Für Mensch & Umwelt

Umwelt Bundesamt

Circular Economy: Policy Making for the Traceability of Chemicals along Value Chains

Regulatory landscape overview

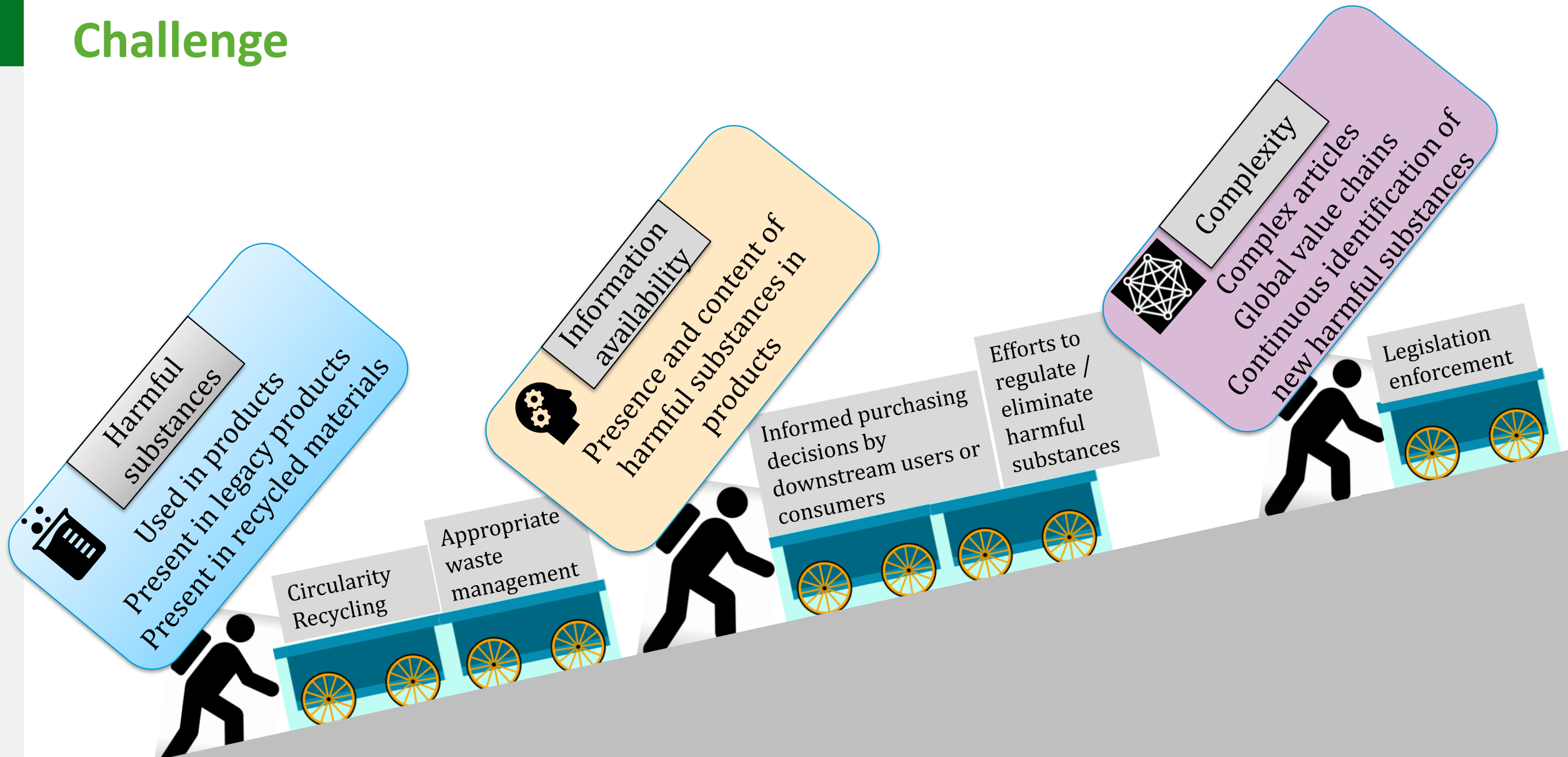Dr. Ioannis Dosis, Eva Becker

Interreg
North-West Europe

Co-funded by
the European Union

ECHT

50 Jahre
Umweltbundesamt
1974–2024

Challenge

Harmful substances: Used in products · Present in legacy products · Present in recycled materials

Circularity Recycling

Appropriate waste management

Information availability: Presence and content of harmful substances in products

Informed purchasing decisions by downstream users or consumers

Efforts to regulate / eliminate harmful substances

Complexity: Complex articles · Global value chains · Continuous identifications of new harmful substances

Legislation enforcement

EU: Most Relevant Green Deal Environmental Strategies/Action Plans

ENVIRONMENTAL STRATEGIES AND ACTION PLANS CONTRIBUTING TO THE GREEN DEAL

Chemicals strategy

Discover the EU's chemicals strategy to protect citizens and the environment, and boost innovation for safe and sustainable chemicals.

Circular economy action plan

The EU's new circular action plan paves the way for a cleaner and more competitive Europe.

Textiles strategy

To create a greener, more competitive textiles sector

Zero Pollution Action Plan

Discover the EU's zero pollution action plan for air, water and soil as part of the European Green Deal.
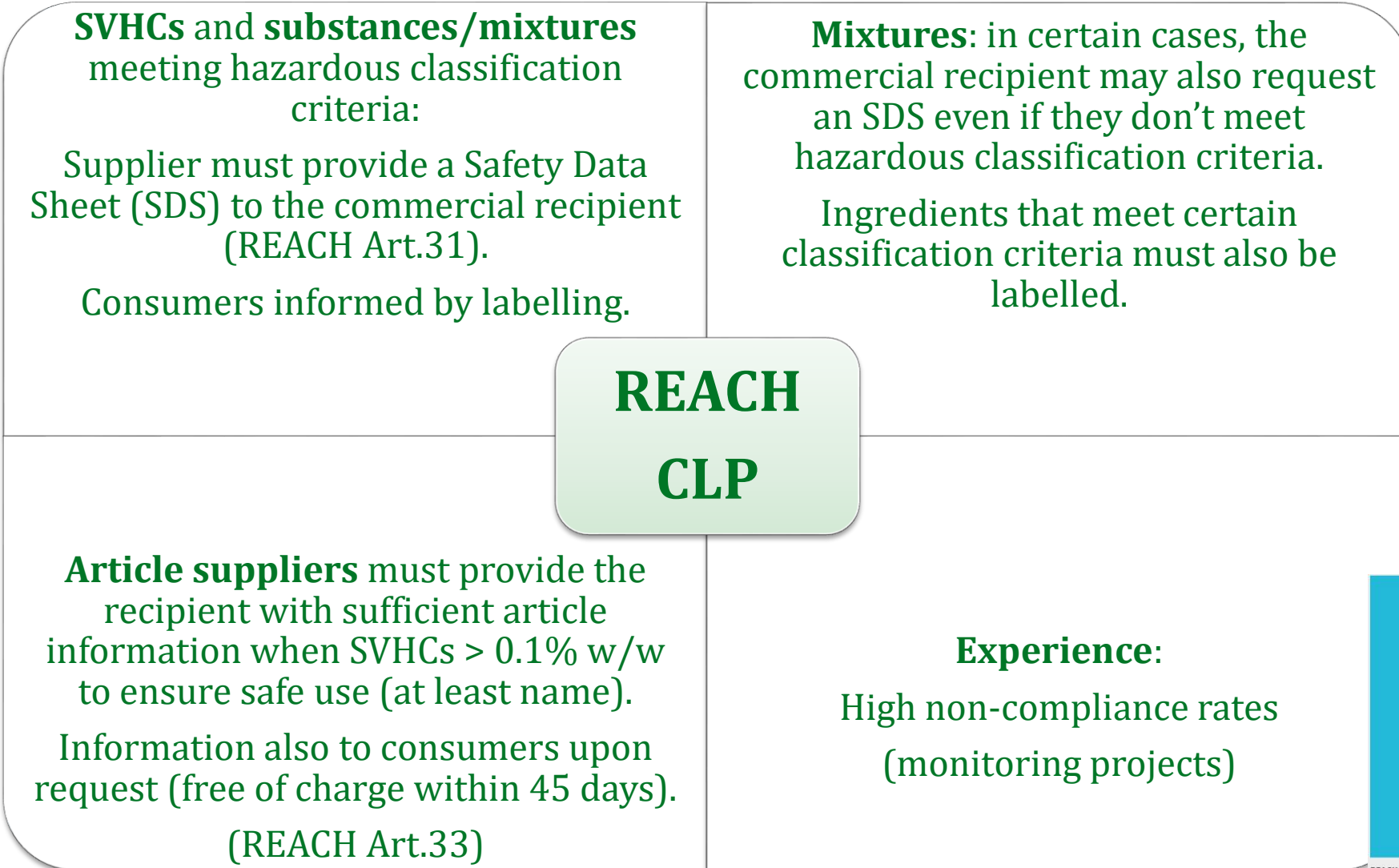

Environment action programme to 2030

Read about the 8th Environment Action Programme (EAP) which will guide European environmental policy until 2030.

Textiles: Sustainability through ecodesign

- Use of sustainable materials

- Circularity

- Repairability

- Elimination of Substances of Concern (SoCs)

Franco Tinè Fotolia

EU: Chemicals Regulations REACH, CLP

SVHCs and **substances/mixtures** meeting hazardous classification criteria:

Supplier must provide a Safety Data Sheet (SDS) to the commercial recipient (REACH Art.31).

Consumers informed by labelling.

Mixtures: in certain cases, the commercial recipient may also request an SDS even if they don't meet hazardous classification criteria.

Ingredients that meet certain classification criteria must also be labelled.

REACH CLP

Article suppliers must provide the recipient with sufficient article information when SVHCs > 0.1% w/w to ensure safe use (at least name).

Information also to consumers upon request (free of charge within 45 days). (REACH Art.33)

Experience:

High non-compliance rates (monitoring projects)

Hazardous chemicals are labelled with pictograms. Hazard pictogram Hazardous to the aquatic envir.
Source: UNECE / GHS

CLP= classification and labelling of chemicals

REACH = EU chemicals regulation

SVHCs = substances of very high concern

REGISTRIERUNG
EVALUIERUNG UND
AUTORISIERUNG VON
CHEMIKALIEN

REACH stands for registration, evaluation, authorisation and restriction of chemicals
Source: Umweltbundesamt

EU: SCIP Database

Under the Waste Framework Directive (WFD)

For waste handlers (elimination of hazardous substances), consumers, for regulatory purposes (e.g. new restrictions)

Mandatory data collection for articles containing SVHCs > 0.1% (not for distributors)

Experiences:

o Too complicated for consumers, little benefit for waste handlers
o Substantial compliance challenges, new administrative burdens for business

SCIP: Substances of Concern in Articles, as such or in complex objects - Products

EU: Ecodesign Regulation ESPR

ESPR =
Framework
legislation:
enabling
adoption of
measures at the
time of need

- Products must comply with **ecodesign requirements** to be placed on the market – SoC included under requirements

- **Delegated acts** for specific product groups, possibly horizontal requirements.

- **Information requirements**: as a minimum requirements in relation to SoC

- Information requirements shall make it possible to **trace the SoC throughout the life cycle** of the products.

- Substance name, position in product, concentration information must be provided in the **DPP**.

- **Exemptions possible**, e.g. based on the technical feasibility or relevance of tracing SoC, CBI, etc. No exemption for SVHCs > 0.1% "present in products, their relevant components or spare parts".
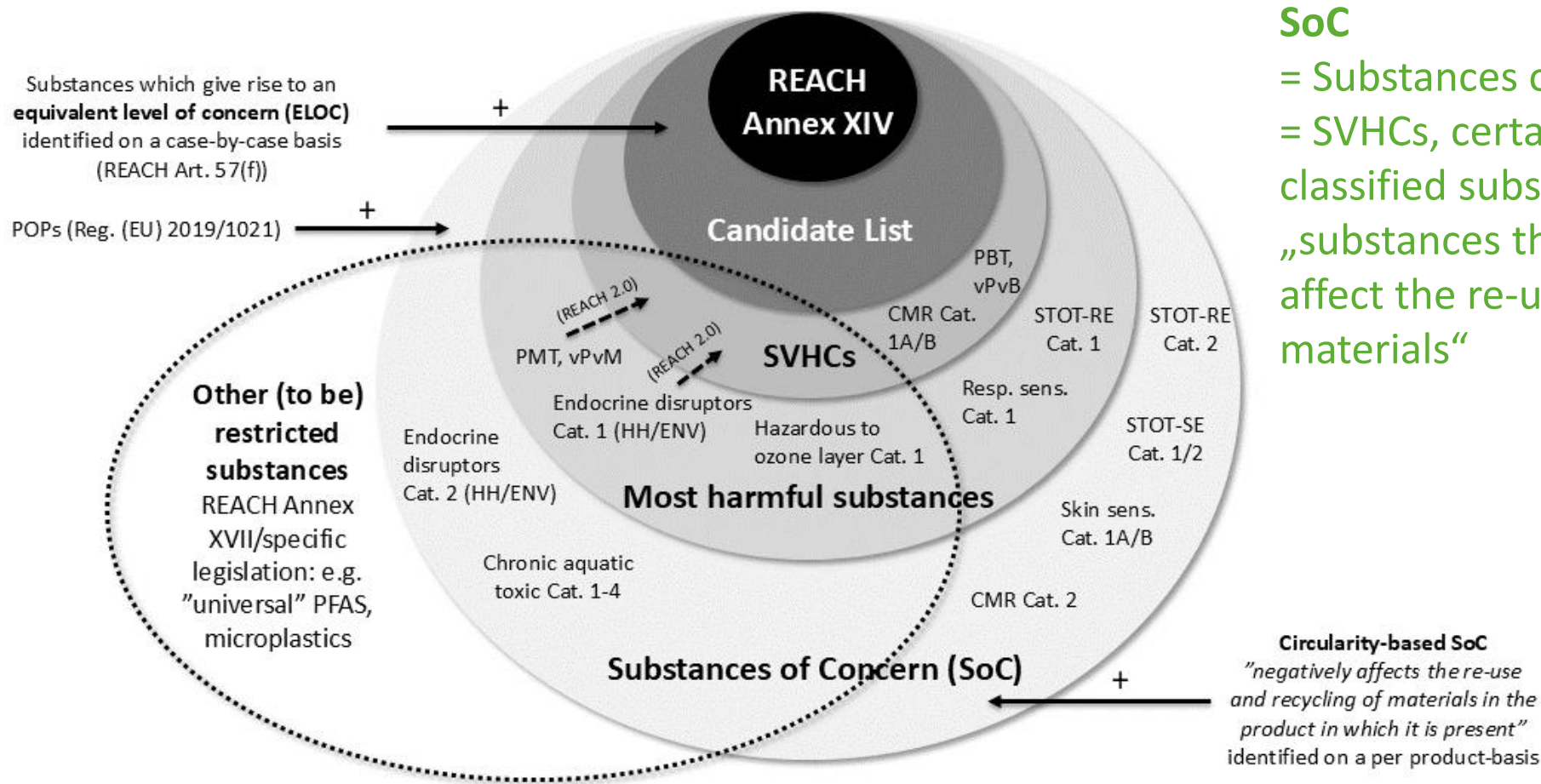
SoC = Substances of concern

Product = any physical good (incl. components and intermediate products, mixtures)

DPP = Digital Product Passport

SoC
= Substances of concern
= SVHCs, certain harmonised classified substances, POPs and „substances that negatively affect the re-use and recycling of materials"

Source: Becker, 2024

EU: Ecodesign Regulation ESPR

ESPR = Framework legislation: enabling adoption of measures at the time of need

- Products must comply with **ecodesign requirements** to be placed on the market – SoC included under requirements
- **Delegated acts** for specific product groups, possibly horizontal requirements
- **Information requirements**: as a minimum requirements in relation to SoC
- Information requirements: enabling **SoC traceability throughout the life cycle** of the products
- **DPP:** Substance name, position in product, concentration information must be provided
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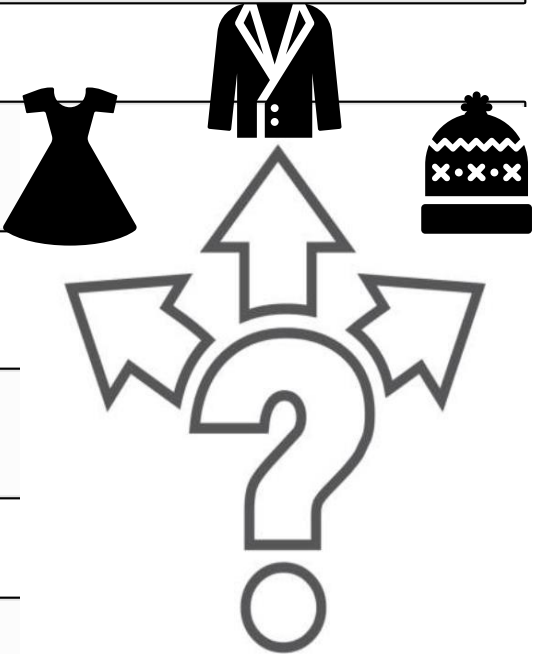# EU: Ecodesign Regulation ESPR

Uncertainties yet remain

Mandatory information requirements: for all SVHCs, for all product groups?
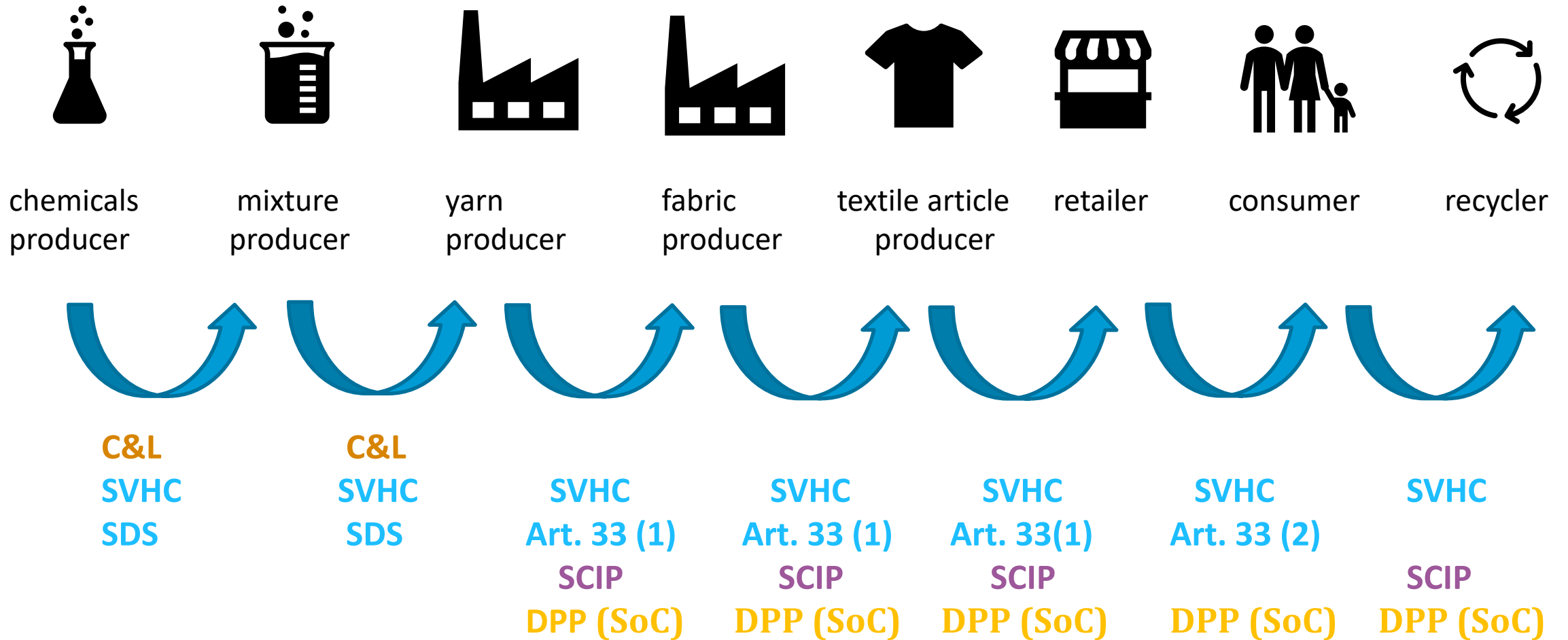
What happens when new SVHCs are identified?

How can SoC be tracked throughout the product life cycle?

E.g. preparatory study JRC on textiles: scope only apparel, excluding all intermediate products (fabrics, yarns, fibres etc.).

How will the information requirements on SoC in the delegated acts evolve?

Simplified supply chain chart EU legislation

CLP REACH WFD ESPR

| chemicals producer	mixture producer	yarn producer	fabric producer	textile article producer	retailer	consumer	recycler
C&L	**C&L**	**SVHC**	**SVHC**	**SVHC**	**SVHC**	**SVHC**
SVHC	**SVHC**	**Art. 33 (1)**	**Art. 33 (1)**	**Art. 33(1)**	**Art. 33 (2)**
SDS	**SDS**	**SCIP**	**SCIP**	**SCIP**		**SCIP**
		DPP (SoC)	**DPP (SoC)**	**DPP (SoC)**	**DPP (SoC)**	**DPP (SoC)**

Global Chemicals Management

Complex system of numerous institutions with different mandates and capacities. UN: at least 9 competent organisations, including UNEP, WHO, FAO, ILO

- Coordination of global activities: IOMC (Inter-Organisation Programme for the Sound Management of Chemicals)
- Conventions: Basel (hazardous waste), Rotterdam (PIC – international chemicals trade), Stockholm (POPs), Minamata (Hg)
- UN GHS (Globally Harmonised System): Classification & Labelling of substances/mixtures, rules for communication of information in the supply chain (SDS)
- OECD (Organisation for Economic Co-operation and Development): Guidelines, recommendations, declarations on chemicals
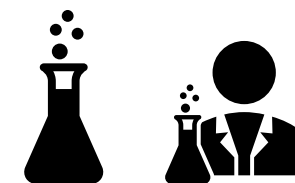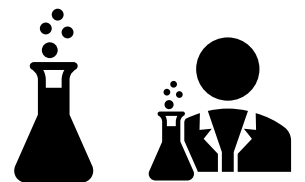
Global Chemicals Management

UNEP: Chemicals in Products (CiP) Programme recommendations

- Establish basic legal structures for chemicals management
- Encourage adoption of information exchange systems (iPoint, HP, IMDS..)
- Use public procurement
- Secure right of consumers to access information
- Raise awareness
- Help stakeholders meet and anticipate regulatory requirements concerning chemicals (e.g. via substances lists)
- Promote voluntary initiatives and collaboration
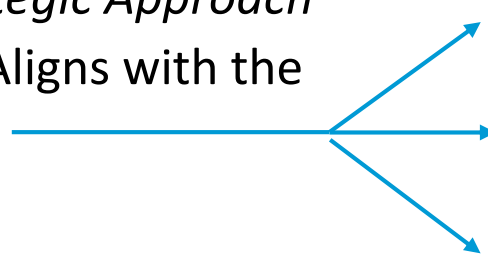
Global Chemicals Management
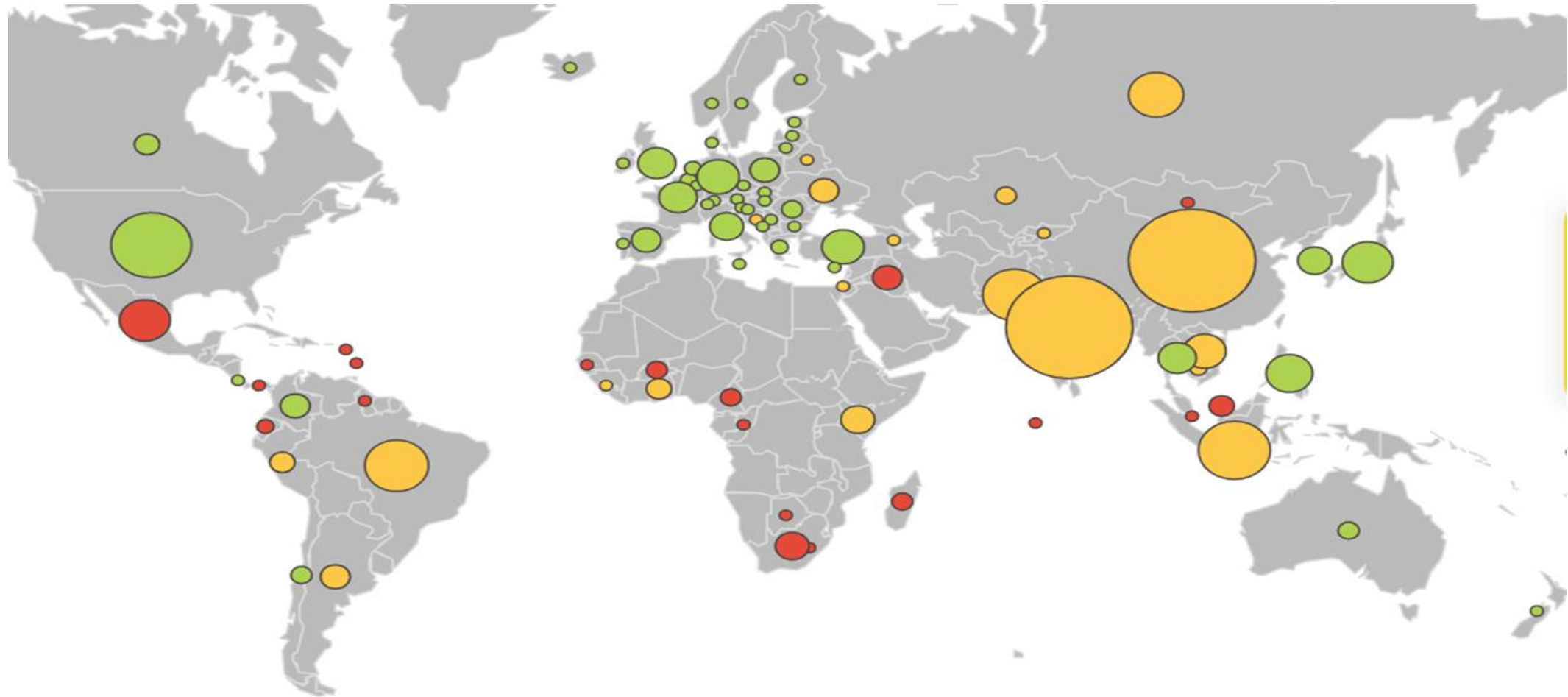
Legislation in place to manage industrial and consumer chemicals, 5 ⓘ

● = Legislation exists   ● = No legislation   ● = In development

● = Unknown

Source: OECD Website

Global Framework on Chemicals (GFC)

- Strategic international initiative. Builds on the *Strategic Approach to International Chemicals Management (SAICM).* Aligns with the Sustainable Development Goals (SDGs) (UN, 2015)

- Adopted 2023 in Bonn. Legally non-binding, > 150 countries. Financing?

- Target B2 - *By 2030, stakeholders make available, to the extent possible, reliable information on chemicals in materials and products throughout the value chain*

- Target B6 - *By 2030, all Governments have implemented the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in all relevant sectors as appropriate for their national circumstances*

establish globally coordinated policies

encourage industry responsibility

strengthen chemical management systems in countries worldwide

Source: https://www.chemicalsframework.org/

Other supportive instruments

Enforcement improvement

(esp. online trade)

Reporting Standards

FMD-compatible
Harmonised
Global
Cross-sector

Greenpeace
Detox campaign: hazardous chemicals elimination

ZDHC
Zero discharge of hazardous chemicals: MRSL

Substance lists

Harmonised
Global
Cross-sector

Green Public Procurement

Linked to ESPR (Art.65)

AFIRM
Apparel and Footwear International RSL Management Working Group

Voluntary initiatives

Digitalisation
(system-to-system data exchanges)

Capacity building
(industry, consumers, recyclers)

(Eco)labels

ChemSec
management guide for textiles

FMD = full material declaration

RSL = restricted substances list

Conclusions

Many information requirements under the existing EU legislation

Creation of interlinks across information requirements → no duplication of work. Availability of information to stakeholders

Problem:
Non-compliance

Problem:
Dynamic nature of hazardous substances identification requires constant information flow

Global scale intrinsically connected to chemicals traceability. Improvement?

ECHT Policy Workshop

What changes are needed to facilitate compliance with the various legal requirements?

What contribution can full material traceability make?

What political steps would have to be taken in the different regulatory areas to promote or even require traceability?

Thank you for your attention

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