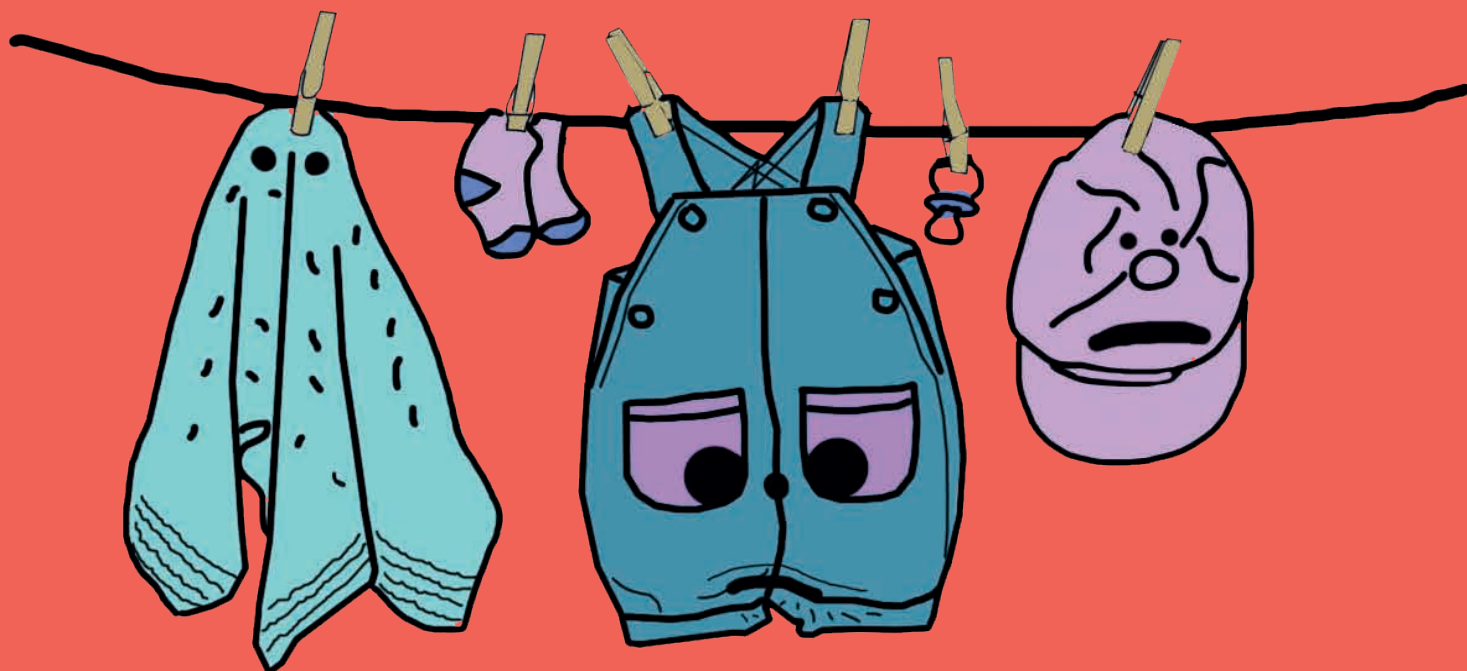




WECF



Textiles: Stop the chemical overdose!

Executive Summary

Towards more coherent and transparent rules for textiles in the EU and beyond for better protection of workers, consumers and the global environment

**Authors: Madeleine Cobbing,
Elisabeth Ruffinengo**

**A report by WECF
October 2013**

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A report by WECF

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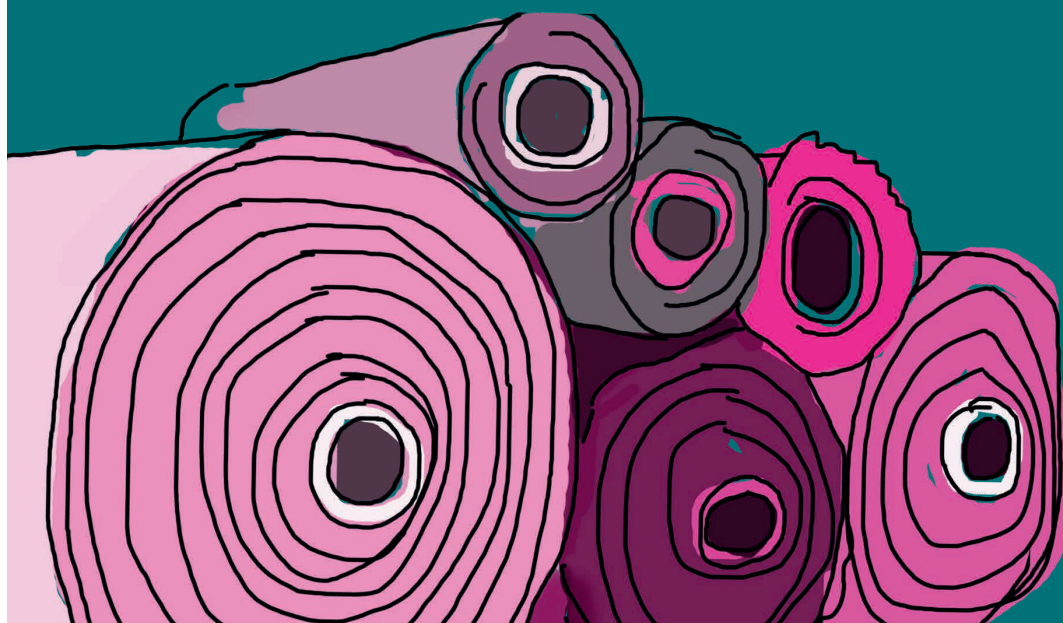
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Introduction:

Why is WECF concerned about hazardous chemicals in textiles?

In this report WECF explores whether textile products containing potential or known chemicals of concern, manufactured within or outside the EU and then placed on the EU market, are adequately regulated to ensure proper consumer information and protection from exposure to hazardous compounds. Indeed, textiles manufacturing is associated with huge consumption of chemicals, some of which are hazardous or potentially hazardous. Some estimate that 4 kg of chemicals are needed to produce 1 kg of t-shirts¹. One of the challenges is: how to provide an adequate and easily understandable legislative framework for products that are inherently complex while at the same time ensuring a high level of protection of the European consumer? This Executive Summary summarizes Chapter I and II of the report, on how textile products go through a wide range of processes, which result in a multitude of potential sources of contamination with hazardous chemicals through the whole textiles supply chain, which can also remain in the final consumer product (Chapter I) as well as the question of whether current EU regulations are sufficient to protect consumers and the environment from the hazardous chemicals in textile products (Chapter II).

In April 2013, the Swedish Chemical Agency (KEMI) released a report entitled "Hazardous chemicals in textiles"². The authors examine the need to further adapt existing EU regulation to provide for a better consumer protec-

tion from hazardous chemicals present in textiles. Therefore, this chapter will not repeat the contents of KEMI report – neither those of the numerous reports on chemicals in textiles drafted in the recent years - but will focus on complementary aspects and stress, when necessary, the arguments put forward by KEMI, which WECF considers to be in line with better protection of human health and the environment, and especially of the health of children, the members most at risk in our societies.

Why children are more at risk: hazardous chemicals in clothes for infants, children, and pregnant mothers

The developing foetus, infants and children are particularly sensitive to chemicals and their toxic effects, and their impacts can cause life-long health effects. Exposure to chemical substances begins with the foetus developing in the womb; chemicals that a mother is exposed to on a daily basis, as well as chemicals that have built up in her tissues over time, can be transferred to the foetus through her blood. Infants are also especially vulnerable to the effects of hazardous chemicals after birth, when they continue to be exposed to relatively higher quantities of hazardous chemicals, particularly in their food and from the indoor environment.

Textiles and clothing products are known

to be one of these sources of hazardous chemicals. Therefore, this report addresses the question of which hazardous chemicals are used in textiles manufacturing, are likely to remain in the final product and what the potential impact might be, with a particular focus on clothing for infants, children and expectant mothers. Inevitably, our clothing is in close and continuous contact with our skin and people have justifiable concerns about what might be found within these most intimate of products, especially where infants, young children and pregnant mothers are concerned.

How hazardous chemicals can affect our children's health

There is a wide range of health problems that affect children, or have their origins in childhood, that have been increasing in the last 50 years. These include birth defects, cancer, asthma, immune system disorders, developmental and reproductive disorders and nervous system disorders. Many hazardous chemicals that have been found to accumulate in our bodies have been linked to these diseases.

Concern is focussed on chemicals that exhibit properties which make them intrinsically hazardous – such as toxicity, persistence, carcinogenicity or other properties of equivalent concern, such as toxicity to the nervous system or the ability to disrupt the endocrine

(hormonal) system. Endocrine disrupting chemicals (EDCs) in particular may be playing a role in the rise of reproductive and developmental disorders, among other factors. Recently, scientists have urged the UN to take action on chemicals in consumer products and pesticides, noting that:³

- “EDCs effects occur at low doses. Many EDC effects occur at low doses even when high dose effects are not apparent.
- EDCs can affect future generations and timing of exposure is key. The most sensitive period is during periods of development, from the fetal and post-natal periods, which can extend into infancy and childhood for some tissues.”

A major problem is that the hazardous properties of many chemicals on the market have not been fully assessed and this lack of data makes it hard to judge which substances might also be intrinsically hazardous. The main sources of exposure to hazardous chemicals are food (which can become contaminated as a result of environmental pollution, the use of agricultural chemicals and from the leaching of contaminants in components and packaging) and air. House dust is also an important exposure pathway in young children. Babies and children can also directly ingest chemicals present in clothing, toys and other items, by chewing or sucking them.

Key figures on textiles in the EU and beyond:

- The global textile and garment market is currently worth more than \$400 billion a year;
- It is predicted to grow by 25 per cent by 2020 with much the biggest contribution to this growth coming from Asia.
- The children’s wear market in the EU is also growing, despite the economic downturn, and is currently worth 28 billion Euros, with five countries making up 67% of the market - France, UK, Italy, Germany & Spain.

However, the most severe impacts of the textiles production are felt in the countries where manufacturing takes place; most clothes sold in Europe come from China, Bangladesh, Turkey and India. As demonstrated by what can only be called the collapse of the textiles mirage in Bangladesh, textiles production is governed by the need to “optimise” costs, by minimising of workers’ salaries as well as environmental and social protection costs. At present, the textiles production chain lacks transparency, as for many imported goods which involve a long chain of successive stakeholders. The absence of coherent and harmonized rules at international level as well as efficient tools to make corporate liability a

reality makes it possible to economic stakeholders to escape their responsibilities.

How are we exposed to chemical residues in garments on the market? Some well-known examples

Hazardous chemicals have been detected in a wide range of textiles and clothing products. A large number of complex chemical ingredients are used to produce textiles for clothing, some of which are potentially hazardous; these chemicals have many different functions at different points of the textiles manufacturing process or the finishing of garments and may be present in the finished articles, whether intentionally or not.

Box 1

Box 1. Selected chemicals used in textiles processing and finishing, with intrinsically hazardous properties.	
Process chemicals	Surfactants: nonylphenol (NP) and nonylphenol ethoxylates (NPEs) Dyes: I) Carcinogenic amines released by certain azo dyes II) Heavy metals: cadmium, lead, mercury and chromium (VI) Chlorinated carriers: chlorobenzenes, chlorinated solvents Phthalates
Functional finishes – designed to stay in the clothes	Flame retardants: I) Brominated and chlorinated flame retardants II) Short chain chlorinated paraffins Water and stain resistant finishes: Per/polyfluorinated Chemicals (PFCs) Easy care finishes: formaldehyde Anti-microbials: nanosilver, triclosan, triclocarban Coatings: MEK
Post-production treatments	Biocides: organotins, chlorophenols, DMF

shows a few of the hazardous chemicals used in textiles that have been identified as chemicals of concern and are the subject of legislative restrictions or bans to a greater or lesser extent at an international or national level, due to their intrinsically hazardous properties.

A total of 18 different studies into the presence of hazardous chemicals in clothing in the last decade have been summarised by WECF for this report, (taking a Swedish Chemical Agency report as the starting point), which identified the presence of 17 different groups of hazardous chemicals in the products examined. Many children’s products were included in these studies, although there was little apparent difference between clothing products for adults and children. Highlights include:

Per/poly-fluorinated chemicals (PFCs): PFCs are designed to remain in the finished item as they are used as waterproofing for outdoor clothing and are highly resistant to breakdown. The stable properties of PFCs

are also a major environmental down-side, namely their long persistence in the environment once they are released. Studies by Friends of the Earth Norway and Greenpeace e.V found these chemicals in outdoor-wear, sometimes in significant concentrations.

Antibacterial chemicals: Also designed to remain in the finished item, antibacterials such as silver, triclosan and triclocarban are intrinsically hazardous. However, studies have shown that these chemicals are washed out, to a greater or lesser extent, leading to problems downstream where they can interfere with wastewater treatment

processes by harming necessary bacteria and making the sludge unsuitable for use as a fertiliser or in landscaping. Studies also question the effectiveness of the biocidal treatment, considering the high proportion of the original concentration of the biocides washed out, and raise the question of potential exposure to consumers. Surveys show that there is no consumer demand for antibacterial treatments in clothing products and that people do not change their behaviour, in terms of washing items less (and saving water and energy, a claimed benefit of antibacterials), as a result of this treatment.

Phthalates:

These chemicals are mainly used as softeners in plastics and can be found in the plastisol (PVC) prints of textiles manufactured and sold around the world. Phthalates are widely found in the environment, primarily due to their presence in many consumer products. They are also commonly found in human tissues, with reports of significantly higher levels of intake in children.⁴ There are substantial concerns about the toxicity of phthalates to wildlife and humans. For example, DEHP, one of the most widely used to date, is known to be toxic to reproductive development in mammals. Up to 40% of plastisol used to print textiles can be made up of phthalates, so it is not surprising that studies have found high concentrations of these hazardous chemicals in items of clothing that bear these prints. Ironically, EU regulations on toys or products that children can put in their mouths prescribe a restriction limit for certain phthalates with hazardous properties of a maximum concentration of 0.1% in the final product; however, contrary to sleeping bags, children's clothing is not included within the scope of the legislation because it is not considered to be an article "intended to facilitate sleep".

Heavy Metals:

The European Consumer Organisation BEUC (BEUC 2012) tested nine national football shirts for EURO 2012 bought in Italy. The toxic heavy metal lead was found in the majority of samples; other toxic metals found were chromium, nickel and antimony. Chromium and nickel are both known to be sensitizers; once people are sensitised, allergies can be triggered which will remain a life-long health concern. Antimony, in combination with sweat, can lead to skin dermatitis.

Nonylphenol ethoxylates (NPEs) and nonylphenols (NPs):

Several reports have demonstrated the widespread presence of NPEs in clothing products, which were found to be present above detection limits in approximately two

thirds of samples tested. NPEs break down to form the more toxic, persistent and bioaccumulative NPs, which are also known to be endocrine disruptors. This shows that despite restrictions within the EU on their use in textiles manufacturing, these chemicals are used routinely during the manufacture of textiles elsewhere, in particular countries in the Global South such as China.

A study by the Danish Ministry of Environment specifically looked at the presence of NPEs in children's products. Children's exposure to NPE from several pieces of clothing worn at the same time was calculated, based on the sample results. The results showed that in a worst-case scenario a child's absorption of NP indicates an increased health risk. Although the possibility of dermal adsorption of NPEs is disputed, the authors expressed their concern due to higher levels of NPEs found in other studies with larger samples.

"Textiles containing these substances are therefore assessed to be a significant source of exposure to NP/NPE in daily life. It therefore makes good sense to try and reduce the levels of NP and NPE in textiles as much as possible because these substances are suspected of endocrine disrupting effects, to overcome any possible combination effects of NP/NPE, respectively, and other endocrine disruptors which humans may come into contact with in daily life."

NPEs and NPs have been restricted in Europe for some time; however, imported clothes are not included in this restriction. This is not only potentially exposing vulnerable children directly to these substances, it is also leading to the continued pollution of European waterways with these chemicals; NPs continue to be found in the sludge of wastewater

treatment plants in Europe, due to the release of these chemicals during the laundering of imported clothes.

The European rapid alert system for non-food dangerous products (RAPEX):5

WECF did a search of the RAPEX database for the key word 'chemical' in the category 'clothing, textiles and fashion items', between 1st January 2011 and 3rd June 2013. The RAPEX database lists products that have been reported on the RAPEX system as a result of testing by customs, some of which have also been the subject of measures taken by Member States and some examples that, while not illegal, resulted in withdrawal from market. The search found 318 examples of such products, 79 of which related specifically to clothing. The chemicals found included the banned substance dimethylfumarate (DMF) (3 items), chromium VI (36), phthalates (3), formaldehyde (4) and azo dyes (33) (which give rise to carcinogenic amines).

For example, a product bought in Poland in February 2012 and made in Thailand was found to contain 158-168 mg/kg of formaldehyde, which is used in easy care finishes in textiles. It is known to be a skin sensitizer, is acutely toxic and is classed as carcinogenic by the IARC; its withdrawal from the market was ordered by the authorities.

However, not all hazardous substances are checked by the RAPEX system, for example, there are no entries for nonylphenol ethoxylates, the perfluorinated chemicals PFOS and PFOA, organotins or flame retardants. In a survey of 692 items of imported textiles conducted by the Finnish Customs laboratory, which included children's garments, 12%



Examples of textile labels which help consumer making better informed choices

did not conform to regulations; this indicates a significant problem, if this pattern is typical of imported products into the EU.

The origins of contaminants in the final products: hazardous chemicals in the textiles supply chain

Textile and clothing product chains can be long and complex, with the various steps of textile processing and garment manufacture taking place in many different countries around the globe.

Raw materials:

Chemicals – and sometimes hazardous chemicals – play a role from the very start of the textiles production chain. Raw materials – both natural and synthetic, of which the majority is cotton and polyester – make up a major part of the environmental impact from the textiles chain.

The use of pesticides and fertilisers in growing cotton, together with large quantities of water result in severe impacts on human health, the environment and the food chain, particularly to those working in the fields and to nearby communities, including many children. However, residues of pesticides in the final product are mostly considered to be bound into the product, if they are present at all. On the other hand, as a thermoplastic, polyester is based on fossil fuels; in the manufacturing process toxic antimony trioxide is used as a catalyst, resulting in hazardous waste and residues in effluent. Antimony trioxide can also be detected in the final product, with the criteria for an EU ecolabel for textile products criteria requiring antimony content of less than 260 ppm.

Textiles manufacturing:

Textiles manufacturing involves many different processes and chemicals, most of which are non-hazardous chemicals such as sodium chloride, used in large quantities. Thousands of chemicals are known to be used, hundreds of which have been identified as hazardous, although the remaining chemicals may also have hazardous properties. The most chemically intensive part of textile manufacturing is ‘wet processing’, such as dyeing, washing, printing and fabric finishing.

As a rule chemicals used in the early stages of textiles processing are more likely to be consumed and washed away, while chemicals used in the dyeing/printing and finishing processes are more likely to remain in the finished product (depending on the specific physical and chemical properties of the chemical). Some chemicals, such as coatings and fire retardants, are designed to remain in the article and others are present in finished



Human body shall not become a toxic waste

articles as an indirect result of the manufacturing process.

Chemicals that are washed out are mostly released in wastewater effluents, where they enter waterways; they can also be released via the air and to soil from solid wastes. The chemicals and their breakdown products can remain in ecosystem over prolonged periods, concentrating in biota and the food chain. In recent years, there has been more attention on the presence of hazardous chemicals in effluent from textiles manufacturing facilities in the Global South, whereas until recently, the issue of these hazardous chemical discharges was shrouded in secrecy.

Inevitably, hazardous chemical use and discharge also impacts on local communities and on workers, who are in daily and routine contact with a large number of chemical substances, many of which are known to be hazardous to human health; acute health problems are commonly caused by the use of textile chemicals which act as irritants, for example formaldehyde-based resins.

Taking action to move towards a sustainable textile model

there is adequate regulation to ensure proper consumer information and protection from exposure to known and potentially hazardous compounds in textiles, whether manufactured within or outside the EU, and then placed on the EU market? The main challenge is how to design an adequate and easily understandable legislative framework for products that are complex by nature while at the same time ensuring a high level of protection of European consumers.

A recent report by the Swedish Chemical Agency⁶ examined the need to further adapt existing EU regulation to provide for better protection of human health and the environment, from hazardous chemicals present in textiles. Many of its recommendations, espe-

cially those concerning the health of children, are re-emphasized in this report.

As a basic consumer product, second only to food, it seems strange that there is no single Regulation or Directive that provides an overview of which substances/mixtures are or are not regulated in textiles, as is the case for other product categories, such as toys.

EU legislation on chemicals is inherently complex; the huge number of chemical substances used in textiles (around 1,900 in a “non-exhaustive” list) and the alleged number of corresponding mixtures (around 15,000) makes it difficult to get a clear picture of the situation. Add to this the wide range of different legal instruments that can apply to textiles or the textile production chain, either directly or indirectly. Voluntary initiatives by clothing brands, to restrict hazardous chemicals in their products are generally limited by a lack of transparency and lack of validation. Both regulatory and mainly voluntary measures rely on so-called “safe limits” for inherently hazardous chemicals that allow the continued use of hazardous chemicals.

The complexity of the different regulatory requirements on textiles and the logic of how or why they are applied is hard to comprehend, even for those with legal experience, let alone members of the public. For example:

- Plasticisers known as phthalates are restricted under EU Toys regulations, a restriction which also applies to some textiles products that can be “placed in the mouth”; EC guidance on which textile products are included states “The main purpose of pyjamas is to dress children when sleeping and not to facilitate sleep”; therefore pyjamas are not covered by the restrictions, whereas sleeping bags are. Does this mean that a sleeping bag needs to be safer than pyjamas? Is a child more or less likely to suck on a pair of pyjamas compared to a sleeping bag?
- A search of the EU chemicals legislation REACH on chemicals that are restricted in textiles brings up a list of just 7 chemical groups and does not include well known hazardous chemicals that are known to be restricted in textile products, such as PFOS.
- Nonylphenol ethoxylates, which degrade to the more toxic nonylphenols, are known to be endocrine disruptors and are restricted in European textile products, but not imported textile products; the only rationale for a proposal to set limits on their presence in imported consumer products is the fact that washing these clothes leads to their release into European wastewaters. This is despite the fact that these chemicals are no longer used in European textile

production and that there is therefore no technical justification for their continued use in textiles manufacturing.

It is impossible to ignore the global nature of the textiles industry. There's no doubt that the search for low-cost production and the avoidance of the more stringent environmental, safety and social rules that are in force in Western countries, for example, is a driver for international textile companies to locate the major part of their production in developing countries. There are plenty of cases that illustrate this: the collapse of the Rana Plaza building in April 2013 in Bangladesh, which killed 1,132 people and injured many more, was

9 Recommendations to address 9 facts about textiles in the EU

Fact 1:
Current EU legislation on chemicals in textiles is not clear and transparent enough to ensure a proper understanding.

Recommendation 1:
Ensure clarity, transparency and comprehensive understanding of EU textiles legislation

Textiles is a major product category as well as a complex issue, it deserves a single regulatory instrument encompassing both labelling and information requirements as well as regulatory limits on the presence of chemicals in the product. Currently, textiles regulation n° 1007/2011 does not encompass restrictions on substances of concern, which are covered by REACH, contrary to regulations like the Toys Safety Directive or the Cosmetics regulation, for example. WECF recommends that all information and rules applicable to restrictions on hazardous chemicals in final textiles articles be included in a single document, so as to make it understandable. Option A proposed by KEMI in its 2013 report, entitled "Expanding the Fibre Labelling Regulation to restrict the chemical content in articles" should be favoured.

Fact 2:
In the EU and globally, textiles for infants and children are regulated in the same way as textiles for adults

Recommendation 2:
Implement specific rules for children's textiles that are adapted to children's vulnerability

only the latest in a line many similar tragic accidents on a smaller scale. The less dramatic but also catastrophic and long-term exposure of workers, communities and end consumers to the hazardous chemicals used by the textiles industry is another aspect of this problem. It is however possible for textile products to originate from organic or low-impact fibres and to be manufactured in a sustainable way, which benefits workers producing raw materials and in manufacturing, the environment and the final consumers. The following nine recommendations are essential steps for EU regulators to take in order to transform the textile industry and protect European consumers.

Children are more vulnerable to the adverse effects of chemicals, due for example to their developing immune, respiratory, neurological and reproductive systems and are potentially more likely to be exposed to hazardous chemicals, particularly due to their size, their behaviour, the delicacy of their skin and their metabolism. A list of hazardous chemicals to be banned from children's textiles, to the lowest possible detection limit (together with regular reviews to ensure continuous reductions in levels of chemicals) must be urgently established at EU level, with particular attention paid to some of the chemicals listed in this report. Today, in Norway for example, ecolabelled clothes represent less than 1% of the market, which is few and does not ensure the availability of better quality products to a significant part of the population. But this specific market is driven by children's wear, which shows a real interest by consumers and the need to go further in this direction.

Fact 3:
Imported products are not controlled to ensure the lowest possible exposure of consumers and the environment to (potentially) hazardous chemicals

Recommendation 3:
Ensure the adequate and sufficient control of both imported and EU-made textiles

Currently, restrictions applicable to products imported within the EU are not implemented as they should. But given the fact that most textiles sold in the EU today originate from countries outside the EU, it is all the more important to dedicate appropriate human, logistical and financial resources to ensure the control of these goods, which every single European citizen consumes at a very rapid

pace. In a 2011 report, the Finnish Environment Institute noted that "Due to the lack of resources, tenational customs laboratory has not been able to extend the surveillance to cover all articles and chemicals of the Annex XVII of REACH, only those based on previous legislation". This should be made history.

Fact 4:
Many potentially harmful chemicals used in textiles are absent from textiles regulations

Recommendation 4:
Fill the knowledge gap to ensure transparency and regulate all relevant known and potentially harmful chemicals used in the textiles sector

Currently, a preliminary list of some 1,900 chemicals are known to be used in the textile production, whereas only 165 of these chemicals have been identified as hazardous and have a harmonized classification in the EU.

Only information and transparency can trigger adequate action. All tools should be used to fill the existing knowledge gap, including:

- Mandatory reporting by companies of restricted hazardous chemicals in products, which trigger sanctions in the case of non-compliance,
- Positive lists of chemicals to be used to complement existing Restricted Lists of Substances,
- An inventory of chemicals used in textile supply chains,
- And most importantly: the reduction at source of the potential risks for workers and consumers by phasing-out of known or potentially hazardous chemicals, whatever their classification (CMR, PBT, vPvB, neurotoxic, immunotoxic, sensitizing, endocrinedisruptors, etc.)

A 2011 report by UNEP on Chemicals in Products (CiP) noted that "Environment Ministries and enforcement agencies themselves typically have no access to CiP information, and that "government personnel interviewed had neither access to negative lists data (e.g. from suppliers) nor to data on actual chemical content in products". The Finnish Environment Institute has noted that: "Management is often conceived and framed narrowly, for instance focusing on restrictions instead of incentives, or technical instead of institutional measures", adding that "Narrow framing of the risks and lacking coupling with associated benefits (such as when considering risks of losing

benefits when substituting alternative products or processes (emphasis added).

Fact 5:

Dermal exposure is the number one route of exposure for textiles consumers but limited knowledge exists on allergic/sensitizing reactions to textile ingredients; consequently these hazards are under-regulated

Recommendation 5:

Enhance knowledge about the health impacts of dermal exposure to chemicals in textiles to adequately protect the consumer from exposure to sensitizing and irritating substances

Several reports point out that the dermal route is number one route of exposure to chemicals in textiles. A 2006 review estimated that among 3,000 individuals using a textile dye mix consisting of 8 disperse dyes the frequency of contact allergy was 1.5 per cent. In Denmark, some 20% of the population is allergic to chemical substances and known allergies have increased over the past 10 years. The concentrations of sensitizing and irritating chemical substances used in chemical mixtures which potentially remain in the finished textile product are completely unknown. A 2013 study on allergies and chemical compounds in textiles commissioned by DG Enterprise estimated that most of the maximum limit values – maximum limits authorized in a product of said sensitizers – are not based on Quantitative Risk Assessment, but are arbitrary. WECF supports measures to harmonize current limit values on quantitative risk assessments (QRA), which take into account aggregate exposure, as an immediate and urgent step, but also recommends stronger action to enforce a strict ban on strong chemical sensitizers in textile products, based on their intrinsic hazard, to the strictest possible detection limit using the most up to date testing technology (which would need to be periodically updated in the future), in particular for children's textiles, in order to reduce potential risk arising from cumulative sources of exposures.

Fact 6:

Consumers are lost in a jungle of textile labels and confused by unclear information

Recommendation 6:

Restore the confidence of consumers and citizens through the availability of clear and comprehensible information on textiles

Consumers want information on the presence or absence of certain chemicals in textile products, but they cannot find it; over 70 different textiles labels are available, making it impossible for anyone to navigate their way through this jungle. At the opposite, some companies do not communicate on the chemicals content of their articles, since they judge it "too risky" to communicate about chemicals in products to the general public. But is it not too risky to be exposed to so many chemicals in textile products?

According to Textile Regulation n° 1007/2011, businesses may state the country of origin and provide social and environmental information in their labelling or packaging provided it is not misleading to consumers. In fact, there is no reliable and information system for the consumer to provide consumers with adequate information on the country of origin and ensure traceability of textile products.

Simple rules that are based on the application of the most protective rules for health and environment should be the rule for all textile products: pyjamas would then be considered in the same category as sleeping bags!

Fact 7:

Cheap textiles at any cost? Textile workers are sacrificed to the devastating economic, social and environmental conditions in the production of textiles

Recommendation 7:

The EU should champion social and environmental rights over trade and the "optimization of costs"

Cheap textiles are a direct consequence of the promotion of a system, by many actors including the World Trade Organization, World Bank, the International Monetary Fund and corporations, where export figures and the reduction of costs come before human, social and environmental factors. WECF urges institutions such as the International Labour Organization, UNEP and the World Health Organization to intervene to prevent activities by transnational companies and their subcontractors that can cause long-term, irreversible damage to human health, the environment and the social conditions of workers. This is unacceptable in the 2013 globalized economy.

WECF stresses the need for the EU to engage in this issue by ensuring that sufficient resources (human and financial) are dedicated by in particular the big textile players to implement actions on the ground by monitoring, controlling and raising standards

to ensure that the best available standards applicable within the EU are also in place outside the EU, where most of the textiles sold in the EU are today manufactured.

Links and resources:

- The petition led by the Ecuadorian government at the United Nations Human Rights Council on Friday, September 13th, which marks a departure from reliance on voluntary mechanisms that have characterised the corporate social responsibility debate,
- The Stop Corporate Impunity campaign, <http://www.stopcorporateimpunity.org/>
- The national French Proposal to enhance social corporate responsibility, <http://www.forumcitoyenpourlarse.org/data/File/mesures-phare-colloque-final.pdf>
- The Clean Clothes campaign, <http://www.cleanclothes.org/resources/publications/Breathless>

Fact 8:

Textiles production and the washing of textiles products releases contaminants into the environment, increasing the environmental burden of hazardous chemicals

Recommendation 8:

Regulate chemicals released in the environment today to ensure a cleaner environment tomorrow

Tools such as the EU Water Framework Directive and Air Quality guidelines do not keep up with the development and consequent release of newly developed chemical compounds into the environment. It is known that a certain number of chemicals found in garments may be water soluble and therefore released during washing: exposure to the consumer will be limited, as the substance will be washed off, contaminating the water cycle. Air and water contamination originating from textiles may be unnoticed but it is still real. In Finland for example, according to Månsson (2009), the stocks of DEHP, PBDE and AP/APEO are accumulating in the technosphere. This means that future emissions are likely to be higher than current emissions, even if no new additions are made. For DEHP, past usage might contribute to most of the current emissions.

Legislative action shall be based on the precautionary principle and ensure the implementation of the principle of the producer's liability, which places the responsibility of preventing ecological damages in the hands of those which manufacture or market the products. WECF recommends that legislation should be adaptable to quick changes while

there is still time to limit the dissemination of hazardous compounds in water, air and soil.

Fact 9:

The globalization of manufacturing and consumption prevents the emergence of a sustainable textiles model

Recommendation 9:

From global to local - engage in a transition model for textiles, valuing the wealth of local, high-quality and small-scale textile stakeholders

There is a need to change the patterns of the current textile model, to transform the system as it is now into a more sustainable one. In addition, consumers are demanding cleaner and greener products that ultimately will need to come from a more locally based textiles production chain.

- Reducing the distance between the places where textiles are manufactured and sold would make it easier for stakeholders to communicate, and improve the flow of information through the whole supply chain, enhancing transparency,
- Promote and support eco-design initiatives of textile companies which are turning towards sustainable models of production, manufacturing and distribution,
- Extending labelling (such as Oeko-Tex 1000, GOTS, or the EU ecolabel) to a wide range of products would significantly help consumers in their choices; extending the criteria of these best-practice labels to all textile products, should be undertaken as a priority for all textile products for infants, children and pregnant women.

These are all elements which can guide interested legislators and countries towards a more coherent textile model, at a time when the transition towards a more sustainable model has to become a reality.

These recommendations will lead to renewed consumer confidence in textile products. The confidence of consumers in the safety of textile products, especially those that will be worn by our infants, children and by pregnant women, needs to be restored. To WECF, it is clear that a sustainable textile model can be reached, step by step, which may also be beneficial to employment in the EU, by encouraging the textiles manufacturing industry to base its model on the use of sustainable materials, local know-how and traditions. With greater transparency and accountability in the textiles industry, we will know that the clothes that are produced will be safer for our children. ■

References

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⁵RAPEX is the European rapid alert system for non-food dangerous products, which reports products that are hazardous to consumer health on its on-line database system.

⁶Need for coherent Union legislation on hazardous substances in textiles, Information from the Swedish delegation to the Council of the European Union, October 2012 <http://register.consilium.europa.eu/pdf/en/12/st14/st14905.en12.pdf>

Textile labels

empowering consumers to make informed choices

Label	Name and main characteristics
	<p>EU Ecolabel</p> <p>The EU Flower ecolabel is one of the best known by the consumers. This label has a range of 40 criteria which covers the whole life cycle of textile articles made of natural, artificial or synthetic fibres. The Ecolabel aims at identifying products with a reduced environmental impact during their whole life cycle. It includes restrictions/bans on the use of ingredients such as pesticides, antimony, lead, formaldehyde, allergens, etc. If the cotton used is 100 percent certified organic, the reference to “organic cotton” can be included on the ecolabel. Social or economic criteria are not covered. www.ecolabel.eu</p>
	<p>Confidence in Textiles - Oeko-Tex Standard 100</p> <p>Oeko-Tex is the international association for research and control in the field of textile ecology. The “Confidence in Textiles” label guarantees the absence of hazardous chemicals in the textile above specified limits. Limits or bans are set for a wide range of hazardous chemicals, including formaldehyde, chlorinated phenols, phthalates, organotins, allergens, flame retardants, etc. Oeko-Tex has separate product categories for infants and children as well as for products that have “direct skin contact” which provide specific guarantees to the consumer. Oeko-Tex also covers product categories like mattresses, bed linen, leather articles, etc. www.oeko-tex.com</p>
	<p>Confidence in Textiles -Eco-friendly factory/ Oeko-Tex Standard 1000</p> <p>To be granted Oeko-Tex standard 1000 certification, companies have to fulfill specific criteria and show evidence of conformity, and at least 30% of their production has to be certified Oeko-Tex standard 100. Criteria encompass the main aspects of pollution generated by the textile industry as well as social criteria, and requirements include meeting certain standards for the treatment of waste water, the absence of dyes harmful to the environment, the absence of child labour. www.oeko-tex.com</p>
	<p>Confidence in textiles – Oeko-Tex Standard 100 Plus</p> <p>Products with the label 100 Plus fulfill both the criteria of the Oeko-Tex 100 and Oeko-Tex 1000 certification. This encompasses both environmental and social requirements. But the label does not guarantee the absence of use of nanoparticles and biocides for anti-dirt or anti-dust mite treatments.</p>
	<p>GOTS – Global Organic Textile Standard – Made with Organic</p> <p>A product labelled with GOTS and the indication “organic” must contain a minimum of 95% of organic certified fibres. GOTS criteria are very demanding and encompass the manufacture of fibres, the process, toxicity for human health and minimum social criteria. GOTS replaces former Ecocert organic and ecological textiles as well as the Dutch EKO label, and covers natural textiles only. www.global-standard.org</p>
	<p>Global Organic Textile Standard – Organic</p> <p>A product labelled with GOTS and described as “made with organic” must contain a minimum of 70% of organic certified fibres. GOTS replaces former Ecocert organic and ecological textiles as well as the Dutch EKO label, and covers natural textiles only. www.global-standard.org</p>

	<p>bioRe</p> <p>bioRe cotton is organically grown. BioRe also encourages farmers to diversify their production in order to step out of mono-culture. The dyeing of textiles takes place without the use of synthetic chemicals and chlorine is avoided for bleaching. The label guarantees decent working conditions for workers, and the traceability of all products through the use of a code makes it possible to follow each step, from the culture of the cotton to its final transformation into the product.</p> <p>www.remei.ch</p>
	<p>Blauer Engel</p> <p>The German label Blauer Engel gives guarantees on both environmental and health concerns. The use of GMO crops is banned, and all natural fibres used have to be organic. For example, the material for cellulose must come from forests which are subject to sustainable management. Fire retardants are banned, and dyes must be resistant to cleaning, sweating, light, etc. www.blauer-engel.de</p>
	<p>Naturtextil</p> <p>This label is well known in German-speaking countries. A Naturtextil Best product bans the use of ammonia, chlorine, heavy metals, formaldehyde, nickel and chromium among others and also requires that basic conventions set by the International Labour Organization are respected. The label also requires manufacturing processes which rely on less polluting methods, a specific requirement compared to other labels.</p>
	<p>Bra miljöval</p> <p>The Swedish eco-label Bra miljöval (Good Environmental Choice) is administered by the Swedish Society for Nature Conservation (SSNC). This eco-label is reported to be the most stringent of all environmental labels, with restrictions that apply to the whole textiles life cycle, from raw materials and processing to the finished article. "Good Environmental Choice" aims to use less harmful chemicals in the textile production and targets the toxicity and persistence of chemicals used, which should not be harmful to factory workers or to consumers using the finished article. The standards apply to textiles made of natural fibres and to specific types of man-made fibres such as viscose and recycled fibres from polyester and polyamide. Reused textile products can apply for Bra miljöval Second hand or Re-design label to reduce the use of new resources and environmental impacts.</p>
	<p>Demeter</p> <p>Demeter label means that the fibres of the product come from farms with a "biodynamic agriculture" certification, according to criteria which are more stringent than the "AB" label. The rules from the International Natural Textiles Association (Naturtextil) apply to the fibres manufacturing process.</p> <p>http://demeter.net</p>
	<p>Fairtrade/Max Havelaar</p> <p>This label guarantees that fibres supplied are "fair trade" guaranteeing decent revenues for farmers and producers, as well as for development perspectives. Criteria mostly cover trade aspects but the environment is also taken into account, since GMOs are banned, only cotton which does not require irrigation is used and cultivation takes place in polycultures. The quantities of pesticides used are reduced by half compared to conventional farming.</p>
	<p>Better Cotton Initiative</p> <p>The Better Cotton initiative was launched in 2005. Integrated Pest Management is among its requirements, and the label requires that pregnant women or children do not handle pesticides. Only pesticides which have been granted an homologation and are labelled in the language of the country of use are authorized and those listed under the Stockholm Convention are prohibited. Some pesticides, such as endosulfan, which is listed in the Annexes of the Rotterdam Convention, are no longer used. Employees and staff have access to drinking water and are trained in health/safety measures relevant to their specific job. The employment of children under 15 years is forbidden.</p>



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