Waste recycling and extended producer responsibility – Standardisation as an opportunity to enhance occupational risks prevention

Bertrand DELECROIX – Eric SILVENTE

INRS France

13-14 June 2024

1. A risky sector
2. Extended Producer Responsibility and the central role of PCSs in the structuration of the processes
3. Examples of strains : Packaging, Medical Waste and WEEE
4. Conclusion : Standardisation – Some limits but a great opportunity

Occupational health figures in waste sector 2019 *(Cnam)*

	Collection	Recycling	Elimination	Construction sector	All industrials sectors
Number of employees	42 361	32 522	23 392	1 731 886	19 557 331
Work related accidents	2 816	2186	741	88 360	655 715
Frequency index	64.2	67.2	31.7	51.0	33.5
Occupational illness	132	140	84	3 371	47 094

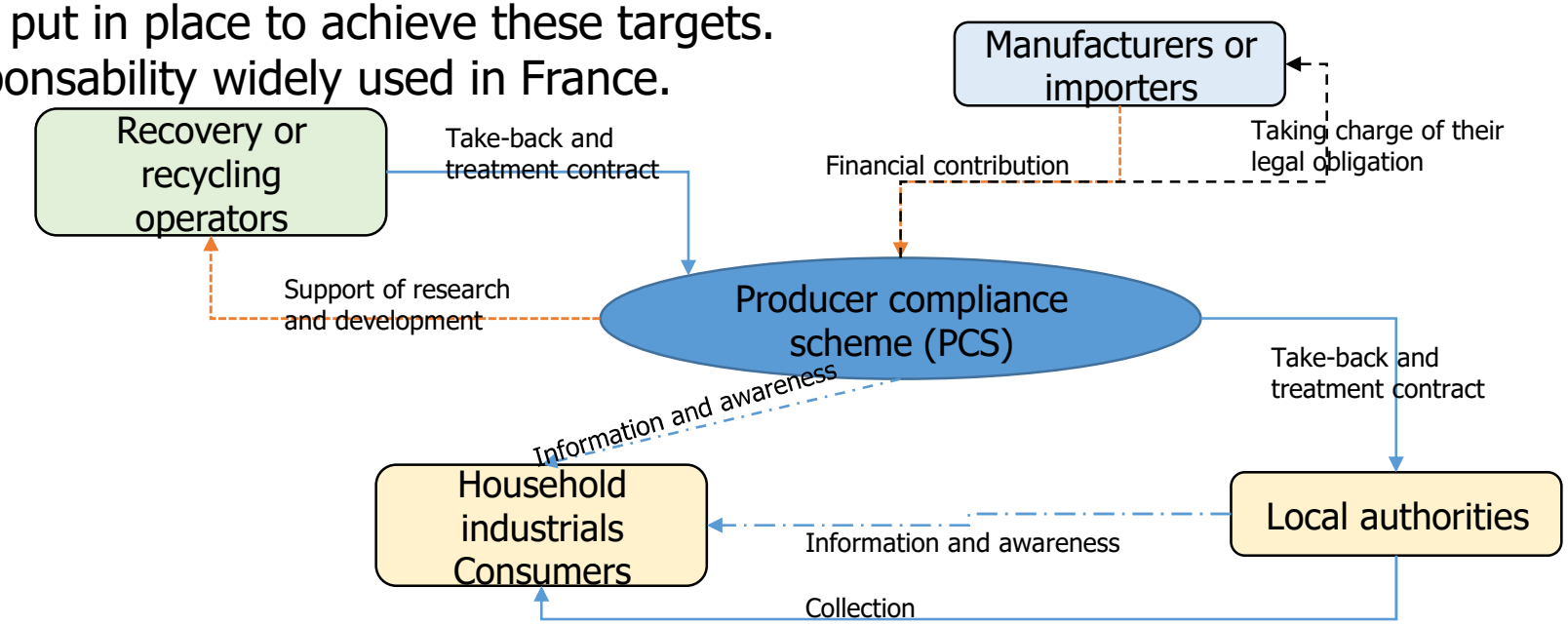
- Manual handling : more than 50 % of the cause of accidents
- Periarticular affection : about 80 % of the occupational diseases

Extended Producer Responability and the role PCS

- People employed in waste activities in France in 2020: 113 000 jobs in nearly 7700 waste management facilities (*Ademe*)

- Strongly constrained and structured by UE and French regulations with collection and recycling targets and definition of organization to be put in place to achieve these targets.
- Principle of extended producer responsability widely used in France.

- **Central role of « PCS »**



The prevention of risks in the waste sectors requires

- a varied assembly of prevention tools (studies, brochures, guides, assistance, standardisation)
- an approach adapted to the specificities of the particular organization of each sector (professionals, local authorities, **PCS**, different maturity, heterogeneous nature of the risks...)

Collaboration with Producer Compliance Schemes

- Helps a better knowledge of the sector (by analyzing and understanding existing organizational processes, by characterizing the processes in emerging and/or existing sectors and by assessing the exposure levels of its employees through observations and operations carried out in the field
- Permits better recommendations of prevention applicable to the field
- …taken into account as early as possible in the implementation of the sector

Example of Standardised practices – Packaging waste stream

- PCS : Citeo (ex Eco-Emballages)
  - A long history – 1992
  - Homogenous incoming products and outputs (plastic bottles, packing cartons), extended to plastic and cellulose films
  - A large source of incoming products

  ➔ Process standardization

- For years, collaboration between INRS and Citeo on working conditions in waste sorting plants

Packaging waste stream and the prevention approach

- Publication of guidelines (2011) " Sorting centers for dry recyclable household and similar waste from separate collections. Prevention guide for the design ". (update in 2018)
- Standardization (2015) : NF X 35-702: "Safety of machines - Ergonomic principles for the design of manual sorting booths for dry recyclable household and similar waste from selective collections.
- Guidelines for extension of sorting instructions to plastic films
- ***Dissemination :*** Guidelines to deal with infectious waste in sorting centers (with Dastri PCS)

Example of NOT Standardised and heteogeneous practices – WEEE

- A wide range of heterogeneous products
- Heterogeneous practices of sorting and recycling
- Heteregenous means of waste collection : household shops or waste collection centers or even in packaging waste centers
- Heteregenous organisation structures of sorting/recycling : small social plants with precarious workers or larger structured companies

➔ Hard to implement standardized prevention solutions

➔ But possibility of specific prevention tools for WEEE recycling

- 2008 : Guidelines for the risk assessment in used lamp chain
- 2012 : Guidelines for the risk assessment in Cathod Ray Tubes chain
- 2017 : Guidelines for the risk assessment in flat screens chain and awareness posters publication and video

WEEE and the prevention approach

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Conclusion – Standardisation a useful tool – among others to help OSH

- Packaging : large automated waste sorting centers
  - standardization is feasible and useful
  - … but doesn't take into account specific territorial characteristics
- Infectious waste : benefits standardization from Packaging PCSs
- WEEE : standardization is difficult to implement because of systemic electronic goods heterogeneity
  - Specific prevention tools are useful

Thank you

Author **Affiliation**