## Substances of concern in material loops: towards safe recycling

Breakout session 14-6-24

Introduction

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#### **Overall objective**





Decreasing the impact of chemical substances in waste and recycled products to a level that is doing no harm to health and environment



### What's already done about it? Broader European context

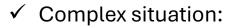
- ✓ EU Green Deal: multifacetted strategy to transform the EU in a modern economy where among others:
  - Ressources are optimaly used
    - Some key principles:
      - substances of concern are kept out of the cycle or have no significant impact on health and environment.
      - more careful use of chemicals in articles and materials
- ✓ Initiatives EU-level with links to substances of concern in waste:
  - Interface between waste and chemicals/products legistlation
  - Chemicals strategy
  - Zero pollution action plan
  - Waste stream specific legislations: batteries, ELV, packaging, WEEE
  - POP-regulation
  - Sustainable Product Initiative with Ecodesign Regulation
  - Textile strategy
  - Regulation on microplastics
  - Regulation waste shipments + guidelines Basel Convention
  - ...







### Some remaining issues



- Products exit chemicals legislation when they become waste, but upon successful recycling, this legislation applies
  again
- SVHC, SoC vs hazardous waste:
  - SVHC: Reach-context but links with WFD
  - SoC: no general EU-definition but applied in specific legislation
  - Hazardous waste: LoW + WFD annex iii
- Waste and chemicals legislation have different objectives => friction
  - Chemicals Legislation
    - Applicable to substances, mixtures, and articles.
    - Registration, authorization, restriction & classification procedures + specific standards
    - Specific rules for hazardous substances such as SVHC (Substances of Very High Concern) and POPs (annex I).
  - Waste legislation
    - Applicable on waste as a whole, unlike chemicals legislation.
    - More "pragmatic" kind of risk management & possible other standards
    - POP Annex IV & V
    - Partial alignment with CLP (2014)
    - $\circ \qquad {\sf EoW} \ {\sf criteria} \ {\sf are} \ {\sf not} \ {\sf harmonized} \ {\sf between} \ {\sf EU} \ {\sf MS}$

#### ✓ Application of precautionary principle unclear





## Some practical challenges

- $\checkmark$ Difficulties in recycling
  - Problem of legacy substances and different lifetimes products
  - Heterogeneous materials + properties vary according to batch
  - Contamination of products after purchase
  - Waste processors should choose waste treatment methods compatible with the risks. .
  - Waste classified under less restrictive hazard class (than CLP) and becomes EoW => reclassification under CLP. Risk for recycler.
- Classification hazardous waste:  $\checkmark$ 
  - Interplay systems of mirror codes vs HP criteria (Hazardous Properties) in waste classification.
  - Potential inconsistencies between waste and chemicals regulations.
- Information Transfer:  $\checkmark$ 
  - Limited information transfer about substances of concern to the waste phase.
  - No mechanism for communication to waste operators.
  - SCIP database as an attempt to gather information on SVHCs:
    - 14 million entries

    - Applicability for waste operator? Could facilitate cleaner products but no obligation to reduce chemical risks
- Tracking substances:
  - Possibly feasible: specific legislation/guidelines for certain sectors
  - Taking into account the cost & the limitations of waste analyses
- Practical Implementation:  $\checkmark$ 
  - Pragmatic approach by waste processors due to lack of information.
  - Choice of LoW-codes (European Waste Catalogue) influenced by available info and practice within sectors.



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# WFD: links with hazardous substances and SvHC - I

- ✓ Art. 4 Waste hierarchy => also take into account global impact, principle of precaution
- ✓ Art. 6 End-of-waste status:
  - Condition n°4 => use of substance with no overall adverse health or environmental effect
  - Possibility for setting of criteria on Union level, member state level or case-by-case
  - Check of meeting requirements of chemical and product legislation
- ✓ Art. 7 List of waste:
  - Distinction non-hazardous vs. Hazardous (\*)
  - Possiblility to reclassify by MS (on basis of Annex III)
- ✓ Art. 8 Extended producer responsibility
  - 8a general minimum requirements:
    - 1(b): Possibility to set other quantitative targets and/or qualitative objectives relevant for EPR
    - 4(b): Possibility to modulate obligations on recyclability and presence of hazardous substances

#### ✓ Art. 9 – Prevention of waste

- 1(i) MS measures to promote the reduction of the content of hazardous substances in materials/production + ensure filling in SCIP by supplier (art. 33(1) REACH)
- 2. ECHA establishes database (SCIP)





# WFD: links with hazardous substances and SvHC - II

- ✓ Art. 10 Recovery
  - MS takes necessary measures before or during recovery, to remove hazardous substances, mixtures and components from hazardous waste.
- ✓ Art.11 preparing for re-use and recycling
  - MS take measures to promote high quality recycling (separate collection of waste
  - MS promote selective demolition to enable removal and safe handling hazardous substances
- ✓ Art. 13 Protection of human health and the environment
- ✓ Art. 17 Control of hazardous waste
  - Production, collection, transportation, storage & treatment => protection of health and environment.
  - Traceability to final destination
- ✓ Art. 18 Ban on mixing hazardous waste
  - No mixing or dilution
  - Derrogations
- ✓ Art. 19 Labelling of hazardous waste
- ✓ Art. 20 Hazardous waste households
- ✓ Art. 21 Waste oils
- ✓ Art. 35 Record keeping by producers, collectors, transporters, brokers of hazardous waste (registry)
- ✓ Annex III Properties of waste which render it hazardous







#### **Discussion themes**

Information bottlenecks => SCIP-information: making it more usable for waste-industry

Legal framework discrepancies => same standards for virgin and recycled materials?

Innovative sollutions for waste management => is industry responsible for high quality recycling of waste



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