



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL JRC  
JOINT RESEARCH CENTRE  
Institute for Prospective Technological Studies (Seville)  
**Sustainable Production and Consumption**

# 1<sup>st</sup> Meeting of the AHWG for the Development of the Commission Decision revising the Ecological Criteria for the Award of the Community Ecolabel for TEXTILES

Wednesday 22<sup>nd</sup> February 2012 (9:30 – 18:00)

Institute for Prospective Technological Studies (IPTS), Edificio Expo  
Room A30 (1<sup>st</sup> Floor)

Calle Inca Garcilaso, 3 - 41092 Seville, SPAIN

## Draft Agenda

<b>Arrival and coffee</b>		09:00 – 09:30
1.	<b>Opening and welcome</b> Introduction to the political objectives of the EU Ecolabel and of Green Public Procurement	
2.	<b>Introduction and background</b> <ul style="list-style-type: none"><li>• Overview of the textile industry</li><li>• Scope, aim and structure of the Ecolabel</li><li>• Terms of reference for the revision</li><li>• Status of the Ecolabel</li></ul>	
3.	<b>Preliminary findings – presentation and discussion</b> <ul style="list-style-type: none"><li>• Structure of the EU market</li><li>• Product areas and eco-innovation</li><li>• Labelling schemes and initiatives</li><li>• LCA studies used as evidence</li><li>• Key issues highlighted for the revision</li></ul>	
<b>Coffee break</b>		11:00 – 11:15
4.	<b>Textile fibre criteria area – presentation and discussion</b> <ul style="list-style-type: none"><li>• Natural fibres – Cotton, wool and flax</li><li>• Synthetic fibres – Process energy use and recycled content</li><li>• Regenerated fibres – Cellulose fibre feedstock and processing</li></ul>	
<b>Lunch break</b>		13:15 – 14:30
5.	<b>Processes and chemical criteria area – presentation and discussion</b> <ul style="list-style-type: none"><li>• New criteria - hazardous substances</li><li>• Biocides</li><li>• Bleaching</li><li>• Dyes (combined criteria)</li></ul>	

	<ul style="list-style-type: none"> <li>• Finishing and printing</li> <li>• Wastewater treatment</li> <li>• Flame retardants</li> <li>• Formaldehyde</li> <li>• Criteria for checking/reviewing (post-AHWG)</li> </ul>	
<b>Coffee break</b>		<b>16:00 – 16:15</b>
<b>6.</b>	<b>Fitness for use criteria area – presentation and discussion</b> <ul style="list-style-type: none"> <li>• Dimensions changes</li> <li>• Colour fastness</li> </ul>	
<b>7.</b>	<b>Proposals for new criteria – presentation and discussion</b> <ul style="list-style-type: none"> <li>• CSR criteria – social and environmental</li> <li>• Design for durability</li> <li>• Design for recycling</li> <li>• Energy saving advice</li> <li>• Air freight</li> </ul>	
<b>9.</b>	<b>Revision of the criteria for textiles</b> Concluding discussion, summary of the key points raised and next steps	
<b>Close of meeting</b>		<b>18:00</b>



# Revision of European Ecolabel Criteria for Textile products

## Session 1: Introduction and background

1st Ad-hoc Working Group Meeting  
22<sup>nd</sup> February 2012, Seville

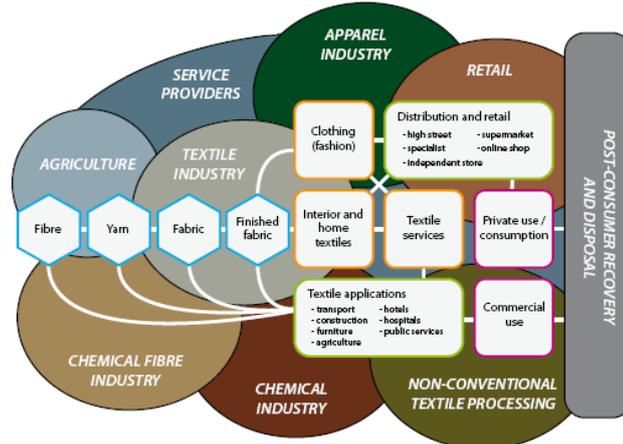
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## Content

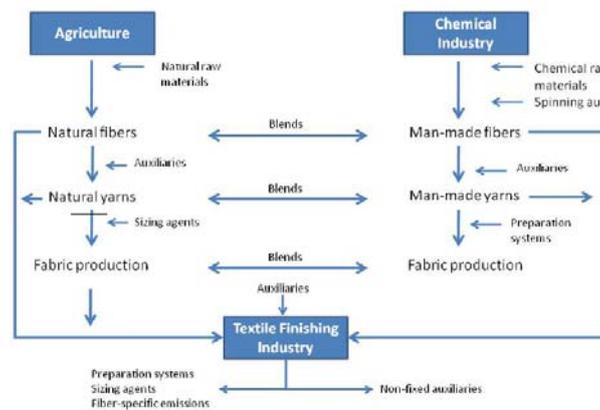
1. Understanding the textile industry
2. Scope, aim and structure of the current Ecolabel
3. Technical terms of reference
4. Current status of the Ecolabel
5. Questionnaire feedback on scope

## Textile industry system

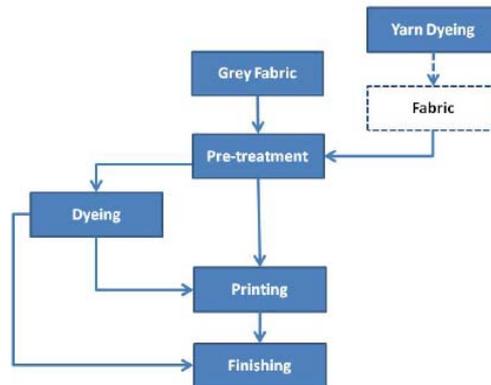


Source: Euratex – A vision for 2020, Dec. 2004

## Feedstocks, fibre, yarn and fabric



## Dyeing, printing and finishing



## Current scope, aim and structure (1)

Decision 567/2009 "Establishing the ecological criteria for the award of the Community Ecolabel for textile products"

- Textile clothing and accessories  
*clothing and accessories (such as handkerchiefs, scarves, bags, shopping bags, rucksacks, belts etc.) consisting of at least 90 % by weight of textile fibres;*
- Interior textiles  
*textile products for interior use consisting of at least 90 % by weight of textile fibres. Mats and rugs are included. Wall to wall floor coverings and wall coverings are excluded;*
- Fibres, yarn and fabric  
*intended for use in textile clothing and accessories or interior textiles.*



## Current scope, aim and structure (2)

Regulation No 66/2011 on the EU Ecolabel

- The EU Ecolabel is a voluntary market instrument
- Product criteria should be designed to reflect and to recognise the best performing products in the market.
- The focus shall be on the most significant environmental impacts and the proposed criteria shall be science based and based on a whole life cycle approach.



## Current scope, aim and structure (3)

*'[the promotion of] the reduction of water pollution related to the key processes throughout the textile manufacturing chain, including fibre production, spinning, weaving, knitting, bleaching, dyeing and finishing.'*

- Textile fibre criteria (9 criteria)
- Processes and chemicals criteria (24 criteria)
- Fitness for use criteria (7 criteria)



## Technical terms of reference (1)

Article 6 'General requirements for EU Ecolabel criteria'

- (a) the most significant environmental impacts, in particular the impact on climate change, the impact on nature and biodiversity, energy and resource consumption, generation of waste, emissions to all environmental media, pollution through physical effects and use and release of hazardous substances;*
- (b) the substitution of hazardous substances by safer substances, as such or via the use of alternative materials or designs, wherever it is technically feasible;*
- (c) the potential to reduce environmental impacts due to **durability and reusability of products**;*



## Technical terms of reference (2)

Article 6 'General requirements for EU Ecolabel criteria'

- (d) the **net environmental balance between the environmental benefits and burdens**, including health and safety aspects, at the various life stages of the products;*
- (e) where appropriate, **social and ethical aspects**, e.g. by making reference to related international conventions and agreements such as relevant ILO standards and codes of conduct;*
- (f) **criteria established for other environmental labels**, particularly officially recognised, nationally or regionally, EN ISO 14024 type I environmental labels, where they exist for that product group so as to enhance synergies;*

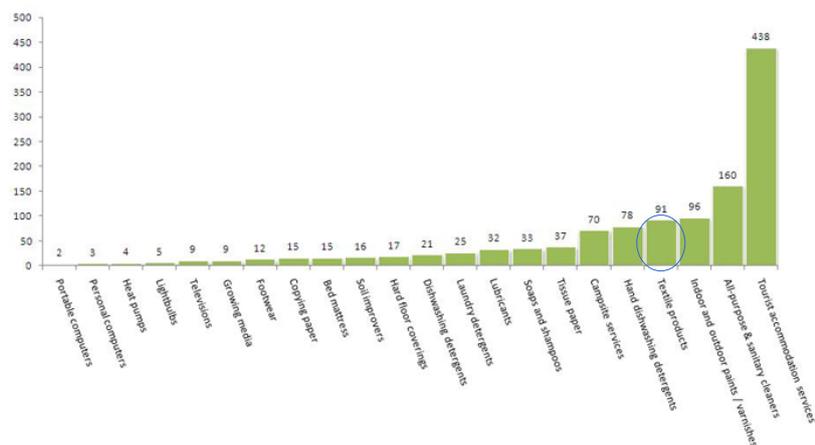


## Technical terms of reference (3) Commission Statements 2009

1. The use and environmental impact of all fluorinated substances
2. Use and impact of nanotechnologies
3. New textiles (e.g. textiles with electric or electronic equipment)
4. Look at restricting the use of flame retardants, phthalates, biocides, PFAS
5. Tighter link to the best value of emissions in the BAT/BREF documents
6. Energy requirements
7. Problems in the waste phase of the product



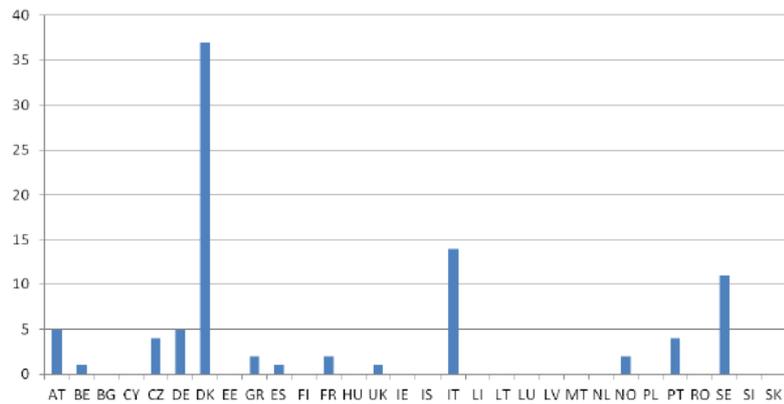
## EU Textile product Ecolabel Current market status – licenses by product (1)





## EU Textile product Ecolabel

Current market status – licenses by member state (2)



## Current scope, aim and structure

Decision 567/2009 "Establishing the ecological criteria for the award of the Community Ecolabel for textile products"

- Textile clothing and accessories  
*clothing and accessories (such as handkerchiefs, scarves, bags, shopping bags, rucksacks, belts etc.) consisting of at least 90 % by weight of textile fibres;*
- Interior textiles  
*textile products for interior use consisting of at least 90 % by weight of textile fibres. Mats and rugs are included. Wall to wall floor coverings and wall coverings are excluded;*
- Fibres, yarn and fabric  
*intended for use in textile clothing and accessories or interior textiles.*



## Questionnaire feedback on scope

15 responses were received: *5 from Competent Bodies, 7 from industry and 3 from other stakeholders (NGO's)*

- Consider whether to include single use products, intermediate product and textiles for outdoor use
- Define end product and intermediate products (which are not included in the scope)
- Define filling materials more clearly (and also take the 90 % calculation into account – what is not included in the calculation)
- Define “smart textiles” and textiles containing electronics and how they shall be included
- Evaluate whether aramid (aromatic polyamide) should be included e.g. kevlar



## Proposal Clarification of scope

The following are **not** covered by the criteria:

- Furniture upholstery
- Wall and floor coverings
- Fabrics and that form part of structures intended for use outdoors
- Single use products

Fillings made of fibre covered by the ecolabel should fulfill the relevant fibre criteria



## Consultation questions

1. Do the clarifications to the scope appear appropriate?  
- *Are any further clarifications needed?*
2. Should all parts of the product supply chain be addressed for the EU Ecolabel?
3. Should smart textiles, e- textiles and/or other specialist textiles (e.g. aramid) be included in this product group?



# Revision of European Ecolabel Criteria for Textile products

## Session 2: Preliminary findings

1st Ad-hoc Working Group Meeting  
22<sup>nd</sup> February 2012, Seville

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## Market analysis

1. Structure of the market
2. Three main product areas
3. EU and national labelling schemes
4. Private labelling and industry initiatives
5. Questionnaire feedback on labelling

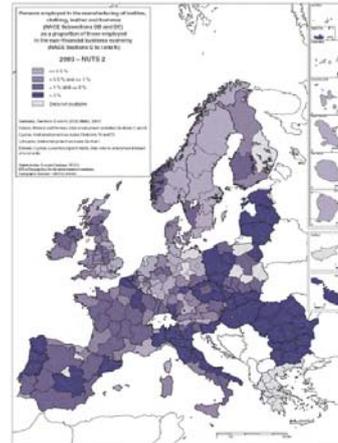


## Structure of the market (1) Production and consumption (2010)

Product types	Production in EU27 - Value (2010)			Apparent consumption in EU27 – Value (2010)		
	1000 mil. Euro	%	Growth rate/year	1000 mil. Euro	%	Growth rate/year
Textile clothing and accessories	39.4	53%	-10%	87.5	71%	-2%
Interior textiles	5.8	8%	-2%	9.9	8%	0%
Fibres, yarn and fabric	29.8	40%	-8%	26.3	21%	-6%
<b>Total</b>	<b>75.0</b>	<b>100%</b>	<b>-8%</b>	<b>123.8</b>	<b>100%</b>	<b>-3%</b>

## Structure of the market (2)

### Import and export markets



## EU textile industry

A sector focussing on innovation and value added

- The European textile and clothing sector is focusing increasingly on research and development, finishing and innovation
- Some finishing operations remain within the EU, while the processing of raw materials, production of yarns and fabrics and transformation into garments are usually outsourced.

### Cotton and natural fibres

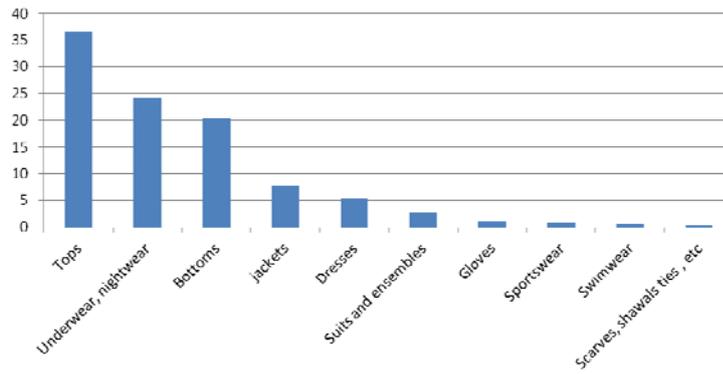
- The EU produces a very limited amount of cotton and the majority therefore has to be imported either as yarn or semi-manufactured/finished products.

### Synthetic fibres

- The EU27 is a significant producer of polyester, polypropylene, acrylic as well as cellulosic fibres.
- 110 plants spread over the whole of EU 27 (except Cyprus) and occupies 25,000 employees.



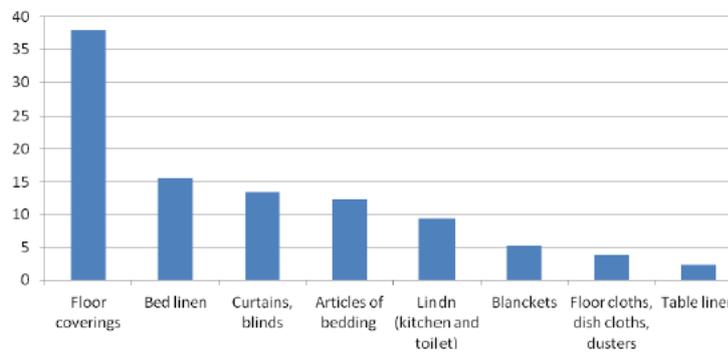
## Three main product market segments **Clothing and accessories**



Consumption share for clothing textile products [%], [IMPRO, 2009]

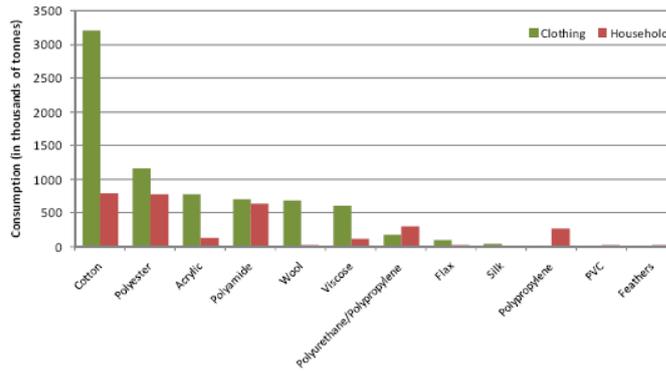


## Three main product market segments **Interior products**



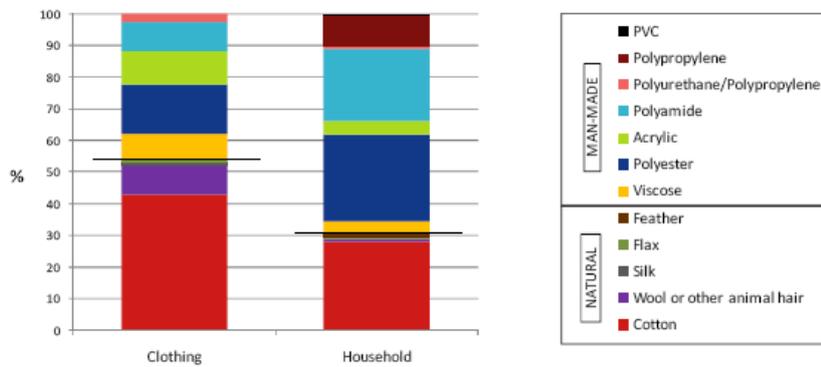
Consumption share for interior textile products [%], [IMPRO, 2009]

## Three main product market segments Fibres, yarns and fabrics (1)



Consumption share for clothing textile products [%], [IMPRO, 2009]

## Three main product market segments Fibres, yarns and fabrics (2)



Consumption share for textile fibres [%], [IMPRO, 2009]

## How the clothing market has evolved



1980's

>

1990's

>

2000's

>

2010 -



- Specialist mail order
- Pioneer niche retailers

- Pioneer mainstream retailers
  - Germany
  - Switzerland
- Pioneer manufacturers and brands
  - Patagonia, Tejin, Wellman

- Mainstream retailers (selected lines)
  - H&M, M&S, C&A, Carrifour, Ikea
- Specialist manufacturers
  - TDV
- Non-EU fibre manufacturers

## Industry eco-innovation trends (1)

### By market segment...

- Development of specific product lines based on target market segments – for example, environmentally aware fashion, baby clothing, outdoor fleeces and jackets, PPE

### Industry monitoring and auditing

- Auditing and verification against a combination of consumer labeling such as Oeko-tex and industry facing auditing standards such as Bluesign and Eco-Index.
- Auditing and close cooperation with sub suppliers in order to fulfill ethical and environmental CSR criteria





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	EU Ecolabel	Nordic Ecolabel	Blaise Engel	Okotex 100	Okotex 1000	GOTS		Better Cotton Initiative	Global Recycling Standard	Bluesign	Eco-Index	Made-By	Business Social Compliance Initiative
							Certification?	3 <sup>rd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Fibres	✓	✓	✓			✓	Fibres	✓	✓			✓	
Sustainable resource use	Cotton, recycled content	Natural fibres, recycled content				Cotton	Sustainable resource use	✓	✓		✓	✓	
Production	✓	✓	✓		✓	✓	Production			✓	✓		✓
Energy consumption	✓*	✓*			✓*		Energy consumption				✓	✓	
Air and water pollution	✓	✓	✓		✓	✓	Air and water pollution		✓		✓		
Substance restrictions	✓	✓	✓	✓	✓	✓	Substance restrictions		✓	✓	✓		
Social and ethical criteria		✓	✓		✓	✓	Social and ethical criteria	✓	✓				✓
Consumer health	✓	✓		✓			Consumer health						
Fitness for use	✓	✓	✓	✓		✓	Fitness for use						
End of life							End of life				✓	✓	



European Commission

## Questions?

1. Does our analysis reflect the current market?
2. Are there any other trends or areas of innovation we have missed?
3. Would this have any implications for the scope and definition of the product group?



## Technical analysis

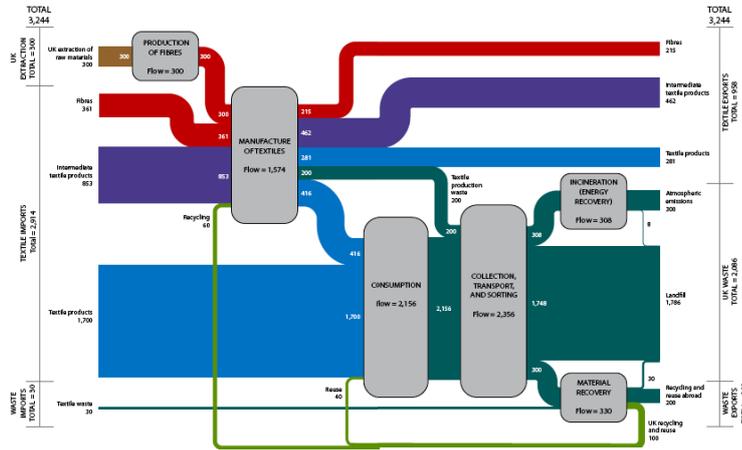
1. Legislative framework
2. LCA evidence base
3. IMPRO Textiles LCA study findings
4. EDIPTEX LCA study findings
5. Key environmental issues highlighted by LCA
6. Further issues identified for consideration
7. Questionnaire feedback on issues and coverage
8. Proposed approach to the revision



## Legislative framework

- Resource efficiency
  - *Waste Framework Directive 2008/98/EC*
- Product labeling and harmonisation
  - *Textile names 2008/121/EC , Fibre composition 96/73/EC*
- Air and water quality
  - *Water Framework Directive, Rotterdam Convention*
- Industrial regulation and chemical management
  - *REACH, IPPC (IED), VOC emissions Directive, Biocide Directive*

## Textile resource flows



Source: Allwood, J.M. et al (2006) University of Cambridge

## Life Cycle Assessment (LCA) evidence base

- The Environmental Improvement Potentials of Textiles (IMPRO Textiles), Author: JRC European Commission, BIO Consulting
- The Danish EDIPTX, Environmental assessment of textiles study, Author: Danish EPA
- Supplementary LCA evidence:
  - Sectoral overview: JRC, University of Cambridge
  - Fibre comparisons: Plastics Europe, Utrecht University
  - Blends: Tampere University
  - Use phase: Chalmers University
  - Closed loop recycling: Utrecht University
  - Industry: Patagonia, M&S, Natureworks, Levi



## IMPRO textile LCA study findings

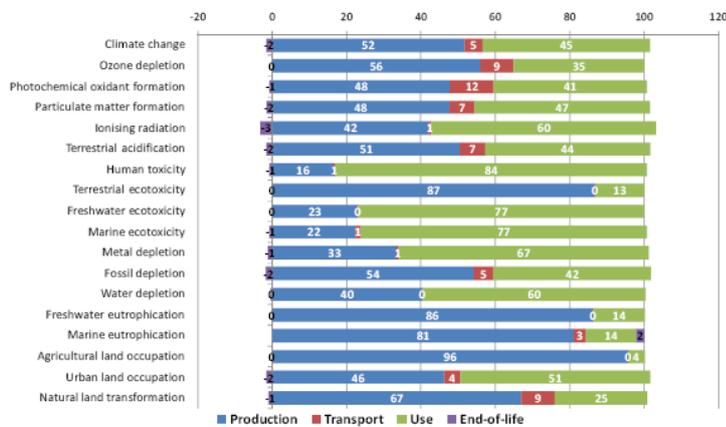
### Methodology and data sources

- Based on the actual consumption of textiles in EU in 2008.
- LCA model took into account the re-use of textiles
- The inventory data for material and energy inputs, process losses and emissions were derived from previously published LCA studies and widely used databases e.g.
  - *WISARD 4.2*
  - *PlasticsEurope*
  - *Research institutes and universities*
- ReCiPe was chosen as the LCIA methodology
  - *18 midpoint indicators and 3 endpoint indicators were included in the textile LCA model.*



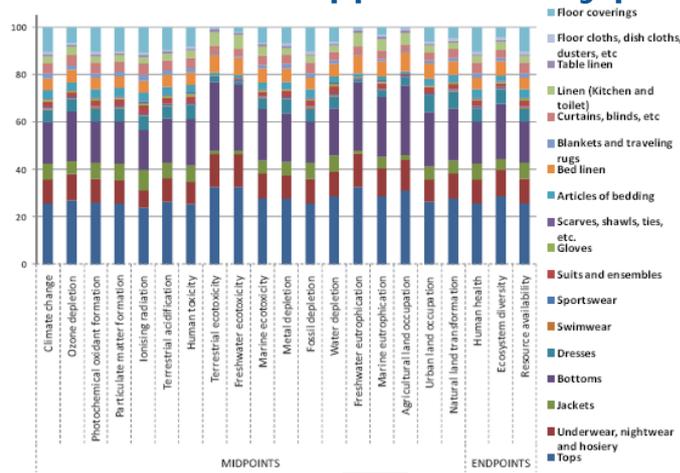
## IMPRO textile LCA study findings

### LCA results by midpoint indicator

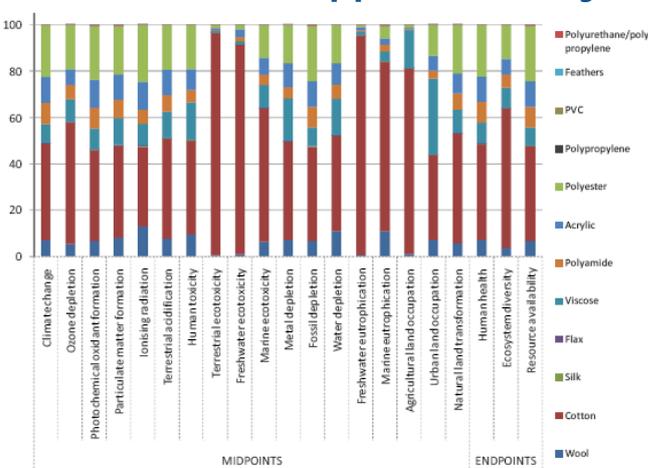




## IMPRO textile LCA study findings LCA all indicators apportioned by product

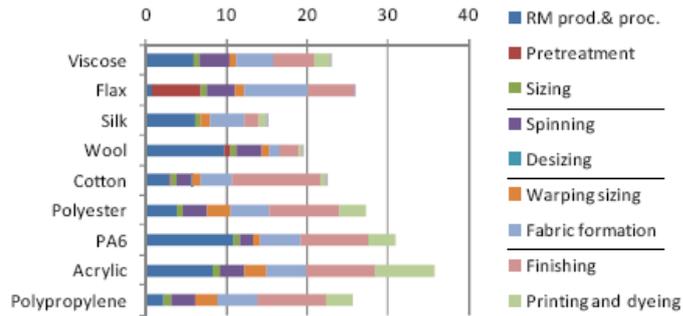


## IMPRO textile LCA study findings LCA all indicators apportioned by fibre





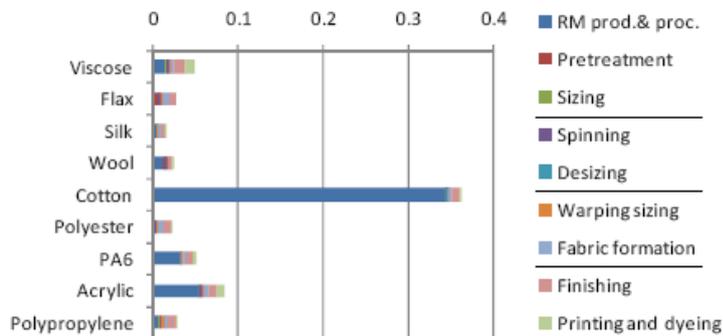
## IMPRO textile LCA study findings Selected midpoints by fibre



Impacts on climate change of textile production according to fibre type and production phases in kg CO<sub>2</sub> eq/kg fabric [IMPRO, 2009]



## IMPRO textile LCA study findings Selected midpoints by fibre



Impacts of textile production, broken down by fibre type and production phases, freshwater ecotoxicity, in kg 1,4-DB eq/kg fabric, [IMPRO, 2009]



## EDIPTEX LCA study findings

### Whole lifecycle of products

Modelled the environmental impacts of the whole lifecycle of products which may typically comprise blends of fibres, fixtures and fastenings, surface treatments and finishings.

- A T-shirt made by 100% of cotton
- A jogging suit made of nylon micro fibres with cotton lining
- A work jacket made of polyester (65%) and cotton (35%)
- A blouse of viscose, nylon and elastane



## EDIPTEX LCA study findings

### Methodology and data sources

- EDIP life cycle impact assessment method which considers nine impact categories (midpoint indicators)
- Data almost 500 textile unit processes (e.g. dyeing of polyester) were modelled
- Process data and equivalency factors are integrated in the GaBi LCA software

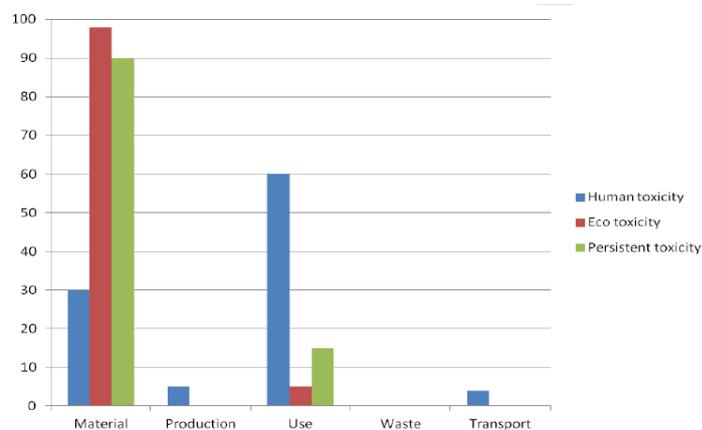


## EDIPTEX LCA study findings Cotton t-shirt LCA parameters

- Multicoloured patterns or prints on the product
- For the cotton cultivation, conventional farming and harvesting was considered, including use of pesticides and defoliating agents.
  - *Water consumption was not assessed, but it was noted that cotton irrigation may have a significant impact on water resources.*
- Hydrogen peroxide was used in the bleaching process
- Reactive dyes are assumed to be used in the dyeing process which avoid the emission of heavy metals and arylamine.
- Regarding finishing, a low impact softener was considered.
- The life time of the T-shirt was set to 50 washes and drying is assumed to be carried out in a tumble dryer.

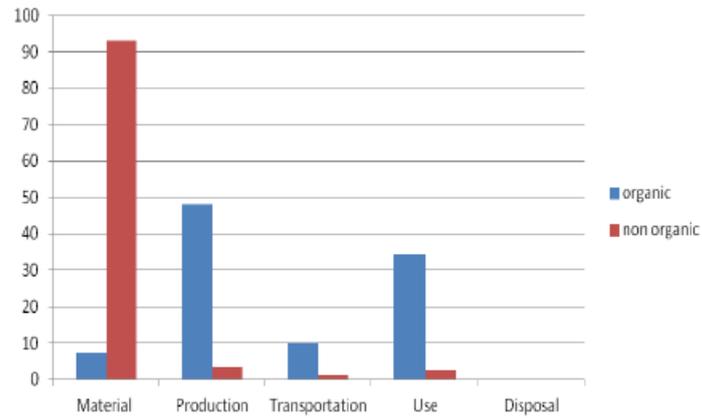


## EDIPTEX LCA study findings Cotton t-shirt toxicology profile

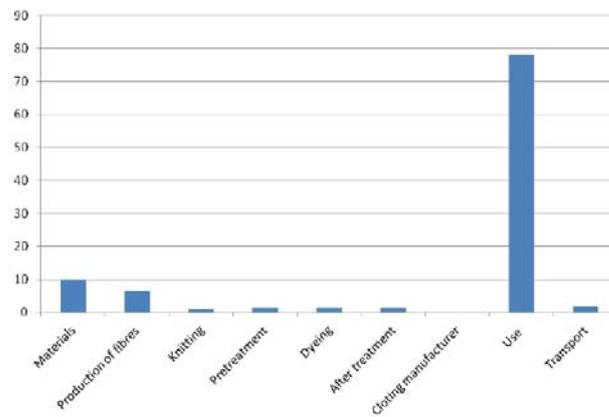




## EDIPTEX LCA study findings Cotton LCA toxicology profile comparison



## EDIPTEX LCA study findings Cotton t-shirt primary energy requirement



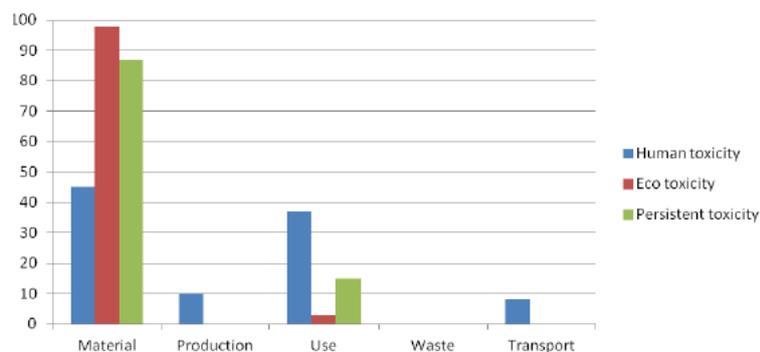


## EDIPTEX LCA study findings Jogging suit LCA parameters

- The cotton was assumed to be conventional cotton farmed and harvested using pesticides and defoliating agents,
  - *Water consumption was not assessed, but it was noted that cotton irrigation may have a significant impact on water resources.*
- The nylon was assumed to have been manufactured from virgin feedstock
- Bleaching was assumed using hydrogen peroxide. The cotton is not dyed while dyeing of the nylon was assumed to have been carried out using acid dyes with no emission of heavy metals and arylamines.
- Regarding finishing, the nylon is treated to be wind-proof as well as water- and dirt-repellent.
- The whole suit is softened.
- 24 washes during the useful life of the suit are assumed. Drying is carried out in a tumble dryer.

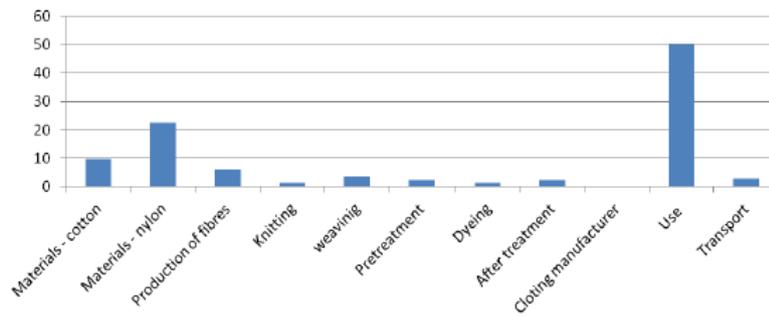


## EDIPTEX LCA study findings Jogging suit toxicology profile





## EDIPTEX LCA study findings Jogging suit primary energy requirement



## Priority areas based on overall LCA findings

Issue	Description	Potential benefit
Cotton	The ecotoxicity associated with the use of agrochemicals and the resource impact of water use for irrigation	High
Synthetic fibres (acrylic, nylon, polyamide, polypropylene)	The climate change and ecotoxicity impact of energy use to manufacture fibres	High to Medium
Wool scouring	The climate change and ecotoxicity impact of associated with scouring and processing	High to Medium
Raw material and feedstocks	Required to manufacture cellulose, synthetic fibres, soaping agents and softeners	High to Medium
Sustainable systems of resource use	Closed loop recycling and greater durability.	High to Medium
Cellulose fibres (viscose):	The climate change and ecotoxicity impacts associated with the manufacturing of fibres	Medium
Energy and ecotoxicity	Associated with the use phase of textile products	Medium to low
Process energy and ecotoxicity	Fabric formation, finishing, printing and dyeing stages of production	Medium to low
Fuel use and climate change impacts	Modal split of air freight and shipping to distribute products.	Medium to Low



## Further issues identified for consideration

### Specific substances and treatments

- **Hazardous substances:** To be restricted according to Article 6 (Paragraphs 6 and 7) of the Ecolabel Regulation (EC) No 66/2010
- **Phthalates:** Plasticisers which can act as endocrine disrupters require further consideration following REACH updates.
- **Flame retardants:** Feedback from stakeholders and updates of the REACH candidate list require a revision.
- **Nano-silver:** There is emerging evidence of risks associated with nano-silver surface coatings and treatments.



## Questionnaire feedback (1)

### Fibres

- Organic cotton – the percentage content should be reviewed
- Wool scouring - the criteria and verification process should be reviewed/improved
- Man made fibres - criteria on energy and water consumption should be introduced
- Bamboo fibre – criteria should be developed

### Processes and chemicals

- Criteria on flame retardants should be reviewed - because it is too limiting and is not practical to meet fire safety regulations
- Exclusion of metal complex dyes – Only two out of six of fibres tend to use this dye.



## Questionnaire feedback (2)

### Fitness for use

- Shrinkage; The existing tolerances should be reviewed.

### New criteria areas

- CSR policies – to be considered, although not widely implemented by producers
- Resource use should be considered – textiles not recyclable shall not be ecolabelled



## Proposed overall approach

1. **Focussed technical updates:** based on BREF and technical evidence review
2. **Improved life cycle perspective:** based on a fibre and product LCA review
3. **Reflect product best practice:** based on eco-innovation by manufacturers, retailers and brands
4. **Explore options for label and initiative harmonisation:** based on a review of state, NGO and private label scheme criteria
5. **Improve focus on opportunities in target market segments:** based on textile label, public procurement consumer and industry priorities



## Consultation questions

- Are the proposed focus areas for improvement appropriate?
- Are there other environmental impacts for which evidence exists to support improvements?



# Revision of European Ecolabel Criteria for Textile products

## Session 3: Textile fibre criteria area

1st Ad-hoc Working Group Meeting  
22<sup>nd</sup> February 2012, Seville

Joint Research Centre, Institute for Prospective Technological Studies



## Criteria 1-9 Major revision proposals

- Natural fibres
  - *Cotton, wool, flax*
- Synthetic fibres
  - *Production/use phases, polymer-specific*
- Regenerated fibres
  - *Cellulose fibres*



## C2 Cotton and other natural cellulosic seed fibres (including kapok)

### Current criteria

- *Cotton and other natural cellulosic seed fibres shall not contain more than 0.05 ppm of the listed substances.*
- *This requirement does not apply where more than 50% of the cotton content is organically grown cotton or transitional cotton, certified by an independent organisation to have been produced in conformity with Council Regulation (EEC) No 2092/91 of 24 June 1991.*
- *This requirement does not apply if documentary evidence establishes the identity of the farmers producing at least 75% of the cotton used in the final product, together with a declaration that the substances listed have not been applied to the fields or cotton plants, or to the cotton itself.*



## C2 Cotton and other natural cellulosic seed fibres (including kapok)

### Current criteria

- *Where at least 95% of the cotton in one product is organic, the applicant may place 'organic cotton' next to the eco-label. Between 70% and 95% it may be labelled "made with xy% organic cotton".*
- *The applicant shall either provide proof of organic certification or documentation relating to the non-use by the farmers or a test report.*
- ***A minimum of 3% of organic cotton have to be used on an annual basis.***



## C2 Cotton and other natural cellulosic seed fibres (including kapok)

### Proposed revisions

- Minimum organic content requirement (50-100%)
  - *Pre-requisite giving higher environmental protection*
  - *Balance % meets pesticide restrictions based on PIC*
- Alternative option 1 responsibly sourced (>75%)
  - *Integrated Pesticide Management and irrigation water use*
  - *Example verification route: Better Cotton Initiative*
  - *100% meets pesticide restrictions based on PIC*
- Alternative option 2 recycled cotton (?%)
  - *Explore as an option in exchange for organic or option 1*
  - *Example verification route: Global Recycling Standard*



## Consultation questions

1. Should a mandatory percentage of organic cotton be set?  
*- if yes what percentage is feasible?*
2. Should cotton grown according to other management regimes (e.g. IPM) or certification routes (e.g. Better Cotton Initiative) be encouraged?

Other issues from the technical report

1. *Should the quantity of irrigation water use used for cotton production be considered within the criteria?*
2. *Do you agree with the proposed additions to the excluded pesticides list?*



## C5 Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat)

Current criteria

- *The sum total content of the listed pesticides shall not exceed 0.5 ppm or 2ppm (as applicable)*
- *The test should be made on raw wool, before it comes through any wet treatment, two times a year if more than two lots of wool per year are received .*
- *These requirements do not apply if documentary evidence establishes the identity of the farmers producing at least 75% of the fibres, together with a declaration that the substances listed have not been applied to the fields or animals concerned.*



## **C5 Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat)**

### Current criteria

- *After treating the scouring effluent, the final COD discharge shall not exceed 5 g/kg greasy wool on site and 10g/kg for off site.*
- *The pH of the effluent discharged to surface waters shall be between 6 and 9 (unless the pH of the receiving waters is outside this range),*
- *The temperature shall be below 40°C (unless the temperature of the receiving water is above this value).*

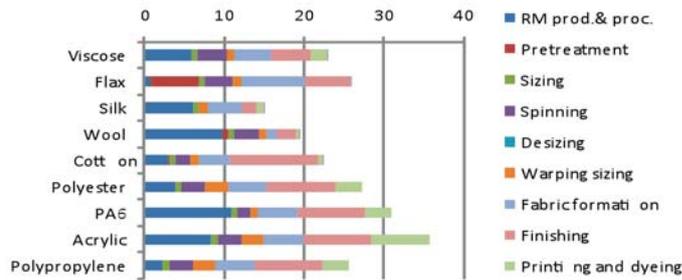


## **C5 Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat)**

### Proposed revisions

- Organic wool to be introduced as alternative compliance route to the pesticide restrictions
  - *'Chlorine-free' and 'AOX-free' wool products to be explored for their compliance with the restrictions*
- Clarification of the frequency and point in the supply chain of testing for batches of wool
  - *Proposal to be formulated to reflect differing routes to market in Europe and Australia/New Zealand*
- Harmonisation of the wastewater treatment requirements for COD to 20 g/kg for on/off-site (C27)

## C5 Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat) LCA climate change midpoint



Impacts on climate change of textile production according to fibre type and production phases in kg CO<sub>2</sub> eq/kg fabric [IMPRO, 2009]

## Consultation questions

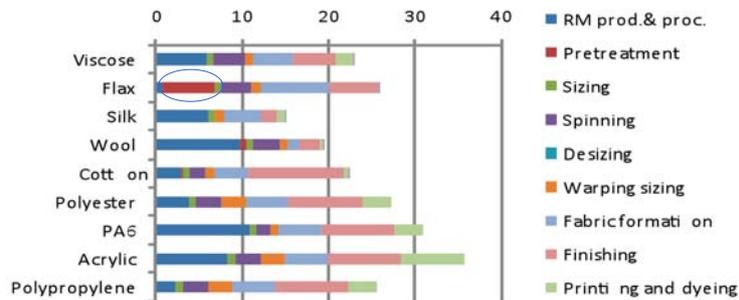
1. Should the criteria be expanded to encourage organic wool?  
- *If yes, should the criterion include a minimum % organic wool content?*
2. How could the approach to test sampling/reporting be best improved to support the ecolabel?
3. Would a COD value of 20 g/kg for all forms of effluent treatment be achievable?

### Information request

- Can you provide any information in relation to:
  - *Energy use associated with raw wool treatment and processing?*
  - *'chlorine free' or 'AOX free' wool – its performance and availability?*



## C4 Flax and other bast fibres (including hemp, jute and ramie) LCA climate change midpoint



Impacts on climate change of textile production according to fibre type and production phases in kg CO<sub>2</sub> eq/kg fabric [IMPRO, 2009]



## Consultation questions

1. Do you agree with the proposal to consider a benchmark for process energy use associated with the pre-treatment of flax fibres?
2. Can you provide data for the energy used during the pre-treatment of flax?



## C1/3/7/8/9 Synthetic fibres

### Current criteria

- C1 Acrylic
  - Acrylonitrile fibre content < 1.5 mg/kg,
  - Acrylonitrile emissions to air of < 1 g/kg fibre produced
- C3 Elastane
  - Exclusion of organotin compounds
  - Emissions to air of aromatic di-isocyanates < 5mg/kg fibre produced
- C7 Polyamide (nylon)
  - Emissions to air of N<sub>2</sub>O of 10g/kg (6) and 50g/kg (6.6)



## C1/3/7/8/9 Synthetic fibres

### Current criteria

- C8 Polyester
  - Antimony limit value of 260 ppm
  - VOC's emissions limit value of 1.2 g/kg resin produced
- C9 Polypropylene
  - Exclusion of lead based pigments



## Ecolabel for Textile products

### Existing recycled/re-used content pre-amble

*The criteria...for a given fibre-type need not be met if...the fibres are of recycled origin.*

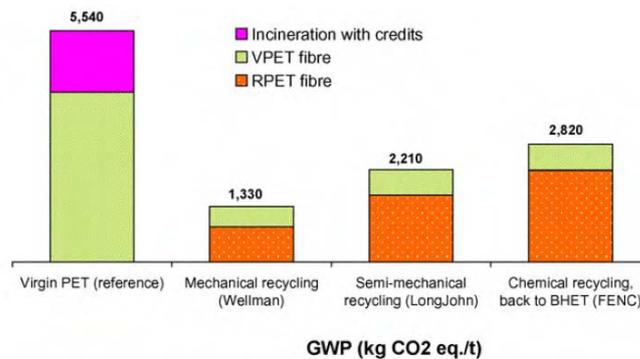
*In this context, recycled fibres are defined as fibres originating only from cuttings from textile and clothing manufacturers or from post-consumer waste (textile or otherwise).*

*Nevertheless, at least 85 % by weight of all fibres in the product must be either in compliance with the corresponding fibre-specific criteria, if any, or of recycled origin.*



## C1/3/7/8/9 Synthetic fibres

### LCA PET virgin v. recycled content comparison



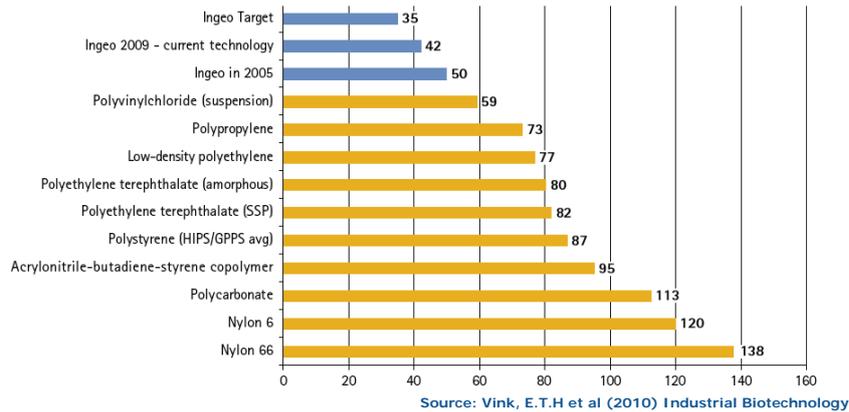
Source: Shen, L et al (2010) Resources, Conservation & Recycling





## C1/3/7/8/9 Synthetic fibres

### Polymer energy benchmark comparison (MJ/kg)



## C1/3/7/8/9 Synthetic fibres

### Common criteria proposals

**Option 1** Process energy benchmark for resin *or* fibre production, x% better than EU average

- *Plastics Europe (GJ/tonne) for resin production and JRC BREF (MJ/kg) for fibre production*
- *Discrepancy between benchmarks and calculation methods requires clarification*

**Option 2** Minimum % recycled content of the fibres used in the product

- *Industry best practice suggests 50-100% post-consumer waste for polyester*
- *Variable % for other fibres based on best practice e.g. emerging producers of nylon 6 but not 6.6*



## C1/3/7/8/9 Synthetic fibres

### Polymer specific proposals

- Polyamide
  - Propose lowering  $N_2O$  emissions to air limit for fibre produced from 50g/kg to 16.5g/kg (Blue Angel)
- Polyester
  - BREF benchmarks for VOC emissions to air suggest range 40 – 100g/t resin (current criteria 1.2g/kg)



## Consultation questions

### *Common proposals*

1. Should a new criterion requiring a benchmark performance for process energy use be introduced?
  - if so, in what form and at what level? Would this be easily verifiable?
2. Should a new criteria requiring a minimum recycled content be introduced?
  - if so what % would be achievable? How might this differ by fibre?

### *Polymer-specific*

- Is a reduction in process  $N_2O$  emissions for nylon 6.6 achievable?
- Is a reduction in process VOC emissions for polyester achievable?
  - if so at what level should the new limit values be set?

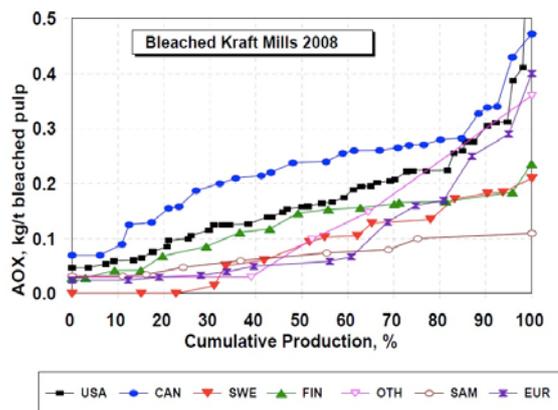


## C6 Man-made cellulose fibres (including viscose, lyocell, acetate, cupro, triacetate) Current criteria

- *The level of AOX in the fibres shall not exceed 250 ppm.*
- *For viscose fibres, the sulphur content of the emissions of sulphur compounds to air from the processing during fibre production, expressed as an annual average, shall not exceed 120 g/kg filament fibre produced and 30 g/kg staple fibre produced.*
- *For viscose fibres, the emission to water of zinc from the production site, expressed as an annual average, shall not exceed 0.3 g/kg.*
- *For cupro fibres, the copper content of the effluent water leaving the site, expressed as an annual average, shall not exceed 0.1 ppm.*

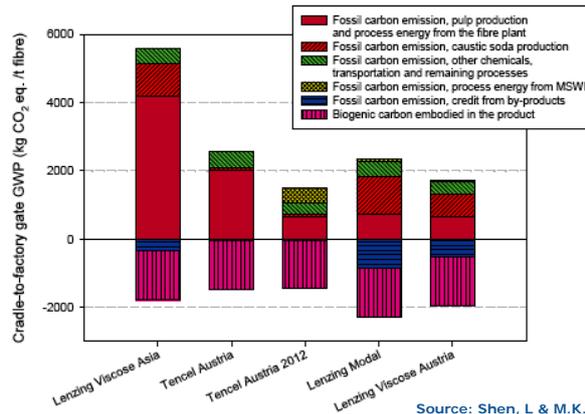


## C6 Man-made cellulose fibres (including viscose, lyocell, acetate, cupro, triacetate) Pulp mill AOX emissions





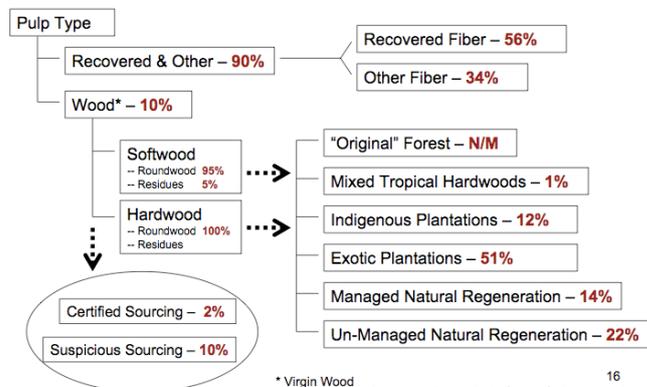
## C6 Man-made cellulose fibres (including viscose, lyocell, acetate, cupro, triacetate) LCA GWP for cellulose fibre technologies



Source: Shen, L & M.K.Patel (2010) Utrecht University



## C6 Man-made cellulose fibres (including viscose, lyocell, acetate, cupro, triacetate) Wood pulp sourcing (China 2004)

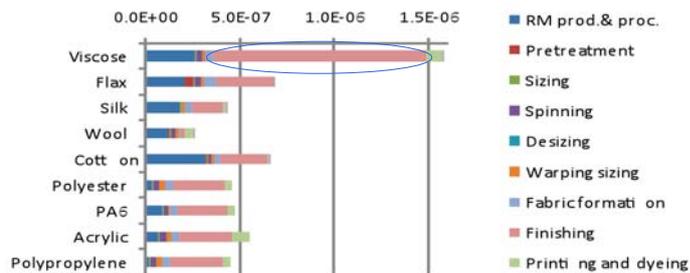


\* Virgin Wood

Source: Goetzl, A (2008) Seneca Creek Associates



## C6 Man-made cellulose fibres (including viscose, lyocell, acetate, cupro, triacetate) LCA ecosystem diversity endpoint



Impacts of textile production, broken down by fibre type and production phases, ecosystem diversity, in species.yr/kg fabric, [IMPRO, 2009]



## C6 Man-made cellulose fibres (including viscose, lyocell, acetate, cupro, triacetate) Criterion proposals

- AOX requirement for pulp production stages – initial proposal of 100ppm
- New sulphur limit for 'batch washing' filament process of 60kg/t – other processes nearly 0 kg/t
- Certified legal and sustainable sourcing of wood pulp – FSC/PEFC or equivalent standards

For consideration:

- a process energy benchmark based on production data
- Certified RSPO sourcing of palm oil for finishing products



## Consultation questions

1. Do you agree with an AOX level for pulp/fibre production, and is the proposed level achievable?
2. Could the sulphur standard be simplified to a tighter requirement based on the BAT for fibre production?
3. Should a new criteria requiring responsible sourcing of wood pulp and palm oil be introduced,  
*- if so are the proposed certification routes suitable?*

### Other areas for investigation

- Should a new criterion requiring a benchmark performance for process energy use be introduced
  - *if so, in what form and at what level? Would this be easily verifiable?*
- Can bamboo plantations be certified FSC/PEFC?



# Revision of European Ecolabel Criteria for Textile products

## Session 4: Processes and chemicals criteria area

1st Ad-hoc Working Group Meeting  
22<sup>nd</sup> February 2012, Seville

Joint Research Centre, Institute for Prospective Technological Studies



## Criteria 10-33

- New hazardous substances criterion 10
- Criteria 11: Biocides
- Criteria 16: Bleaching
- Criteria 17, 20-23: Dyes
- Criteria 25, 29/30: Finishing and printing
- Criteria 27: Wastewater treatment
- Criteria 26: Formaldehyde
- Criteria 28: Flame retardants
- Criteria to check for relevance/possible deletion



## Required new criteria: Hazardous substances and mixtures

In accordance with Article 6(6) of Regulation (EC) No 66/2010 on the EU Ecolabel, the product or any component of it shall not contain substances that:

- Are referred to in **Article 57 of Regulation (EC) No 1907/2006** and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Have been identified according to **the procedure described in Article 59(1)** which establishes the Candidate List for Substances of Very High Concern
- Meet the criteria for **classification as toxic, hazardous to the environment, carcinogenic, mutagenic or toxic for reproduction (CMR)** in accordance with Regulation (EC) No 1272/2008 or Directive 67/548/EC



## Proposed new criteria: Hazardous substances and mixtures

The use of substances or mixtures which change their properties upon processing (e.g., become no longer bioavailable, undergo chemical modification) so that the identified hazard no longer applies are exempted from the above requirement.

**No derogation shall be given concerning substances that meet the criteria of Article 57 of Regulation (EC) No 1907/2006 and that are identified according to the procedure described in Article 59(1) of that Regulation**, and are present in mixtures, in an article or in any homogeneous part of a complex article in concentrations higher than 0,1 % (weight by weight).



## Hazardous substances and mixtures REACH Annex XIV/XVII substances

- Biocides:
  - *Textiles must not contain pentachlorophenol (PCP). The import, export, sale or use of products containing 5 ppm, or above of PCP or its salts or esters is prohibited.*
- Dyes
  - *Azo dyes is the name of the group of synthetic chemicals based on nitrogen that are often used in the textile industry.*
- Flame retardants
  - *Penta- and octabromodiphenol ethers (penta and octa-BDE) Threshold limit is 0,1% (w/w). Impregnants tris (2, 3-dibrompropyl), phosphate cas. Nr. 126-72-7, (TRIS), tris (1-aziridiny) phosphineoxide (TEPA) cas. Nr. 5455-55-1) and polybrominated biphenyls (PBB) cas. Nr. 59536-65-1 must not be used in textiles which are intended to come into contact with the skin, e.g. articles of clothing or linen.*
- Surface repellents
  - *PFOS (perfluorooctane sulfonate and its derivatives) are prohibited in textiles. Special notice should be taken of the ban on textiles or other materials with a coating, if the amount of PFOS comprises 1µg/m<sup>2</sup> or more of the coated materials.*

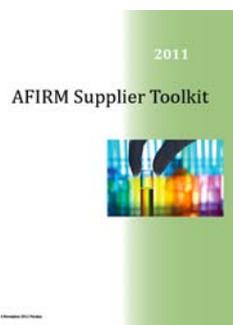


## Hazardous substances and mixtures Substances of Very High Concern

- Auxiliaries
  - 4-(1,1,3,3-tetramethylbutyl)phenol
  - 1-Methyl-2-pyrrolidone
- Dyes and mordants
  - Anthracene (dye precursor)
  - See table 1.3 in the Preliminary Report
- Flame retardants
  - HBCD – Hexabromocyclododecane
  - TCEP – Tris (2,chloroethyl)phosphate
  - Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)
- Plasticizers (phthalates)
  - DEHP (Di-(2-ethylhexyl)-phthalate) CAS no. 117-81-7
  - BBP (Butylbenzylphthalate) CAS no. 85-68-7
  - DBP (Dibutylphthalate) CAS no. 84-74-2
  - Bis(2-methoxyethyl) phthalate
  - DIBP (Diisobutylphthalat)
  - TCEP (Tris(2-chlorethyl)phosphate)



## Industry substance restrictions



### bluesign® certification The path to the bluesign certificate for textile manufacturers

To maintain the trust of customers and the textile value chain, the manufacturing process is audited using the bluesign® system. This process requires that the manufacturers are certified and certified only to make sure that from the production process and the finished product no harmful substances are released.





H300 Fatal if swallowed R28  
H301 Toxic if swallowed R25  
H304 May be fatal if swallowed and enters airways R65  
H310 Fatal in contact with skin R27  
H311 Toxic in contact with skin R24  
H330 Fatal if inhaled R23/26  
H331 Toxic if inhaled R23  
H340 May cause genetic defects R46  
H341 Suspected of causing genetic defects R68  
H350 May cause cancer R45  
H350i May cause cancer by inhalation R49  
H351 Suspected of causing cancer R40  
H360F May damage fertility R60  
H360D May damage the unborn child R61  
H360FD May damage fertility. May damage the unborn child R60/61/60-61  
H360Fd May damage fertility. Suspected of damaging the unborn child R60/63  
H360Df May damage the unborn child. Suspected of damaging fertility R61/62  
H361f Suspected of damaging fertility R62  
H361d Suspected of damaging the unborn child R63  
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. R62-63

H362 May cause harm to breast fed children R64  
H370 Causes damage to organs R39/23/24/25/26/27/28  
H371 May cause damage to organs R68/20/21/22  
H372 Causes damage to organs R48/25/24/23  
H373 May cause damage to organs R48/20/21/22  
H400 Very toxic to aquatic life R50  
H410 Very toxic to aquatic life with long-lasting effects R50-53  
H411 Toxic to aquatic life with long-lasting effects R51-53  
H412 Harmful to aquatic life with long-lasting effects R52-53  
H413 May cause long-lasting effects to aquatic life R53  
EUH059 Hazardous to the ozone layer R59  
EUH029 Contact with water liberates toxic gas R29  
EUH031 Contact with acids liberates toxic gas R31  
EUH032 Contact with acids liberates very toxic gas R32  
EUH070 Toxic by eye contact R39-41

*Sensitising substances*

*H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled R42*

*H317: May cause allergic skin reaction R43*



## Categorisation of existing criteria

### Criteria applying to processes

#### Substance restrictions

12. Stripping or depigmentation
13. Weighting
14. All chemicals and chemical preparations
16. Bleaching agents
17. Impurities in dyes: Colour matter with fibre affinity (soluble or insoluble)
18. Impurities in pigments: Colour matter with fibre affinity (soluble or insoluble)
19. Chrome mordant dyeing
20. Azo dyes
22. Dyes that are carcinogenic, mutagenic or toxic to reproduction
23. Potentially sensitising dyes
24. Halogenated carriers for polyester
25. Printing
29. Anti felting finishes
30. Fabrics finishes
31. Fillings

#### Wastewater or aerial emissions

10. Auxiliaries
15. Detergents, fabric softeners and complexing agents
20. Metal complex dyes
27. Wastewater discharges from wet processing
31. Fillings
32. Coatings, laminates and membranes
33. Energy and water use (no specific limit values)



## Categorisation of existing criteria

### Criteria applying to the end-product

#### Substance restrictions

- 11. Biocidal and biostatic products
- 28. Flame retardants
- 31. Fillings
- 32. Coatings, laminates and membranes

#### Concentration limits

- 26. Formaldehyde
- 31. Fillings



## Hazardous substances and mixtures

### Derogation requests

- **Industry stakeholder are requested to submit derogation requests**
- Must be based on quantitative information providing sufficient evidence that alternatives do not exist at the present time that:
  - *are safer and provide sufficient environmental protection;*
  - *Can provide the same technical function;*
  - *are present in a sufficient number of products.*

<http://www.echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>



## Possible approaches to implementation

- **Setting limit values** for residual substances and specific groups of compounds
  - *How might we determine limit values for substances in finished products?*
  - *Are there organisations that could assist in providing data to assist with this approach?*
- **Derogations for specific substances** that of high concern but present in a product at >0.1%
  - *Should any derogation from the list of H/R phrases be made for specific substances, fabrics, products? We require quantitative data to demonstrate that a substance should be derogated*



## C11 Biocidal or biostatic products

### Current criteria

*Chlorophenols (their salts and esters), PCB and organotin compounds shall not be used during transportation or storage of products and semi-manufactured products.*

*Assessment and verification: The applicant shall provide a declaration of non-use of these substances or compounds on the yarn, fabric and final product.*



## C11 Biocidal or biostatic products

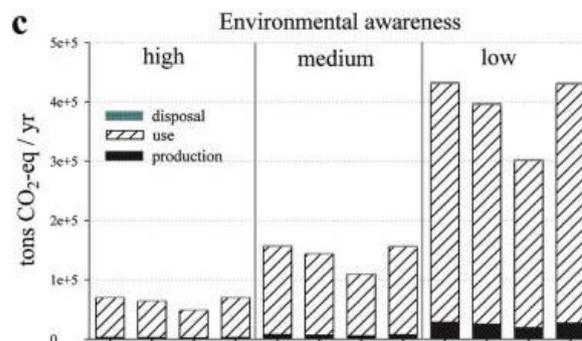
### Nano-silver biocidal treatment

- Wide use already in consumer products
  - *Socks, shirts, caps, gloves, underwear*
- Anti-microbial properties of silver supposes hygiene and environmental benefits
- Limited theoretical and lab-based studies of environmental releases
  - *Modelling of contemporary/future releases*
  - *Exposure pathways and effect concentration levels*
  - *REACH case study: limited ability to classify nano-silver*



## C11 Biocidal or biostatic products

### Nanosilver could give use phase benefits



Source: Walser, T (2011) Environmental Science & Technology



## Consultation questions

1. Is a precautionary approach to nanosilver justifiable on the basis of current evidence? Is new/additional evidence available?
2. Are you aware of other coatings or nanoparticles that should be addressed?
3. Should this form part of the horizontal approach to hazardous substances?



## C16 Bleaching agents

### Current criteria

Chlorine agents are excluded for bleaching yarns, fabrics and end products

*This requirement does not apply to the production of man-made cellulose fibres.*

***Proposed deletion:*** *This requirement does not apply to the production of man-made cellulose fibres.*



## C17,21-23 Dye-related criteria

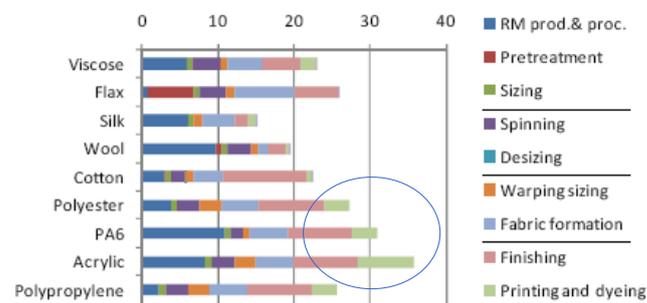
### Proposed amalgamation and restrictions appendix

- C17 Impurities in dyes
  - *Unchanged*
- C21 Azo dyes
  - *Listing of aryl amines restricted under REACH*
  - *MAK III Category 1&2 (harmonised with Oeko-tex)*
  - *Addition of 4,4'-Methylene-bis-(2-chloroaniline) (MAKIII-2)*
  - *GOTS currently restricts MAKIII Category 3 dyes*
- C22 Carcinogenic, mutagenic or toxic to reproduction
  - *Unchanged*
- C23 Potentially sensitizing dyes
  - *Add C.I. Disperse Blue 1 and C.I. Disperse yellow 3 in order to harmonise with Oeko-tex*



## C17,21-23 Dye-related criteria

### LCA climate change midpoint



Impacts on climate change of textile production according to fibre type and production phases in kg CO<sub>2</sub> eq/kg fabric [IMPRO, 2009]



## Consultation questions

1. Do you agree with the changes to the structure and coverage of the criterion?
2. Should MAK III classified aryl amine dyes be restricted as in GOTS?
3. Should dye-house energy use and dye-use efficiency be addressed?



## C20 Metal complex dyes

### Current criteria

*If metal complex dyes based on copper, chromium or nickel are used:*

- *In case of cellulose dyeing, where metal complex dyes are part of the dye recipe, less than 20 % of each of those metal complex dyes applied (input to the process) shall be discharged to waste water treatment (whether on-site or off-site).*
- *In case of all other dyeing processes, where metal complex dyes are part of the dye recipe, less than 7 % of each of those metal complex dyes applied (input to the process) shall be discharged to waste water treatment (whether on-site or off-site).*
- *20.2. The emissions to water after treatment shall not exceed: Cu 75 mg/kg (fibre, yarn or fabric); Cr 50 mg/kg; Ni 75 mg/kg.*

**Proposal:** Metal complex dyes are only to be allowed when dyeing wool, polyamide or silk



## Consultation questions

1. Do you agree with the proposal to restrict metal complex dyes for the three proposed fibers?
2. Could this criterion be incorporated into the amalgamated dye restriction criteria?



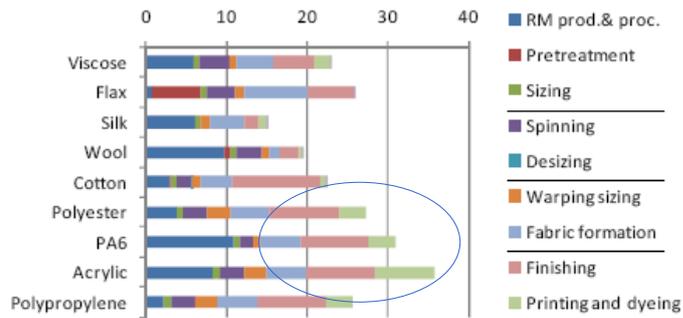
## C29/30 Finishing and C25 Printing

### Current criteria

- *C29 Anti felting finishes*
  - *Restriction on the application of halogenated substances or preparations, with wool exempted*
- *C30 Fabric finishes*
  - *Restriction on the use of finishing substances or preparations that carry listed H/R phrases*
- *C25 Printing*
  - *Printing pastes should not contain more than 5% VOC compounds*
  - *Plastisol-based printing is not allowed*



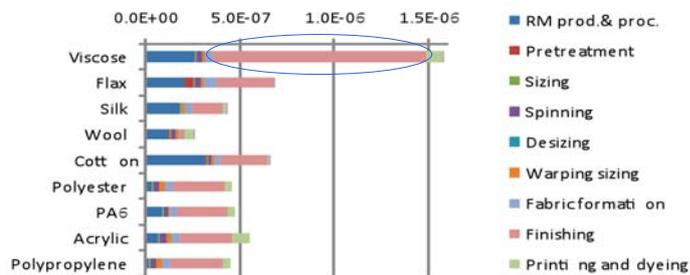
## C29/30 Finishing and C25 Printing How to address process energy use?



Impacts on climate change of textile production according to fibre type and production phases in kg CO<sub>2</sub> eq/kg fabric [IMPRO, 2009]



## C29/30 Finishing and C25 Printing How to address fibre-specific finishing agents?



Impacts of textile production, broken down by fibre type and production phases, ecosystem diversity, in species.yr/kg fabric, [IMPRO, 2009]



## Consultation questions

- Are there any hazardous substances that are commonly used during these stages?
- Is it possible to lower the limit for VOC or completely forbid VOC in printing paste?
- Is data available for process energy use associated with finishing and printing processes?



## C27 Wastewater treatment from discharges from wet processing

Review against BREF

- Current blanket COD approach does not reflect the range of wet processes
- BREF Textiles presents groups of process stages and COD ranges
- Potential to set performance ratios for treatment works for different process stages
- Performance ratio will influence biogradation of chemical applications e.g. NTA (Criteria 13)

**For discussion:** Do agree to review underlying approach?



## C26 Formaldehyde

### Current criteria

The amount of free and partly hydrolysable formaldehyde in the final fabric shall not exceed:

- 20 ppm in products for babies and young children under 3 years old,
- 30 ppm for products that come into direct contact with the skin,
- 75 ppm for all other products.



## C26 Formaldehyde

### Oekotex 100 criteria

Four classes of limit values on formaldehyde depending on the degree of skin exposure and sensitivity:

- |  |              |
|--|--------------|
| • Class 1 (baby):                      | 16 ppm (lod) |
| • Class 2 (contact with skin):         | 75 ppm       |
| • Class 3 (without contact with skin): | 300 ppm      |
| • Class 4 (decoration material):       | 300 ppm      |

The detection limit for both methods is 20 mg/kg.



## C26 Formaldehyde

### Proposed options for discussion

1. **Maintain the same** - Feedback is requested on practical issues relating to the current limit values
2. **Harmonisation with Ökotex 100** - Would weaken the criteria but the majority of the products on the market should fulfil these criteria.
3. **Harmonise with GOTS** - Not to accept any release of formaldehyde – with a detection limit is 16 mg/kg. A clear strengthening of the criteria but feedback is requested on whether this can be achieved/or is necessary for Class 2/3/4 products.
4. **Horizontal approach** – Carries H/R phrases relating to toxicity and is carcinogenic.



## C28 Flame retardants

### Current criteria

- *Only flame retardants that are chemically bound into the polymer fibre or onto the fibre surface (reactive flame retardants) may be used in the product.*
- *If the flame retardants used have any of the listed R-phrases below, reactive flame retardants should, on application, change their chemical nature to no longer warrant classification. (Less than 0,1 % of the flame retardant may remain.)*
- *Flame retardants which are only physically mixed into the polymer fibre or into a textile coating are excluded (additive flame retardants).*
- *Alternatively, classification may be considered according to Regulation (EC) No 1272/2008 and the listed hazard statements*



## C28 Flame retardants

### Questionnaire feedback on existing criteria

- The differentiation between reactive and additive does not reflect product chemistry
  - *May typically be reacted to 30-70%*
- The criteria as currently worded restrict the ecolabel in specific member states with stringent fire regulations
  - *UK is specific case in point*
  - *Requirements will vary by product*



## C28 Flame retardants

### Product types to address?

- Furnishings and drapery – Types that fulfill product definition
- Nightwear – polycotton blends and health service/care facility garments
- Bed linen – Health services and care facilities which require flame retardancy
- Personal Protective Equipment – Industrial overalls, emergency services, armed services



## C28 Flame retardants

### Common textile flame retardants?

- Halogenated
  - *Synthetic fibre melt, natural fibre post-treatment*
  - *Used in a complex e.g. brominated with antimony*
  - *Brominated are restricted by REACH XIV/XVII or SVHC*
  - *decaBDE may have some limited applications*
- Organophosphates
  - *Used in combination with nitrogen containing monomers (natural fibres)*
  - *Synthetic fibre melt, natural fibre post-treatment*
  - *Application can reduce fabric lifespan*



## Consultation questions

1. How could the definition of reactive and additive flame retardants be improved to better reflect product chemistry?
2. Do flame retardants exist which would provide adequate fire safety for the listed textile applications whilst not carrying Risk Phrases?
3. How should this be addressed as part of the horizontal approach?



## Criteria to be reviewed

Feedback requested following AHWG

1. Are these criteria still relevant?  
- 10, 13, 18, 24, 29, 31, 32
2. Could we delete these criteria?  
- 12, 19, 30  
- 33 (*replacement by CSR criteria*)
3. Are there criteria that could be merged as part of a horizontal approach?



# Revision of European Ecolabel Criteria for Textile products

## Session 5: Fitness for use criteria area

1st Ad-hoc Working Group Meeting  
22<sup>nd</sup> February 2012, Seville

Joint Research Centre, Institute for Prospective Technological Studies



## Criteria 34-40

- Criteria 34: Dimensional changes
- Criteria 39: Colour fastness



## C34 Dimensional changes

### Current criteria

*The dimensional changes after washing and drying shall not exceed:*

- *Plus or minus 2 % for curtains and for furniture fabric that is washable and removable,*
- *More than minus 8 % or plus 4 % for other woven products and durable non-woven, other knitted products or for terry towelling.*

*This criterion does not apply to:*

- *Fibres or yarn - products clearly labelled 'dry clean only' or equivalent (insofar as it is normal practice for such products to be so labelled),*
- *Furniture fabrics that are not removable and washable.*



## C34 Dimensional changes

### Proposed tightening of tolerances (Blue Angel)

Textile products or type of material	Dimensional changes during washing and drying
Curtains and furniture fabric that is washable and removable	+/- 2 %
knitted fabrics	+/- 4 %
Chunky knit	+/- 6 %
Towels and fine rib fabrics	+/- 7 %
Interlock	+/- 5 %
Woven fabrics: - Cotton and cotton mix - wool mix - synthetic fibres	+/- 3 % +/- 2 % +/- 2 %



## Consultation questions

1. Do you agree on the proposed changes to the tolerances?
2. Should other tests be introduced for special textiles?



## C39 Colour fastness

### Current criteria

*For fabrics intended for furniture, curtains or drapes, the colour fastness to light shall be at least level 5. For all other products the colour fastness to light shall be at least level 4.*

*A level of 4 is nevertheless allowed when fabrics intended for furniture, curtains or drapes are both light coloured (standard depth < 1/12) and made of more than 20% wool or other keratin fibres, or more than 20% silk, or more than 20% linen or other bast fibres.*

*This requirement does not apply to mattress ticking, mattress protection or underwear.*

**Proposed exclusion:** Baby clothing



# Revision of European Ecolabel Criteria for Textile products

## Session 6: Proposals for new criteria

1st Ad-hoc Working Group Meeting  
22<sup>nd</sup> February 2012, Seville

Joint Research Centre, Institute for Prospective Technological Studies



## Proposed new criteria areas

- Corporate Social Responsibility (CSR) criteria
  - *Environmental management, social codes of conduct*
- Ecodesign improvements
  - *Design for durability, recycling systems*
- Consumer labelling
  - *Energy saving advice, Air freight*



## Corporate Social Responsibility (CSR)

- Public reporting on performance of suppliers and manufacturing sites against national and internationally recognised standards.
- Deals with social and ethical issues but also addresses the environmental management practices of production plants.
- Customers expectations and reputational risk – increasingly sensitised in recent years to social and environmental issues
  - *Promotion of the Ecolabel to manufacturers in countries which supply the EU.*
  - *United Nations Environment Programme (UNEP) promotion of ecolabel opportunities Leading clothing retailers active in auditing their sub-suppliers performance*



## Corporate Social Responsibility (CSR)

### Proposed criteria sets

- CSR Criteria 1 - Environmental management practices
- CSR Criteria 2 - Human rights
- CSR Criteria 3 - Labour rights, working agreements and salaries
- CSR Criteria 4 - Occupational safety and health



## Corporate Social Responsibility (CSR)

### Options for third party verification

- Textile-specific schemes
  - *Oeko-tex 1000, GOTS, GRS*
- Generic CSR schemes
  - *Global Reporting Initiative (GRI)*
  - *Global Social Compliance Programme (GSCP)*
  - *Business Social Compliance Initiative (BSCI)*

Schemes vary in the CSR issues they cover and in some cases do not yet offer third party verification.



## Corporate Social Responsibility (CSR) **Current criteria 33**

*The applicant shall provide data on water and energy use for the manufacturing sites involved in wet processing.*

*Assessment and verification: The applicant is requested to provide the abovementioned information.*



## Corporate Social Responsibility (CSR) **CSR Criteria 1: Environmental management**

### **Overarching requirement**

- Has an Environmental Management System in place in order to manage and report on environmental impacts

### **Compliance with local regulatory minimums**

- Complies with national waste water and air emission standards or are approved in accordance with the national environmental legislation for the countries where manufacturing is undertaken.

### **Engagement of the workforce**

- Has provided training to the workforce on environmental and health issues and hazards



## Corporate Social Responsibility (CSR) CSR Criteria 1: Environmental management

### Specific required areas of action and reporting

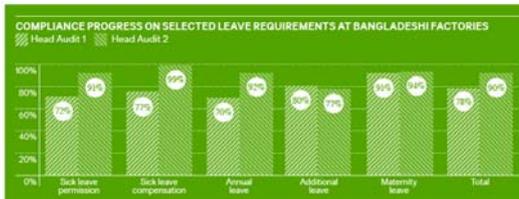
- Has mapped the major and most critical emission sources to water and air (the sources may be reported by a list and as an indicated on a map).
- Has introduced preventive measures to reduce or eliminate waste water and air emissions (all preventive measures must be reported).
- **Energy, water and waste management plans supported by the monitoring and benchmarking of performance against specific targets set in the management plan to reduce energy use**



## Corporate Social Responsibility (CSR) CSR monitoring by H&M

### 10 STEPS FOR STRENGTHENING SUPPLIER OWNERSHIP

- |   |   |
|---|---|
| <p><b>1</b> Get to know the reality and issues in each factory through audits</p> <p><b>2</b> Have an open dialogue with suppliers and define clear achievable targets for improvements and remediation of non-compliance</p> <p><b>3</b> Have a frequent presence in the factories, not only through audits, and create a close and long-term co-operation with the supplier</p> <p><b>4</b> Train audit teams to prepare for moving from a policing agent to a catalysing partners</p> <p><b>5</b> Listen to stakeholders, including our suppliers themselves, their employees, trade unions, NGOs, government, industry bodies and other brands, and share knowledge</p> | <p><b>6</b> Function as a facilitator and help to build suppliers' management capacity</p> <p><b>7</b> Know where suppliers can find additional help in strengthening their capacities and link them up with, for example, NGOs, development agencies, consultants or government bodies</p> <p><b>8</b> Show the benefits of a sustainable mindset and performance, and reward suppliers for progress</p> <p><b>9</b> Educate workers on their rights</p> <p><b>10</b> Prepare suppliers for joint assessments and where possible self-assessments, resulting in self-reporting</p> |
|---|---|





## Corporate Social Responsibility (CSR) Example scheme: GSCP Environmental Code

### Three levels of 'generic' compliance

- Awareness and compliance
- Pro-active management and performance improvement ✓
- Leading practice

### Eleven detailed reference requirements

- Environmental Management System ✓
- Energy Use, Transport and Greenhouse Gases (GHGs) ✓
- Water use ✓
- Wastewater effluent
- Emissions to air
- Ozone Depleting Substances (ODS)
- Waste management ✓
- Pollution Prevention / Hazardous and Potentially Hazardous Substances
- Major incident prevention and management
- Contaminated land/ Soil and groundwater pollution prevention
- Land use and biodiversity
- Nuisances



## Consultation questions

1. Do you agree with the scope and coverage of proposed CSR criteria 1?
2. Are the compliance and verification routes workable?
  - *If no, how could they be improved?*
  - *Are there other suitable alternatives?*



## Corporate Social Responsibility (CSR) **CSR Criteria 2: Human rights**

Documented compliance with the international labour standards as defined by the **ILO Declaration on Fundamental Principles and Rights at Work** and its follow up:

- ILO convention **C-29** Forced Labour Convention, 1930
- ILO convention **C-87** Freedom of Association and Protection of the Right to Organise Convention, 1949
- ILO convention **C-98** Right to Organise and Collective Bargaining Convention, 1949
- ILO convention **C-100** Equal Remuneration Convention, 1951
- ILO convention **C-105** Abolition of Forced Labour Convention, 1957
- ILO convention **C-111** Discrimination (Employment and Occupation) Convention, 1958
- ILO convention **C-138** Minimum Age Convention, 1973
- ILO convention **C-182** Worst Forms of Child Labour Convention, 1999



## Corporate Social Responsibility (CSR) **CSR Criteria 3: Labour rights, working agreements and salaries**

All suppliers in the supply chain shall fulfil the following requirements:

- All workers to have an employment contract.
- The basic salary of the supplier's workforce to at least comply with the minimum wages for normal working hours in the country in question.
- Maternity leave is guaranteed and normal working hours are included in the employment contracts with the workforce of all suppliers.



## Corporate Social Responsibility (CSR) **CSR Criteria 4: Occupational health and safety**

It must be documented by all suppliers in the supply chain that:

- Suppliers and specially the spinning houses comply with **ILO Convention no. 148** (Working Environment (Air Pollution, Noise and Vibration) and comply with national Threshold Limit Values for noise.
- Suppliers have provided training to the workforce on environmental and health issues and hazards.
- Suppliers shall undertake sufficient training in waste management, handling and disposal of chemicals and other dangerous materials.



## Corporate Social Responsibility (CSR) **Example scheme: GSCP Social Code**

Seven distinct themes which incorporate the listed ILO conventions:

- Forced, bonded, indentured and prison labour
- Child labour
- Freedom of association and the effective recognition of the right to collective bargaining
- Discrimination, harassment and abuse
- Health and safety
- Wages, benefits and terms of employment
- Working hours



## Consultation questions

1. Do you agree with the scope and coverage of proposed CSR criteria 2-4?
2. Are the compliance and verification routes workable?
  - *If no, how could they be improved?*
  - *Are there other suitable alternatives?*



## ED1 Design for durability

### Durable designs and repair service provision

Features should make the product more durable and have the potential to extend its useful life. Options could include:

- Stitching patterns
- Fabric re-enforcement in areas of wear
- Yarn selection and knitting patterns to reduce piling

Spare features such as fastenings and zips should also be made available:

- provided with the product upon sale
- via retailers or direct communication routes e.g. websites.



## ED1 Design for durability Durable designs and repair service provision

For specific high value garments (to be specified) repair services should be made available and/or promoted to consumers:

- via retailers and direct communication routes e.g. websites.
- directly or via affiliations.

*Assessment and verification: A design report is to be provided by the manufacturer and/or retailer identifying options, their potential benefit and the selected design feature(s). For specified types of garments evidence should also be provided of the availability of a repair service*



## ED1 Design for durability Industry best practice

**HAND-ME-DOWN**

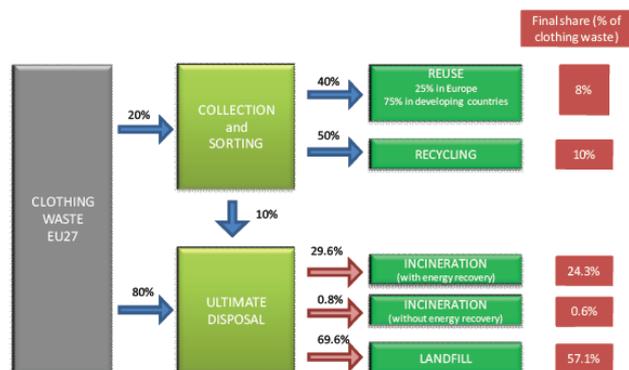
Classic cut organic ventile jacket lined with organic tweed.  
Two external jetted pockets. Internal zip pocket with earphone cable exit. Secure wallet pocket has wooden toggle fastener.  
Internal rib cuff at sleeve.  
S, M & L  
£400.00  
Buy

## Consultation questions

1. Is the area of focus correct? If not, what should it consider?
2. Is the proposed approach workable? If not, how could it be improved?
3. Are you aware of other industry examples?



## ED2 Design for recycling Closed loop systems design



Source: JRC (2011) IMPRO Textiles





## ED2 Design for recycling **Closed loop systems design**

- Promote textile recycling by ensuring that EU Ecolabeled textiles can technically be recycled and/or by promoting the recovery and recycling of textiles:
  - *Option 1: Consideration at the design and material selection stage*
  - *Option 2: Promotion of retailer take-back schemes, either closed loop or via compliance schemes*



## ED2 Design for recycling **Industry best practice**

### **Patagonia 'Common Threads' closed loop take-back**

- Recovery of old product displaying their brand.
- Has worked with manufacturers to ensure that specific polyester fibre product lines can be recycled.

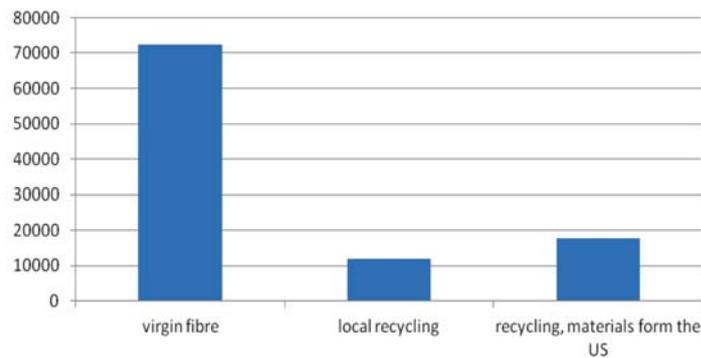
### **Marks & Spencers open loop take-back**

- Consumers who bring back old clothing displaying their brand receive in-store credits.

### **France, 'Grenelle law' take-back requirement**

- Textile producers that retail products on the French market must contribute towards a producer responsibility scheme.

## ED2 Design for recycling 'Common threads' LCA comparison



Source: Patagonia (2011) Common threads analysis

## Consultation questions

1. Should this criterion be considered within the scope of the revision?
2. Is the proposed approach workable? If not, how could it be improved?
3. Are you aware of other industry examples?



## CL1 Energy saving advice Washing and drying advice labels

- Whole life significance of the use phase - opportunities to influence consumer choices should be explored
  - *Impacts are largely related to hot water, tumble drying, loading and detergent choice*
- Potential to provide consumers with information on how to save energy in combination with appropriate washing detergents.
- Best practice - Marks & Spencers/IKEA: Consumers have been encouraged to wash clothing at 30°C or less, with a full load and to line dry.
  - *Evidence to be obtained as to how effective this has been*

### Options?

- Temporary labeling and packaging provided with products
- Adjust GINETEX/care labelling stitched into products in order to provide advice.



## Consultation questions

1. Should this criteria be considered within the scope of the revision?
2. Is the proposed approach workable? If not, how could it be improved?
3. Are you aware of other industry examples?



## CL2 Avoidance of air freight Disclosure on product labels



- Distribution phase may be responsible for 10% of the overall environmental impacts of textile products.
  - *Long distance shipment is dominated by shipping (92%) with air transportation a smaller share (8%)*
- A reduction in environmental impact of approximately 40% could be achieved if air freight reduced to a 4% modal share.
  - *Care needed to ensure that clothes shipments don't require additional biocide treatments.*

### Proposal

- Adopt similar approach to food labeling initiatives in the UK by retailers Marks & Spencers and Tesco
- Labelling would be applied to the end-product, disclosure would therefore be needed for B2B supply chain



## Consultation questions

1. Should this criteria be considered within the scope of the revision?
2. Is the proposed approach workable? If not, how could it be improved?
3. Are you aware of other industry examples?



## Follow-up contacts

**Oliver Wolf**

Tel. +34 954 48 82 96  
e-mail [oliver.wolf@ec.europa.eu](mailto:oliver.wolf@ec.europa.eu)

**Nicholas Dodd**

Tel. +34 954 48 84 86  
e-mail [nicholas.dodd@ec.europa.eu](mailto:nicholas.dodd@ec.europa.eu)

**Mauro Cordella**

Tel. +34 954 48 05 78  
e-mail [mauro.cordella@ec.europa.eu](mailto:mauro.cordella@ec.europa.eu)

European Commission, Joint Research Centre (JRC)  
Institute for Prospective Technological Studies (IPTS)  
Sustainable Production and Consumption Unit  
Edificio EXPO C/ Inca Garcilaso 3  
41092 Sevilla, SPAIN