>19</td>
<td>2.784</td>
<td>706</td>
<td>5.043</td>
<td>17.7</td>
<td>19.38</td>
</tr>
<tr>
<td>Tissue Paper</td>
<td>4.015</td>
<td>17.8</td>
<td>9.829</td>
<td>763</td>
<td>18.887</td>
<td>22.9</td>
<td>30.92</td>
</tr>
<tr>
<td>Total Graphic</td>
<td>1.265</td>
<td>53.0</td>
<td>1.587</td>
<td>405</td>
<td>2.275</td>
<td>16.2</td>
<td>20.68</td>
</tr>
<tr>
<td>Case Materials</td>
<td>1.969</td>
<td>7.942</td>
<td>1.381</td>
<td>473</td>
<td>3.433</td>
<td>14.5</td>
<td>9.141</td>
</tr>
<tr>
<td>Carton Boards</td>
<td>1.969</td>
<td>7.942</td>
<td>1.381</td>
<td>473</td>
<td>3.433</td>
<td>14.5</td>
<td>9.141</td>
</tr>
</tbody>
</table>

Recycled Paper Grades

- Share of Total 19.2% 46.7% 23.6% 10.5% 100.0%
- *Usage by sector: total use of recovered paper in a sector as % of the total recovered paper used by the industry
- **Utilisation rate: use of recovered paper in a sector as % of total paper production in that sector

Source: CEPI
Push for a higher % of virgin fibres that are SFM.
- Should take inspiration from recently voted EU Ecolabel product groups (i.e. Footwear and Furniture).
- A minimum 70% requirement for "sustainable fibres".
- Considered as SFM virgin fibres and/or recovered fibres.
- No distinction to be made between pre- and post-consumer fibres.
- Mirrors current FSC and PEFC requirements.
- Affords the flexibility to use SFM virgin material or recovered fibres as best suits local conditions.

Concerns about verification and fibre accounting.

Questions

Q. Market data shows a current average 95% recovered fibre content for Newsprint Paper, is this sufficient evidence to justify maintaining (or even increasing) the current criterion requiring a minimum recycled content of 70%?

Q. Market data shows much lower average % recovered fibre contents for CGP (12%) and TP (41%). Is this sufficient evidence to support a flexible approach where at least 70% of fibres should be from recovered paper or SFM certified virgin fibre or a combination thereof?

Q. Any opinions from practical experience about the level of information needed to clearly demonstrate the accounting for certified fibres in and out of a production facility?
Fibre sourcing -7

Push for directly stating SFM principles
- Lack of clarity over what is required as “or equivalent” to FSC and PEFC considering the only partial recognition that these schemes afford to each other.
- Directly stating SFM principles and criteria is not so difficult, but doing it in a way that is concise, tangible and verifiable outside of FSC and PEFC is not so easy.
- Minimum requirements for any principles to be included:
  - Respect the Forest Europe indicators
  - Respect current FSC and PEFC principles
  - Be as tangible, quantifiable & verifiable as possible.

Fibre sourcing -8

<table>
<thead>
<tr>
<th>Forest Europe</th>
<th>FSC</th>
<th>PEFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest area, growing stock, age structure, heat wave, forest carbon, increment and fellings, roundwood, non-wood goods, services</td>
<td>Compliance with laws, human rights and social affairs, biodiversity, environmental values and impacts, management planning, implementation and implementation of management activities, protective forests, benefits from the forest, environmental conservation and appropriate enhancement of protective functions in forest management, maintenance and encouragement of productive functions of forests, sustainability and productivity of forest ecosystems, compliance with legal requirements, forest holdings, contribution to GDP, Net revenue, investments, forest sector workforce, OHS, wood consumption, trade in wood, wood energy, recreation</td>
<td>Maintenance and sustainable enhancement of forest resources and their contribution to the global carbon cycle, indigenous peoples' rights, maintenance of forest ecosystem health and vitality, maintenance and encouragement of productive functions of forests, maintenance, conservation and enhancement of biodiversity in forest ecosystems, management planning and monitoring and assessment, high conservation values, protective forests, implementation of management activities, compliance with legal requirements</td>
</tr>
<tr>
<td>Air pollutant deposition and concentration, air quality, air pollution, forest damage, forest land degradation, biodiversity, genetic resources, forest fragmentation, threatened forest species, protected forests, common forest bird species, diversity of tree species, regeneration, naturalness, introduced tree species, deadwood, genetic resources, forest fragmentation, threatened forest species, protected forests, ecological forest functions, biodiversity, maintenance of forest ecosystem health and vitality, implementation of management activities, compliance with legal requirements, forest holdings, contribution to GDP, Net revenue, investments, forest sector workforce, OHS, wood consumption, trade in wood, wood energy, recreation</td>
<td>Community relations, benefit to the forest economy, environmental values and impacts, management planning, implementation and appropriate enhancement of protective functions in forest management, maintenance and encouragement of productive functions of forests, sustainability and productivity of forest ecosystems, compliance with legal requirements, forest holdings, contribution to GDP, Net revenue, investments, forest sector workforce, OHS, wood consumption, trade in wood, wood energy, recreation</td>
<td>Maintenance of forest ecosystem health and vitality, maintenance and encouragement of productive functions of forests, maintenance, conservation and enhancement of biodiversity in forest ecosystems, management planning and monitoring and assessment, high conservation values, protective forests, implementation of management activities, compliance with legal requirements</td>
</tr>
<tr>
<td>Workers' rights and employment conditions, air pollutant deposition and concentration, air quality, air pollution, forest damage, forest land degradation, biodiversity, genetic resources, forest fragmentation, threatened forest species, protected forests, common forest bird species, diversity of tree species, regeneration, naturalness, introduced tree species, deadwood, genetic resources, forest fragmentation, threatened forest species, protected forests, ecological forest functions, biodiversity, maintenance of forest ecosystem health and vitality, implementation of management activities, compliance with legal requirements, forest holdings, contribution to GDP, Net revenue, investments, forest sector workforce, OHS, wood consumption, trade in wood, wood energy, recreation</td>
<td>Air pollutant deposition and concentration, air quality, air pollution, forest damage, forest land degradation, biodiversity, genetic resources, forest fragmentation, threatened forest species, protected forests, common forest bird species, diversity of tree species, regeneration, naturalness, introduced tree species, deadwood, genetic resources, forest fragmentation, threatened forest species, protected forests, ecological forest functions, biodiversity, maintenance of forest ecosystem health and vitality, implementation of management activities, compliance with legal requirements, forest holdings, contribution to GDP, Net revenue, investments, forest sector workforce, OHS, wood consumption, trade in wood, wood energy, recreation</td>
<td>Community relations, benefit to the forest economy, environmental values and impacts, management planning, implementation and appropriate enhancement of protective functions in forest management, maintenance and encouragement of productive functions of forests, sustainability and productivity of forest ecosystems, compliance with legal requirements, forest holdings, contribution to GDP, Net revenue, investments, forest sector workforce, OHS, wood consumption, trade in wood, wood energy, recreation</td>
</tr>
</tbody>
</table>

Questions

Q. What are the most important SFM criteria, how credible are they and how easily can they be verified?

Q. What are the pros and cons of using existing SFM certification schemes as proof of compliance with SFM criteria established under the EU Ecolabel?

Q. Besides SFM certificates, what other forms of assessment and verification could be considered as proof of compliance that fibres are sustainably sourced?

Use phase

<table>
<thead>
<tr>
<th>Use phase</th>
<th>Newsprints 2012/448/EU</th>
<th>Copying and Graphic papers 2011/332/EU</th>
<th>Issue paper 2012/448/EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitness for use</td>
<td>The product shall be suitable for its purpose/use</td>
<td>Fitness for use</td>
<td>Fitness for use</td>
</tr>
<tr>
<td>Consumer information</td>
<td>Appearing on Box 2 of the ecolabel product</td>
<td>Consumer information</td>
<td>Consumer information</td>
</tr>
</tbody>
</table>

Key aspects:
- To investigate the relevance of fitness for use, its formulation and verifiability.
Fitness for use (C&G)

Criterion 6. The product shall be suitable for its purpose.

Assessment and verification: the applicant shall provide appropriate documentation demonstrating compliance with the scope of the criteria. The test methods shall comply with one of the following standards:
— copying papers: EN 12281 — ‘Printing and business paper — Requirements for copy paper for dry toner imaging processes’

The product shall fulfil requirements for permanence in accordance to applicable standards. The user manual will provide the list of norms and standards which shall be used for the permanence assessment.

As alternative to the use of the above methods, the producers shall guarantee the fitness for use of their products providing appropriate documentation demonstrating the paper quality, in accordance with the standard EN ISO/IEC 17050-1:2004, which provides general criteria for suppliers’ declaration of conformity with normative documents.

Fitness for use (NS)

Criterion 6 — Fitness for use

The product shall be suitable for its purpose.

Assessment and verification: the applicant shall provide appropriate documentation demonstrating compliance with the scope of the criteria. The product shall fulfil the requirements for permanence in accordance with applicable standards. The user manual will provide the list of norms and standards which shall be used for the permanence assessment.

As alternative to the use of the above methods, the producers shall guarantee the fitness for use of their products providing appropriate documentation demonstrating the paper quality, in accordance with the standard EN ISO/IEC 17050-1:2004, which provides general criteria for suppliers’ declaration of conformity with normative documents.

Fitness for use (TS)

Criterion 7. Fitness for use

The product shall be fit for use

Proposal:
(Already included in existing criteria but under a different criterion: Product Safety)
All tissue products shall fulfil the following requirements:
— slimicides and antimicrobial substances: No growth retardance of micro-organisms according to test method EN 1104
— dyes and optical brighteners: No bleeding according to test method EN 646/648 (level 4 is required).

Assessment and verification: The applicant shall provide a declaration of compliance with these requirements, supported by relevant test reports in accordance with standards EN 1104 and EN 646/648.

Consumer information (C&G)

Criterion 7 — Information on the packaging

The following information shall appear on the product packaging:
— Please collect used paper for recycling.
In addition, if recycled fibres are used, the manufacturer shall provide a statement indicating the minimum percentage of recycled fibres next to the EU Ecolabel logo.

Assessment and verification: the applicant shall provide a sample of the product packaging showing the information required.

Criterion 8 — Information appearing on the EU Ecolabel

The optional label with text box shall contain the following text:
— ‘low air and water pollution,
— use of certified fibres AND/OR use of recycled fibres (case-by-case),
— hazardous substances restricted’.

The guidelines for the use of the optional label with the text box can be found in the Guidelines for use of the EU Ecolabel logo on the website:

Assessment and verification: the applicant shall provide a sample of the product packaging showing the label, together with a declaration of compliance with this criterion.
Criterion 7 — Information appearing on the EU Ecolabel

The optional label with text box shall contain the following text:

— low air and water pollution
— use of certified fibres AND/OR use of recovered fibres [case-by-case]
— hazardous substances restricted

The guidelines for the use of the optional label with the text box can be found in the "Guidelines for the use of the EU Ecolabel logo" on the website: http://ec.europa.eu/environment/ecolabel/promo/pdf/logo%20guidelines.pdf

Assessment and verification: the applicant shall provide a sample of the product packaging showing the label, together with a declaration of compliance with this criterion. EN 28.7.2012 Official Journal of the European Union L 202/37

Criterion 8. (TS)

Box 2 of the Eco-label shall include the following text:

— uses sustainable fibre,
— low water and air pollution,
— low greenhouse gas emissions and electricity use.

In addition, next to the Eco-label, the manufacturer shall either provide a statement indicating the minimum percentage of recycled fibres, and/or a statement indicating the percentage of certified fibres.

Q: Should we change the information on the packaging?

Proposal:

Information on the packaging

The following information shall appear on the product packaging:

Please minimise use of this paper where possible (e.g. through avoidance and double sided printing), reusing used paper where possible (e.g. as note paper), and finally presenting it for recycling. Remember that minimising contamination (e.g. adhesives, labels, tape, laminates etc.) helps to maximise the environmental benefits of recycling.

Assessment and verification: the applicant shall provide a sample of the product packaging bearing the information required.

The consumers is encouraged to follow the waste hierarchy and to maximise the benefits of paper recycling.

Question: Do the revisions/additions seem reasonable?

Three new proposals:

i. Water consumption control
ii. EDTA / DTPA restrictions
iii. Optical Brightening Agents (OBAs)

Following slides will:

• Present proposed criteria (where relevant)
• Present supporting rational
• Present questions to encourage discussion
Water consumption

Why is water consumption important?
- It is the biggest normalised LCA impact

Importance varies with:
- Regional context
- Temporal context
- Long term climate change...

Another potential indicator is WEI:
- WEI = Water Exploitation Index

Defined as the % of water in a country that is abstracted for use on an annual basis. Still not fully established at catchment level.
### Water consumption - 5

**Pros and cons of reducing water consumption**

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced abstraction costs</td>
<td>Corrosion risk in ECF plants</td>
</tr>
<tr>
<td>Less stress on local water catchment</td>
<td>Need to monitor and manage NPEs</td>
</tr>
<tr>
<td>Public perception</td>
<td>Investment costs</td>
</tr>
<tr>
<td>Improved possibilities for fibre recovery</td>
<td>May be more difficult with certain processes</td>
</tr>
<tr>
<td>Reduced effluent quantity</td>
<td>Poorer effluent quality</td>
</tr>
</tbody>
</table>

### Water consumption - 6

**Examples of simple improvements:**

<table>
<thead>
<tr>
<th>Sector</th>
<th>BAT-associated waste water flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleached kraft pulp</td>
<td>25 – 50 m3/ADt</td>
</tr>
<tr>
<td>Bleached sulphite paper grade pulp</td>
<td>25 – 50 m3/ADt</td>
</tr>
<tr>
<td>Magnesite pulp</td>
<td>45 – 70 m3/ADt</td>
</tr>
<tr>
<td>Dissolving pulp</td>
<td>40 – 60 m3/ADt</td>
</tr>
<tr>
<td>NFC pulp</td>
<td>11 – 20 m3/ADt</td>
</tr>
<tr>
<td>Mechanical</td>
<td>9 – 16 m3/ADt</td>
</tr>
<tr>
<td>CTMP and CHP</td>
<td>9 – 16 m3/ADt</td>
</tr>
<tr>
<td>Recycled paper mills without deinking</td>
<td>1.5 – 10 m3/t (the higher end of the range is associated with mainly folding board production)</td>
</tr>
<tr>
<td>Recycled paper mills with deinking</td>
<td>8 – 15 m3/t</td>
</tr>
<tr>
<td>RCF-based tissue paper mills with deinking</td>
<td>10 – 25 m3/t</td>
</tr>
<tr>
<td>Non-integrated paper mills</td>
<td>3.5 – 20 m3/t</td>
</tr>
</tbody>
</table>

### Water consumption - 7

**Best practice for kraft pulp (evidence from BREF):**

![Graph showing water consumption for various pulp types](chart.png)

**Rationale:**

- Propose to require monitoring and good management practice.
- Fits well with EMAS and ISO 14001 approach.
- May be useful for future BREF exercises.
- Only require applicants to optimise what they can control (i.e. not cover market pulp from third parties).
- Is an important issue, even more so in some regions.
- Paper industry already has front-runners in EU.
- Quick wins possible and encouraged.
- Major improvement possible but not required.
Water consumption Questions
Q. Is it more appropriate to target the minimisation of water consumption or the minimisation of wastewater discharge volume? Please explain why either way?
Q. Do you think a benchmark could or should be set for water consumption (or wastewater effluent discharge)?
Q. Would market pulp suppliers be willing or able to provide specific water consumption data from their pulp?
Q. Should a tiered approach be taken, which would introduce actual limits for mills located in geographical regions of higher water scarcity/water stress? If so, what system should be used to define levels of water scarcity/water stress?

EDTA / DTPA - 1
• An important chelating agent (esp. in TCF) → very relevant to Nordic countries
• Widely used in other applications (detergents, cosmetics etc. Paper is ca. 12% of EU market)
• EDTA has poor biodegradability
• Can pass to environment in WWTP effluents
• Possible further consequences (i.e. mobilisation of heavy metals in waters)
• Can reduce EDTA emissions by having suitable WWTP in place (i.e. alkaline activated sludge)

EDTA / DTPA - 2
Nordic approach:
• Basic module requirement (version 2.2)
• Report on quantities of EDTA used
• If > 1.0kg/t 90% dry pulp then,
  • Submit an EDTA use reduction plan
  • Consider alternatives
Blue Angel approach:
• EDTA and DTPA are explicitly banned.

EDTA / DTPA - 3
Discussion points:
Q: Should chelating/complexing agents be restricted like surfactants on the basis of their biodegradability?
Q: What chemicals are used by Nordic Swan and Blue Angel licence holders as alternatives to EDTA/DTPA?
Q: If so, are there any issues with these alternatives such as poorer performance, higher quantities needed, cost, and market availability?
Q: Is there any existing information concerning the overall environmental profile of these alternative chemicals?
Q: If EDTA / DTPA were to be permitted, what conditions should be applied? For example, certain wastewater treatment processes, effluent testing (using which method)?
OBA - 1

- To improve brightness
- Can result in savings on bleaching chemicals
- Can be more cost-effective than extra bleaching for a given brightness
- Some may possess hazards that could be restricted under 4a) if they do not change properties during processing and are >0.1% of paper weight.

Blue Angel: Bans OBAs outright except for certain grades where a list of certain OBAs are approved for use.
Green Seal: Added OBAs should not exceed 0.02% w/w.

OBA - 2

Discussion points
Q. Should some OBAs be restricted under the EU Ecolabel where they carry certain risk phrases (e.g. around PBT and vPvB)?
   Or should they simply be addressed like most other chemicals under criterion 4a)?
Q. If to have a specific restriction, should restrictions be conditional depending on the grade of paper product?

Timing next steps
1. Stakeholders can provide comments on separate draft criteria proposals for EU Ecolabel before 1st July;
2. Comments need to be transmitted in BATIS;
3. Derogation request (1st August) – possible extension;
4. Sub-groups call for interest - July 2016;

Thank you for your attention

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