

Hazardous chemical substances in textiles

– proposals for risk management measures

Report from a government assignment

REPORT 8/16



The Swedish Chemicals Agency is supervisory authority under the Government. We work in Sweden, the EU and internationally to develop legislation and other incentives to promote good health and improved environment. We monitor compliance of applicable rules on chemical products, pesticides and substances in articles and carry out inspections. We review and authorise pesticides before they can be used. Our environmental quality objective is A Non-toxic Environment.

© Swedish Chemicals Agency. Print: Arkitektkopia, Stockholm 2016.

ISSN 0284-1185. Article number: 361 206.

Order print from Arkitektkopia AB, Box 11093, SE-161 11 Bromma.

Order tel: +46 8 505 933 35, Order fax: +46 8 505 933 99, e-mail: kemi@cm.se.

Preface

This report on measures to reduce the risks associated with hazardous substances in textiles is the presentation of a Government assignment that was given to the Swedish Chemicals Agency in its appropriation directions for 2015.

The purpose of the report is to show measures that can be taken to reduce the risks to health and the environment posed by hazardous substances in textiles. This report has been produced in accordance with the conclusions and recommendations set out in the previous Government assignment on Chemicals in textiles – Risks to human health and the environment, Report No. 6/14, October 2014.

This assignment was carried out at the department for *Development of Legislation and Other Instruments*. Kent Wiberg, Head of Unit, was responsible for the assignment, and members of the project group were Jenny von Bahr, Christophe Kellner, Amelie Pedersen (project manager), Elin Simonsson, Emma Westerholm and Camilla Westlund. This work has been carried out in consultation with the public agencies, companies and organisations concerned.

Content

Summary	6
Sammanfattning	7
1 The assignment	8
1.1 The Government assignment	8
1.2 Consultation	8
2 Introduction	9
2.1.1 Identified problem substances in textiles	10
2.1.2 Ongoing efforts to reduce the risks	11
2.2 Proposals for further measures	12
3 Development of sector-specific legislation covering textiles	14
3.1 Grounds	14
3.2 Possibility of implementing the measures	15
3.3 Formulation of sector-specific legislation covering textiles	15
3.4 Implementation	16
4 Extended restriction on certain azo dyes	17
4.1 Grounds	17
4.2 Extended restriction on azo dyes by way of a technical adaptation of REACH	17
4.2.1 Possibility of implementing the measures	18
4.2.2 Formulation	18
4.3 Restriction on azo dyes at national level	19
4.3.1 Possibility of implementing the measures	19
4.3.2 Formulation	22
4.3.3 Implementation	22
5 Inquiry into an excise duty on clothing and home textiles	24
5.1 Grounds	24
5.2 Possibility of implementing the measure	26
5.3 Formulation	26
5.3.1 A possible tax structure	26
5.3.2 Taxable articles	26
5.3.3 Liability to pay excise duties	27
5.3.4 E-commerce	27
5.3.7 Chemical substances in specific parts of an article	29
5.4 Implementation	29
6 Background	30
6.1 Previous Government assignments provide a background to the problems	31
6.2 Legal analysis	33
6.2.2 Legislation at national level	39
6.2.3 Voluntary environmental labelling and restriction lists	41

6.2.4	Textile legislation in certain EU Member States	41
6.3	Supervisory responsibility and reporting of a suspected crime	43
6.3.1	Inspection of chemicals in textiles	44
6.3.2	The lack of regulations makes the inspection of textiles difficult	45
7	Impact assessment	45
7.1	Problems.....	45
7.2	Purpose and objectives	45
7.3	Market failures behind the problems	46
7.4	Choice of measures for analysis	46
7.4.1	The reference alternative.....	48
7.4.2	Voluntary work in the textile sector	48
7.6	Proposals in line with EU law	49
7.7	Comparative analysis of criteria for alternative means of regulation.....	49
7.8	Impact of specific product legislation for textiles in the EU	50
7.9	Impact of a national ban on certain azo dyes	52
7.10	Impact of an excise duty which incorporates a deduction for chemicals in clothing and home textiles.....	54
7.11	The reference alternative.....	57
7.12	Impact analysis summary	59
8	List of terms and abbreviations	61
8.1	Terms	61
8.2	Abbreviations.....	63
9	References	64

Summary

In its Government appropriation directions for 2015, the Swedish Chemicals Agency was instructed to draw up recommendations for measures on how EU legislation can be developed further, as well as other measures, with the aim of reducing the risks associated with hazardous substances in textiles. This report presents an account of the Government assignment. The assignment was carried out with due regard to the conclusions and recommendations set out in the previous Government assignment concerning textiles; see Swedish Chemicals Agency 2014, Report No. 6/14, Chemicals in textiles – risks to human health and the environment.

Textiles can contain chemicals which may harm humans and the environment. A lack of information on the occurrence of hazardous substances in textiles makes it difficult for actors to make well-informed choices. The problem affects all the actors: consumers, trade and industry, and public agencies. It can also make recycling of textiles more difficult. The Swedish Chemicals Agency has drawn up recommendations for measures aimed at managing the risks associated with hazardous substances in textiles, and it describes the necessary preconditions for these measures.

The Swedish Chemicals Agency recommends that the Government take the initiative to develop sector-specific legislation concerning textiles in the EU. Regulation of hazardous substances in textiles is fragmented. The voluntary initiatives that are in place vary as regards the substances that are covered and the threshold values. Sector-specific legislation within the EU covering textiles could impose uniform requirements on the hazardous chemical substances which need to be regulated and the development and dissemination of relevant information in the supply chain, including consumers and waste management operators. The legislation should cover identified textile-relevant substances with hazardous properties such as CMR, endocrine-disrupting, allergenic and environmentally harmful substances. We describe at a general level the components which sector-specific legislation covering textiles should contain.

The Swedish Chemicals Agency intends to investigate the possibilities of introducing additional restrictions on certain azo dyes which are not covered by existing legislation at EU level. Azo dyes are added to textiles with the intention that these continue to be present in the finished product, thus exposing consumers and, in the long term, the environment to these substances, when the clothes are washed. The existing restrictions in REACH should be extended and also tightened in their formulation. We intend to draw up proposals for restrictions if the necessary preconditions are in place and we have support within the EU for their implementation.

The Swedish Chemicals Agency recommends that the Government consider commissioning a study of an excise duty on clothing and home textiles. Financial instruments could act as a supplement pending binding legislation. However, we believe that it may be important to first await experiences from the recommendations put forward in the chemical tax report.

The Swedish Chemicals Agency has initiated and is participating in a number of activities with the aim of reducing the risks associated with hazardous substances in textiles at national, EU and international levels. We describe in brief some examples of this.

Sammanfattning

I regleringsbrevet för år 2015 fick Kemikalieinspektionen i uppdrag att utveckla förslag till åtgärder, inklusive förslag på hur EU-lagstiftningen kan utvecklas, för att minska riskerna med farliga ämnen i textil. Den här rapporten är en redovisning av detta regleringsuppdrag. Arbetet har genomförts med hänsyn till de slutsatser och rekommendationer som kom fram i det närmast föregående regleringsuppdraget om textil, Kemikalieinspektionen 2014, Rapport 6/14, Chemicals in textiles - Risks to human health and the environment.

Textil kan innehålla kemiska ämnen som kan skada människor och miljön. Brist på information om förekomsten av farliga ämnen i textil försvårar för aktörerna att göra väl underbyggda val. Problemet drabbar alla aktörer: konsumenter, näringsliv och myndigheter. Det kan också försvåra möjligheterna att återvinna textil. Kemikalieinspektionen har tagit fram förslag på åtgärder för att hantera riskerna med farliga ämnen i textil och beskriver förutsättningarna kring dessa åtgärder.

Kemikalieinspektionen föreslår att regeringen initierar ett arbete för att inom EU utveckla en särskild produktlagstiftning för textil. Regleringen av farliga ämnen i textil är fragmenterad. De frivilliga initiativ som finns skiljer sig åt vad gäller urval av ämnen och gränsvärden. En särskild produktlag inom EU för textil skulle kunna ställa enhetliga krav på vilka farliga kemiska ämnen som behöver regleras och på att ta fram och vidarebefordra relevant information i leverantörskedjan, inklusive konsumenter och avfallsled. Lagen skulle omfatta identifierade, textilrelevanta ämnen med farliga egenskaper såsom CMR, hormonstörande, allergiframkallande och miljöfarliga ämnen. Vi beskriver övergripande vilka komponenter en särskild produktlag för textil skulle kunna innehålla.

Kemikalieinspektionen avser att undersöka möjligheterna att införa ytterligare begränsning av vissa azofärgämnen som inte täcks av befintlig lagstiftning på EU-nivå. Tillverkare tillsetter azofärgämnen till textil i avsikt att de ska finnas kvar i den färdiga varan. Konsumenter utsätts därmed för azofärgämnena och på sikt påverkas även miljön när kläderna tvättas. Den befintliga begränsningen i Reach skulle kunna utökas och även skärpas i sin formulering. Vi avser att ta fram förslag till begränsningar om det finns förutsättningar och stöd inom EU, för att de kommer att genomföras.

Kemikalieinspektionen föreslår att regeringen överväger en utredning av en punktskatt på kläder och hemtextil. Ekonomiska styrmedel kan vara ett komplement i väntan på en bindande lagstiftning. Vi menar dock att det kan vara viktigt att först invänta erfarenheter från de förslag som lämnades av Kemikalieskatteutredningen.

Kemikalieinspektionen har startat och deltar i ett antal aktiviteter för att minska risker med farliga ämnen i textil nationellt, i EU och internationellt. Vi beskriver kortfattat några exempel på detta.

1 The assignment

1.1 The Government assignment

The Swedish Chemicals Agency (Kemikalieinspektionen) was tasked by the Swedish Government to draw up proposals for measures to reduce the risks associated with hazardous substances in textiles. This assignment was worded as follows:

Hazardous substances in textiles

The Swedish Chemicals Agency is tasked with drawing up proposals for measures on the basis of the conclusions and recommendations set out in its Report No. 6/14 on the risks associated with hazardous substances in textiles. The assignment includes drawing up proposals for how EU legislation can be developed in order to manage sufficiently well the risks associated with hazardous substances in textiles. The assignment is to be presented no later than 1 December 2015.

1.2 Consultation

In carrying out this work, the Swedish Chemicals Agency invited the interested parties listed below to consultation meetings. These meetings were held on two occasions: 8 May and 12 October 2015.

The Swedish Asthma and Allergy Association
The Swedish School of Textiles at the University of Borås
Coop
H & M
Filippa K
Haglöfs
IKEA
Innovation and Chemical Industries in Sweden (IKEM)
International Chemical Secretariat (ChemSec)
The National Board of Trade
The Swedish Consumer Agency (KO)
The Swedish Society for Nature Conservation (SSNC)
The Swedish Environmental Protection Agency
The Swedish Trade Federation
The Swedish Water and Wastewater Association (SWWA)
The Swedish Research Unit for Industrial Renewal and Sustainable Growth (Swerea)
The Swedish Association of Local Authorities and Regions (SALAR)
The Swedish Consumers' Association
The Swedish Textile and Clothing Industries Association (TEKO)
The Textile Importers
The Swedish Agency for Economic and Regional Growth
The National Agency for Public Procurement

2 Introduction

2.1 Further measures are needed to reduce the risks

The Swedish Chemicals Agency proposes further measures for ongoing efforts in order to reduce the risks associated with hazardous substances in textiles:

The development of sector-specific legislation covering textiles within the EU

Extended restrictions of certain azo dyes within the EU

A carefully considered study into an excise duty on clothing and home textiles

The Swedish Government and Parliament have set 16 environmental quality objectives, of which one is *A Non-Toxic Environment*. This objective means that by the year 2020 the necessary preconditions must be in place to protect human health and the environment from hazardous chemicals. The Government has determined eight interim objectives concerning hazardous substances. Several of these interim objectives are directly applicable to the risks to human health and the environment associated with hazardous substances in textiles, and the areas of concern include particularly hazardous substances, information on hazardous substances in articles and the development and application of EU chemicals regulations.

The Swedish Chemicals Agency presented a report¹ to the Government in 2014 on the risks to human health and the environment associated with hazardous substances in textiles. We identified two overarching problems in this report:

- Textiles contain hazardous substances that can harm human health and the environment.
- Article-producing companies, public agencies, consumers and waste management operators lack information on chemical substances in textiles.

Our report showed that many of the substances found in textiles are likely to fulfil the criteria to be regarded as particularly hazardous substances, i.e. the category of substances that should be phased out in line with *A Non-Toxic Environment*. Furthermore, a large number of allergenic substances were identified. The presence of particularly hazardous substances and allergenic substances in textiles is worrying, as use involving skin contact clearly poses a risk of human exposure to these substances. Textiles can also contain a large number of environmentally hazardous substances.

As textiles cover many different groups of articles, which in turn may contain a large number of chemical substances, a series of measures is required to remedy this problem.

The large number of substances means that it is not feasible to investigate thoroughly and address the substances one at a time. A greater possibility to assess and restrict the risks associated with groups of substances within the relevant areas of EU legislation is a precondition for effective management of the risks associated with hazardous substances in

¹ Swedish Chemicals Agency 2014, Report No. 6/14, Chemicals in textiles – Risks to human health and the environment.

textiles. This should also take us a step closer to the interim objective of *A Non-Toxic Environment* concerning the development and application of EU chemicals regulations.

2.1.1 Identified problem substances in textiles

In a report² submitted to the Government, the Swedish Chemicals Agency identified just over 3,500 chemical substances which can be used in textile manufacturing. In the case of just over 1,000 substances, their use was confidential and they were therefore not included in further analysis. Our assessment was that out of just over 2,400 remaining substances, over 350 substances have particularly hazardous properties.

Most textile articles on the EU market (approx. 80 per cent) are manufactured outside the EU and are covered to a lesser extent by the REACH Regulation, which limits the information made available on these substances. The figure of just over 350 substances identified as being particularly hazardous is probably an underestimate of the actual number of substances in textiles that can pose a risk to human health and the environment (see Section 6 Background). The majority of the particularly hazardous substances identified which can be found in textiles are not currently regulated by REACH, the European legislation on chemicals. Figure 1 shows the proportion of the substances regulated by REACH to some extent.

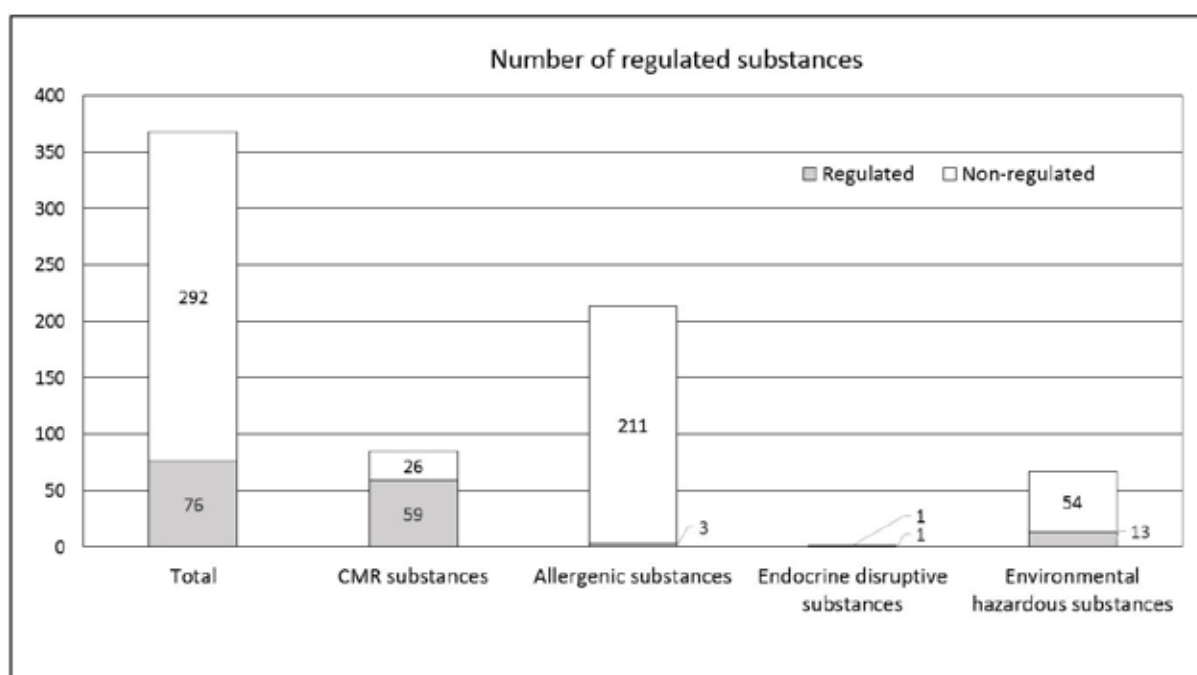


Figure 1: Existing regulation within REACH covering particularly hazardous substances that can be found in textiles. The figure also includes substances regulated by the authorisation system (Annex XIV) or restrictions (Annex XVII), or that are included in the Candidate List. Regulation of individual substances may in some cases apply to their presence in textiles in particular.

² Swedish Chemicals Agency 2014, Report No. 6/14, Chemicals in textiles – Risks to human health and the environment.

2.1.2 Ongoing efforts to reduce the risks

The Swedish Chemicals Agency has initiated and is participating in a number of activities to reduce the risks associated with hazardous substances in textiles at national, Nordic, EU and international level. A few examples of the most important activities are provided below.

We believe that regulations at EU level are the most effective way of addressing the risks. One of the most important activities being undertaken from a risk perspective is the effort of the EU Commission to put forward a Swedish proposal for a groupwise restriction within the REACH Regulation that would cover so-called CMR substances³ in textiles. We are also investigating the preconditions for introducing, within the same regulatory framework, requirements for labelling the presence of allergenic substances in textiles. In order for manufacturing companies and consumers to obtain information on the risks, it is essential that allergenic substances come under an EU-harmonised classification system and that particularly hazardous substances are added to the REACH Regulation's Candidate List. Few Member States are giving priority to developing proposals for an EU-harmonised classification of allergenic substances. If, in time, labelling requirements concerning allergenic substances in textiles are introduced in the EU, the Swedish Chemicals Agency will be able to give greater priority to its efforts to bring about further classification of substances found in textiles.

For the past few years, the Swedish Chemicals Agency has been in talks with Swedish companies in certain sectors, including the textile sector. The aim has been to support companies in their efforts to remove hazardous substances from their articles. The talks have shown that some companies already go, or would like to go further than required by the detailed rules of the legislation.

The Nordic Council of Ministers has produced an action plan for sustainable fashion and textiles. One objective is for the Nordic textile and fashion industry to be free of problematic chemicals by the year 2020⁴. The Swedish Chemicals Agency is participating in this work, which is coordinated by the Ministry of Environment and Food of Denmark.

The issue of the need for information about chemical substances used in articles is being addressed at international level by the programme on Chemicals in Products (CIP), which is run by SAICM⁵. The CIP project is a process in which most of the interested parties from the business sector and other organisations from different parts of the world participate. The project addresses four prioritised groups of articles: textiles, electronics, toys and construction materials. A proposal for the programme was adopted on 4 October 2015 (ICCM4) which includes a guide containing examples of ways in which companies can seek more knowledge about hazardous substances in articles throughout the supply chain. Within SAICM, Sweden has been working particularly to pursue the idea of international collaboration on information on chemicals in articles.

³ Substances that are carcinogenic, mutagenic or toxic to reproduction.

⁴ Well dressed in a clean environment: Nordic Action Plan for sustainable fashion and textiles, Copenhagen: Nordic Council of Ministers, 2015.

⁵ The Strategic Approach to International Chemicals Management (SAICM) is a political framework for promoting chemicals safety in the world.

Highly fluorinated substances are extremely persistent in the environment, and many of them accumulate in living organisms and can be toxic. Several are classified as harmful to reproduction. There is a significant lack of available and basic information about these substances and the dangers they pose. Highly fluorinated substances have many uses and occur in products such as textiles. These substances are not addressed in this Government assignment however. The Swedish Chemicals Agency will be submitting a report on an integrated plan of measures for highly fluorinated substances to the Government at a later stage.

Information on the content of hazardous substances in textiles helps actors to make informed choices. Consumers have the right to obtain information on whether an article contains one or more of the substances included in the EU Candidate List concerning particularly hazardous substances in concentration levels of over 0.1 per cent of the article's weight. The supplier must provide the information free of charge within 45 days and, in turn, is entitled to obtain the same information from his or her supplier. Increased consumer demand can act as a spur to the transfer of information in the supply chain. The Swedish Chemicals Agency has produced a form which is available on its website to assist those wishing to ask questions about the content of an article they intend to buy.

2.2 Proposals for further measures

The Swedish Chemicals Agency believes that even if the ongoing activities prove entirely successful, they are still not sufficient to resolve the problems associated with hazardous substances in textiles. We therefore propose further measures. Table 1 provides an overall view of our ongoing work and further measures proposed.

We propose that the Government take the initiative to develop specific product legislation concerning textiles within the EU.

Our judgement is that uniform EU legislation covering textiles is needed in the long term. An EU regulation would cover textile-relevant hazardous substances: carcinogenic, mutagenic, toxic to reproduction, endocrine-disrupting, allergenic and environmentally hazardous. It would also require the transfer of information in the supply chain from the manufacturing companies to consumers and waste management operators (see Section 3).

We intend to examine the possibility of introducing further restrictions of certain azo dyes not covered by existing legislation at EU level.

A group of particularly problematic substances in textiles is the so-called azo dyes. Some of these substances are subject to a restriction concerning textiles under the REACH Regulation. The existing regulations are unclear and difficult to supervise however. Furthermore, there are other azo dyes that should be included in the list of restricted substances (see Section 4.2).

The Swedish Chemicals Agency recommends a binding regulation at EU level to cover azo dyes. The Government may still choose to consider a national restriction on certain azo dyes. We describe the preconditions for introducing such a measure in Section 4.3.

We propose that the Government consider a study for introducing an excise duty on clothing and home textiles.

Uniform EU legislation for textiles is a long-term objective. One possibility, pending such legislation, is that Sweden introduce financial instruments that increase the pressure on companies to substitute hazardous substances in textiles (see Section 5). However, the Swedish Chemicals Agency believes that it may be important to await experiences of putting forward the proposals submitted by the Chemical Tax Investigation⁶.

Table 1: Ongoing work overall and further measures to reduce the risks associated with particularly hazardous substances in textiles

Substance properties	Ongoing work overall	Further measures
CMR substances	Restriction on harmonised, classified CMR substances in textile consumer goods (according to REACH Article 68.2) Textile-relevant CMR substances is a priority area in the work by the Swedish Chemicals Agency on harmonised classification and identification of SVHC candidates	<ul style="list-style-type: none"> • Product legislation within the EU covering textiles • Extended restrictions according to the EU Chemicals Regulation REACH • Excise duty on clothing and home textiles
Allergenic substances	The possibility of labelling textiles with the content of harmonised, classified allergenic substances is being investigated Textile-relevant allergenic substances are a priority area in the work by the Swedish Chemicals Agency to achieve harmonised classification	<ul style="list-style-type: none"> • Product legislation within the EU covering textiles • Excise duty on clothing and home textiles
Endocrine-disrupting substances	Once the criteria concerning endocrine-disrupting substances have been determined, these substances can be made one of the Swedish Chemical Agency's priorities in identifying SVHC candidates	<ul style="list-style-type: none"> • Product legislation within the EU covering textiles • Excise duty on clothing and home textiles
Environmentally hazardous substances	Environmentally hazardous substances are a priority area in the work by the Swedish Chemicals Agency to identify SVHC candidates according to REACH	<ul style="list-style-type: none"> • Product legislation within the EU covering textiles • Excise duty on clothing and home textiles

⁶ SOU 2015:30, Chemical Tax Investigation. Tax on certain consumer goods containing chemicals.

3 Development of sector-specific legislation covering textiles

Proposal: The Swedish Chemicals Agency proposes that the Government take the initiative to develop sector-specific legislation concerning textiles in the EU.

3.1 Grounds

Uniform regulations within the EU enable a comprehensive risk reduction in terms of human health and the environment while at the same time creating common ground rules for companies and enabling a level playing field. The regulation of hazardous substances in textiles is fragmented, and there are a number of legislative acts that touch on parts of the life cycle of articles or contain a ban on certain substances in textiles. There are certain environmental labelling criteria and other voluntary restriction lists concerning chemicals in textiles. These restriction lists are not uniform, however, and they differ in terms of the selection of chemical substances, threshold values and verifications. This creates practical problems and is an administrative burden. It can also be difficult to communicate these requirements in the supply chain.

A specific piece of EU legislation covering textiles would be able to take special account of children. Children belong to a vulnerable group of people who are exposed to skin contact most of the time, day and night.

The EU Chemicals Regulation, REACH, is one of the main legal acts in the EU which covers chemicals, but it is not specifically adapted to regulate the content of chemical substances in articles. Most textile articles on the EU market (approx. 80 per cent) are manufactured outside the EU, and SVHC substances found in imported articles are not covered by the authorisation requirements. Although REACH restrictions on substances do apply to imported articles, the restriction process is seen to be less than efficient⁷. In the textile sector, where fashion and trends can vary over time, sector-specific legislation covering textiles could be formulated so as to keep up more with the market and the technical and scientific development.

The Swedish Chemicals Agency carried out a previous survey of EU legislation that is pertinent to the handling of chemicals⁸, and one area highlighted was the need for specific legislation covering textiles. The Swedish Chemicals Agency later⁹ proposed regulating chemicals in textiles within the framework of a survey of the Fibre Labelling Regulation¹⁰. The purpose of this Regulation is to promote free movement on the market and is not primarily intended to govern those aspects relating to the environment and health. However, the Commission chose not to further develop the Fibre Labelling Regulation to include requirements concerning chemicals.

⁷ Swedish Chemicals Agency 2014, Report No. 4/14, Utveckla och effektivisera Reach – en handlingsplan

⁸ Swedish Chemicals Agency 2012, Report No. 1/12, Bättre EU-regler för en Giftfri miljö.

⁹ Swedish Chemicals Agency 2013, Report No. 3/13, Hazardous chemicals in textiles.

¹⁰ Regulation (EU) No 1007/2011 on textile fibre names and related labelling and marking of the fibre composition of textile products.

3.2 Possibility of implementing the measures

According to the Treaty on European Union, it is the European Commission that has exclusive right of initiative to draw up proposals for new legislation. When the Commission has made a proposal, it is submitted to the Council and the European Parliament. The European Parliament discusses the proposal and can amend it. The European Parliament adopts a position on the basis of a vote, and this is communicated to the Council. The Council also has the power to make amendments to the proposal. When the European Parliament and Council of Ministers reach agreement, they adopt the new act.

The focus of the current Commission is on growth and the economy, but it is restrictive in its approach to new legislation.

3.3 Formulation of sector-specific legislation covering textiles

One basic principle that ought to apply is that substances with particularly hazardous properties should not be present in textiles. In our previous assignment on textiles in 2014, we identified over 350 substances with particularly hazardous properties which may be used in textiles (Figure 1). It is important to protect human health and the environment from substances which are carcinogenic, mutagenic or toxic to reproduction, allergenic and endocrine-disrupting.

The legislation should be formulated in accordance with the principles of legal clarity, better regulation and rule of law which apply in the EU to guarantee that it benefits the environment and health and, at the same time, that the regulatory framework is proportionate and enforceable and ensures a level playing field. It should be possible to formulate sector-specific legislation covering textiles that addresses the two overarching problems that have been identified:

- There are hazardous chemical substances in textiles that can harm human health and the environment
A piece of legislation could stipulate that particularly hazardous substances may not be present in textiles released for consumers on the EU market
- Article-producing companies, public agencies, consumers and waste management operators lack information on which chemical substances are present in textiles
A piece of legislation could require the transfer of information in the supply chain, which includes consumers and waste management operators.

To address these problems, sector-specific legislation covering textiles could contain the following provisions:

- A restriction on the maximum permitted concentration level of CMR substances in categories 1A and 1B, certain allergenic substances, fluorinated substances, endocrine-disrupting substances, PBT and vPvB substances. It should be possible to apply the concentration limits set by the EU Regulation for Classification, Labelling and Packaging (CLP), adapted to apply to textiles. The voluntary systems in existence today which specify concentration limits should be evaluated.
- A requirement to provide information on the content of chemical substances in textiles for improved transparency and traceability throughout the supply chain, including waste management operators. It should be possible to pass on such

information in a standardised format. This could also include information which enables consumers to make conscious choices.

- The possibility of adding new substances and lower the threshold values so as to adapt the legislation to new scientific and technical findings and promote technology development, innovation and substitution.
- The possibility of making exceptions to restrictions under special terms and conditions.
- The power of the Commission to mandate the development of standardised test methods.

In addition to the above, it may be appropriate to consider whether other aspects should be included, such as requirements concerning resource efficiency. Such requirements could apply to the life expectancy of a textile product, the content of recycled material and recyclability. These factors have the potential to lessen the environmental impact and promote sustainable use of natural resources in the textile sector.

3.4 Implementation

Working towards initiating sector-specific legislation will yield results in the long term. One way to get there would be for the Commission and other Member States to assess the problems associated with hazardous substances in textiles to be so serious that sector-specific legislation would provide a solution. The problems may need to be quantified and the key features of the legislation described. This is best done in collaboration with other Member States.

One way of initiating this work could be for the Government and the Swedish Chemicals Agency to consider the following activities:

- Produce a cost estimate for the environmental and health problems posed by chemicals in textiles.
- Run a workshop involving the Commission and Member States in order to get a common understanding of the problems. It may be possible to do this within the framework of Nordic cooperation.
- Highlight the issue of textiles in bilateral collaborations.
- Continue the joint work with businesses in the textile sector.
- Use the REACH-up¹¹ initiative to achieve consensus on the problems relating to textiles and possible solutions.
- Respond to the public consultation on a roadmap for monitoring the appropriateness of the so-called *REFIT* initiative¹² under the auspices of the Commission, and point out that textiles are an example of a group of products for which there is a lack of suitable regulation of hazardous substances.
- Provide information on the problems and costs associated with chemicals in articles as part of the EU strategy to achieve A Non-Toxic Environment¹³ which is to be

¹¹ REACH-up: <http://www.regeringen.se/artiklar/2015/10/stor-enighet-pa-konferens-om-eus-kemikalielagstiftning/>.

¹² The EU Commission's REFIT initiative http://ec.europa.eu/smart-regulation/refit/index_en.htm.

¹³ The strategy for A Non-Toxic Environment is to be produced in accordance with the European Parliament and Council Decision No. 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet'.

finalised by 2018. In this context, it is important to note that textiles form one of the prioritised product groups in SAICM.

4 Extended restriction on certain azo dyes

4.1 Grounds

Azo dyes are a large group of dyes which can be metabolised into arylamines. Some of these arylamines have carcinogenic properties. Several azo dyes were also identified in a previous report by the Swedish Chemical Agency as posing a problem.¹⁴ At present, a REACH restriction applies to azo dyes that can be metabolised into one or more of 22 arylamines that are mutagenic and/or can cause cancer.¹⁵ As well as these 22 carcinogenic arylamines, a further 15 arylamines have been identified (Appendix 1) which are not restricted but have similar properties.¹⁶ The amount of available data varies in the case of the 15 arylamines, but the information available indicates that these arylamines can also be mutagenic or cause cancer. Substances with these kinds of properties are undesirable in consumer articles. Above all, children who bite or suck on a textile article may be at risk of high exposure to the substances contained in it. This means that there may be a need to restrict also the azo dyes that can give rise to arylamines with the same types of properties as the arylamines already regulated by REACH.

There are a large number of azo dyes that have been identified for use in the textile industry. A compilation of known dyes (the Colour Index database¹⁷) lists approx. 2,000 azo dyes. A scientific review has identified 896 azo dyes with a known chemical structure.¹⁸ Of these 896 azo dyes, 426 can be metabolised into one or more of the 22 regulated arylamines, while the other 470 azo dyes can be metabolised into other arylamines which are not regulated at present.

The proposed measure is based on an examination of whether it is possible to restrict these 15 arylamines and the azo dyes that can give rise to them. Such a restriction could be implemented by way of a technical adaptation of the existing restriction in REACH.

4.2 Extended restriction on azo dyes by way of a technical adaptation of REACH

Proposal: The Swedish Chemicals Agency intends to examine the possibility of introducing a further restriction on certain azo dyes not covered by existing legislation at EU level.

A description is provided below of how a technical adaptation of REACH could be formulated and implemented. The Swedish Chemicals Agency intends to examine what support for an extended restriction of certain azo dyes might be given by the Commission and

¹⁴ Swedish Chemicals Agency 2014, Report No. 6/14, Chemicals in textiles – Risks to human health and the environment.

¹⁵ Regulation (EC) No. 1907/2006, Annex XVII, Entry 43 and Appendix 8.

¹⁶ Brüscheiler et al. 2014.

¹⁷ <http://www.colour-index.com/>

¹⁸ Brüscheiler et al. 2014.

individual Member States. We intended to produce a proposal for restrictions if there is reason to believe they will be implemented.

4.2.1 Possibility of implementing the measures

The current restriction on azo dyes in the EU Chemicals Regulation REACH has been incorporated from the old Restriction Directive.¹⁹ The restriction was introduced by Directive 2002/61/EC and has looked much the same since then. The grounds stated for this restriction were a need to protect human health against the potential risk of cancer posed by these azo dyes and arylamines.²⁰ The regulation constitutes primarily a ban on the use of textile and leather articles coming into contact with the skin and containing the types of azo dyes that can be broken down into the aromatic amines listed in a special appendix in a concentration of over 30 mg/kg (point 1). Point 2 stipulates a ban on placing on the market the textile and leather articles referred to in point 1 if these do not meet the requirements stated in the same point. Reused fibres were made subject to an interim provision allowing a higher maximum concentration up to and including 2005. It may be noted that the 22 arylamines currently regulated by REACH are exactly the same amines that were regulated at the beginning (now Appendix No. 8 to Entry 43 in Annex XVII to REACH). There was a provision concerning the revision of this restriction in the case of any new scientific findings which aimed to include materials that were not covered, including other aromatic amines, whereby special consideration should be taken to the risks to children.²¹ The restriction regulation was amended once again in 2003 when a so-called ‘blue dye’, which is an azo dye²², was added to the restriction as a point in its own right.²³ Today, this restriction is included in column 2, point 3 under Entry 43 in REACH.²⁴ The restriction stipulates a ban on the release of this dye on the market and on its use for dyeing textile and leather articles should it occur in concentrations higher than 0.1% by weight. There is therefore no connection in this case to arylamines because the restriction applies directly to the dye. It may be noted that the wording of the restriction does not prohibit the placing on the EU market of textiles that have been dyed with this dye outside the EU. The grounds stated for the restriction were the need to reduce environmental risks resulting from high toxicity in marine environments.²⁵

4.2.2 Formulation

A restriction imposed on other arylamines by way of a technical adaptation of REACH would be based on the existing restriction. The formulation would thus be the same as that of the restriction in existence today but would also include the other 15 arylamines identified. It is important that the restriction applies not only to the arylamines but also to the azo dyes that can be broken down into these arylamines.

This would mean a ban on the use of these particular substances and on placing on the market the textile articles referred to in the restriction. The current wording should also be revised in order to make clear that the occurrence of arylamines is measured after the absolute reduction of azo dyes. By removing the requirement that the restriction should apply only to dyes used

¹⁹ Restriction Directive (76/769/EEC).

²⁰ Amendment to Restriction Directive (2002/61/EC), Recitals 2, 4 and 5 in the preamble.

²¹ Amendment to Restriction Directive (2002/61/EC), Recital 9 in the preamble and point 3 under the restriction Entry in Annex I to the Directive.

²² The restriction actually applies to a mixture without a CAS number.

²³ Amendment to Restriction Directive (2003/3/EC).

²⁴ REACH, Annex XVII Appendix No. 9.

²⁵ Amendment to Restriction Directive (2003/3/EC), Recital 2 in the preamble.

in textile and leather articles coming into direct contact with the skin or mouth over a long period of time, this provision could also be tightened, at the same time as its application could be simplified. This would also facilitate enforcement.

4.2.3 Implementation

The simplest adaptation would be if the EU decided to regulate also these 15 arylamines within the framework of the current restriction. This could be done quite simply by adding them to the list in Appendix No. 8 to Annex XVII to REACH. However, a more advanced adaptation would allow the EU to revise the construction of the present restriction provision in REACH in Entry 43 of the Annex in accordance with the thinking described above.

If any measure of this kind were to be proposed, it would require full supporting documentation in the form of an Annex XV dossier to be produced by a competent authority such as the Swedish Chemicals Agency. The supporting documentation in the dossier would probably need to contain an investigation of the hazardous properties of the 15 arylamines with the help of, for example, a read-across analysis in which they are compared with the arylamines which are already restricted. Producing a proposal for a technical adaptation of REACH would require a long-term effort in which the results would be far from obvious in advance.

As already mentioned, a provision on the revision of the restriction already existed in the original restriction under the Restriction Directive. A revision could take place if new scientific findings emerged. In this case, new information would have been produced which could provide grounds in line with the original intention for a revision to assess whether yet more arylamines should be restricted. The revision provision also stated that special consideration should be given to the risks to children (see also Section 4.1). Given their physical make-up and patterns of behaviour, children generally suffer greater exposure to chemical substances in textiles than adults do.

A first step would be for the Swedish Chemicals Agency to examine suitable conditions for proposing a technical adaptation of REACH and the degree of support for the issue offered by the other Member States in the EU.

4.3 Restriction on azo dyes at national level

The Swedish Chemicals Agency favours a binding regulation at EU level on azo dyes. Introducing risk-reducing effects at EU level would have a greater impact and cover more azo dyes than would a national regulation. A national measure must be reported to the Commission in line with the procedures set out in Directive (EU) 2015/1535.

The Government may still choose to consider a national restriction on certain azo dyes. We describe the preconditions for introducing such a measure.

4.3.1 Possibility of implementing the measures

The amount of leeway given to individual Member States to adopt national regulations in an area already regulated in part by REACH is controversial. However, the Swedish Chemicals Agency has said in the past that it believes such leeway exists when the legislative act in question makes no specific mention of the particular issue on which regulation is being

sought.²⁶ The Commission will no doubt have opinions about such a proposal and criticise it within the framework of the notification process in line with Directive (EU) 2015/1535 (see also Section 4.3.3). Generally speaking, national restrictions are possible in the non-harmonised area on condition that such measures are based on mandatory requirements, are non-discriminatory and fulfil the requirements for proportionality.

What is harmonised?

The 15 arylamines mentioned above are not covered by the current restriction in REACH. These arylamines are therefore not regulated by EU law. The question is then whether a decision could be reached on a national restriction of these arylamines and their parent substances. The Swedish Chemicals Agency has previously stated its view that REACH does not harmonise (i.e. regulate) anything other than that expressly stated in the existing restriction provision.²⁷ According to the Swedish Chemicals Agency, a proposal for a national restriction would therefore mean that a national regulation would be created in an area that falls outside the fully harmonised area in which REACH provisions apply.²⁸ The European Court of Justice has made known its view regarding the scope of the restriction provisions in the so-called Lapin case²⁹ in which the Court stated clearly that Articles 67 and 128 in REACH should be interpreted as meaning that Union law has harmonised the requirements for the manufacture, use and placing on the market of the substances that are restricted in Annex XVII to REACH. This was expressed in fairly categorical terms, and the ruling has therefore raised questions as to how it should be interpreted.

A different but related question concerns the restriction procedure set out in REACH. The Commission stated before and after the Court judgment in the Lapin case that if a country wishes to introduce national provisions in a non-harmonised area, that country must apply the provisions for the restriction procedure set out in REACH (i.e. Articles 68-72). One implication of this is that a country must prepare a so-called Annex XV dossier.³⁰ The Commission thus believes that the restriction procedure set out in REACH is fully harmonised, and this means that it also believes that a country wishing to introduce national regulations to restrict a substance is obliged to use the REACH provisions to introduce such new restrictions. However, the Swedish Chemicals Agency feels that the view of the Commission has no legitimacy in terms of either the wording or the REACH procedure.³¹ It would therefore be possible to draw up a proposal for a national restriction without the need to develop a complete Annex XV dossier. It can also be said that, according to the wording in the so-called Notification Directive, it is sufficient for a Member State to carry out a risk analysis in accordance with the principles established in the relevant parts of Annex XV to REACH (see also Section 4.3.3).

In summary, the Swedish Chemicals Agency feels it would be possible to decide on a national restriction since this would fall outside the fully harmonised area in which REACH applies. The procedure and supporting documentation which must be used need not be in line

²⁶ Swedish Chemicals Agency 2014, Report No. 7/14, Förslag till utfasning av fortplantningsstörande och hormonstörande ftalater i Sverige, Appendix 5. English version: Report No. 4/15, Phthalates which are toxic for reproduction and endocrine-disrupting – proposals for a phase-out in Sweden, Appendix 5.

²⁷ Ibid.

²⁸ For a discussion on what can be regulated in general in relation to REACH, see, for example, the Official Reports of the Swedish Government (SOU) 2007:80, Appendix 1 and the case law given there.

²⁹ Judgment in Case C-358/11, ECLI:EU:C:2013:142.

³⁰ REACH Article 69.4.

³¹ Swedish Chemicals Agency 2014, Report No. 7/14, op.cit., Appendix 5.

with every part of the REACH provisions. The judgment in the Lapin case has not changed this view.

The relationship to EU rules on the free movement of goods

Such a ban on the occurrence of the arylamines in question in textiles would, however, typically be seen as a barrier to trade and must therefore be assessed in the light of the Treaty provisions on free movement. Article 34 TFEU³² stipulates a ban on so-called quantitative import restrictions and measures having an equivalent effect, i.e. measures that may in some way prevent or affect the free movement of goods between Member States.³³ This ban provides the basis for a number of legitimate grounds for exemption in Article 36 TFEU in which such measures are justified in terms of, among other things, protecting human health. Furthermore, EU case law has established further grounds in the form of the so-called mandatory requirements, which includes protection of the environment.³⁴

In such situations, reference is sometimes made to the ‘EU law test’, which states the requirements to be fulfilled by a national measure that may inhibit a fundamental freedom of the Treaty.³⁵ Such national measures are to be non-discriminatory³⁶, proportional and based on the general interest³⁷. In more concrete terms, this means that the measures decided on must be devoted to achieving the goal of protecting human health and the environment and may not go beyond that necessary for achieving the purpose intended.³⁸ In practice, alternative protective measures, where such exist, should be investigated and presented, and they should be able to show that the proposed measure helps ensure that the desired level of protection is achieved.

One important question concerns which scientific data are needed to gain acceptance for national measures. In cases of uncertainty, it is sometimes crucial that the so-called precautionary principle can be applied. This principle³⁹ has no clear definition but can be summarised as meaning that measures may be taken when a potential risk exists but that insufficient scientific data mean that the risk cannot be demonstrated or quantified in full or its effects identified.⁴⁰ The principle is intended to prevent potential risks to human health and the environment.⁴¹ However, the risk assessment may not be based on purely

³² The Treaty on the Functioning of the European Union (TFEU; OJ C 326, 26.10.2012), Article 191.2.

³³ EU Court judgment in Case 8/74 Dassonville; ECLI:EU:C:1974:82.

³⁴ See, for example, the judgment in Case 302/86, Commission of the European Communities v Kingdom of Denmark; ECLI:EU:C:1988:421.

³⁵ See, for example, the Official Reports of the Swedish Government, SOU 2013:53 *Privata utförare – kontroll och insyn*, Appendix 2, p. 278.

³⁶ The doctrine addresses the issue of whether the Court is able at all times to uphold the requirement of non-discrimination concerning national measures for protecting the environment; see, for example, Langlet/Mahmoudi, *EU:s miljö rätt*, 3rd ed., Stockholm 2011 p. 12, concerning the judgment in Case C-320/03, Commission of the European Communities v Republic of Austria; ECLI:EU:C:2005:684 and Jans/Vedder, *European Environmental Law*, 4th ed., Groningen 2012, pp. 278-279.

³⁷ Judgment in Case C-55/94, Reinhard Gebhard v Consiglio dell'Ordine degli Avvocati e Procuratori di Milano, ECLI:EU:C:1995:411, para. 37.

³⁸ See, for example, the judgment in Case C-28/09, European Commission v Republic of Austria, ECLI:EU:C:2011:854, para. 125.

³⁹ TFEU Article 191.2 TFEU.

⁴⁰ Langlet/Mahmoudi, *op.cit.*, p. 75.

⁴¹ Judgement in Case T-229/04, para. 161

hypothetical assumptions.⁴² The Commission has stated in a non-legally binding Communication the requirements for being able to take measures with the support of the precautionary principle.⁴³ It says that the measures should be proportional to the level of protection desired, non-discriminatory and compatible with similar measures already taken. Furthermore, the measures should be based on an investigation of the potential advantages and costs of taking or not taking such action, and they should be subject to scrutiny in the light of new scientific findings. The European Court of Justice has stated in a number of judgments the way in which the precautionary principle ought to be applied. A correct application of the principle would require any negative consequences to human health to be identified and an overall assessment of the health risks to be made based on the most reliable scientific information available and on the most recent results of international research.⁴⁴

4.3.2 Formulation

The formulation of a restriction on azo dyes at national level must take into account the following aspects: the 15 arylamines identified which are not included in the current restriction in REACH, and the azo dyes which can be broken down into one of these 15 arylamines and which should be restricted through national regulation. It is important that this restriction applies not only to the arylamines but also to the azo dyes that can be degraded into these arylamines.

Since the restriction concerns substances that can harm our DNA or cause cancer, all cases in which the arylamines identified exceed the limit of detection should be regulated.

As for the extent of the ban, it may be appropriate to use the current REACH restriction as a base but to modify its formulation so as to broaden the area of application. If the Government decides on a national restriction, the overall formulation of such a measure could thus be as follows: the restriction would take the form of a ban partly on the use of the substances in question in textile or leather articles, and partly on the placing on the market of textile and leather articles containing these substances. As far as is known, it may be appropriate for the time being to keep the current limit of detection in articles or in their dyed parts at 30 mg/kg.

The restriction could be made stricter than the equivalent one in REACH by omitting the requirement that this should apply to products potentially in direct contact with skin or the mouth cavity over a long period of time. There would then be no need to list examples of the articles in question. The construction of the ban presupposes that there are standardised methods of analysis for measuring the occurrence of the substances.

4.3.3 Implementation

A national restriction could be introduced in the Ordinance (1998:944) on the ban in certain cases concerning the handling, import and export of chemical products. One question to consider is whether there is a need to list the 15 arylamines in an appendix to the Ordinance or whether a kind of table incorporated in the Ordinance itself would be desirable. It is debatable whether there are grounds to exempt used articles from the ban. It can be noted that there is no consistent use of terms in the formulation of the existing bans and restrictions in

⁴² Judgment in Case C-333/08, *Stichting Natuur en Milieu and Pesticide Action Network Europe v European Commission*, ECLI:EU:T:2012:300, para. 91.

⁴³ COM(2000)1 final, Communication from the Commission on the Precautionary Principle.

⁴⁴ Judgment in Case C-333/08, *Stichting Natuur en Milieu and Pesticide Action Network Europe v European Commission*, ECLI:EU:T:2012:300, para. 92.

the Ordinance. It mentions, for example, marketing, offering for sale, transferring and placing on the market, probably as a result of the provisions being drawn up at different times, sometimes before the establishment of the Swedish Environmental Code. The Swedish Chemicals Agency underlines the importance of having uniform definitions and therefore wants to bring this to the Government's attention.

The Regulation contains a provision according to which the Swedish Chemicals Agency may, where necessary, issue further implementing regulations.⁴⁵ One matter for consideration is whether the Swedish Chemicals Agency needs to be given the authority to issue regulations on exemptions from the restriction and, likewise, whether there is a need to allow some kind of derogation from the ban. Were the Government to reach such a conclusion, the measures taken would need to have stringent requirements attached. This could be expressed as, for instance, special grounds being needed to issue regulations on the granting of exemptions and also urgent needs to grant derogation in any one case.

As regards the issue of transitional provisions, consideration may be given to the introduction of a provision stipulating that textile articles placed on the market before a certain date would not be covered by the restriction. The aim of this would be to exempt such articles that were placed on the market before the ban came into force. This would also facilitate the practical application and enforcement of the new provisions. The date chosen could coincide with the date on which the provisions came into force.

Notification in accordance with Directive (EU) 2015/1535

There is a special notification procedure aimed at preventing the erection of barriers in the internal market when individual countries within the EEA wish to adopt regulations that may restrict free movement. The provisions are included in Directive (EU) 2015/1535.⁴⁶ The Directive is implemented in Sweden by the Ordinance (1994:2029) on technical regulations. The notification procedure keeps the Commission informed of proposals for regulations in the non-harmonised area. At the same time, other Member States are also given access to this information and can provide opinions on the proposals. Proposals for a ban or restrictions constitute what are known as technical regulations according to the Directive.⁴⁷ In the main, this procedure consists of Member States submitting all the drafts available for such technical regulations and setting out the reasons why such regulations are considered necessary. This is followed by a so-called standstill period of three to six months when the proposal is examined by the Commission and other Member States. During this period, the Member State that has put forward the proposal may not adopt these regulations.⁴⁸ If a proposal for a regulation is not submitted to the Commission, it is not permitted by European Court case law to be applied by the authorities in the Member State putting forward the proposal.⁴⁹

The key provision is Article 5 in Directive 2015/1535. This states, by way of summary, that if a Member State wishes to restrict a chemical substance, preparation or product on grounds

⁴⁵ Ordinance (1998:944) on the ban in certain cases concerning the handling, import and export of chemical products, Section 21.

⁴⁶ Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services.

⁴⁷ Directive (EU) No. 2015/1535, Article 1(1) f.

⁴⁸ Directive (EU) No. 2015/1535, Article 6.

⁴⁹ See, for example, the judgment in Case C-303/04, *Lidl Italia Srl v Comune di Stradella*, ECLI:EU:C:2005:528, para. 24.

such as public health or environmental protection, it shall submit a summary of or references to all relevant data on the substance or product in question and on the known and available substitute products where such details are available and state the expected effects of the measure on public health and environmental protection.⁵⁰ The last sentence also specifies that a Member State need not send a complete Annex XV dossier but simply an analysis of the risk that has been “carried out as appropriate in accordance with the principles provided for in the relevant part of Section II.3 in Annex XV” to REACH.

5 Inquiry into an excise duty on clothing and home textiles

Proposal: The Swedish Chemicals Agency recommends that the Government consider commissioning an inquiry into an excise duty on clothing and home textiles.

5.1 Grounds

The primary aim of an excise duty on clothing and home textiles would be to reduce the proportion of clothing containing undesirable chemical substances that can damage human health or the environment.

The secondary aim would be to allow greater access to information on the chemical substances contained in the articles. The party liable to pay the excise duty would be entitled to a deduction if certain substances were not present in the article. This deduction could provide financial incentives for actors to request information from their suppliers. The effect of this would favour the growth of a circular economy by making it easier to recycle textiles if they are known not to contain hazardous chemical substances.

The third aim of the excise duty would be to reduce the amount of textile waste. This is in line with Directive 2008/98/EC of the European Parliament and of the Council which states: “The first objective of any waste policy should be to minimise the negative effects of the generation and management of waste on human health and the environment. Waste policy should also aim at reducing the use of resources, and favour the practical application of the waste hierarchy.” The waste hierarchy means that the first step towards reducing the amount of waste is to minimise it through different instruments. These instruments should be designed to change consumption patterns.

⁵⁰ Directive (EU) No. 2015/1535, Article 5(1), 4th para.

Environmental taxes – a brief background

A free market is vulnerable to market failure, i.e. that the socio-economic aspects are inefficient. There are two key market failures in the case of consumer goods containing hazardous substances.

- External effects. Chemicals cause health-related and environmental effects that affect third parties – so-called external effects. This means that the price paid by the purchaser of an article containing hazardous substances falls below the optimal socio-economic price as it does not include damage or costs to others than those selling or purchasing the article. The low price means that consumption of the article will be greater than is socio-economically desirable.
- Imperfect information. The information given to consumers on the chemical content in consumer goods is as a rule wholly inadequate. Consumers also do not have the expertise required to be able to assess how tens of thousands of chemical substances risk affecting human health and the environment.

The advantages of environmental taxes and other economic instruments have been described in a number of different publications. The European Commission's Green Paper on market-based instruments for environmental and related policy purposes lists the following advantages of economic instruments:

- They improve the price signals by giving a value to the external costs so that economic actors take them into account and change their behaviour to reduce the negative and increase the positive environmental and other impacts.
- They allow industry to meet objectives in a more flexible way than by imposing restrictions and thus reduce the total socio-economic costs of achieving the environmental objectives of society.
- They stimulate companies to take long-term initiatives in technological innovation to further reduce the negative environmental impacts.
- They help boost employment when tax revenues allow for a reduction in tax on work.

Environmental taxes allow trade to meet environmental objectives in a more flexible way than by imposing restrictions and thus reduce the size of the welfare loss sustained by the restriction in the form of a reduced producer and consumer surplus. For example, an import company may decide to stop importing consumer goods containing hazardous substances when the profit margin for them is low and thus avoid having to pay the excise duty. In cases in which the profit margin is high, the company may decide to continue to import and pay the excise duty. The opposite applies where the chemicals contained in a product are restricted, as the product may no longer be imported regardless of the situation. This means that the losses sustained by a consumption and production surplus will be greater as a result of regulation than would be the case with environmental taxes, all things being equal. An environmental tax that is effective in a socio-economic sense will result in environmental and health benefits that have greater socio-economic advantages than do negative socio-economic costs created by the tax in the form of administrative costs and the loss of a consumption and production surplus.

It is therefore important that new environmental taxes are designed in such a way as to minimise the additional administrative burden. This can be achieved by basing the environmental tax, as far as possible, on procedures that are applied and information that is already collected by the companies concerned, or by exempting small companies from paying the tax. Furthermore, it is important that the tax regulations are formulated in a way that is clear and easy to follow. For example, as a rule, it is easier for a clothing company to know which substances have been used in the finish of an outer garment than which pesticides have been used in the manufacture of the raw product from which the same garment is made.

Source: Swedish Chemicals Agency 2013, Report No. 1/13, När kan ekonomiska styrmedel komplettera regleringar inom kemikalieområdet?

5.2 Possibility of implementing the measure

The chemical tax report ⁵¹ singled out an excise duty on clothing involving a deduction for chemical content as one of the most interesting proposals to take forward, besides the report's own proposals. The reason was that a large number of hazardous and undesirable substances occur in clothing and textiles and, at the same time, they are relatively poorly regulated, especially in the case of imported products. An excise duty would therefore be one way of discouraging the use of these substances. Furthermore, clothing, along with electronics, was the group of articles singled out as being of most interest in the directive to the chemical tax report. The reason that the report did not proceed with a chemical excise duty on clothing was that the tax structure initially discussed by the report was not suitable for this group of articles. When the tax structure *Fiscal tax with a lower tax for less harmful articles* became the focus of attention towards the end of the study, the picture changed. This tax structure is well suited to the article group clothing and home textiles.

However, we believe that it may be important to first await and hear about experiences from the recommendations put forward in the chemical tax report.

5.3 Formulation

5.3.1 A possible tax structure

One possible tax structure for an excise duty on clothing and home textiles is *Fiscal tax with a lower tax for less harmful articles*. It is one of four tax structures discussed in the chemical tax report. This tax structure is based on the principle that all articles in defined groups of articles should be taxable and that the party liable to pay the tax should be entitled to a deduction if certain substances listed as undesirable are not present in the article. This would facilitate the administration and inspection of the excise duty as all the articles in the group of articles in question would be taxable. The advantage of this type of tax is that it can include groups of articles in which not all the articles contain undesirable chemicals. The basic level of the tax would be set according to the need to reduce the consumption of virgin textiles and to reduce the amount of textile waste.

5.3.2 Taxable articles

It must be clearly defined which articles should be taxable. The taxable area could be defined with the help of the classification system whereby customs tariffs are assigned CN (Combined Nomenclature) codes. The advantages of using the Combined Nomenclature are

- The Combined Nomenclature is used internationally and understood throughout the world.
- Many systems are already set up based on the Combined Nomenclature, such as the Swedish Customs' system for importers of articles into Sweden and Statistics Sweden's import statistics.
- The Combined Nomenclature means that there is already a system for defining different groups of articles. There are goods handbooks, explanatory notes, past notifications of classification, and extensive case law for guidance in case of uncertainty over which article should be assigned which CN code.

⁵¹ SOU 2015:30, Kemikalieskatt. Skatt på vissa konsumentvaror som innehåller kemikalier.

The disadvantage is that the Combined Nomenclature has been designed for reasons other than the taxation of chemicals, and it is therefore unwieldy to apply in some cases. For example, articles are not as a rule classified in terms of chemical content. However, they are sometimes classified in terms of type of material. An alternative to using the Combined Nomenclature is to produce a separate list of articles that should be taxable. The disadvantage of such a list is the resulting problems regarding definition. When, for instance, does a waterproof jacket stop being a waterproof jacket and become just an all-weather jacket? A third model is to tax all articles based on the material of which they consist. A study should consider which would be most suitable in this case.

Grounds are needed to justify a possible limitation of the tax to certain groups of articles. Below are examples of what such grounds might look like:

- Clothing and home textiles (as distinct from other textile articles) are often washed in a washing machine, which means that undesirable substances end up in the wastewater that is carried away to a treatment plant. Some of these undesirable substances then end up in the environment.
- Clothing is worn close to the body, and we also come into direct contact with sheets and bedding. Furthermore, children can bite and suck on textiles. It is therefore particularly important to remove undesirable substances such as endocrine-disrupting phthalates from clothing and home textiles.

5.3.3 Liability to pay excise duties

A study should recommend which parties should be liable to pay excise duties. A clear pattern for most Swedish excise duties is to place the tax liability at as early a stage as possible among the actors that trade in taxable goods. This limits the number of actors liable to pay excise duty, which facilitates administration and control of the excise duties. There are also advantages of imposing an excise duty at the sales stage. A study should compare the options and find the most advantageous.

If the excise duty is imposed at as early a stage as possible, the liability to pay it will fall to those who manufacture taxable goods for commercial purposes in Sweden, those who acquire taxable goods for commercial purposes from another EU country, and those who import taxable goods for commercial purposes from outside the EU. The liability to pay the excise duty should arise at the time of manufacture, acquisition or import.

5.3.4 E-commerce

One disadvantage of national excise duties is that they do not extend to e-commerce from other countries. A study should establish whether there are ways of reducing the negative impact of this, such as by renegotiating tax agreements with other countries.

5.3.5 Imposing the excise duty

Many excise duties are based on weight or volume. In the case of textiles, an excise duty based on the weight of the article is likely to be appropriate as an article of greater weight is assumed to contain more textile material. A study should establish whether the amount of excise duty should differ for different types of material, such as cotton and nylon, or whether such differentiation would involve too much administrative work.

5.3.6 Deductions of excise duty

According to the tax structure that is best suited to textiles, taxable articles that do not contain certain undesirable substances would be eligible for a deduction of excise duty. The size of such a deduction would need further study. Undesirable chemical substances or groups of substances, whose omission from a product would make it eligible for a deduction in excise duty, would have to fulfil certain criteria:

- The chemical substances have negative impacts on human health or the environment when they are present in textiles.
- There must be a uniform and reliable method of measurement to enable assessment of the presence of the substances in the taxable goods.
- A substance that has been singled out must not be banned completely in home textiles or clothing. It would be possible, however, to tax a whole group of substances of which some are banned.
- The occurrence of a substance or group of substances in home textiles and clothing on the Swedish market today should be made known.

The Swedish Chemicals Agency has identified four groups of substances which either fully or to a large extent meet the criteria above.

Biocides

The biocides silver and silver compounds, triclosan and triclocarban can be used as antibacterial agents to treat articles. Biocide-treated textile articles are available on the EU market, often without sufficient information, according to the Biocidal Products Regulation, on the active substances used or without proof of the alleged antibacterial effects. Biocides usually work as toxins in one or more target organisms but can also be toxic to other organisms and humans. Biocides are also suspected of having the potential to help develop resistance against antibiotics, which means that targeted use in important areas such as health care can be threatened.⁵² One biocide used in clothing is silver in various forms. As silver is an element, it is easy to measure with special measuring instruments.

Phthalates

The phthalates DEHP, BBP, DBP, DINP, DIDP and DNOP are used to soften plastic and can be found in prints and other plastic details. Phthalates are loosely bound to the plastic material and constantly leach out of articles and into the environment. This leaching can lead to phthalates in dust and indoor air and to direct exposure by people who come into contact with the articles, such as children sucking or biting on textiles.⁵³ The phthalates DEHP, DBP, BBP and DIBP are included in the Authorisation List in REACH (Annex XIV). The authorisation requirement does not, however, extend to imported articles, which means that although the use of these substances has decreased within the EU, the substances may still be present in imported articles. A large number (more than 80 per cent) of the textiles we consume in the EU are imported. The four phthalates on the Authorisation List and the phthalates DINP and DIDP are restricted in toys and child care articles. These restrictions

⁵² Swedish Chemicals Agency 2014, Report No. 6/14, Chemicals in textiles – Risks to human health and the environment.

⁵³ Swedish Chemicals Agency 2014, Report No. 7/14, Förslag till utfasning av fortplantningsstörande och hormonstörande ftalater i Sverige.

apply to all articles released on the EU market and include imported articles. The Swedish Chemicals Agency therefore considers it reasonable for clothing and textiles containing these phthalates not to be eligible for a deduction in excise duty because children come into direct contact with clothing and textiles. Phthalates are measured by wet chemical analysis. There are also portable measuring instruments for phthalates which use infrared light, but these produce less reliable results.

Highly fluorinated substances

Highly fluorinated substances (perfluoroalkyl and polyfluoroalkyl substances, PFAS) is an umbrella term for substances that have properties that are conducive to repelling water, dirt and grease. These substances have therefore been widely used for impregnating items such as functional clothing. They have a number of undesirable properties that can affect human health and the environment, however, at the same time as they are very persistent in the environment. Certain PFAS are banned in the EU but may be present in imported articles. Banned PFAS have also been replaced by other forms of fluorinated substances that are less well known but have similar properties. There is therefore a need to examine the total occurrence of organic fluorine to counteract unsound substitution, i.e. replacing one hazardous substance with another which later also proves hazardous.^{54 55} Today, there are two laboratories in the world capable of measuring organic fluorine. A researcher in Sweden is attempting to explore the potential of developing such a method of analysis in Sweden.

Other possible substances and groups of substances

In addition to the substances and groups of substances mentioned above, the Swedish Chemicals Agency believes that a study is needed to establish whether further substances should be included. It may be appropriate to consider allergenic substances and other antibacterial substances. The Swedish Chemicals Agency feels it may be appropriate to start with a few groups of substances at a time however.

5.3.7 Chemical substances in specific parts of an article

Some clothes are made up of different parts that can consist of a number of different materials. Eligibility for a deduction based on the absence of certain substances from an article must be designed to take this into account. Eligibility for a deduction based on the absence of a specific substance from any part of an article may face problems in terms of practical application. As a substance can occur in several places in an article, such a deduction would require a number of measurements to establish that the substance is not present in that article. It is therefore proposed that a future study recommends which parts of a garment need to be measured.

5.4 Implementation

In order to produce a final proposal, a Government commission will need to produce a report with a complete legislative proposal for a chemical charge on textiles. The Swedish

⁵⁴ Swedish Chemicals Agency 2014, Report No. 6/14, Chemicals in textiles – Risks to human health and the environment.

⁵⁵ Swedish Chemicals Agency 2015, Report No. 6/15, Förekomst och användning av högfluorerade ämnen och alternativ.

Chemicals Agency has compiled a list of the areas requiring investigation of which it is aware at present.

- An analysis of the proportion of clothing and home textiles placed on the market today that contain substances on the list of undesirable substances or other substances that may be appropriate to add to the list of substances and whose absence from an article would make it eligible for a deduction in excise duty. It may be that a large-scale measurement study needs to be included in the Commission's budget.
- What information on chemical substances in textiles is necessary to improve the possibilities of recycling. This is so that the excise duty, as far as possible, facilitates the transfer of information needed for a circular economy.
- What substitutes are available and what form the excise duty should take to encourage innovation as much as possible.
- What form the excise duty should take not to be defined as a state subsidy.
- Whether the excise duty should be imposed at the time of import, acquisition and manufacture, or at the sales stage.
- Which specific substances should be included in the list of undesirable substances.
- Which specific methods of measurement should be used. This must include an investigation of how much the different methods cost. Methods that apply to many substances or whole groups of substances at a low cost should be prioritised.
- Whether concentration limits need to be set and, if so, which ones.
- Which part or parts of the article should be subject to chemical analysis in order to achieve the same measurement results regardless of who carries out the analysis.
- Which level of excise duty may be appropriate before and after the deduction for chemicals. Would a tax ceiling for an individual product be appropriate?
- Would it be appropriate to differentiate the basic excise duty based on the material of the article?
- How the negative impact of increased international e-commerce can be minimised.

6 Background

Any assessment of chemical risks in connection with the use of textile articles will require information on the potentially hazardous properties of chemical substances, the occurrence of hazardous chemical substances in textiles and textile articles, and the extent to which humans and the environment could be exposed to the substances present. Such information is often lacking. It is known, however, that a large amount of chemicals is used in the production of textiles and that these can affect human health and the environment both in the countries of production and at the consumer stage.

The fact that the lack of knowledge about which chemicals occur in textiles is a problem has also been confirmed in consultation with various interested parties, including other authorities, individual companies and sector organisations. There is also a lack of uniform European product legislation on textiles, which may be a further reason for this lack of knowledge, as it means that no overall approach exists for the regulation of chemicals in the EU.

6.1 Previous Government assignments provide a background to the problems

The Swedish Chemicals Agency previously investigated and reported on different aspects of hazardous chemical substances in textiles, in KemI Report No. 3/13⁵⁶ and KemI Report No. 6/14⁵⁷. The Government assignment on textiles in 2013 concerned the identification of the hazardous substances that may be present in textiles and how these substances could be regulated. This work continued in the Government assignment on textiles in 2014. In KemI Report No. 6/14 we compiled information on risks to human health and the environment related to hazardous chemical substances that may be present in textile articles.

Below is a general description of the conclusions concerning the problems or obstacles in the way of effective management of the risks associated with hazardous substances in textiles. The results of this work form the basis for a description of the problems and the proposals for risk-restricting measures concerning hazardous chemical substances in textiles that are set out in this report.

Large amounts of chemicals but inadequate knowledge about their properties in relation to human health and the environment

Large amounts of chemical substances are used in the production of textiles. A review of substances in Report No. 6/14 identified approx. 2,400 chemical substances that can be used in the production of textile articles. There are indications that the number of substances that can be used in textile production is considerably higher. Some of these substances can be harmful to human health and the environment, which affects first and foremost the situation in the country of production but can also have an effect on the consumer stage.

The chemical substances considered to be of greatest relevance in terms of human and environmental exposure at the consumer stage were prioritised based on their effects: carcinogenic, mutagenic, toxic to reproduction and allergenic, as well as bioaccumulative and persistent in the environment. Approximately ten per cent of the identified 2,400 textile-related substances were considered to pose a risk to human health and approximately five per cent to the environment. However, there is a lack of information on a number of substances with properties that could pose a risk to human health and the environment.

Certain information on the properties of various substances can also be found in scientific articles, but this mainly concerns already relatively well-known problems and makes no clear connection to the use of the substances in textiles – certainly not in the case of consumers. Very few of the identified substances are covered by the Swedish Environmental Monitoring Programme.

Inadequate transfer of information in the distribution and supply chains

The distribution and supply chains in the textile sector are often long and complex with a long row of sub-suppliers at different stages. In addition, a very large part of the chains – over 80 per cent – exists outside the EU. The transfer of information in these chains is often poor, at the same time as the EU has little power to regulate and control it. The fact that a

⁵⁶ Swedish Chemicals Agency 2013, Report No. 3/13, Hazardous chemicals in textiles.

⁵⁷ Swedish Chemicals Agency 2014, Report No. 6/14, Chemicals in textiles – Risks to human health and the environment.

large part of the production takes place outside the EU also means that substances whose use is restricted within the EU can still be found in imported articles.

Despite it being known that chemical substances are used in large volumes for the manufacture and treatment of textile materials, there is no comprehensive and accessible compilation of hazardous substances. Access to reliable information is crucial for protecting human health and the environment and important for ensuring smooth functioning of the markets. The production and handling of goods differ between countries, and it is crucial that we develop effective ways at international level of providing and exchanging information on chemical substances in textiles.

Increased consumption means increased exposure

The consumption of textiles has increased rapidly in the EU during the last decades. Textile materials are produced in large quantities and included in many different articles in widespread use in society. Such comprehensive and widespread use means that both consumers and the environment can be directly or indirectly exposed to the chemical substances contained in the articles. Chemical substances can in certain circumstances be released from textile material and humans and the environment can be exposed to them. Most textile articles such as clothing and bedding are used in close contact with the skin, and skin absorption together with inhalation or ingestion of dust is considered a relevant form of human exposure. Substances in textiles that are washed can end up in the wastewater and spread into the environment. Furthermore, hazardous substances can leach from textile waste in landfill sites. Sweden incinerates the greatest amount of textile waste while, at EU level, the amount of textiles ending up in landfill sites is approximately 57 per cent.

Limitations in chemical legislation make risk assessment and regulation difficult

There are further pieces of legislation that affect substances which can be used in the textile sector (see Legal analysis 6.2). There is a lack of product-specific legislation regulating the chemical content in textiles. The risks associated with hazardous chemical substances in textile articles are therefore not addressed in a uniform way. Uniform regulations at EU level would also be able, in part, to replace the criteria that apply to the environmental labelling and voluntary restriction lists in existence today.⁵⁸

One of the requirements placed on companies by the REACH legislation on chemicals⁵⁹ is to make available knowledge about the risks of the substances to human health and the environment, provide information on intended use and, in the case of high-volume chemicals, assess the risks to human health and the environment. The obligation to register or report substances included in articles imported into the EU is limited, and there are no registration requirements specified in REACH that apply to substances manufactured in quantities below one tonne per company and year.

The registration requirements in REACH are thus a source of knowledge about substances, even though in many cases the registrations do not contain enough information on their use in different materials or articles to make a complete risk assessment.⁶⁰ The limited obligation to register means that there are often not enough substance-specific details available to make a

⁵⁸ Swedish Chemicals Agency 2012, Report No. 1/12, Bättre EU regler för en giftfri miljö.

⁵⁹ REACH (EC) No. 1907/2006.

⁶⁰ ECHA, Evaluation under REACH Progress Report 2014.

risk assessment of substances that may be present in textiles, because this is a sector with a high proportion of imports and in which many of the substances used are in quantities below one tonne.

6.2 Legal analysis

At present there is no one body of legislation for regulating the content of chemical substances in textile articles – at either EU or national level. However, there are a number of legislative acts which either regulate parts of the life cycle, in the case of articles in general, or contain a ban or restrictions relating to certain substances that may be present in textiles. A review of these legislative acts follows.

6.2.1 Legislation at EU level

The purpose of the chemicals legislation is to prevent chemical risks to humans and the environment. The two fundamental EU legislative acts which regulate chemicals are the REACH Chemicals Regulation⁶¹ and the CLP Regulation on the classification, labelling and packaging of chemical substances and mixtures⁶².

REACH contains certain provisions that apply to chemical substances in articles, including the restricted use of hazardous substances in textiles. However, REACH is not specifically designed to regulate chemical substances in groups of articles such as textile articles. Instead, the purpose of REACH is the regulation of individual substances. For example, the basis for the restriction procedure is that there will be extensive supporting evidence for restricting a clearly defined substance.⁶³

The CLP Regulation establishes binding harmonised classification of the dangers posed to health and the environment by certain substances, such as those which are carcinogenic or harmful to reproduction. However, effects such as allergies are not given priority under the CLP Regulation, but Sweden has identified allergenic substances as being an important area in the efforts to achieve the environmental quality objective of A Non-Toxic Environment.

Classification, labelling and packaging of chemical substances and mixtures (CLP)

The classification of substances is key to chemicals control and is therefore of great importance to the application of a number of regulations to articles. This is because these regulations refer to the CLP classification.

The CLP Regulation contains rules on the classification, labelling and packaging of chemical products. The rules contain criteria for when a substance should be considered to have certain hazardous properties and standardise the information to users. Certain substances come under

⁶¹ Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

⁶² Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006.

⁶³ Swedish Chemicals Agency 2014, Report 4/14, Utveckla och effektivisera Reach – en handlingsplan; English version: Report 2/15, Developing REACH and improving its efficiency – an action plan.

harmonised classification in the EU.⁶⁴ Other substances are classified by those who place these on the market with the support of the criteria specified in the CLP Regulation.

The procedure for giving a substance a harmonised classification involves competent authorities in the Member States or the European Chemicals Agency (ECHA) drawing up proposals for harmonised classification and labelling.⁶⁵ The proposals made by the authorities are submitted to ECHA. First of all, however, the actual intention to produce a proposal for classification must be reported to ECHA in its special Registry of Intentions. The proposal consists of two parts: a report containing a proposal for classification and a technical dossier presenting the scientific grounds for the proposal for classification. The proposal for classification along with comments and the responses to these are then sent to ECHA's Risk Assessment Committee (RAC) for an opinion. ECHA then forwards the RAC's opinion to the Commission for a decision within the framework of the comitology system.⁶⁶ If the proposal is accepted, the new classification is added to Annex VI to CLP.

REACH

REACH⁶⁷ is the EU legislative act that contains overriding provisions on chemicals control in the EU. The purpose of REACH is to guarantee a high level of protection for human health and the environment and to allow substances to circulate freely on the inner market while at the same time boosting competitive power and innovation. REACH contains provisions on the registration, evaluation, authorisation and restriction of chemicals. REACH distinguishes between substances, mixtures and articles. Most of the provisions in REACH apply to substances such as these or substances forming part of a mixture. Below is a description of the areas covered by REACH which, directly or indirectly, involve a regulation of hazardous substances in textiles.

Registration

Those manufacturing or importing chemical substances in amounts of at least one tonne per year shall register these with the European Chemicals Agency (ECHA).⁶⁸ The obligation to register also applies to substances in articles such as textiles. However, it is not the articles themselves that are to be registered but the substances included in them if the amount is at least one tonne per year.

Substances of Very High Concern (SVHC), the Candidate List and authorisation requirements

The term 'Substances of Very High Concern' (SVHC) in REACH covers substances that do serious and often permanent harm to human health or the environment. These include substances that are carcinogenic, mutagenic, toxic to reproduction or persistent, or may have

⁶⁴ The CLP Regulation (EC) No. 1272/2008, Annex VI contains a list of substances given harmonised classification. These are substances containing properties that are carcinogenic, mutagenic or toxic to reproduction or are respiratory sensitisers, and those that occur as active substances in biocidal products or plant protection products, and other substances where the need for classification at EU level has been seen to be justified.

⁶⁵ CLP Regulation (EC) No. 1272/2008, Title V, Chapter 1, Articles 36-38.

⁶⁶ With the help of the so-called regulatory procedure with scrutiny and its controls in accordance with Article 5a in Council Decision 1999/468/EC compared with Article 12, paragraph 2 in Regulation (EU) No. 182/2011.

⁶⁷ REACH (EC) No. 1907/2006.

⁶⁸ REACH (EC) No. 1907/2006, Article 6.

other serious properties such as endocrine-disruptors⁶⁹. The purpose of the REACH regulations on these substances is to be able to properly control the risks to which these give rise and to ensure they are gradually replaced once this is economically and technically viable.⁷⁰

The Commission and Member States may propose substances to ECHA that should be added to the Candidate List.⁷¹ If a Member State wishes to propose that a certain substance be identified as an SVHC, the actual intention to produce the proposal shall be published in the Registry of Intentions before the proposal is submitted in order to inform the actors concerned. The proposal shall be produced in accordance with Annex XV in REACH and consist of two main parts.⁷² The first part shall contain the details and grounds for identifying the substance as an SVHC substance. The second part shall contain information on the amounts on the EU market and the use of the substance and its subsequent release and exposure, and any conceivable alternatives to the substances. Once the proposal has been published, a public consultation will take place at which views may be submitted. If no views are submitted, the substance is added to the Candidate List. If views are submitted, the matter is referred to the REACH Member State Committee (MSC). If the Committee does not reach unanimous agreement, the matter is referred to the Commission, which prepares a draft decision.

This draft is then subject to a vote in accordance with the examination procedure.⁷³ The Candidate List is published on the ECHA website with the aim of informing the industry and public that these substances are candidates for inclusion in the Authorisation List (Annex XIV to REACH). The Candidate List is updated on an ongoing basis.⁷⁴ The List includes Substances of Very High Concern that can be found in textiles, such as brominated flame retardants (e.g. hexabromocyclododecane and decabromodiphenyl ether), a number of phthalates, nonylphenol ethoxilates (NPEO) and their derivatives, and pentadecafluorooctanoic acid (PFOA).

The substances on the Candidate List are therefore not prohibited, but they are subject to certain information obligations. As of the date when ECHA publishes a substance on the Candidate List, the information requirement in Article 33 of the REACH Regulation on articles will apply. This means that those who manufacture, import or sell an article containing more than 0.1 per cent by weight of the substance have a duty to provide their customers with information that ensures safe handling of the article. It also means that information must in all cases be submitted to customers who use the article for industrial purposes or professionally. Finally, consumers have the right, on request, to receive the equivalent information free of charge from the supplier within 45 days. Those manufacturing or importing an article containing more than 0.1 per cent of a substance which is included on the Candidate List must report this to ECHA. This obligation applies if the amount of the substance exceeds one tonne per manufacturer/importer and year.⁷⁵

⁶⁹ See Article 57 in REACH for a complete list.

⁷⁰ REACH (EC) No. 1907/2006, Article 55.

⁷¹ REACH (EC) No. 1907/2006, Article 59, paragraphs 2 and 3.

⁷² REACH (EC) No. 1907/2006, Article 59 regulates the procedure concerning the uptake of SVHC substances.

⁷³ The Control by Member States of the Commission's exercise of implementing powers (EU) No. 182/2011, Article 5.

⁷⁴ On 15 June 2015, 163 substances were added to the Candidate List. See the List on the ECHA website:

<http://echa.europa.eu/web/guest/candidate-list-table>

⁷⁵ REACH (EC) No. 1907/2006, Article 7(2).

SVHC substances can thus be made subject to compulsory authorisation, which means they may not be used or placed on the market without authorisation. This applies regardless of the amount of the substance being used.⁷⁶ ECHA selects a number of substances from the Candidate List and recommends the Commission to add these to Annex XIV to REACH. If an SVHC substance is subject to compulsory authorisation, this is added to Annex XIV to REACH.⁷⁷ Authorisation may be granted if the applicant is able to demonstrate that the health and environmental risks can be adequately controlled or that the socio-economic advantages outweigh the health and environmental risks in connection with the use of the substance and no suitable alternative substances or techniques exist.⁷⁸ One shortcoming of the regulation is that SVHC substances in imported articles are not covered by the provisions on authorisation. However, one conclusion that can be drawn from applying these provisions is that a number of companies manufacturing or importing articles which contain substances on the Candidate List voluntarily choose to replace these substances with others that are not SVHC substances. They therefore take the decision that their articles should no longer contain substances included in the Candidate List. Finally, mention can be made of the power ECHA has, once the sunset date for a substance has passed⁷⁹, to consider whether the use of that substance in articles constitutes a health or environmental risk that cannot be adequately controlled and to prepare an Annex XV dossier to instigate a restriction procedure for that substance.⁸⁰

Restriction regulations – REACH Annex XVII

If there exists at EU level an unacceptable health or environmental risk in connection with the manufacture, use or placing on the market of a substance, this may be restricted. A restriction may apply to a substance as such or one included in a mixture or an article.

The restriction may also apply to substances in imported goods. The restriction provisions in REACH are given in Title VIII and the restrictions of substances and mixtures agreed upon are given in Annex XVII to REACH. A number of these substances occur in textiles. The restrictions apply to items such as azo dyes⁸¹, certain brominated flame retardants⁸², mercury compounds for the impregnation of coarse textiles for industrial use, and a list⁸³ of Substances of Very High Concern (substances which are carcinogenic, harmful to the foetus and harmful to our DNA) which may only be sold for professional use.

New restrictions or changes to existing restrictions may be proposed by the Member States or ECHA on behalf of the Commission. Any decision on a restriction must take into account the socio-economic effects of that restriction, such as the availability of alternatives.⁸⁴ If a Member State wishes to propose the restriction of a substance at EU level, it must compile supporting documentation in the form of a so-called restriction dossier which is needed in

⁷⁶ REACH (EC) No. 1907/2006, Title VII (Articles 55-66).

⁷⁷ REACH (EC) No. 1907/2006, Article 59. Annex XIV includes 31 substances as at 1 October 2015.

⁷⁸ REACH (EC) No. 1907/2006, Articles 60(2) and 60(4).

⁷⁹ REACH (EC) No. 1907/2006, Article 58(1) c. The date from which the placing on the market and use of a substance shall be prohibited if authorisation is not granted.

⁸⁰ REACH (EC) No. 1907/2006, Article 69(2).

⁸¹ Several aromatic amines in azo dyes have been classified as carcinogenic and/or mutagenic. A Supplement to Annex XVII lists 22 aromatic amines which can be turned into biodegradable products made from azo dyes. These may not be contained in textile articles (see also Section 4).

⁸² Polybrominated biphenyls, polybrominated diphenyl ether and octabromodiphenyl ether.

⁸³ REACH (EC) No. 1907/2006, Annex XVII Entries 28-30 and Supplements 1-6.

⁸⁴ REACH (EC) No. 1907/2006, Article 68(1).

order to reach a decision. The Member State must first notify ECHA that it intends to compile the documentation required.⁸⁵ Once the documentation on the substance has been compiled in accordance with the requirements in Annex XV, this shall be submitted to the ECHA Risk Assessment Committee (RAC) and to the Socio-Economic Analysis Committee (SEAC) for an assessment of whether the documentation fulfils the requirements in Annex XV. ECHA also publishes on its website the documentation in accordance with Annex XV as well as the proposed restrictions. This is followed by a procedure with different deadlines for the parties concerned to submit views. RAC and SEAC assess the proposal and provide their reports, which are submitted to the Commission. The proposal is also sent to the Forum for the Exchange of Information on Enforcement.⁸⁶ Thereafter the Commission produces a proposal for a new restriction which is then subject to a vote in the REACH Regulatory Committee where representatives for the Member States vote on the proposal.⁸⁷

As well as this standard procedure there is a possibility, according to the so-called fast track specified in Article 68(2) of REACH, for the Commission to propose restrictions. In this case the substances in question are those which fulfil the criteria for classification as CMR substances in Categories 1A or 1B according to the CLP Regulation and which can be used by consumers. This procedure means that there is no need to produce an Annex XV dossier. Nor is there a need for the RAC and SEAC to assess the proposal. Instead, the Commission has the sole right of initiative to produce a proposal for restrictions which are subject to a vote by the REACH Regulatory Committee. If approved, the restrictions are added to Annex XVII to REACH. Extensive discussions during 2014 have taken place between the Commission and the Member States on how Article 68(2) could be applied in practice.⁸⁸ The Commission, among others, has underlined the possibility of individual Member States making the Commission aware of possible proposals for restrictions.⁸⁹ One aim of the discussions has been to assess the required extent of the supporting documentation. On 22 October 2015 the Commission published a public consultation on a possible restriction concerning CMR substances in textiles (see Section 2.1.2)⁹⁰.

The POPs Regulation

The EU Regulation on Persistent Organic Pollutants (POPs) prohibits or restricts the use of 23 substances that are seen as particularly problematic on the grounds that their properties are

⁸⁵ REACH (EC) No. 1907/2006, Articles 69(4) and 69(5). ECHA is in charge of a list of planned or initiated proposals for restrictions in what is known as the Registry of Intentions. This list also includes planned proposals for the harmonised classification, labelling and documentation for the identification of SVHC substances.

⁸⁶ REACH (EC) No. 1907/2006, Article 77(4).

⁸⁷ REACH (EC) No. 1907/2006, Article 73. Decisions are reached in accordance with the provisions covering the regulatory procedure and controls coming under Article 5a in Council Decision 1999/468/EC as compared with Article 12, paragraph 2 in Regulation (EU) No. 182/2011.

⁸⁸ Caracal 14, 15 and 17 (the latter dated March 2015). Caracal (Competent Authorities for REACH and CLP) is a group of experts which provides advice to the Commission and ECHA on issues affecting REACH and CLP. The group consists of representatives for the competent authorities for REACH and CLP in the Member States, representatives for competent authorities in the EEA-EFTA countries and a number of observers from countries outside the EU, as well as interested parties from trade and industry organisations, non-governmental organisations, trade unions and international organisations.

⁸⁹ CACS/13/2014, Use of Article 68(2) for CMRs in articles.

⁹⁰ Consultation is taking place up to and including 22 January 2016: http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=8299

harmful to health and the environment.⁹¹ These substances are persistent organic pollutants that can give rise to effects such as cancer and disruption to reproduction and development. The POPs Regulation prohibits or restricts the use of such substances and also contains regulations covering the unintentional emissions, waste management and environmental monitoring of the substances. The Regulation regulates the content of POPs substances in both chemical products and articles. The Regulation has direct application in all EU Member States and implements within the EU the Stockholm Convention⁹² and the Protocol⁹³ on Persistent Organic Pollutants to the Convention on Long-Range Transboundary Air Pollutants (CLRTAP)⁹⁴. Some of the substances covered by the POPs Regulation may occur in textiles. This applies, for instance, to PFOS, certain brominated flame retardants (PBDEs) and chlorinated paraffins.

The Biocides Regulation

Biocidal products are pesticides used for controlling harmful organisms. Biocides can be used in textiles to give them antibacterial and other properties. For example, sportswear can be treated with biocides to combat sweat odour. The EU Biocides Regulation⁹⁵ contains provisions on approval at EU level of active substances in biocidal products and product approval for the sale and use of biocidal products. In addition, there are provisions concerning the placing on the market of biocide-treated articles, including textiles. As a main rule, a treated article may only be placed on the market once it has been treated with biocidal products containing active substances approved at EU level for the relevant product type and use.⁹⁶ If an article treated with or containing biocidal products is claimed to have a biocidal property, the article must be labelled with particular information.⁹⁷ The treated article must also be labelled with particular information should this be required by the decision to approve the substance and must relate to the active substance contained in the biocidal product with which the article has been treated. Even if a treated article has not been claimed to have biocidal properties or if no specific labelling requirements were made when approval was given to the substance, the treated article must be labelled if it is necessary to protect humans, animals or the environment.

The Fibre Labelling Regulation

The Fibre Labelling Regulation⁹⁸ contains provisions on the designation of textile fibres and labelling of the fibre composition in textile products. The purpose of the Regulation is to guarantee that consumers are given the correct information and to remove obstacles to the inner market for the clothing and textile market in the EU. The Regulation contains

⁹¹ Regulation (EC) No. 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

⁹² The Stockholm Convention on Persistent Organic Pollutants, UNTS vol. 2256, 40214.

⁹³ The 1998 Aarhus Protocol on Persistent Organic Pollutants (POPs), UNTS vol. 2230.

⁹⁴ The Convention on Long-Range Transboundary Air Pollution, adopted in Geneva on 13 November 1979, UNTS vol. 1302.

⁹⁵ Regulation (EU) No. 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products.

⁹⁶ The Biocides Regulation (EU) No. 528/2012, Article 58(2).

⁹⁷ The Biocides Regulation (EU) No. 528/2012, Article 58(3).

⁹⁸ Regulation (EU) No. 1007/2011 of the European Parliament and of the Council of 27 September 2011 on textile fibre names and related labelling and marking of the fibre composition of textile products and repealing Council Directive 73/44/EEC and Directives 96/73/EC and 2008/121/EC of the European Parliament and of the Council.

provisions that previously called on the Commission to investigate the need for the regulation of hazardous substances.⁹⁹ According to these provisions, the Commission had to produce a report by 2013 at the latest to investigate the need for new labelling regulations covering items such as hazardous substances. A study was also to be carried out on the connection between allergic reactions and the use of chemicals in textiles. These results were published in a report in 2013.¹⁰⁰ The conclusion in the report was that labelling and other instruments for providing information on allergenic substances required further investigation. Cases in which further measures were required for such substances were to be addressed by other relevant pieces of EU legislation such as REACH.

6.2.2 Legislation at national level

The Swedish Environmental Code (1998:808)

The Swedish Environmental Code coordinates Swedish legislation, and Chapter 2 of the Code contains general rules concerning the exercise of caution, the restriction of measures and activities and the rules of consideration which are to apply within the area of application of the Code. These are the general rules of consideration which apply to all those taking a measure or intending to pursue an activity. There is a precautionary principle that obliges persons who pursue an activity or take a measure to take the necessary precautionary measures to prevent, obstruct or counter any harm to human health or the environment.¹⁰¹ These precautionary measures are to be taken as soon as there are grounds to assume that an activity or measure could cause damage or detriment to human health or the environment. An important provision concerns the application of the substitution principle. According to the Swedish Environmental Code, this means, for example, that those pursuing an activity or taking a measure should avoid using or selling such chemical products that are suspected of posing a risk to human health or the environment if these can be replaced by such products that can be assumed to be less harmful.¹⁰² The Regulation does not support a general ban on the use or sale of a product, organism or article; rather, it serves as a rule of consideration or an approach that all parties should observe.¹⁰³ There are instead special authorisation rules in Chapter 14, Section 8, paragraphs 3-4 the Swedish Environmental Code, that give the Government or an authority appointed by the Government the power to issue regulations concerning handling, acquisition, export or prohibition that are of particular significance from the point of view of health and environmental protection and are in regard to items such as chemical products and articles.¹⁰⁴ This means that the Government can decide on a ban and other terms in relation to chemical products or articles that have been treated with a chemical product. Such national bans and restrictions are found mainly in Ordinance (1998:944) on bans etc. in certain cases in connection to the handling, import and export of chemical products.

⁹⁹ The Fibre Labelling Regulation (EU) No. 1007/2011, Recital 26 in the Preamble and Articles 24 and 25.

¹⁰⁰ COM(2013) 656 final, Report from the Commission to the European Parliament and the Council regarding possible new labelling requirements of textile products and regarding a study on allergenic substances in textile products.

¹⁰¹ Chapter 2, Section 3 of the Swedish Environmental Code (1998:808).

¹⁰² This so-called product choice principle or substitution principle is given in Chapter 2, Section 4 of the Swedish Environmental Code (1998:808). It also finds expression in EU legislation; for example, Article 191.2 TFEU.

¹⁰³ Government Bill 1997/98:45, Environmental Code, I p. 226 f.

¹⁰⁴ The Swedish Chemicals Agency has been given authority to issue regulations with the support of point 3. See Section 25 of the Ordinance (2008:245) on chemical products and biotechnical organisms.

The Ordinance (1998:944) on Prohibition in Certain Cases in Connection with the Handling, Import and Export of Chemical Products

This Government Regulation brings together national provisions concerning individual chemical substances, mixtures and product groups. It contains provisions on items such as cadmium, certain chlorinated solvents and mercury. The same Regulation gives the Swedish Chemicals Agency the authority to issue regulations on exemption and to grant exemption from a ban. There is a provision which, to some extent, concerns textiles. That is Section 16, which prohibits the sale and transfer of *health care and sanitary articles, garments and the materials for such* as well as household articles should these contain or be treated with a chemical product that may be suspected of causing harm to humans. This provision came into existence before the Environmental Code. Due to its general wording, it is not considered clear whether it can be applied in practice.¹⁰⁵

The Product Safety Act (2004:451)

The Swedish Product Safety Act implements the EU General Product Safety Directive¹⁰⁶ in Swedish law. The key provisions in this Act are subsidiary in relation to other pieces of legislation. The purpose of the Act is to guarantee that articles and services provided to consumers do not cause personal harm. The following applies to articles alone. The area of application of the Act covers articles made available through business activities and public services where the articles are intended for consumers or will presumably be used by consumers in the future. The Act stipulates that all articles and services offered by business operators to consumers must be safe. According to the Act, an article is safe if it poses either no risk or a low risk to human health and safety during normal use. The Act does not apply to articles intended solely for professional purposes (such as working clothes). The Act does not apply to damage to the environment either. The Act gives enforcement authorities (the Swedish Consumer Agency or another authority determined by the Government) powers such as requiring a business operator to provide safety information or to prohibit a business operator from continuing to supply articles assumed to be potentially harmful. According to the EU General Product Safety Directive, the Commission is able to decide, at EU level, on a temporary ban should a product pose a serious risk to the health and safety of the consumer.¹⁰⁷ Such a ban generally applies for one year at a time but may be extended in certain cases. The purpose of this measure is that a ban should be incorporated into the legislation to which it is most closely related. The power given by the General Product Safety Directive has been used in cases such as the prohibiting of certain phthalates in toys and the biocide dimethyl fumarate which is used in furniture and footwear. Both these bans were then transferred to REACH. The EU General Product Safety Directive is currently subject to a review and may be replaced by an EU regulation on product safety.¹⁰⁸

¹⁰⁵ Swedish Chemicals Agency 2012, Report No. 1/12, Bättre EU-regler för en giftfri miljö – rapport från ett regeringsuppdrag, cf. p. 145. In Swedish, with an English summary.

¹⁰⁶ Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety.

¹⁰⁷ General Product Safety Directive 2001/95/EC, Article 13

¹⁰⁸ The Commission's website 23/10/2015:

http://ec.europa.eu/consumers/consumers_safety/product_safety_legislation/product_safety_and_market_surveillance_package/index_en.htm

6.2.3 Voluntary environmental labelling and restriction lists

The purpose of voluntary environmental labelling on textile articles is to provide guidance to professional purchasers and consumers in their choice of textiles which have less of a negative effect on human health and the environment. Some common certified environmental labels are the Global Organic Textile Standard (GOTS)¹⁰⁹, the Nordic environmental label Svanen¹¹⁰, the EU environmental label Eco-label, Öko-Tex¹¹¹, Bra Miljöval (Good Environmental Choice) and Bluesign¹¹².

According to the guide from 2012 on the environmental labelling of textiles, there are approximately 100 international standards and labels but only about ten different types of environmental labels imposing requirements on textile production¹¹³. Apart from voluntary labelling, many textile companies require their suppliers to observe so-called restriction lists with the aim of restricting the content of hazardous substances in textiles. Companies can have different requirements, which makes it difficult for certain suppliers, especially small import companies, to guarantee that their requirements are met by suppliers and sub-suppliers. The restriction lists are not uniform and differ in detail as regards the selection of chemicals, concentration limits and verification methods. Managing the different requirements is therefore an administrative burden.

The many environmental labels and voluntary restriction lists may be interpreted as parts of the textile sector seeing today's legislation as inadequate in terms of the possibilities of controlling the use of hazardous chemicals in textile production and their occurrence in finished articles. The Swedish textile industry¹¹⁴ favours a development of EU legislation on the grounds of the voluntary initiatives already applied in the sector, such as the large number of lists of substances which ought to be restricted (The Restricted Substances List, RSL) and Öko-Tex 100. This would mean a simplified method for the sector to address issues among companies that relate to chemicals throughout the production and distribution chains.

6.2.4 Textile legislation in certain EU Member States

This section gives an overall description of which regulations apply in the area of chemicals linked to textile products in certain other EU Member States. The regulations described are national and exist in addition to the requirements of EU law. Overall, the regulations concern restrictions of individual substances, especially pentachlorophenyl (PCP) and formaldehyde, which both have biocidal properties. In many cases these can be restrictions that may eventually have to be removed when harmonising EU regulations come into full force.¹¹⁵ Below is a description of the regulations in Denmark, Finland, Germany and Austria.

¹⁰⁹ www.global-standard.org

¹¹⁰ www.nordicecolabel.org

¹¹¹ www.oeko-tex.com

¹¹² www.bluesign.com

¹¹³ www.ecoextilelabels.com

¹¹⁴ Sveriges Textil- och Modeföretag (TEKO).

¹¹⁵ REACH (EC) No. 1907/2006. Formaldehyde is included in REACH Annex XIV, and its sunset date for and placing on the market without authorisation is 22 August 2017.

Denmark

Denmark has a regulation which prohibits the import, export, sale and use of articles containing 5 ppm or more of pentachlorophenyl and its salts and esters.¹¹⁶

Finland

Certain substances in textiles are regulated by Finnish law. With the support of Finnish consumer legislation¹¹⁷, a number of legislative acts which regulate individual substances have been adopted. One substance included here is formaldehyde, for which provisions exist that stipulate the maximum permitted concentrations.¹¹⁸ The provisions mean that the maximum permitted concentration of formaldehyde in textiles depends on the age of the user and the duration of skin contact.

Germany

Germany has regulations on restrictions that affect a number of textile-relevant substances or groups of substances. There is a ban on the manufacture of four arylamines, such as 2-aphthylamine, 4-aminobiphenyl, benzidine and 4-nitrobiphenyl, which have been used as dyes¹¹⁹. All of the substances apart from the last one in the group of substances are included in the current list of restricted amines given in Entry 43, Supplement 8 to REACH Annex XVII. The German regulations ban the manufacture of these substances and mixtures containing substances in concentrations of over 0.1 per cent by weight. Furthermore, there is a ban on pentachlorophenol which stipulates that articles treated with PCP may not be used if the parts treated contain more than 5 mg/kg of this substance.¹²⁰ The same ban also includes a restriction on the dye 6-amino-2-ethoxynaphthalene, which can give off carcinogenic amines.¹²¹ It may only be manufactured and used in closed systems. The same applies to bis(chloromethyl) ether which was previously used in the textile industry.¹²² Another piece of legislation includes a restriction in the form of a labelling requirement concerning formaldehyde.¹²³ These provisions mean that a total concentration of more than 0.15 per cent of formaldehyde in an article would require the article to be labelled with the wording 'Contains formaldehyde'.

¹¹⁶ Bekendtgørelse nr 854 af 05/09/2009 om forbud mod import, salg, anvendelse og eksport af varer, der indeholder pentachlorophenol (PCP).

¹¹⁷ Statsrådets förordning om de högsta tillåtna mängderna formaldehyd i vissa textilprodukter 10.5.2012/233. The strictest concentration limit is 30 mg/kg for children under 2 years and up to 300 mg/kg for items including furnishing fabrics.

¹¹⁸ Consumer Safety Act (920/2011), Section 52.

¹¹⁹ Verordnung zum Schutz vor Gefahrstoffen (Gefahrstoffverordnung – GefStoffV), Vom 26. November 2010 (BGBl. I S 1643). The bans come under Section 16 and Appendix II (Besondere Vorschriften für bestimmte Gefahrstoffe, number 2.

¹²⁰ GefStoffV, Appendix II, number 3.

¹²¹ GefStoffV, Appendix II, number 6, item 1. Number 6 contains a list of highly carcinogenic substances.

¹²² GefStoffV, Appendix II, number 6, item 2.

¹²³ Bedarfsgegenständeverordnung, (BGBl. 1998 I S. 5), Appendix 9 (Section 10, point 3).

Austria

Austria has provisions on the restriction of certain hazardous chemical substances, mixtures and articles in a body of legislation called *Chemikalien Verbotsverordnung 2003*¹²⁴. For example, Section 8 of this Ordinance contains a restriction concerning PCP. Paragraph 2 of this section includes a provision stipulating that the manufacture, sale and use of finished articles containing more than 5 ppm of PCP and its salts or esters is prohibited.¹²⁵ A special ‘formaldehyde ordinance’ includes a provision that textiles coming into contact with the skin that contain more than 0.15 per cent of this substance should be labelled with the wording ‘Contains formaldehyde’.¹²⁶

6.3 Supervisory responsibility and reporting of a suspected crime

The Swedish Chemicals Agency and the municipal environmental and health protection committees supervise the regulations restricting the occurrence of substances in textiles. The regulations which are controlled concern restrictions in REACH, the information obligation which applies to Substances of Very High Concern in articles in REACH, and labelling in accordance with the Biocides Regulation. In certain cases the restrictions in the POPs Regulation are also of interest. The supervision of textiles is often based on chemical analyses carried out on random samples selected by the authorities.

Where analyses show the occurrence of a substance that exceeds a certain limit, the company which has released the article on the market is contacted to investigate which measures it will take. The company may be forced to recall the articles from its customers if these are retailers, and the authorities can decide on a sales ban in cases where the company does not voluntarily discontinue its sales of the article.

When substances included in the Candidate List are found in textiles in concentrations exceeding 0.1 per cent by weight, the companies in the supply chain are contacted to investigate whether the duty to inform as specified in REACH has been complied with. Controls can also be initiated as a result of details submitted to the authorities in the form of, for example, reports from consumers or organisations that have carried out tests. Cases in which a consumer gets in touch usually concern a purchased article whose smell has affected human health.

According to the Environmental Code, a suspected crime should be reported to the environmental prosecutor in cases in which restricted substances such as arylamines are shown to have a concentration level exceeding the limit or in which a company is judged not have informed its recipients that the content of an article includes substances on the Candidate List. The environmental prosecutor then assesses whether or not to launch a preliminary investigation. The penalty scale for the two crimes in question – the handling of environmentally hazardous chemicals and inadequate information relating to the environment

¹²⁴ Verordnung des Bundesministers für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft über weitere Verbote und Beschränkungen bestimmter gefährlicher Stoffe, Zubereitungen und Fertigwaren (Chemikalien-Verbotsverordnung 2003 – Chem-VerbotsV 2003).

¹²⁵ Paragraph 1 of this section specifies a restriction of PCP which imitates the restriction currently found in REACH, Annex XVII, Entry 22. Such a regulation is in fact seen as not permitted according to EU law.

¹²⁶ Section 2, point 2 of the Verordnung des Bundesministers für Umwelt, Jugend und Familie vom 12. Februar 1990 über Beschränkungen des Inverkehrsetzens und über die Kennzeichnung formaldehydhaltiger Stoffe, Zubereitungen und Fertigwaren (Formaldehydverordnung) StF: BGB1. Nr. 194/1990.

– is fines or a prison sentence of a maximum of two years, and the supervisory authorities are obliged to report any suspicion of crime.

6.3.1 Inspection of chemicals in textiles

In recent years, the Swedish Chemicals Agency has carried out inspection projects on a number of different aspects of the textile sector. See the table and results below (and the Swedish Chemicals Agency's website¹²⁷).

So far, nine cases have been reported to the environmental prosecutor concerning textiles in connection with the projects listed in the table below. In each of these cases concentrations of prohibited arylamines have been detected in textiles at levels exceeding the limit.

The Swedish Chemicals Agency carries out random sample checks, and the results below are therefore not an accurate representation of the reality, but they do give an indication of the current situation. There is no correlation between the articles in which the Agency found the prohibited substances. For example, prohibited arylamines have been detected in artificial fibres, cotton and wool. The dyes in the textiles tested have been light, strong or dark.

Table 2. Inspection projects and prohibited substances in textiles

Year	Project	Number of tested articles in lab	Number of articles containing DMF	Number of articles containing arylamines	Number of articles containing nonylphenol ethoxylate	Number of articles containing azo dyes on the Candidate List	Number of prosecution notifications
2007	Shell Clothing	No analyses	-	-	-	-	0
2009	Children and Textiles	No analyses	-	-	-	-	0
2009-2010	Jeans	18	0	-	-	-	0
2010	Buggies & Footmuffs	10	-	0	-	-	0
2012	Child Car Seats & Covers	14	-	0	-	-	1 ¹²⁸
2013	Clothing in Contact with Skin	110	-	3	35	-	3
2013	Upholstery Fabric	74	-	0	11	0	3 ¹²⁹
2013	Costumes	81	-	2	-	-	2
2014	Interior Fabrics	50	-	3	3	0	4 ¹³⁰
2014	Labelling according to the Biocides Regulation	No analyses	-	-	-	-	0
2015	Footwear & Leisurewear	192	-	1	1	0	Not yet ready

¹²⁷ <http://www.kemi.se/sv/Innehall/Publikationer/Tillsyn/>

¹²⁸ The prosecution notification in 2012 was because the soft plastic in a child car seat contained a phthalate.

¹²⁹ The prosecution notifications made during the project in 2013 concerned SVHC substances found in filling material and imitation leather; i.e. not in material covered by the definition of textiles.

¹³⁰ In 2014, azo dyes were found in three textiles (two cushion covers and one throw). One of the companies was not a direct importer. In that particular case their suppliers were also contacted. A total of four companies were reported to the prosecutor during the project.

Explanation

- A dash (-) in the table means that no analyses for that substance were carried out in the project. In the Jeans project, only analysis for the anti-mould agent dimethyl fumarate (DMF) was carried out.
- Nonylphenol ethoxylate is included in the Candidate List.
- As regards the Shell Clothing and Children and Textiles projects, inspection took place on site, but no samples of the articles were sent for analysis.

Analyses of substances in textiles have also been carried out in projects not directly concerned with textiles. During an inspection project in 2012-2013, 21 toys made of textiles were tested, including doll's clothes, soft toys and cloth balls. Prohibited arylamines were then found in doll's clothes whereby this was reported to the environmental prosecutor.

During an internal inspection in spring 2015, one major actor on the market discovered a prohibited substance in one of its bed textiles. The company informed the Swedish Chemicals Agency of this, and since the bed textile was for sale, the authority reported it to the prosecutor. The Swedish Chemicals Agency plans to carry out a project on textiles in 2016 that is targeted in part at bed textiles.

6.3.2 The lack of regulations makes the inspection of textiles difficult

Inspections are made difficult due to the lack of regulations and restrictions concerning textiles. There are no documentation requirements either for regulating the inspection. This can be contrasted with the regulations concerning electrical goods or toys, which are subject to requirements that include an EU insurance policy. Inspection has still been meaningful for informative purposes in cases where the actors have been unaware that any regulations existed at all concerning chemical substances in textiles.

7 Impact assessment

7.1 Problems

The most recent Government assignment on textiles, 2014, showed the Swedish Chemicals Agency that there are more than 350 chemical Substances of Very High Concern whose use in textile production has been reported. We also showed that there are considerable problems with the lack of information on chemical content in textiles on the market, in part because of long and complex supply chains. A more detailed description of the problems is given in Section 6.

7.2 Purpose and objectives

The proposed measures in this report aim to reduce human exposure to hazardous substances found in textiles and negative effects caused by the leaching of hazardous substances in textiles into the environment. The measures also aim to improve the availability of information regarding which hazardous substances occur in textiles placed on the market. One of the proposed measures also aims to reduce the consumption of virgin textile raw materials which is an interim objective in the area of waste management.

7.3 Market failures behind the problems

There are two market failures behind the continued occurrence in textiles of substances that are harmful to the environment and health. One is the lack of information. In order for a market to work well, the consumer must be able to reject alternatives such as those which are harmful to health. That is not the case today as textiles do not carry a declaration of content covering chemicals. Furthermore, few people would have the knowledge required to understand such a declaration. To compensate for this shortcoming, the textile sector has made efforts to avoid substances that are harmful to health and the environment in their textiles.

The other market failure is that some chemical substances do not primarily cause any harm to the individual consumer. It is only later when a large number of consumers buy textiles containing these substances that harm is done to the environment. In this case, the market failure is that the consumption of articles containing these substances creates a *negative external effect*¹³¹. Since the consumer is not personally affected by the harm that he or she is doing and enables, there is little will to pay to avoid these chemicals. Or, there is a will to pay, but the consumer is not prepared to devote the time and energy needed to familiarise himself or herself with the issue.

7.4 Choice of measures for analysis

An important part of the work in this assignment has been to identify proposals for measures that can be implemented given the harmonised chemicals policy in the EU. It has also been a priority to identify new measures, i.e. that are not ongoing or could be initiated within the framework of the current work by the Swedish Chemicals Agency or the EU. These two criteria have been set as 'shall' requirements for the purposes of the investigation. Table 3 presents the most important of the proposals discussed as part of the investigation. Proposals for measures that fulfil both of these 'shall' requirements have been analysed further.

¹³¹ An external effect is created if an economic transaction has an impact on the benefit to a third party. Externalities can be both positive and negative.

Table 3. Table of measures fulfilling the 'shall' requirements

Measures:	Viable? I.e. compatible with EU law? ('Shall' requirement)	Not an ongoing measure or one that can be prioritised within the framework of ongoing work ('Shall' requirement)
Development of special product legislation for textiles	Yes	Yes
A national restriction of certain azo dyes in textiles	Yes ¹³²	Yes
Excise duty on clothing and home textiles	Yes ¹³³	Yes
Labelling of allergenic substances in textiles as a result of a restriction under REACH	Yes	Ongoing ->included in the reference alternative
More prohibited substances at EU level, such as a group restriction of CMR substances in articles under REACH 68.2	Yes	Ongoing ->included in the reference alternative
More classified substances at EU level	Yes	Ongoing ->included in the reference alternative
National restrictions on biocides, phthalates, perfluorinated substances or CMR substances in clothing and home textiles	No ->being abandoned ¹³⁴	Yes
National requirements for a declaration of contents for clothing and home textiles	No ->being abandoned	Yes
Environmental labelling of textiles	Yes	Ongoing ->included in the reference alternative
Chemical inspection of textiles	Yes	Ongoing ->included in the reference alternative
Chemicals network for the textile sector	Yes	Ongoing ->included in the reference alternative
Standard for information in the supply chain, voluntary international standard	Yes	Ongoing ->being abandoned

The possibility of imposing an extended restriction on azo dyes by way of a technical adaptation of REACH is not taken into account in the table. The Swedish Chemicals Agency intends to produce a proposal on restrictions if there is reason to believe that these will be implemented.

The review above shows that only three proposals fulfil the 'shall' criteria that the measure shall be compatible with EU law and that it is not an ongoing measure, or that it is a measure that could be implemented within the framework of ongoing work. These three proposals are

- Special product legislation for textiles in the EU
- An excise duty on clothing and home textiles
- A national restriction on certain azo dyes in textiles

¹³² According to the Swedish Chemicals Agency assessment.

¹³³ Given that it is designed in the correct way.

¹³⁴ The legal situation is complex and there are considerable difficulties in restricting these substances at national level as the EU has harmonised legislation in this area

These proposals will therefore be seen against a reference alternative as part of the impact analysis, meaning that all the current ongoing measures will continue but no further measures will be taken.

7.4.1 The reference alternative

A number of activities are being pursued which result in the reduced occurrence of hazardous substances in textiles. The impact analysis covers the reference alternative to all the measures already under way (see Table 3), including within the framework of the work being done at EU level on chemicals.

7.4.2 Voluntary work in the textile sector

In this section we look at whether there is an increase or decrease in hazardous chemicals contained in textile articles irrespective of which regulations are implemented. Active companies are trying to take a proactive approach and phase out chemicals on a voluntary basis. There are approximately 90 such companies in the textile sector, and these are linked to the Chemicals Group at Swerea which provides professional support on chemicals-related issues. Companies such as H&M and IKEA are continuing their efforts to achieve the sustainability goals set for 2020. There is growing awareness among medium-sized companies and increasing discussion on sustainable products that have been manufactured in a sustainable way and on circular flows of textile materials. This encourages the setting up of new, small companies with a clear sustainability profile. More companies are going to bring in so-called 'Good Choice' collections as part of their range.

At the same time, there are counter trends that can result in greater use of undesirable chemicals: the ongoing product development of new functions, materials and properties, and the constant, rapid turnover of collections, which leads to continued high consumption, large amounts of waste and constant, rapid changes in production.

Voluntary work is assumed to be part of all the alternatives in the impact analysis, including in the reference alternative.

7.5 Actors affected by the proposals

The report *Modebranschen i Sverige*¹³⁵ has produced statistics on companies in the fashion industry. The statistics cover clothing companies in the agency sector, the wholesale trade, the retail trade, mail order and e-commerce, and manufacturing. This means that the statistics largely cover the same target group as the proposals for the measures in this report. The demarcation does not, however, include companies in home textiles, but this group is significantly smaller than that of clothing, and the details are therefore still relevant. The Swedish Agency for Economic and Regional Growth has also excluded H&M from its report as the company is so big that it has too great an influence on the results.

¹³⁵ Modebranschen i Sverige, statistik & analys, 2015. Report 0176, the Swedish Agency for Economic and Regional Growth, Stockholm, January 2015.

Table 4. Sector structure according to company size in 2012, excluding H&M¹³⁶

	One-man companies	Micro companies	Small companies	Medium-sized companies	Large companies
Companies					
Number	10,638	5,679	625	95	23
Proportion	62%	33%	4%	1%	0.1%
Employees					
Number	0	14,909	12,192	9,890	19,999
Proportion	0%	28%	23%	18%	32%
One-man companies with a turnover in excess of SEK 500,000¹⁰					
Number	1,808	14,909	12,192	9,890	19,999
Proportion	3%	27%	22%	18%	31%
Domestic turnover					
MSEK	5,209	30,311	21,773	13,996	24,877
Proportion	6%	24%	25%	16%	29%
Export					
MSEK	642	2,473	6,844	5,548	7,476
Proportion	3%	11%	30%	24%	33%
Total turnover					
MSEK	5,851	22,784	28,617	19,544	32,353
Proportion	5%	21%	26%	18%	30%

Most companies in the fashion industry are one-man companies (63 per cent) or micro companies with 1-9 employees (33 per cent). The small companies with 10-49 employees constitute 4 per cent of the total, and those with 250 or more employees constitute 0.1 per cent of the total. This is largely in line with trade and industry as a whole. Adding up the number of companies above gives a total of approximately 17,000, of which a large proportion are small companies. Many of these companies are not importers themselves but purchase goods from others.

In the light of the above, new regulations will be introduced in the textile sector in order to target many small companies which lack their own knowledge of chemicals.

7.6 Proposals in line with EU law

See Section 6.2.

7.7 Comparative analysis of criteria for alternative means of regulation

Since none of the measures have been fully investigated, and two exist on a relatively theoretical level without complete details, it is not possible to produce advanced calculations of the effects of these measures. Instead, we have chosen to assess the overall effects of the three different measures by way of a criteria analysis. The criteria analysis focuses on the factors that are relevant for these three measures specifically and the special features that

¹³⁶ Modebranschen i Sverige, statistik & analys, 2015. Report 0176, the Swedish Agency for Economic and Regional Growth, Stockholm, January 2015

distinguish them from each other. The opinions on each measure form the basis of the project group's assessments.

Table 5. Criteria analysis of the measures

	New EU law	Excise duty	National ban on certain azo dyes	The reference alternative, incl the measures taken under REACH ¹³⁷
Goal achievement 1. Proportion of Substances of Very High Concern found in textiles that are targeted by the regulation	+++	+ / ++	+	++
Goal achievement 2. Proportion of the targeted Substances of Very High Concern found in textiles that are expected to disappear from the market	+++	++	+++	+++
Goal achievement 3. Increase in the transfer of information on the chemical content of textiles	+++	++	+	++
Goal achievement 4. Reduced use of virgin raw materials.	0	+++	0	0
The companies' administrative costs	-	---	-	--
Impact on small companies	--	---	--	--
Impact on public expenses for administration and control	-	---	0/-	-
Impact on company competitiveness	0	---	0	0
Impact on public revenue	0	+++	0	0
Time frame. The measure can be implemented in the short term	0	++	+++	++
Means. Sweden has its own means to implement the measure	0	++	+++	+

Table 6. Explanation of the weighting criteria

Ranking of positive criteria		Ranking of negative criteria	
High	+++	High	---
Medium high	++	Medium high	--
Low	+	Low	-
None/insignificant	0	None/insignificant	0

7.8 Impact of specific product legislation for textiles in the EU

As there is no fully formed proposal on what uniform legislation on textiles could look like, we have made the uncertain assumption that such legislation would be similar to the RoHS Directive or the Toys Directive in terms of its design and effects. However, the analysis does give a good picture of the ways in which the impacts of this proposal would differ from those of the other two proposals.

¹³⁷ Unlike the other measures, the reference alternative is not compared with the reference alternative but with the current situation.

Goal achievement 1. Proportion of Substances of Very High Concern found in textiles that are targeted by the regulation

The assessment is that a high proportion of the Substances of Very High Concern found in textiles should be covered by new product legislation. This assessment is naturally an uncertain one. It may also be that the European Commission chooses to proceed with a relatively short list of substances.

Goal achievement 2. Proportion of the targeted Substances of Very High Concern found in textiles that are expected to disappear from the market

New and uniform product legislation for textiles in the EU would largely help to ensure that the substances covered by such legislation disappeared from textiles on the market. This is because the EU Member States represent such a large part of global consumption of textiles that manufacturers would adapt to the requirements set by the EU to a high degree. The downside of this is that the European Commission normally introduces a number of exemptions from its regulations for certain types of use.

Goal achievement 3. Increase in the transfer of information on the chemical content of textiles

It should be possible for product legislation for textiles to incorporate requirements for an increased amount of information and a declaration of contents for textile articles, at least at the supply stage. By taking joint action, the EU would be in a good position to place strict requirements on suppliers to ensure the transfer of an increased amount of information.

Goal achievement 4. Reduced use of virgin raw materials

This measure would not be expected to affect the consumption of textiles.

The companies' administrative costs

This measure would presumably have a medium-high impact on the companies' administrative costs. On the one hand, the number of substances covered would probably be large and the extended requirements for documentation would be relatively strict, while, on the other hand, all the EU Member States would introduce the same regulations at the same time, which would mean that most of the suppliers would be forced to adapt their manufacturing and information systems to the new regulations. This would keep down the EU Member States' administrative costs.

Impact on small companies

Small companies would be affected in a similar way to the other companies.

Impact on public expenses for administration and control

If more extensive legislation were to be introduced concerning chemicals in textiles, the supervisory role of the authorities would also need to be more extensive. The cost would be relatively low.

Impact on company competitiveness

Since most of the countries in Europe would be covered by the new legislation, competition within the EU would not be distorted. A certain distortion of competition might arise in relation to non-EU countries. However, the new regulations would presumably not result in greater price increases at the consumer stage – although there is great uncertainty over this – which is why an increase in trade with countries outside the EU ought to be insignificant.

Impact on public revenue

This measure would not be expected to affect public revenue.

Time frame

The measure is only seen as viable in the longer term. This assessment is based on the current European Commission's intention of taking a restrictive approach towards new legislation and the fact that Sweden was not successful with its proposal to develop the Fibre Labelling Regulation.

Means

Sweden has few means of ensuring the implementation of this measure since it is one of 28 countries which need to reach agreement.

Consultation

The views aired during a consultation with the external reference group on 12 October 2015 included the following:

- Harmonised regulation at EU level is on the whole satisfactory. A uniform regulation of chemicals in textiles is satisfactory.
- An act on textiles is not needed because REACH is in place and should be used for this purpose.
- There needs to be a greater level of knowledge among consumers as well as companies.

7.9 Impact of a national ban on certain azo dyes

Goal achievement 1. Proportion of Substances of Very High Concern found in textiles that are targeted by the regulation

The measure would affect a small number of Substances of Very High Concern found in textiles: in this case CMR substances. Goal achievement 1 is assessed as being low.

Goal achievement 2. Proportion of the targeted Substances of Very High Concern found in textiles that are expected to disappear from the market

The substances affected by the regulation would be expected to largely disappear from the market.

Goal achievement 3. Increase in the transfer of information on the chemical content of textiles

Importers must improve their knowledge about the occurrence of these substances in the articles they import. This measure would therefore result in a certain (low) increase in the transfer of information.

Goal achievement 4. Reduced use of virgin raw materials

The measure would have no effect on the use of virgin raw materials.

The companies' administrative costs

Since the measure includes a special regulation which applies only to Sweden, this would involve a certain amount of administration on the part of the companies. This should not be a big problem for large companies which already place requirements on their suppliers since this would apply only to a few substances. The administrative costs are assessed to be relatively low.

Impact on small companies

Small companies may find it more difficult to control by themselves substances which are prohibited only in Sweden. The additional cost to them is therefore assessed to be medium high.

Impact on public expenses for administration and control

There are already controls in place today regarding the CMR substances contained in textiles. The measure would therefore be expected to result in only low or insignificant increases in public expenses covering supervision and control.

Impact on company competitiveness

The assessment is that the measure would not affect company competitiveness since all the companies in Sweden would be affected in the same way. The cost increases for consumers are assessed as not being great enough to provide a boost to international e-commerce.

Impact on public revenue

This measure would not result in increased public revenue.

Time frame

The measure is assessed to be viable in the short term; that is to say, within 6-18 months.

Means

The Swedish Chemicals Agency believes that Sweden has the means to implement this measure. However, other actors may come to other conclusions. The means by which Sweden can act are therefore assessed as medium high.

Consultation

The views aired during a consultation with the external reference group on 12 October 2015 included the following:

- The measure can be seen as being proactive and it would have an almost immediate impact. Such a measure should at the same time be supplemented by action at EU level.
- The measure does not ensure a level playing field. REACH is in place and should be used for this purpose.

7.10 Impact of an excise duty which incorporates a deduction for chemicals in clothing and home textiles

Goal achievement 1. Proportion of Substances of Very High Concern found in textiles that are targeted by the regulation

It is difficult to say at present how large a proportion of the Substances of Very High Concern found in textiles could be expected to be targeted by an excise duty. This issue would need investigating first. A tentative assessment, however, suggests a low to medium-high proportion of these substances, as it must be possible to measure the occurrence of these substances at not too high a cost in terms of analysis. If it is possible to identify effective methods of measurement for a large proportion, there would be no obstacle to increasing the proportion of substances.

Goal achievement 2. Proportion of the targeted Substances of Very High Concern found in textiles that are expected to disappear from the market

An excise duty to reduce the occurrence of taxable substances would have three effects. The first would be to make clothing generally more expensive, which would result in a reduction in clothes purchases in the order of 4-7 per cent of the market (see the calculation under Goal achievement 4 below). The second would mean that clothes containing hazardous substances would be subject to an even higher excise duty. This, in turn, would mean that a greater number of potential buyers would avoid these clothes in favour of others that did not contain these substances, and the clothing chains would actively remove these clothes from their range. All in all, a sharp reduction could be expected in the proportion of clothes containing taxable substances where substitutes for these substances exist, whereas the reduction would be relatively small for articles where no substitutes for the taxable substances exist. The overall effect is assessed to be medium high.

Goal achievement 3. Increase in the transfer of information on the chemical content of textiles

An excise duty would increase the amount of information on the occurrence of taxable substances in textiles at the import stage. If the excise duty were supplemented by a requirement to provide information to the end consumer, the access to information at the consumer stage could also increase. However, previous proposals for excise duties on chemicals have not included a proposal of this kind and such a requirement would therefore need to be investigated. The overall assessment is that an excise duty would result in a

medium-high increase in the amount of information available on the chemical content of textiles, primarily at the import stage.

Goal achievement 4. Reduced use of virgin raw materials

The measure is expected to result in a reduction of sales of the taxed articles in the order of 5-8 per cent. The calculation for this figure is based on the assumption that the excise duty would raise the end price of the articles by an average of 10 per cent, that tax evasion and an increase in international e-commerce would mean that 15 per cent of the articles would not be taxed, and that the own-price elasticity for clothes would amount to -0.785^{138} . This would be a relatively sharp reduction. The biggest reduction would apply to clothes set at a low price, and this would indirectly favour articles of somewhat higher quality.

The companies' administrative costs

The administrative costs for the companies would be high. The measure would incur costs for obtaining documentation from the suppliers, carrying out chemical analyses and administering the payments of this excise duty. A large number of companies would also be liable to pay the excise duty.

Impact on small companies

Small companies would be affected proportionately more as a result of the administrative costs, which means that an excise duty would involve a considerable cost for small companies.

Impact on public expenses for administration and control

An excise duty on textiles would result in relatively high administrative costs for supervisory authorities such as the Swedish Tax Agency and the Swedish Customs.

Impact on company competitiveness

An excise duty on textiles would lead to poorer competitiveness for Swedish companies as competing international e-commerce would benefit from not having to pay this 12 per cent¹³⁹ on all clothing and footwear bought via e-commerce in 2014, a large proportion of which probably took place in Sweden. A domestic excise duty would increase this proportion to some extent. The assessment is that the negative distortion would be high.

Impact on public revenue

The public revenue from an excise duty is determined to a large extent by the amount of sales of the taxable articles, how high the average level of the excise duty would be, and how great the loss would be in terms of reduced consumption, increased international e-commerce and tax evasion. At this stage only a rough estimate has been made of the possible amount of public revenue in which the taxable articles are assumed to be 'Items of clothing', 'Other items of clothing' and 'Home furnishings' in accordance with Table 7 below. Other possible

¹³⁸ Martine, Lauren A., 'The Country-Specific Nature of Apparel Elasticities and Impact of the Multi-Fibre Arrangement' (2012). Honours Projects. Paper 49. Table 21.

http://digitalcommons.maclester.edu/economics_honors_projects/49

¹³⁹ E-barometern 2014. Postnord. <http://www.hui.se/statistik-rapporter/index-och-barometrar/e-barometern>

demarcations could, of course, be made; see, for example, the closely related groups of articles in Table 7 below. Should such a demarcation of taxable articles be made, total household consumption would amount to MSEK 78 per year. If the consumption of authorities and companies, which could amount to 10 per cent of household consumption, is added to this, it would mean a total consumption of MSEK 86 per year. Assuming that the average level of the excise duty (after any tax deductions) would amount to 10 per cent of the sales price and that reductions in consumption, increases in international e-commerce and tax evasion amount to 20 per cent, without further fine tuning of the calculations, the total tax revenue would in this case amount to in the order of BSEK 7 per year.¹⁴⁰ This is considered a large amount of revenue.

Table 7. Household consumption of a number of textile-related articles in 2014¹⁴¹

Group of articles	Household consumption according to Statistics Sweden for 2014. MSEK/year
Material for clothing	648
Items of clothing	66,129
Other items of clothing	3,534
Shoes etc.	11,853
Furniture, lighting	31,741
Carpeting, incl fitting	2,320
Home furnishings	8,783

Time frame

Deciding on and appointing a Government commission, implementing it, referring the proposal for consultation and scrutiny by the Council on Legislation, and finally taking the form of a Bill on which the Swedish Parliament is able to take a decision is a process that takes roughly two and a half to three years. This is judged to be an average time frame.

Means

Sweden has the national right of decision in the area of taxation, but the taxes introduced must comply with a number of common principles applying to the EU inner market. A tax may not, for example, be seen to be a state subsidy. The means by which Sweden can act are therefore assessed to be medium high.

¹⁴⁰ $86 \times 01 \times (1-0.2)$.

¹⁴¹ Special run carried out by Statistics Sweden for the Swedish Chemicals Agency in 2015. The run is based on COICOP codes at a four-digit level.

Consultation

The views aired during a consultation with the external reference group on 12 October 2015 included the following:

- Economic instruments are good because other forms of regulation proceed too slowly.
- An excise duty would be able to encourage new business models.
- An excise duty would be a white elephant. The measure would involve an administrative burden.
- An excise duty is difficult for the authorities to control.
- An excise duty 'punishes' textiles as a product group.
- An excise duty allows international e-commerce to get off scot-free.
- An excise duty puts small and medium-large companies at a disadvantage.
- Use should be made of the existing legislation.

7.11 The reference alternative

The reference alternative means that only ongoing measures are taken. Other measures are evaluated on the basis of their net impact on the reference alternative. Were the reference alternative to be evaluated in the same way, it would have no impact at all. The reference alternative is therefore instead evaluated on the way the situation looks today.

The ongoing measures expected to have the greatest impact on the goal criteria in question are

- More prohibited substances at EU level such as the group restriction of CMR substances in articles in accordance with REACH Article 68(2).
- More classified substances at EU level.

REACH 68(2) is intended to act as a fast track for classified substances. It is still unclear as to how fast this would be in practice.

Goal achievement 1. Proportion of Substances of Very High Concern found in textiles that are targeted by the regulation

The proportion of Substances of Very High Concern found in textiles that are expected to be targeted by the ongoing measures in the reference alternative is judged to be high, given that CMR substances are included. However, substances which are harmful to the environment or allergenic will not be covered. All in all, the goal achievement is judged to be medium high.

Goal achievement 2. Proportion of the targeted Substances of Very High Concern found in textiles that are expected to disappear from the market

The substances targeted by the extended regulations resulting from the ongoing measures are expected largely to disappear from the market.

Goal achievement 3. Increase in the transfer of information on the chemical content of textiles

The amount of information transferred between manufacturers and importers on the substances in question is expected to be high. At the same time, the proposal does not cover

any general, stricter requirements for an increase in information to, for example, consumers. All in all, an increase in the transfer of information would be medium high.

Goal achievement 4. Reduced use of virgin raw materials

The ongoing measures would have no impact on the use of virgin raw materials.

The companies' administrative costs

The ongoing measures cover a number of different substances. Should these be prohibited, this would mean a medium-high increase in costs for the companies.

Impact on small companies

The administrative costs for small companies are assessed to be medium high.

Impact on public expenses for administration and control

The costs of supervision are expected to increase, but these are relatively low.

Impact on company competitiveness

The ongoing measures would not be expected to affect company competitiveness because all the companies in Europe would be affected in the same way. The cost increases for consumers are assessed as not being great enough to provide a boost to international e-commerce.

Impact on public revenue

The ongoing measures would have no impact on public revenue.

Time frame

The ongoing measures could be implemented in the medium term.

Means

Sweden has some means of addressing the ongoing measures since there is an established process under the REACH system which allows Sweden to do so. The means by which Sweden could act are relatively few however.

Consultation

The views aired during a consultation with the external reference group on 12 October 2015 included the following:

- The REACH processes (ongoing measures) are preferred to special regulations at national level.
- The REACH process is too slow and ought to be supplemented by Swedish initiatives.

7.12 Impact analysis summary

The three measures have totally different profiles because of the costs and impacts involved.

Special product legislation for textiles within the EU

This proposed measure has the best goal achievement of all the proposals. The measure is assumed to cover a high proportion of Substances of Very High Concern found in textiles and to have a high impact of the occurrence of these substances in articles on the market.

Presumably certain administrative costs would arise and affect both companies and authorities as a result of this act, but since a large number of countries would be introducing the same legislation at the same time, the costs would be kept down, as the countries of manufacture would be forced to adapt to the new regulations. All in all, the Swedish Chemicals Agency believes that this measure would have a good chance of achieving highly indicative cost-effectiveness.¹⁴²¹⁴²

However, the proposed measure scores poorly in terms of both the time frame and the means. It is unclear if and when the measure would come into force, and Sweden has no means of its own to implement the measure but would need to reach agreement with the other 27 EU Member States.

National ban on azo dyes

A national ban on certain azo dyes covers a few substances, but these are expected to be largely phased out. The measure would involve certain administrative costs for companies or authorities. In the case of small companies, the need for them to impose national requirements on their suppliers could be difficult. All in all, the indicative cost-effectiveness of the measure is assessed to be medium low. The measure is assessed to be viable within a relatively short time frame and the means are assessed as medium high.

Excise duty on clothing and home textiles

An excise duty on clothing and home textiles is assumed to be a satisfactory goal achievement. This is because an excise duty would have a broad impact on all four goal indicators. For example, this is the only measure which would mean a reduction in the use of virgin raw materials. At the same time, it is the measure burdened with the greatest administrative costs for both companies and authorities. Furthermore, the measure would result in a distortion of the market in a way that would put Swedish companies at a disadvantage, while e-commerce companies with their storage business overseas would be at an advantage. All in all, the indicative cost-effectiveness of this measure is assessed to be relatively low. In order for it to be cost-effective, the measure would need to target hazardous substances which incur considerable costs in health-economic terms in order to justify the administrative costs that it would create.

¹⁴² Cost-effectiveness is difficult to estimate at the current time, which is why an indicative cost-effectiveness analysis has been carried out. Here, cost-effectiveness has been assessed by dividing the estimates for goal achievement by the total of the estimates for the criteria that set out the costs for companies and authorities. The means, time frame and tax revenue are not taken into account. Goal achievements 1 and 2 have been multiplied by each other to produce a picture of the pattern. In other cases the estimates have been added.

The advantage of this excise duty is that it would result in far greater revenue for the public purse. One way of justifying the excise duty might be to argue that tax revenue enables a reduction in other taxes that are more damaging to society.

This measure could be introduced in two and a half to three years' time, bearing in mind the time normally taken to investigate, refer, incorporate and decide on a proposal for new legislation.

Taxes are an area where the national right of decision still applies. However, the EU has established a number of regulations, such as those concerning state subsidies, which strongly curtail the possibilities of individual states formulating taxes the way they would wish. That is to say, the means are medium high.

The reference alternative

The reference alternative, which covers measures that are already ongoing, especially those measures being taken under REACH, is seen to be a satisfactory goal achievement. The administrative costs for companies and authorities are seen to be restrictive. All in all, the ongoing measures being taken under REACH are assessed to have high indicative cost-effectiveness. The efforts to restrict CMR substances within REACH are assessed to be viable in the medium-long term, but the means by which Sweden can act are few.

8 List of terms and abbreviations

8.1 Terms

Annex XV dossier	Documentation that may be required for producing a proposal for a restriction under REACH, including information on its occurrence and use on the EU market, risks, release, alternatives to the substance, and a socio-economic analysis.
Article	An object which during production is given a special shape, surface or design, which determines its function to a greater degree than does its chemical composition.*
Arylamines	Degradation products from azo dyes. Certain arylamines may be carcinogenic or may affect DNA.
Azo dyes	Synthetic dyes containing one or more azo groups consisting of two nitrogen atoms with a double bond.
Candidate List	List of SVHC substances which are included in the list in accordance with Article 59 of the REACH Regulation. The substances are candidates for inclusion in Annex XIV to REACH, which means that authorisation will be required in order to use them.
Combined Nomenclature/CN codes	A classification system used by Swedish Customs to assign a customs tariff to an article at the time of import. CN Codes are the article codes listed in the Nomenclature.
Colour Index database	A compilation of known dyes.
Endocrine disruptors	Substances which affect the hormonal systems and can cause damage to organisms, populations or ecosystems.
Hazardous substances	Substances which are classified as being

	hazardous in accordance with the CLP Regulation and which fulfil the criteria set out in the provisions for hazardous substances, but which have not yet been classified.
Substance	Chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.*
Particularly hazardous substances	In this report, the term refers to substances which are persistent and bioaccumulative, substances which are carcinogenic, mutagenic or toxic to reproduction, substances which are endocrine disruptors or highly allergenic, and substances with other serious properties of equivalent concern, as well as the metals mercury, cadmium and lead ¹⁴³ .
	*The definitions of these terms have been taken from Article 3 of the Definitions in REACH.

¹⁴³dnr M2012/1171/Ma and Ds 2012:23 Svenska miljömål – preciseringar av miljö kvalitetsmålen och en första uppsättning etappmål

8.2 Abbreviations

CAS Chemical Abstract Service

CiP Chemicals in Products

CMR Substances which are carcinogenic, mutagenic or toxic to reproduction

CN The Combined Nomenclature

ECHA European Chemicals Agency

MSC ECHA's Member State Committee

PBT Persistent, Bioaccumulative and Toxic

PFAS Per- and Polyfluorinated Alkyl Substances

POP Persistent Organic Pollutants

RAC ECHA's Risk Assessment Committee

RMO Risk Management Options

SAICM Strategic Approach to International Chemicals Management

SEAC ECHA's Socioeconomic Assessment Committee

SVHC Substances of Very High Concern (according to Article 57 of REACH)

vPvB very Persistent very Bioaccumulative

9 References

Brüschweiler BJ, Küng, Bürgi D, Mural L, Nyfeler E. Identification of non-regulated aromatic amines of toxicological concern which can be cleaved from azo dyes used in clothing textiles. *Regulatory Toxicology and Pharmacology* 69 (2014) 263-272.

COM 2013, Report from the Commission to the European Parliament and the Council regarding possible new labelling requirements of textile products and on a study on allergenic substances in textile products. COM(2013) 656 final.

Commission Directive 2003/3/EC of 6 January 2003 relating to restrictions on the marketing and use of “blue colourant” (twelfth adaptation to technical progress of Council Directive 76/769/EEC).

Convention on Long-Range Transboundary Air Pollution, adopted in Geneva on 13 November 1979, UNTS vol. 1302.

Council Decision of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission (1999/468/EC).

Council Directive of 27 July 1976 on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (76/769/EEC).

Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on General Product Safety.

Directive 2002/61/EC of the European Parliament and of the Council of 19 July 2002 amending for the nineteenth time Council Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations (azocolourants).

Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (codification).

Ministry Publications Series (Ds.), 2012:23 Svenska miljömål - preciseringar av miljö kvalitetsmålen och en första uppsättning etappmål.

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EEC, and amending Regulation (EC) No 1907/2006.

Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission’s exercise of implementing powers.

Regulation (EU) No 1007/2011 of the European Parliament and of the Council of 27 September 2011 on textile fibre names and related labelling and marking of the fibre composition of textile products and repealing Council Directive 73/44/EEC and Directives 96/73/EC and 2008/121/EC of the European Parliament and of the Council.

Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products.

SOU 2014:90, Bisfenol A. Kartläggning och strategi för minskad exponering. Report by the Bisphenol A Commission.

SOU 2015:30, Kemikalieskatt. Skatt på vissa konsumentvaror som innehåller kemikalier. Report by the Chemical Charge Commission.

Stockholm Convention on Persistent Organic Pollutants, UNTS vol. 2256, 40214.

Swedish Chemicals Agency 2012, Report No 1/12, Bättre EU-regler för en Giftfri miljö.

Swedish Chemicals Agency 2013, Report No 1/13, När kan ekonomiska styrmedel komplettera regleringar inom kemikalieområdet?

Swedish Chemicals Agency 2013, Report No 3/13, Hazardous chemicals in textiles.

Swedish Chemicals Agency 2014, Report No 4/14, Utveckla och effektivisera Reach – en handlingsplan.

Swedish Chemicals Agency 2014, Report No 5/14, Handlingsplan för en giftfri vardag 2015 - 2020 – Skydda barnen bättre.

Swedish Chemicals Agency 2014, Report No 6/14, Chemicals in textiles – Risks to human health and the environment.

Swedish Chemicals Agency 2014, Report No 7/14, Förslag till utfasning av fortplantningsstörande och hormonstörande ftalater i Sverige.

Swedish Chemicals Agency 2015, Report No 6/15, Förekomst och användning av högfluorerade ämnen och alternativ.

Swedish Code of Statutes 1998:808, Environmental Code.

Swedish Code of Statutes 1998:944, Ordinance concerning prohibitions etc in certain cases in connection to the handling, import and export of chemical products.

Swedish Code of Statutes 2008:245, the Chemical Products and Biotechnical Organisms Ordinance.

Treaty on the Functioning of the European Union (TFEU, OJ 2012/C 326/01).

The 1998 Aarhus Protocol on Persistent Organic Pollutants (POPs), UNTS vol. 2230.



Box 2, SE-172 13 Sundbyberg
+46 8 519 41 100

Visitors' and delivery address
Esplanaden 3A, Sundbyberg

kemi@kemi.se
www.kemikalieinspektionen.se