



GOING GREEN TRAININGS

# Navigating EU Textiles and Chemical Legislation

Implications for SMEs

10 April 2025 • 10:30-11:30 • Online



# Webinar Procedures



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Type questions  
in the chat



Raise your hand  
when you wish  
to speak



When you are invited  
to speak, unmute mic  
and show video  
(if possible)

# Agenda

## Introduction

*Charlotte Denis, Textile  
ETP*

## Q&A

**Navigating EU  
Textiles and  
Chemical Legislation**  
*Steffen Schellenberger,  
RISE*

## Conclusion

*Charlotte Denis,  
Textile ETP*



# COMMUNITY TALKS

## GOING GREEN TRAININGS

**Online animation activities play a pivotal role in sustaining the engagement of SMEs within the digital ecosystem.** To stimulate interaction, the RegioGreenTex Community Talks **promote the latest progresses and results of the project, and well as encouraging dialogue and knowledge sharing in the textile sector.**

**The 'Going Green Trainings', a component of the RegioGreenTex Community Talks, offer advisory green support to SMEs in the textile sector, carefully tailored to address sustainability concerns. Led by experts from RISE, these webinars provide practical training across six distinct areas of sustainability.**

The Going Green Trainings are part of WP4 (T4.2 Green advice/advisory support to SMEs) and are managed by RISE, with support from OVAM, Euramaterials, Citeve, Eurofins, Ateval, AEI Textils, CS-Pointex, NTT, EURATEX, and Textile ETP.

# Navigating EU Textiles and Chemical Legislation

*Steffen Schellenberger, RISE*



Co-funded by  
the European Union



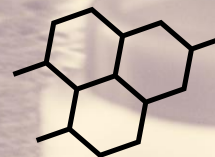


# Navigating EU Textiles and Chemical Legislation: Focus on chemicals and textiles

RegioGreenTex webinar

Steffen Schellenberger  
25-04-10

CO<sub>2</sub>

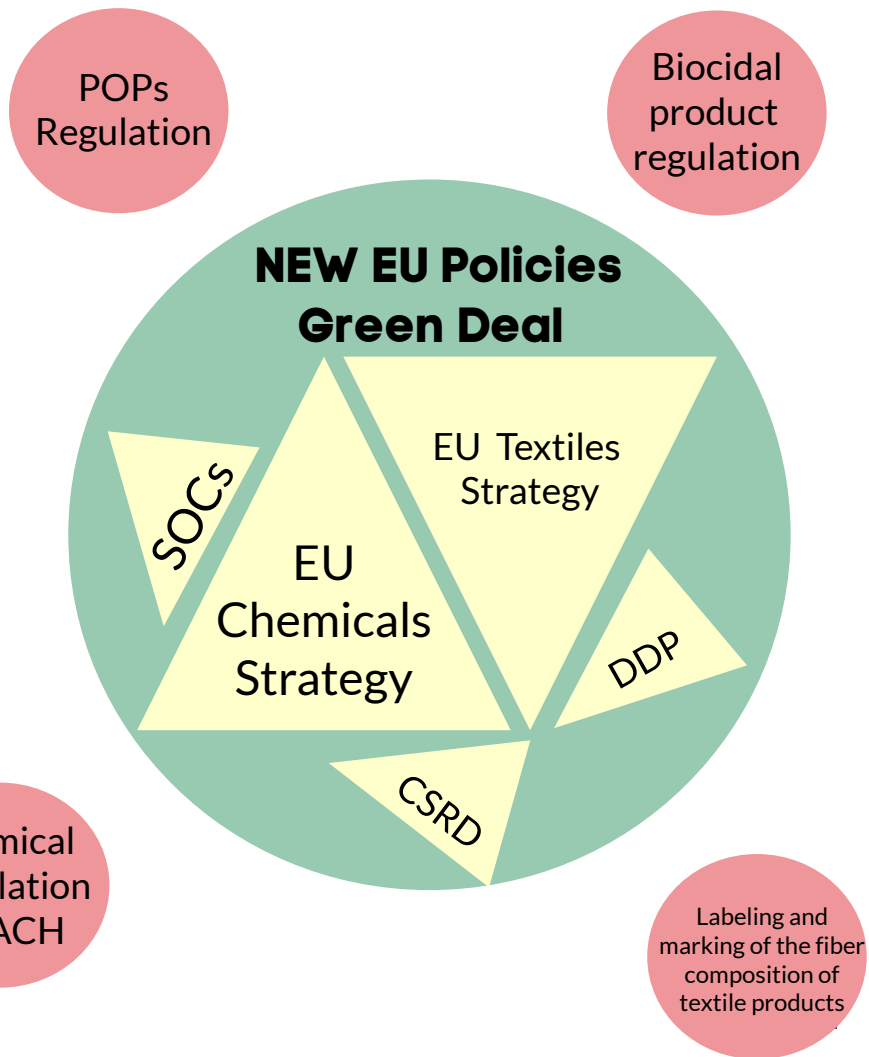


RI  
SE

## AIM of presentation



- Overview of new key policies and regulations important for textiles
- Special focus on chemical management under REACH and how this work relates to new EU policies
- Implications for small and medium-sized enterprises (SMEs)

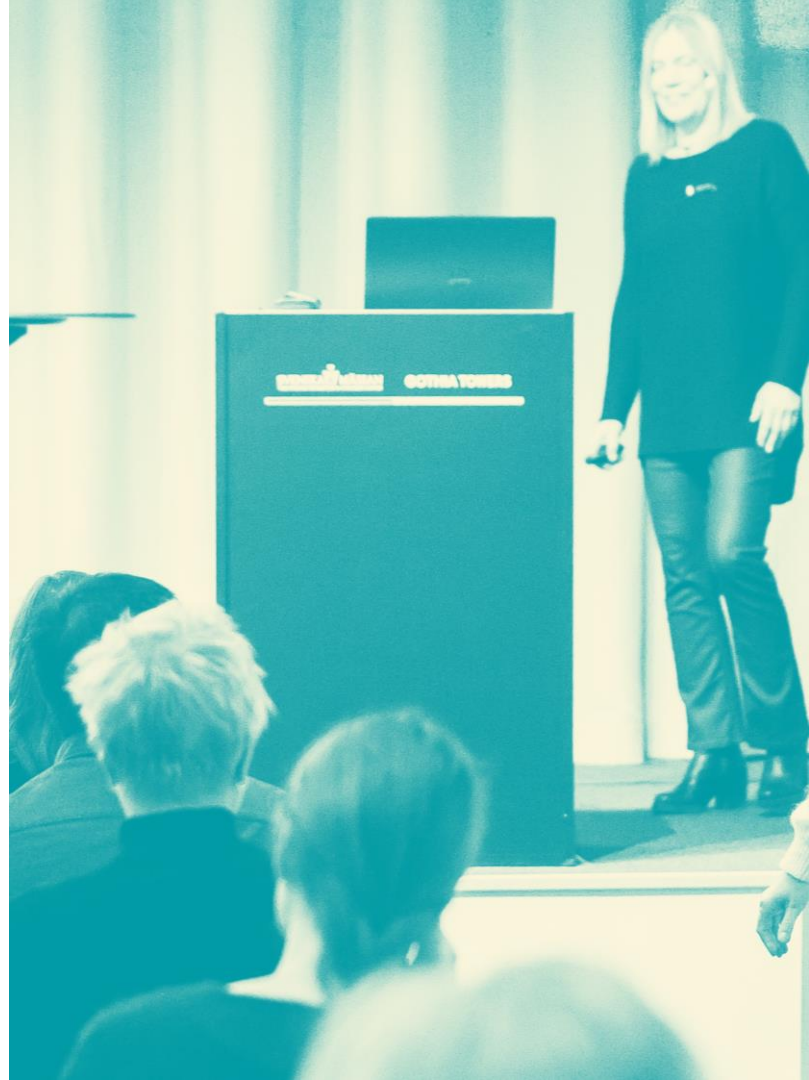


The Chemicals Group - a network for textile and electronics companies

**The network consists of about 110 companies that network via physical and digital meetings, led by RISE.**



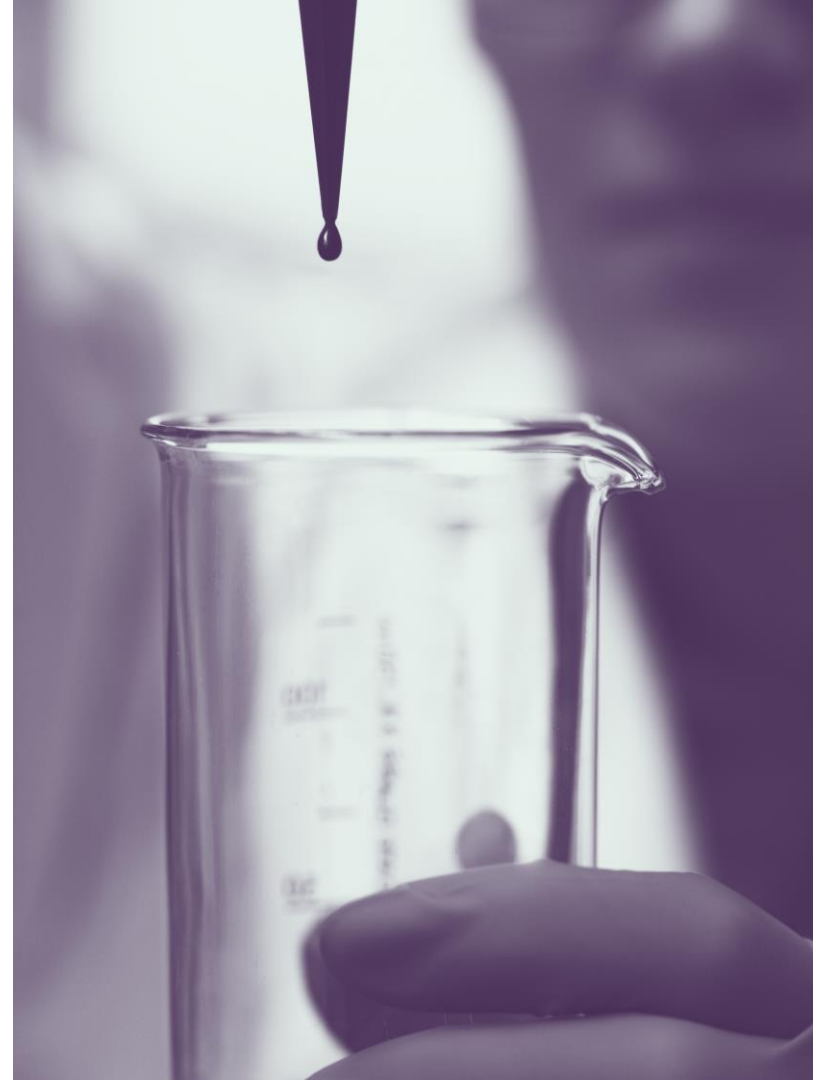
RISE — Research Institutes of Sweden  
[www.ri.se](http://www.ri.se) [nfo@ri.se](mailto:nfo@ri.se)





# Alone

is not always the strongest



# EU strategy developemnt



Good intentions



# Types of EU legislation?

## Need to follow

### DIRECTIVE

Sets out a goal that EU countries must achieve. Each individual country implements its own laws on how to reach these goals.

European law

INTERPRETATION

National law

ACT



Member states

## Need to follow

### REGULATION

A binding legislative act and must be applied in its entirety across the EU.

European law

ACT



Member states

## Voluntary

### RECOMMENDATIONS

A "recommendation" is not binding without any legal consequences. A recommendation allows the institutions to make their views known and to suggest a line of action

EU frameworks

- Safe and Sustainable by Design (SSbD)
- The EU Ecolabel

Sets rules (criteria) and standards but the assessment or labeling is voluntary



# Implementation of new EU policies and initiatives

## New EU policies and initiatives

Need to be  
harmonized with  
the existing  
ones

Good intentions, but  
sometimes difficult to  
implement in real  
production processes  
today, especially for  
small and medium-sized  
enterprises (SMEs)

A vast and  
increasing  
number of  
rules and  
reporting  
to follow



## Simplify?

It is good to simplify the  
regulatory system.

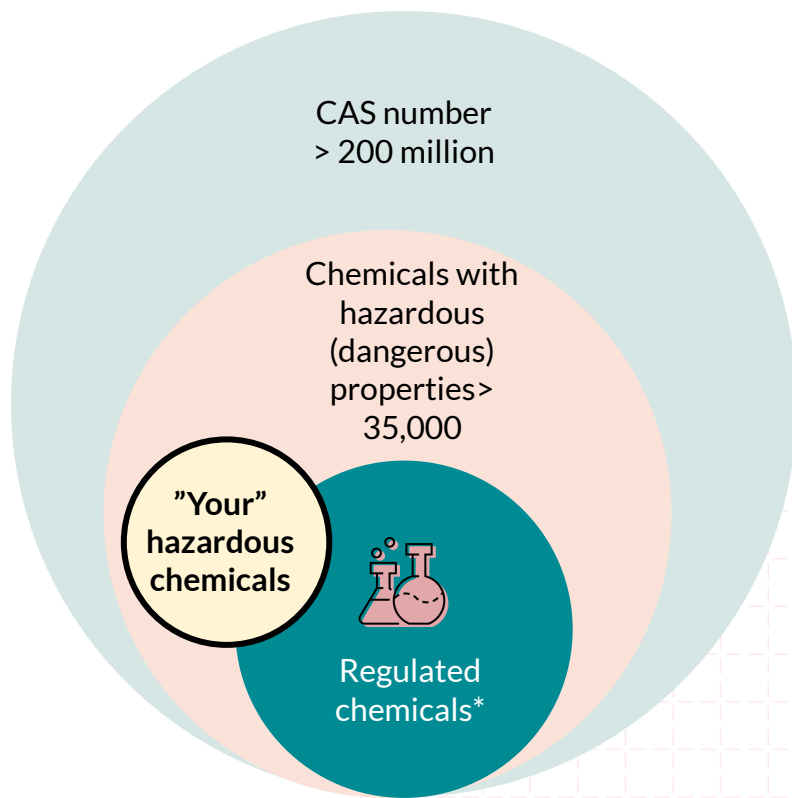
**But:** Maintain (or improve)  
the level of protection and  
sustainability efforts!



# **“Established EU regulations for textiles”**

**Chemicals legislation  
(REACH)**





\*Constantly increasing number

**Not all chemicals  
are dangerous**

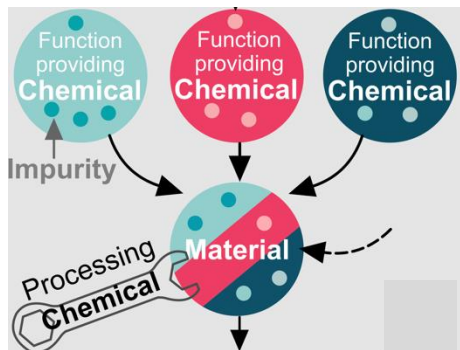
**Not all chemicals  
are relevant**

**BUT: Many  
imported products  
contain hazardous  
substances!**

# Why do we need chemicals in textiles?



# Understanding why hazardous chemicals are present in products is an important part of their replacement (substitution )



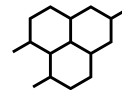
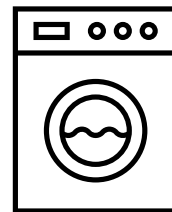
Emissions due to production

(highest emissions)



Function providing chemicals

Emissions due to use and end of life



RI.  
SE



# Chemicals with dangerous properties for humans

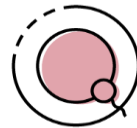
Substances that can cause permanent damage even at low concentrations are called **CMR substances**



Carcinogenic



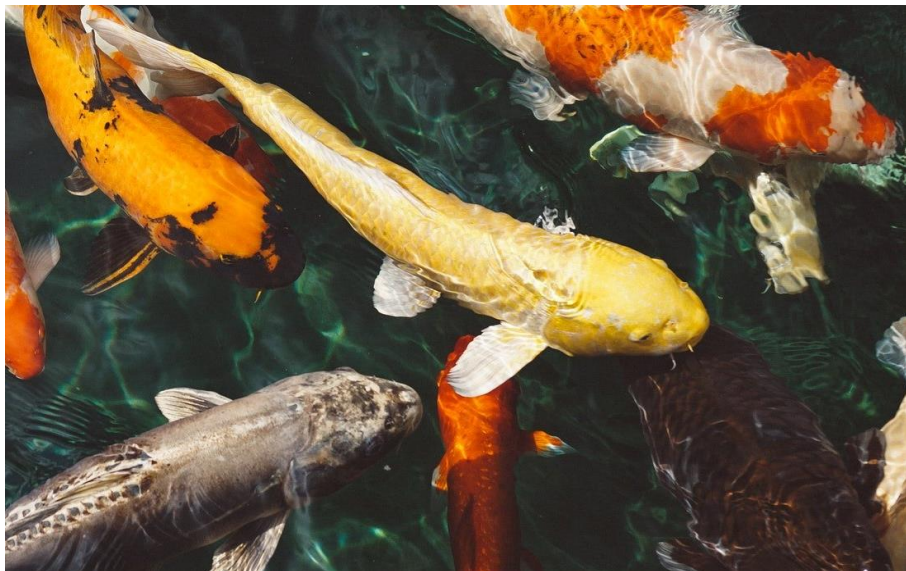
Mutagenic



Reproductive toxicity

# Chemicals with hazardous properties for the environment

Substances that accumulate in the environment, organisms and are toxic are classified as **PBT substances**



Persistent



Bioaccumulative

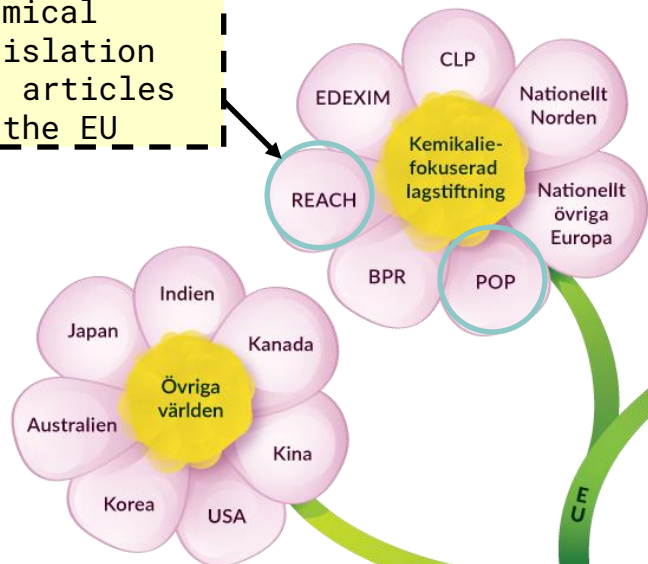


Toxic



Other dangers

Chemical  
legislation  
for articles  
in the EU



Depending on the  
type of product,  
additional  
regulations need to  
be considered!

**Different laws  
and regulations  
affect your  
textile products**



# POP/Stockholm convention



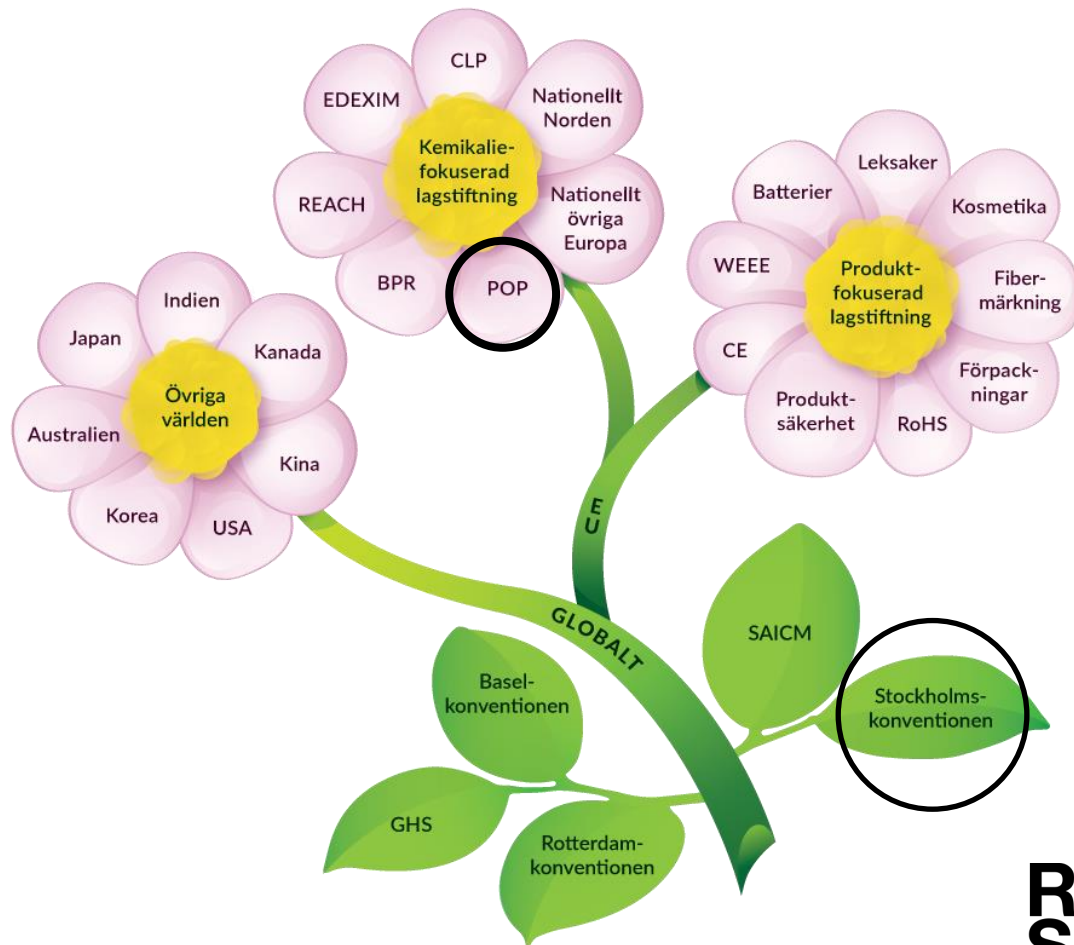
For Persistent Organic Compounds, POPs



Global convention



Implemented in the EU  
(EC 2019/2021)





# 16%

## REACH4TEXTILES

BETTER MARKET SURVEILLANCE IN THE EU

16% of 160 textile articles exceeded regulatory limits

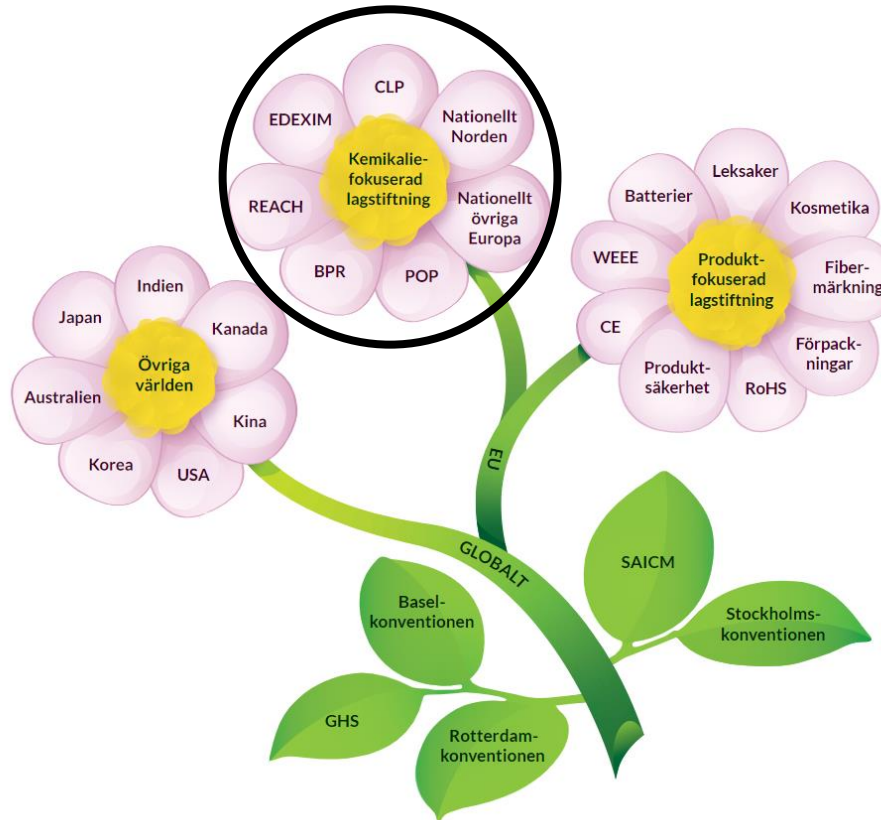
General statistics



Webinar RISE 24/09/24

Stijn Steuperaert

# Following the EU chemicals legislation is important to protect humans and the environment

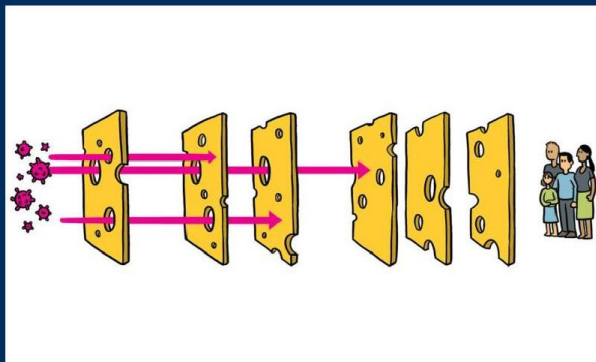


Tools for chemical management relevant to textiles



Chemical guidance  
X-List  
Contract Guidance  
Process guide  
....

## Three safety net



Corporate  
responsibility

Chemical  
regulation

Environmental  
monitoring

Source: Marlene Ågerstrand (Department of Environmental Science, Stockholm University)  
Presentation: *"Strengthened chemicals legislation to better protect human health and the environment"*



Registration  
Evaluation  
Authorization

**REACH**



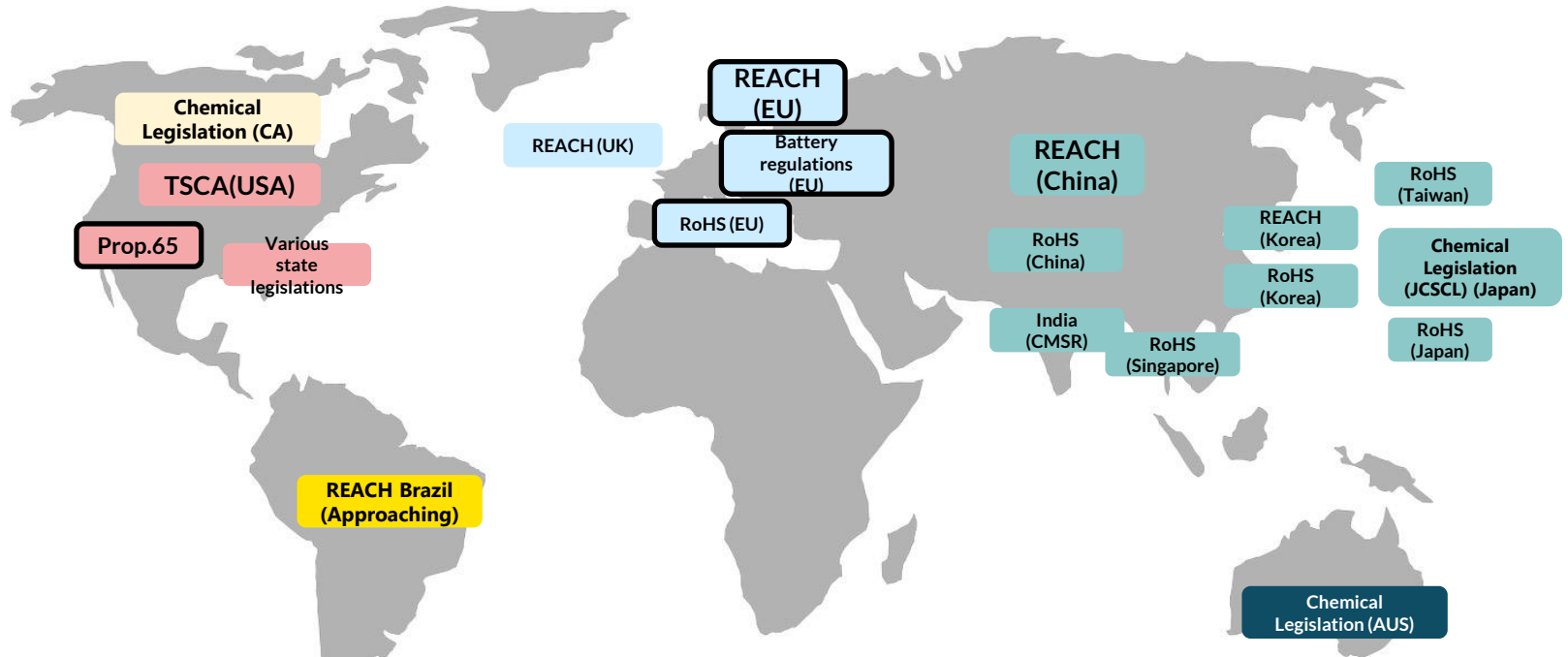
**and Restriction of  
Chemicals**

Chemicals legislation for  
articles within the EU

**RI.  
SE**



# Other chemical legislations are established globally



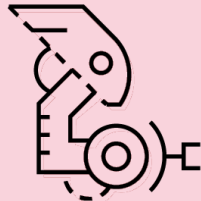
- Various chemical legislations that affect products exist
- EU regulation is one of the most comprehensive legislations

# Who are you in REACH?

**Manufacturer /  
importer  
- Chemicals**



**Producer  
- Articles**



**Supplier  
- Articles**



**Consumer**





RI  
SE

# REACH regulates hazardous substances



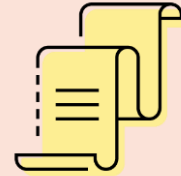
## **SVHC substances**

Candidate list



## **Authorization list**

REACH Annex 14



## **Restriction**

REACH Annex 17



# REACH Candidate List

- > 240 substances of very high concern (SVHC)
- Limit 1000 ppm (0.1wt%)
- Candidates for the Authorisation list (Annex XIV)
- Updated twice a year







Information duty

## Your obligation: Inform about SVHC

- Always to B2B customers
- At the request of the consumer
- Report SVHC (> 0.1%) in articles in the SCIP database (Waste Directive)



# Supply chain communication is key to avoiding hazardous chemicals in products

## VIKTIGA FRÅGOR

- What chemicals do we have?
- What chemicals do we not want?
- What chemicals are sustainable substitutes?

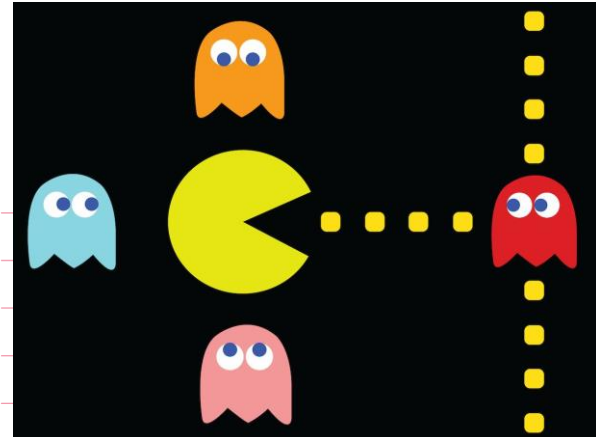


# Biocidal Products Regulation



**(BPR)**

(EU) nr 528/2012



A biocide is a chemical compound that kills, deters growth, repels or attracts microorganisms.

# Biocidal Products Regulation



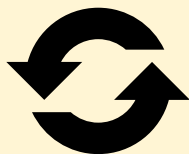
Plastic Product type 9, PT9 are preservatives for fibre, leather, rubber and plastics by the control of microbiological deterioration

## 22 different product types

- Make sure that the biocide is approved as an active substance for your product type



# Regulatory updates

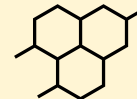
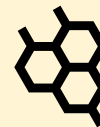
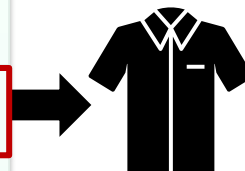


Chemical legislation (REACH)  
Updated 2 times per year

# New SVHCs January 2025

Name	CAS	USE
6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid	2156592-54-8 (701-118-1)	Used in hydraulic fluids, lubricants and greases and metal working fluids.
O,O,O-triphenyl phosphorothioate (TPPT)	597-82-0 (209-909-9)	Used in lubricants and greases, in cooling liquids in refrigerators and oil-based electric heaters. Used in hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids.
Octamethyltrisiloxane, L3	107-51-7 (203-497-4)	Used in cosmetics and personal care products, in automotive care products, polish and wax blends, <b>washing and cleaning products.</b>
<u>Perfluamine</u>	338-83-0 (206-420-2)	Used for the <b>manufacture of electrical, electronic</b> and optical equipment and machinery and vehicles, in cooling liquids in refrigerators and oil-based electric heaters.
Reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives	192268-65-8 (421-820-9)	Used in lubricants and greases; Used in cooling liquids in refrigerators and oil-based electric heaters, in hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids.
Tris(4-nonylphenyl, branched and linear) phosphite (TNPP)	- (-)	<b>Used in polymers, adhesives, sealants and coating products; Used for the manufacture of plastic and rubber products.</b>

Relevant?





# PFHxA (C6) update: **limit values**

## Regulatory text

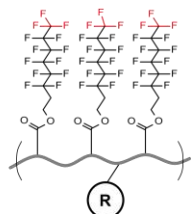
1. Shall not, from 10 October 2026 be placed on the market, or used, in a concentration equal to or greater than 25 ppb for the sum of PFHxA and its salts, or 1 000 ppb for the sum of PFHxA-related substances, measured in homogeneous material, in the following:

## Limit values

- **25 ppb** for the sum of PFHxA and its salts
- **1 000 ppb** for the sum of PFHxA-related substances

What are related substances to PFHxA?  
“substances that have the potential to degrade or be transformed to PFHxA.”

This means all PFAS based substances in a C6 treatment should be considered in the analysis!



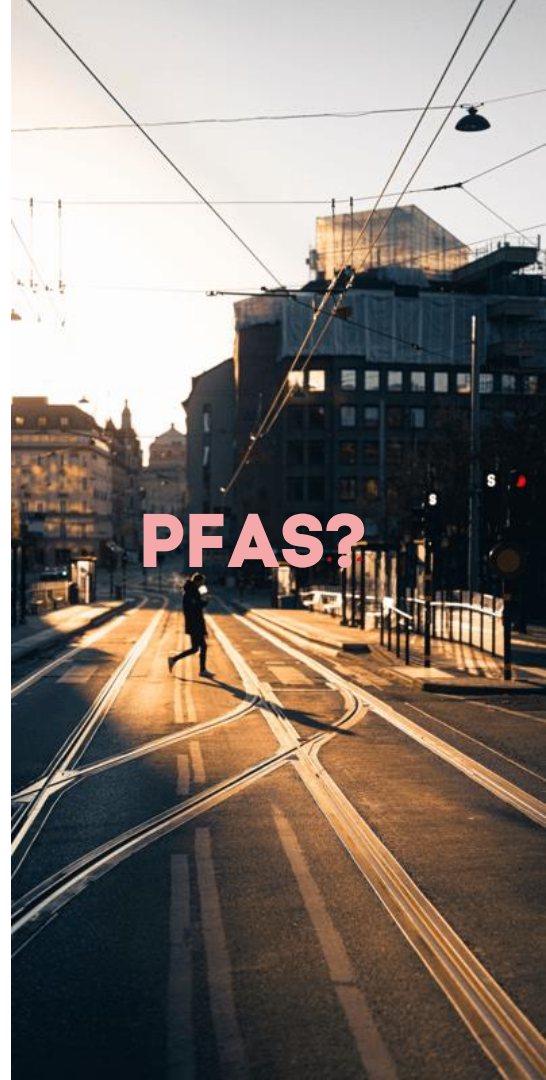
Emission

**PFHxA**  
and other  
persistent  
substances



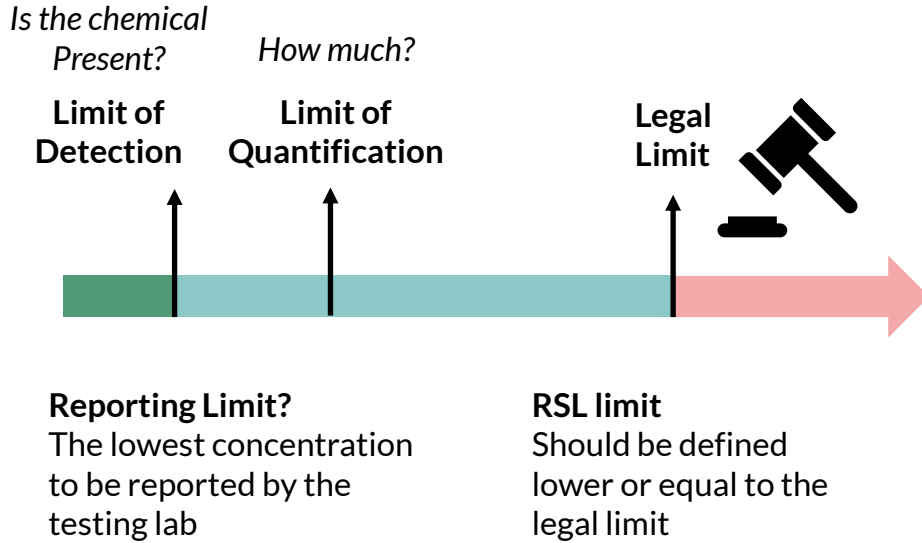
Textile weave

[Link to the regulation](#)





# Limit values and test methods for compliance testing



# List of Restricted Substances (RSL)

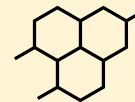
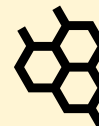
RSL lists are a way to manage regulated chemicals with suppliers



SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Nonylphenol (NP), mixed isomer	Various	APs can be used as antioxidants to stabilise or protect polymers, and as intermediaries in the production of APEOs.	EN ISO 21084:2019 (textile), (AP)	Total of NP/OP: 100 mg/kg	Sum of NP/OP: 10 mg/kg
Octylphenol (OP), mixed isomers					
Nonylphenol Ethoxylates (NPEOs) Octylphenol Ethoxylates (OPEOs)	Various	APEOs can be found in, or used as, detergents, softeners, emulsifying or dispersing agents for dyes and prints, impregnating agents, scouring agents, wetting agents, spinning oils, de-gumming for silk production, dyes and pigment preparations, down or feather fillings and polyester padding, etc.	<b>Textiles:</b> EN ISO 18254-1:2016, 2:2019 (APEO)  <b>Leather:</b> EN ISO 18218-1:2015 (direct method) EN ISO 18218-2:2019 (APEO indirect method)	Total of NPEO/ OPEO: 100 mg/kg	Sum of NPEO/ OPEO: 20 mg/kg



Chemical testing is recommended to check the regulatory limits in articles





# Chemical management tools: Contract guidance, Restricted substances list (RSL) and chemical testing

## OPTIONS

### Contract



Contract with suppliers with chemical Requirements

Some members keep it separate (no additional signing required when the RSL is updated)

Can be included

### RSL



List with relevant regulated chemicals, testing methods, and limit values  
(Update needed)

Some members use the Chemicals Guide as RSL and concentrated on the testing (updated by us)

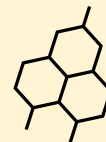
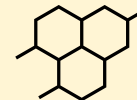
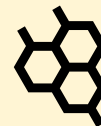
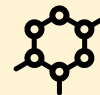


Can be included

### List for chemical testing/risk matrix



List materials and chemicals selected for for chemical analysis  
(Update needed)



# **NEW EU Policies and regulations For textiles**



# The European Green Deal

The **European Green Deal**, approved in 2020, is a **set of policy initiatives** by the European Commission with the overarching aim of making the European Union (EU) climate neutral in 2050 (55% by 2030)



## Goals

- Become climate-neutral by 2050
- Protect human life, animals and plants, by cutting pollution
- Help EU companies become world leaders in clean products and technologies
- Inclusive transition

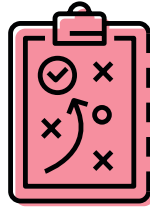
## EU policies and initiatives

- EU's chemicals strategy
- EU strategy for sustainable and circular textiles
- Ecodesign for Sustainable Products Regulation (ESPR) → Digital Product Passport
- Corporate sustainability reporting directive (CSRD)

....

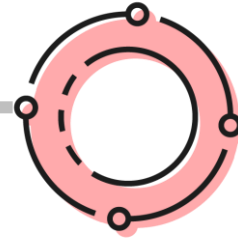
# Two key EU policy packages for textiles

## The Green Deal



- The EU's new growth strategy
- Carbon neutrality by 2050 at the latest
- Economic growth decoupled from resource flows
- A package of policy initiatives

## Circular Economy Action Plan



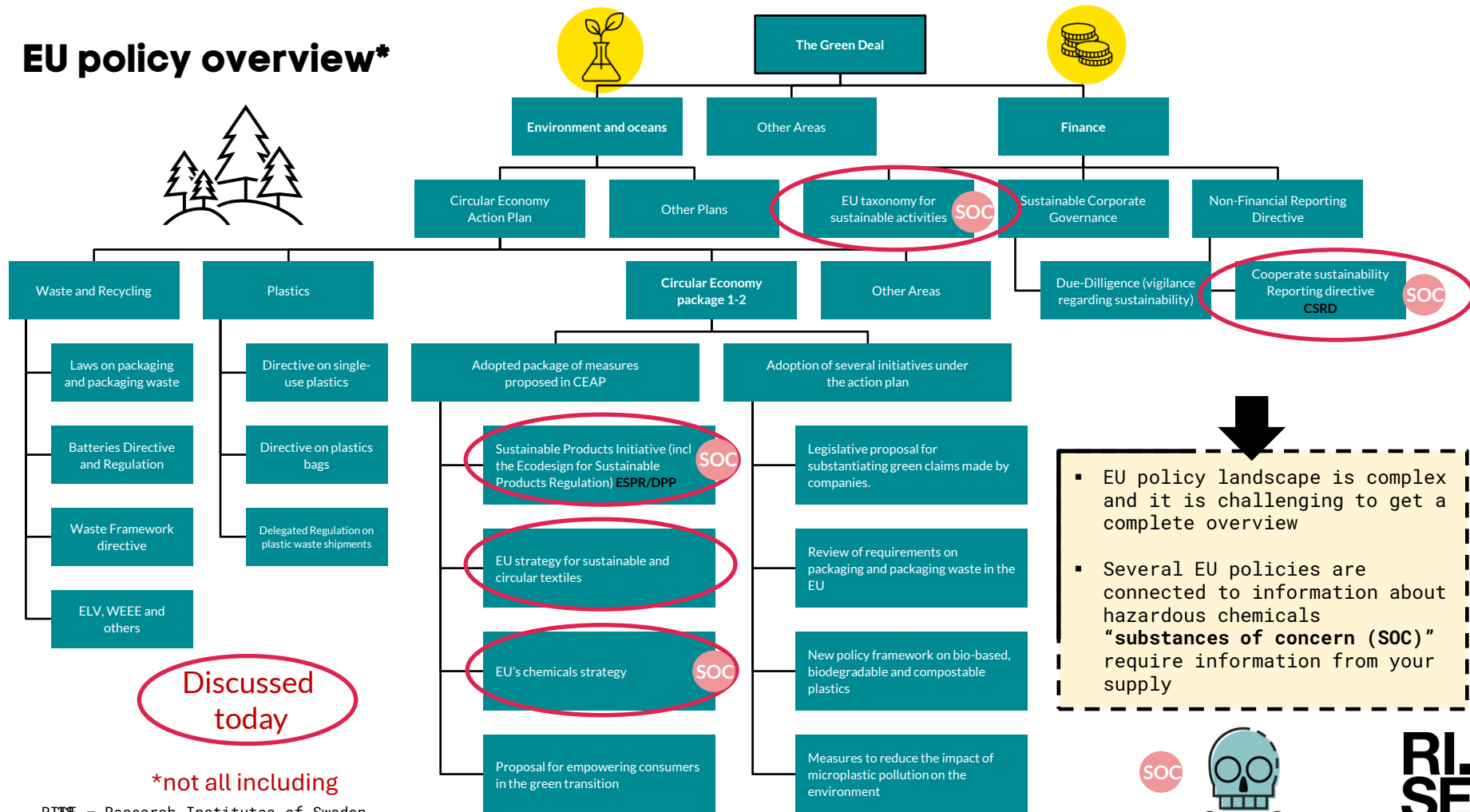
Included



- 30 action points focused on:
  - Sustainable products and circularity in production processes
  - More consumer power
  - Targeting key industry sectors
  - Waste reduction



# EU policy overview\*



Discussed today

\*not all including

- EU policy landscape is complex and it is challenging to get a complete overview
- Several EU policies are connected to information about hazardous chemicals **"substances of concern (SOC)"** require information from your supply





Source: Magnus Nikkarinen (Svensk Handel),  
The legislative process around ESPR and how the  
value chain can be future-proofed through  
product pass

## Green Deal (2022)



## Green Deal Industrial Plan (2023)

Statements from the EU

Enhances the competitiveness of Europe's net-zero industry



A vast number of rules and reporting requirements which are challenging to understand in some cases

*"We need a business case for the green deal"*

*"You cannot have a green transition with red numbers"*

*"No deregulation but lowering the burden for SMEs"*



Predictable and simplified regulatory environment



Faster access to funding

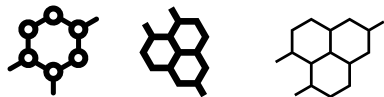


Enhancing skills

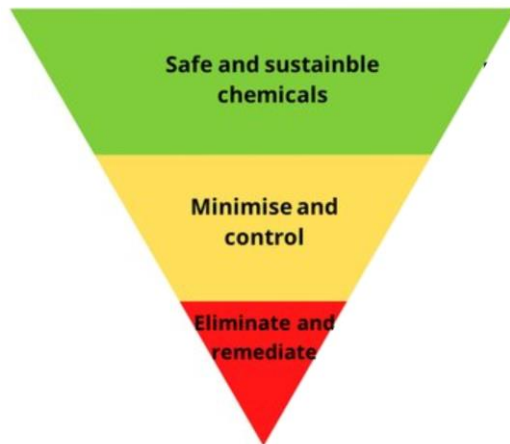


Open trade for resilient supply chains

# EU's chemicals strategy for sustainability towards a toxic-free environment



**The toxic-free hierarchy  
– a new hierarchy in  
chemical management**



## Objectives



### Protect of health and the environment



Use of safe chemicals;  
**Avoid substances of concern** for non-essential uses

**Minimize exposure** to harmful substances though risk management (in production) and information to users

**Eliminate substances of concern** in waste and secondary raw materials

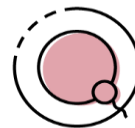
### Encourage innovation



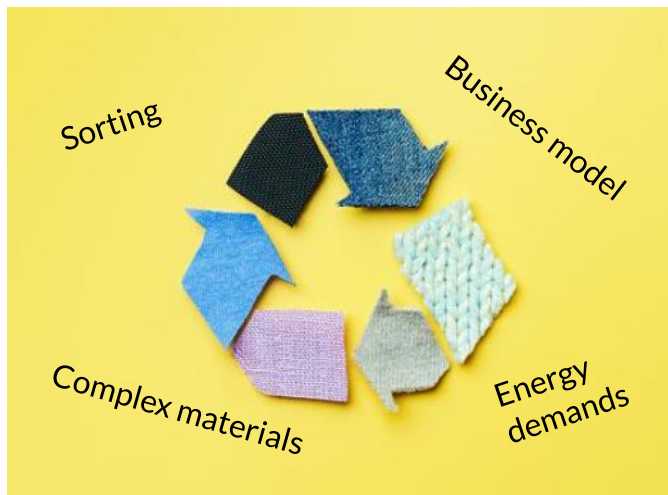
Promote the development of **safe and sustainable chemicals** and production processes

Promote modern and **smart production processes**, safe and suitable uses and business models

Promote safe and **clean recycling** solutions



# EU strategy for sustainable and circular textiles



5 million tonnes

of clothing discarded each year in the EU - around 12kg per person

1%

of material in clothing is recycled into new clothing

- Should transform production and consumption of textiles
- It implements the commitments of the EU's **Green Deal** and the **Circular Economy Action Plan**

Their environmental impact is significant and growing. EU textile consumption ranks:

**High impacts**

- **4th** in environmental and climate impact (after food, housing, mobility).
- **3rd** in water and land use.
- **5th** in primary raw material use and greenhouse gas emissions.



The EU Strategy addresses the **full lifecycle of textiles**, proposing coordinated actions to **transform production and consumption**.

# EU strategy for sustainable and circular textiles

Greener, more competitive and more resistant to global shocks

## Objectives

Durable

Repairable

Recyclable

Made of recycled fibers



Free of hazardous substances

Low social impacts and the environmental impacts

## Actions

Set EU design requirements

Clearer information and a digital Product Passport (DPP)

Reverse overproduction and overconsumption

Lower microplastics releases

Extend producer responsibility rules

Tackle greenwashing

Restrict the export of textile waste

Support of circular business models

RISE competences  
For development projects!



# Sustainable textiles of the future at RISE

## TESTBEDS IN TEXTILES



## EXPERTISE IN TEXTILES



## WHAT WE DO IN TEXTILES



If you need support!

➡ [Link to the website](#)

# EU strategy for sustainable and circular textiles

Greener, more competitive and more resistant to global shocks

## Implementation: Regulations and directives

## Goals

The Ecodesign for Sustainable Products Regulation (ESPR)



Ecodesign requirements for products including textiles Digital Product Passport (DDP) solution to share data

Green Claims Directive



Tackle greenwashing

The Waste Shipment Regulation



Restrict the export of textile waste

Research projects under Horizon Europe



Develop technologies and processes increasing the circularity and sustainability (e.g. BioSusTex)

Revision to the Waste Framework Directive



Harmonised extended Producer Responsibility

Revise the Textile Labelling Regulation.



Consumers gets access to all the relevant information

...

# Ecodesign for Sustainable Products Regulation (ESPR) and Digital Product Passport (DDP)

## Proposal stage

### ESPR

- This regulation focuses on improving the overall circularity and both energy and environmental sustainability performance of products.
- Key **mechanism for capturing and sharing this data** is a **Digital Product Passport (DDP)** solution
- Textiles and shoes have priority
- Possible benefits:
  - Clearer information
  - Suitability assessments (e.g. LCA)
  - Reporting
  - Recycling processes

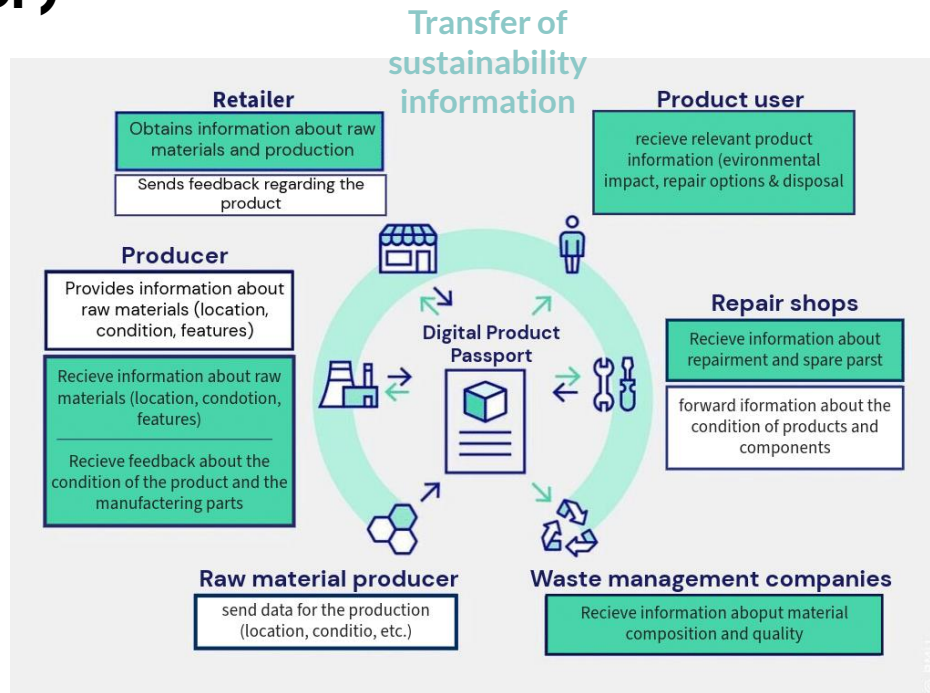


Image source: <https://www.bmu.de/digitalagenda/so-funktioniert/> (translation)

# Ecodesign for Sustainable Products Regulation (ESPR) and Digital Product Passport (DPP)

## What goes into the passport?

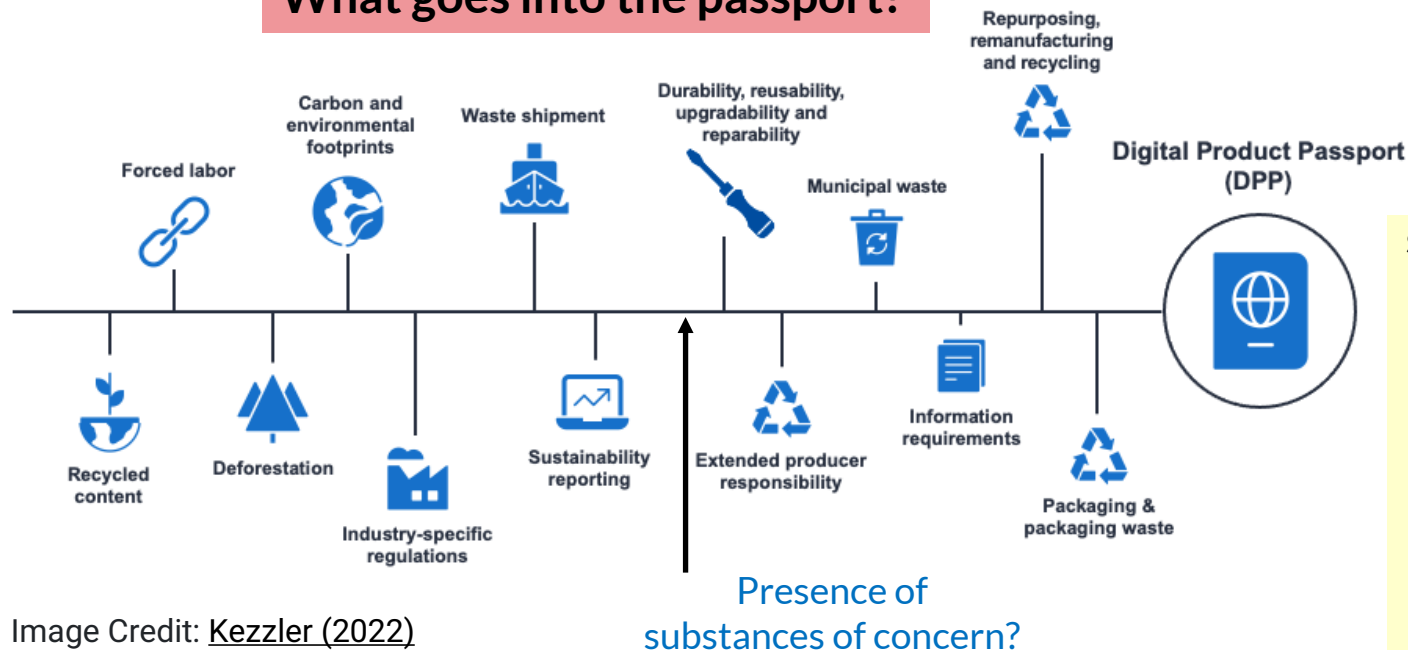


Image Credit: [Kezzler \(2022\)](#)

GS1 standard



### Some open questions:

- Data sharing system?
- Data quality management?
- Handling of confidential information?
- What happened in recycling and second-life scenarios?
- ...



# Chemicals of concern (SOC)?

## Hazards for Substances of Very High Concern (SVHCs) 247 substances

- Carcinogenic
- Mutagenic
- Toxic for reproduction
- Persistent, bioaccumulative and toxic
- Very persistent and very bioaccumulative

*Information duty for  
products (articles) sold  
in EU*

+

## Additional Hazards

- Respiratory sensitizing
- Skin sensitizing
- Aquatic toxicity
- Ozon depleting
- Organ toxicity

*Information that can be  
found in safety data  
sheets*

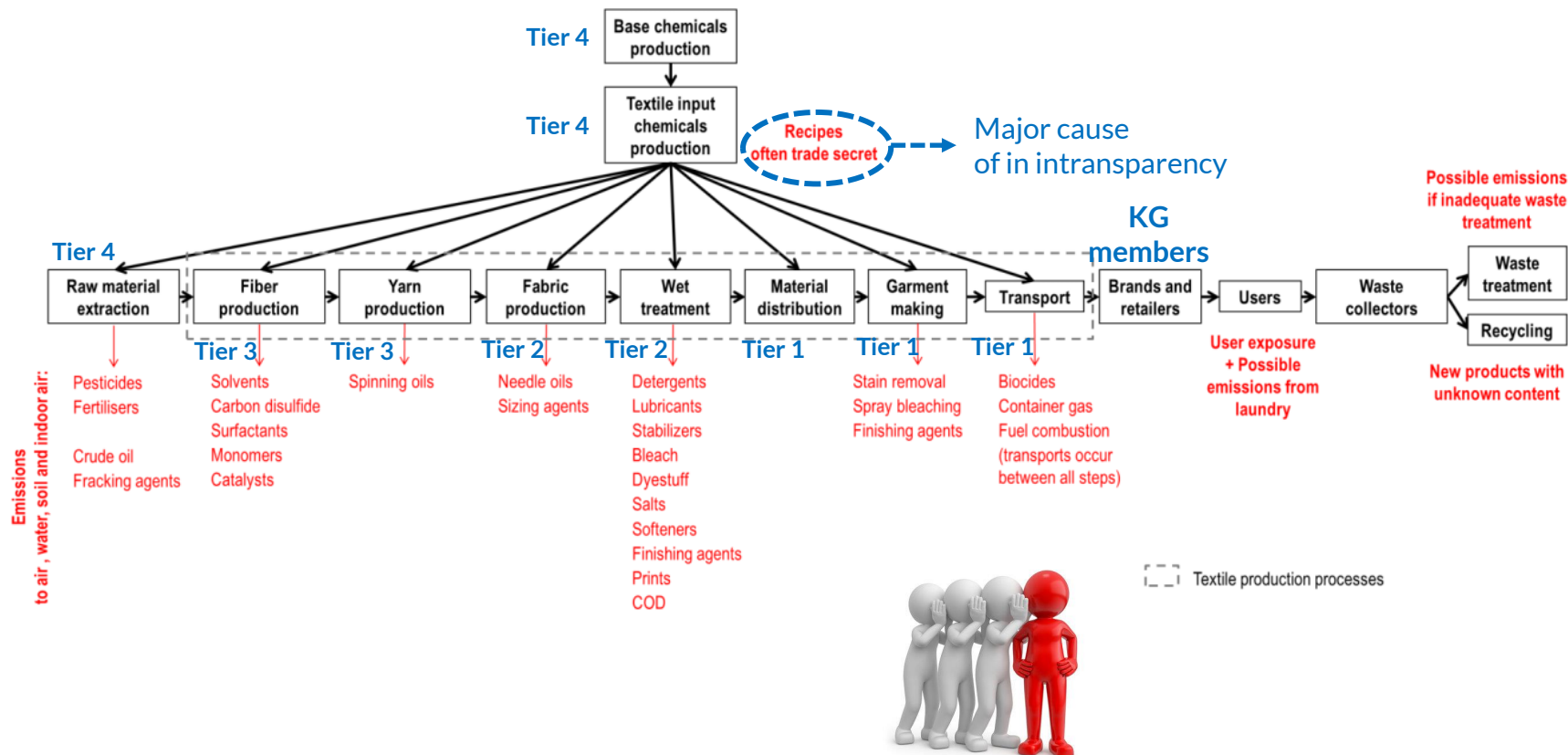
Negative effect on reuse and recycling (?)



“substances of  
concern (SOC)”

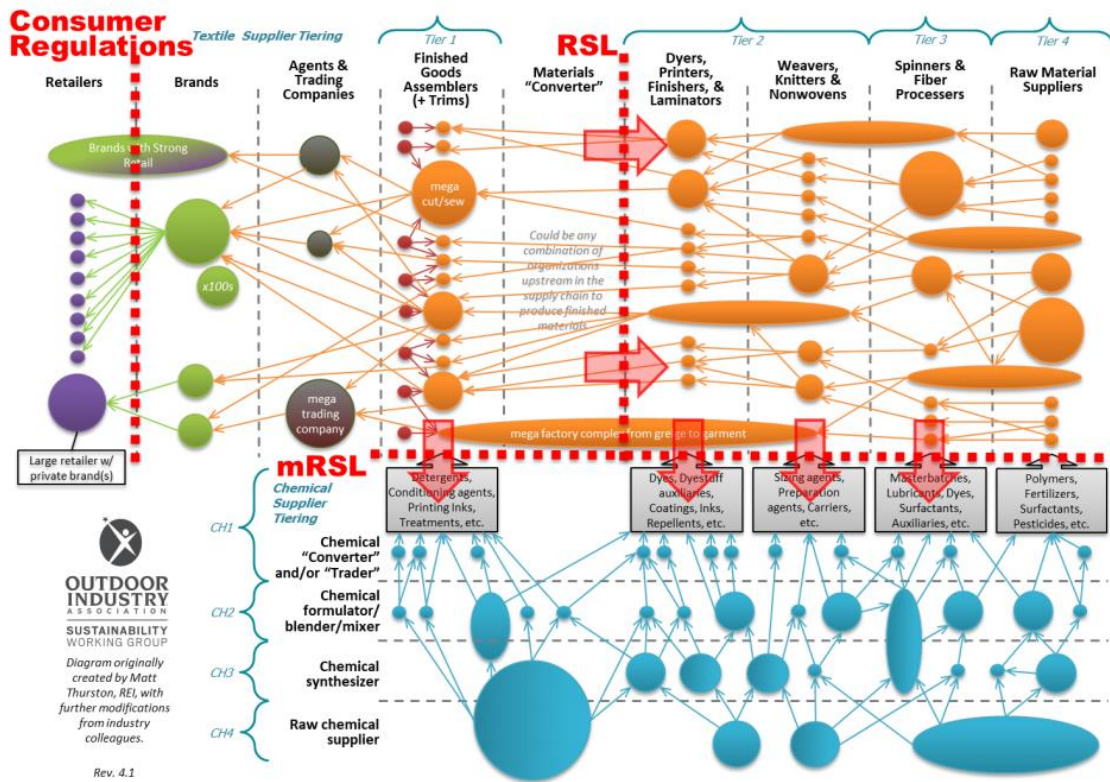
# TEXTILE SUPPLY CHAIN and textiles life cycle

## Including Chemicals





# An “explanatory overview” of the TEXTILE SUPPLY CHAIN



Textile supply chains are complex  
Can change over time  
(e.g. with new collections)

Where is the information about chemicals ???

Rev. 4.1

**OUTDOOR INDUSTRY ASSOCIATION**  
SUSTAINABILITY WORKING GROUP  
Diagram originally created by Matt Thurston, REI, with further modifications from industry colleagues.

**RI SE**

# Effective communication within the TEXTILE SUPPLY CHAIN



A crucial part of gathering chemical information is to identify whom to ask!

- Tier 1 suppliers are likely to have only very general information on chemicals
- Fabric manufacturing including chemicals typically starts at Tier 2 and it might even be necessary to understand who your Tier 3 and Tier 4 suppliers are.

## THE SUPPLY CHAIN TIERS

Tier 1 – Product assembly, cutting, sewing

Tier 2 – Fabric production, dyeing, finishing

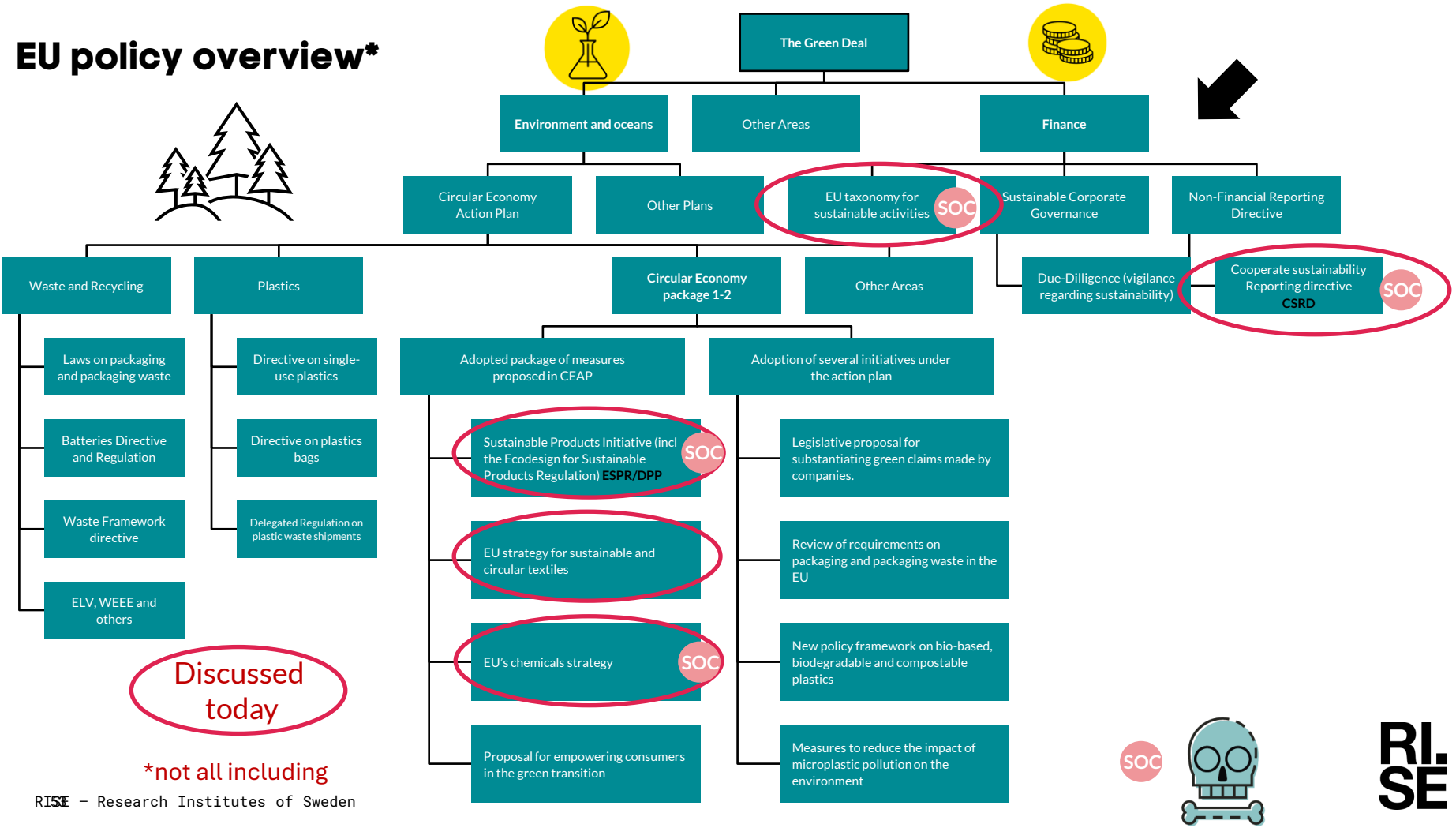
Tier 3 – Textile fibre production

Tier 4 – Raw material extraction and processing

Source: PFAS Substitution Guide  
(POPFREE project)

- Develop an understanding of the chemical and environmental management practices
- Good documentation

# EU policy overview\*



## CSRD



# Corporate Sustainability Reporting Directive

Aims to help investors and consumers to evaluate the sustainability of their activities.

- Different timelines depending on company size (e.g. SMEs in 2027)
- Sweden has postponed the reporting for larger companies
- Reporting based on:

**Double materiality analysis** made by each company according to ESRS1 och ESRS 2 determine what topics will be reported.

## ESRS

European Sustainability Reporting Standards  
HOW to report to comply with CSRD

**ESRS 1 General requirements**

**ESRS 2 General disclosures**



ESRS E1 Climate change

ESRS E2 Pollution

ESRS E3 Water and marine resources

ESRS E4 Biodiversity and ecosystems

ESRS E5 Resource use and circular economy

ESRS S1 Own workforce

ESRS S2 Workers in the value chain

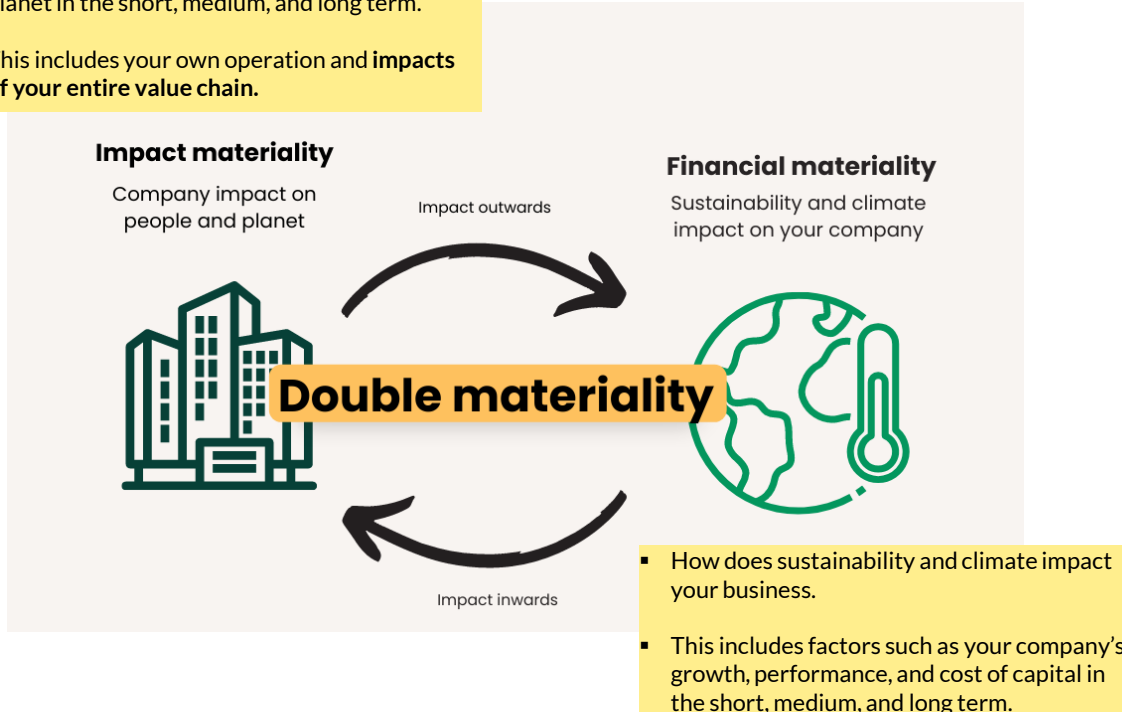
ESRS S3 Affected communities

ESRS S4 Consumers and end-users

ESRS G1 Business conduct

# Corporate Sustainability Reporting Directive (CSRD)

- Your company's actions impact people and the planet in the short, medium, and long term.
- This includes your own operation and **impacts of your entire value chain**.



What to include  
important information in your  
report

## RESULT OF THE EVALUATION:

Which **sustainability risks and opportunities are important for your company** specifically and thus should be included in your reporting.

Establish appropriate thresholds for decision making:  
likelihood of occurrence and the potential financial effect.



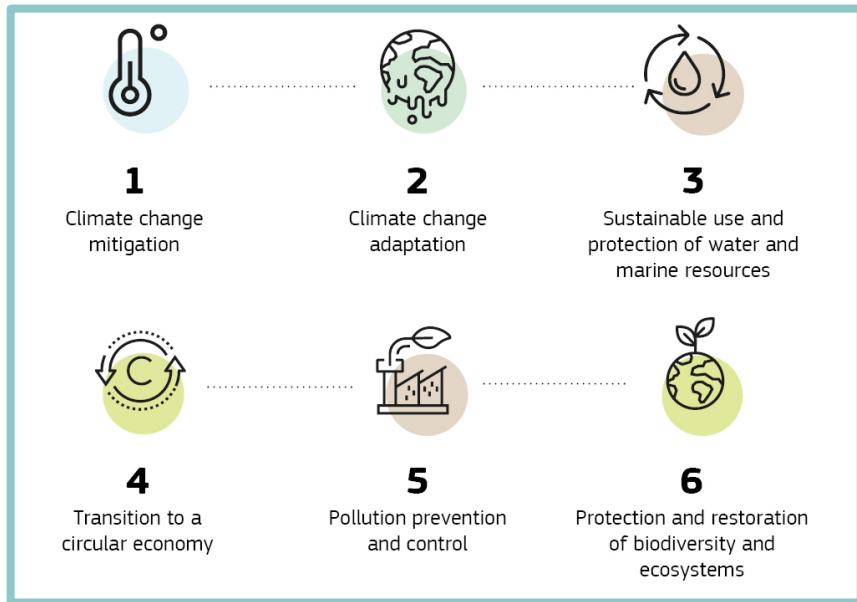
# EU Taxonomy



## to help and facilitate sustainable investments

A classification system that defines criteria for economic activities

### 6 Overarching targets

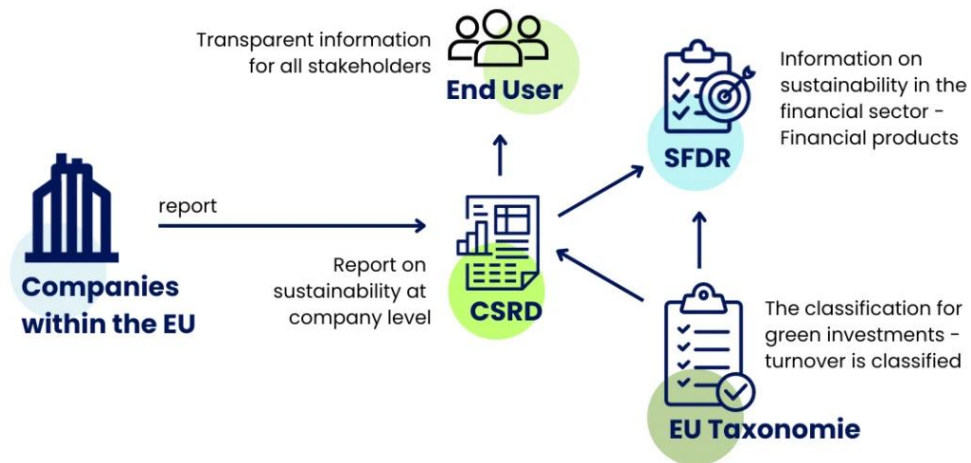


- Relevant for companies > 500 employees
- At least one Target needs to be improved
- No interference with the other 5 targets





# The EU taxonomy and the CSRD



Source: <https://sustainabilityand.com/en/whats-new/blog/the-eu-taxonomy-and-the-csrd>



## New policies under the EU Green Deal

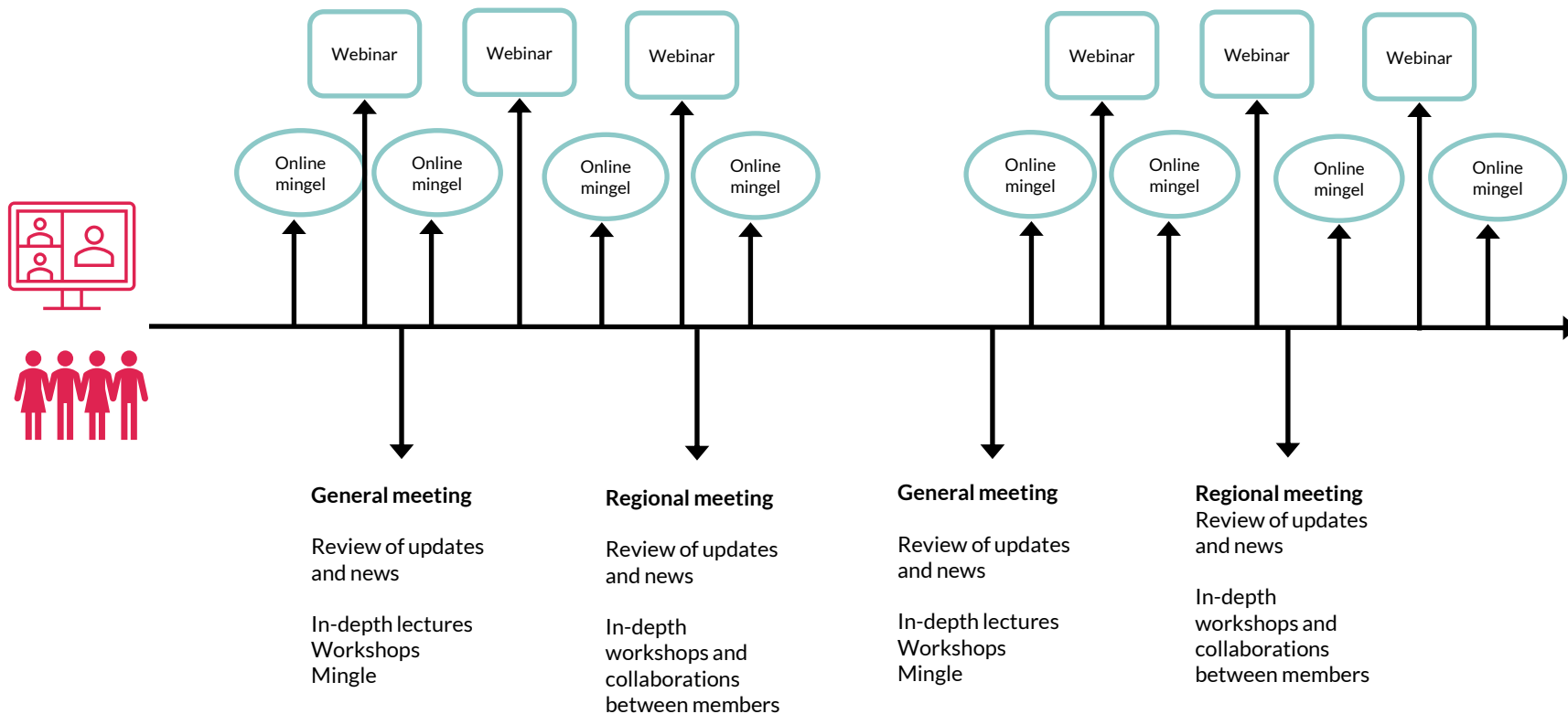
### Take home

- Complex landscape but good intentions
- Possibilities for improvement
- Be prepared!
- Requirements might change over time
- Check what others do!



RI.  
SE

# The Chemicals Group – Network meetings



**Tack!**

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[Kemikaliegruppen@ri.se](mailto:Kemikaliegruppen@ri.se)



**RI  
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Elisabeth



Anna-Karin



Anna



Anne-Charlotte



Steffen



Charlotte



Malin



Johanna



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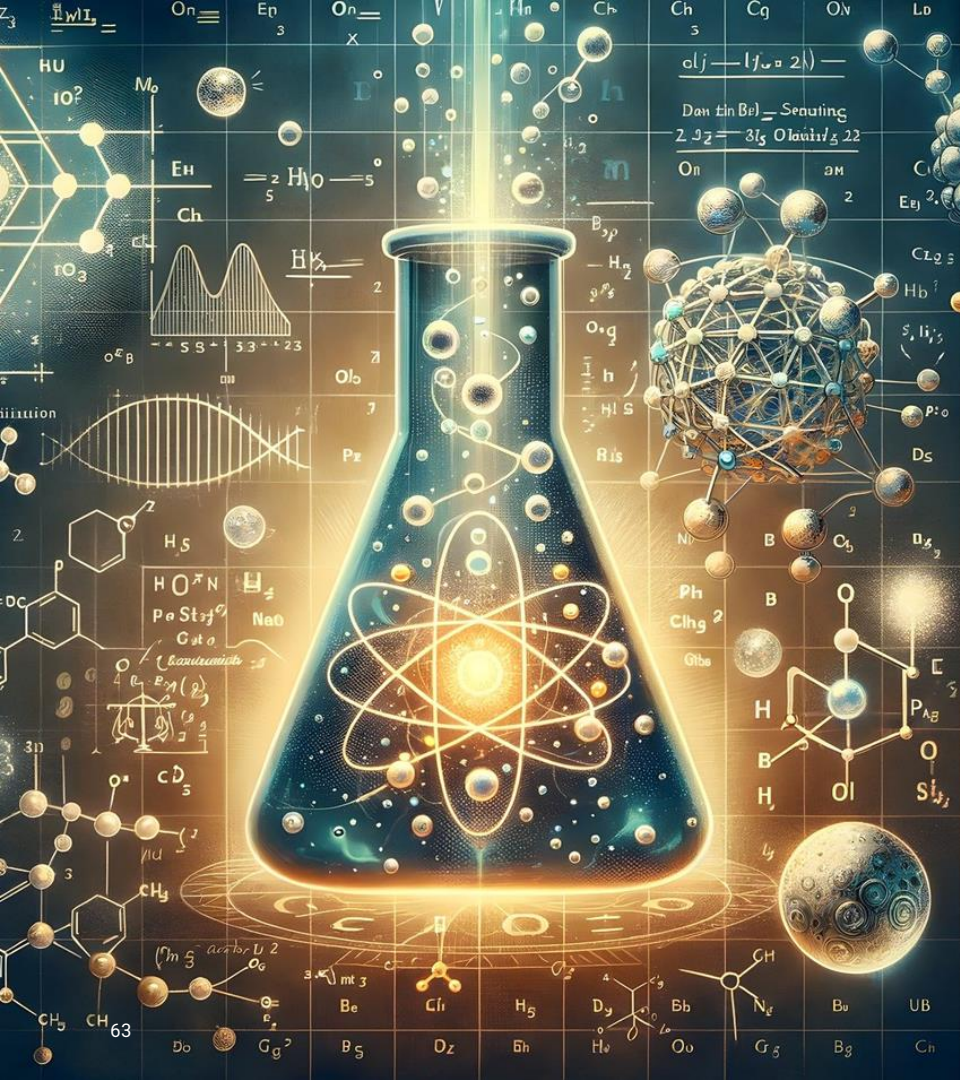
If you are interested in our  
network, please contact  
us:

[kemikaliegrupper@ri.se](mailto:kemikaliegrupper@ri.se)

# Chemical analyses





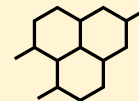
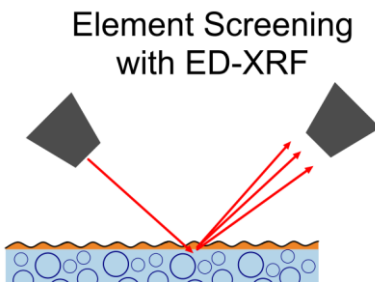


# Why analyze?

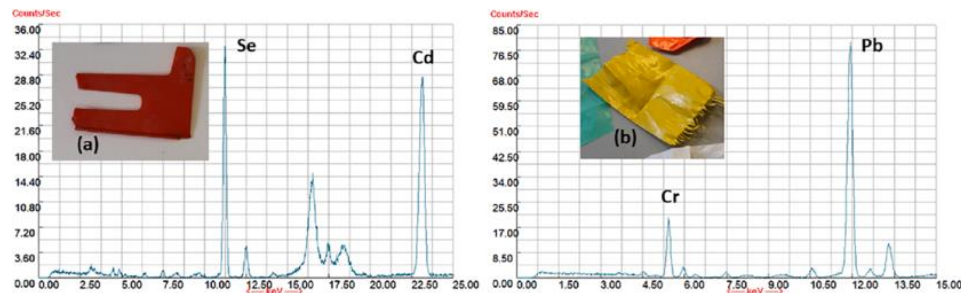
- Regulated substances
- Dangerous substances
- Health - environmentally hazardous
- Duty to inform,
- Work environment etc.
- Verify requirements
- Process control

# Chemical Analysis Screening methods

- X-ray Fluorescence (XRF) is an analytical technique that uses the interaction of X-rays with a material to determine its elemental composition.



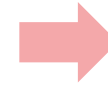
XRF is a cheap and fast method for a screening of chemicals in plastics



# Chemical Analysis

**GC-MS:** Gas chromatography–mass spectrometry for volatile compounds)

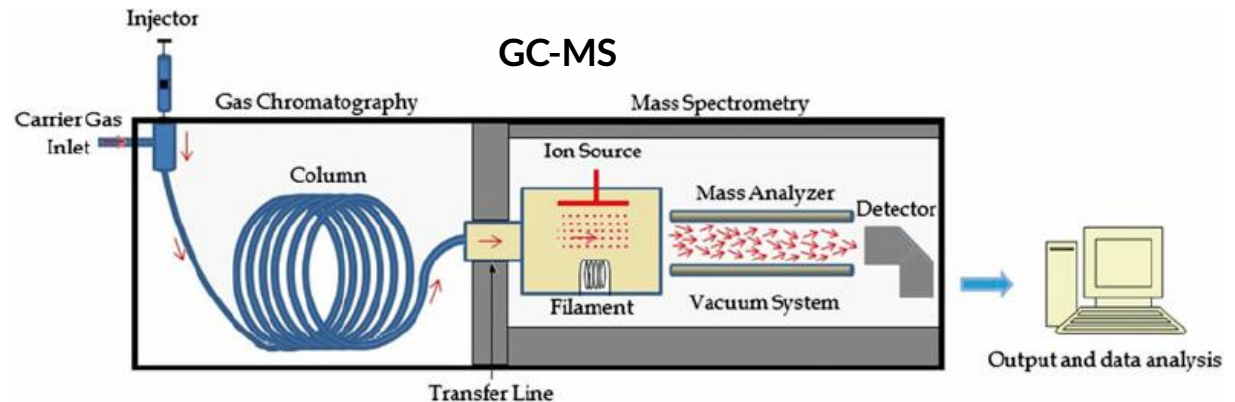
**LC-MS:** Liquid chromatography–mass spectrometry for soluble compounds



Following  
Standardized methods  
e.g. ISO EN...

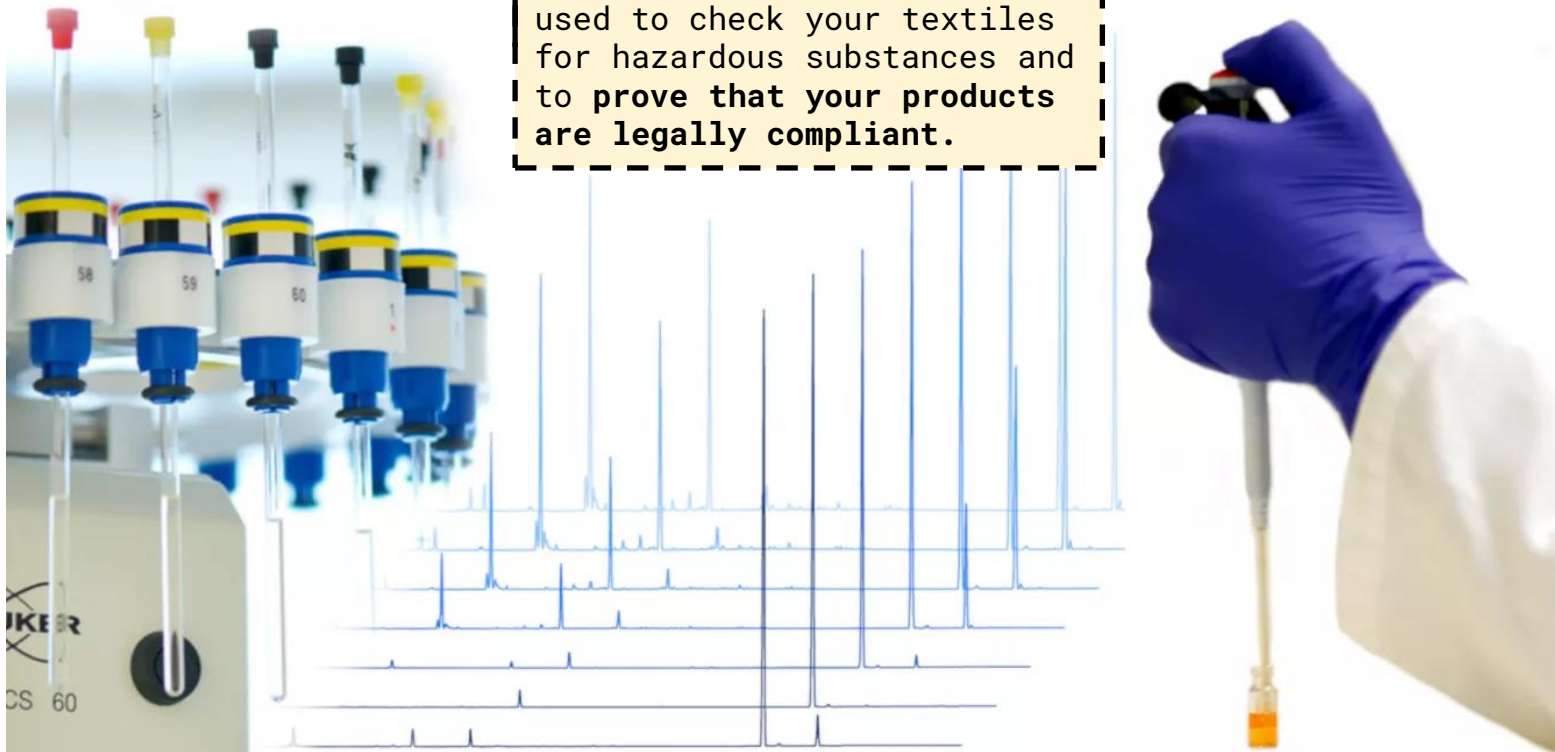
## Procedure

- Extraction
- Separation
- Detection



•DOI: [10.1007/978-1-4939-2377-9\\_8](https://doi.org/10.1007/978-1-4939-2377-9_8)

Chemical analysis can be used to check your textiles for hazardous substances and to **prove that your products are legally compliant.**



# Q&A

# Thank you

*For more information about the RegioGreenTex Community Talks,  
contact: [charlotte.denis@textile-platform.eu](mailto:charlotte.denis@textile-platform.eu)*



Co-funded by  
the European Union





# Anticipating Extended Producer Responsibility requirements and fees

How to enhance ecodesign and implement eco-modulation

24 April 2025 • 10:30-11:30 • Online

