For our environment

Umwelt Bundesamt

"How to make Packaging more Recyclable", Webinar with Delara Burkhardt and the German Environment Agency, March 26, 2021

Current Situation of Packaging Waste Generation and Recycling in the European Union

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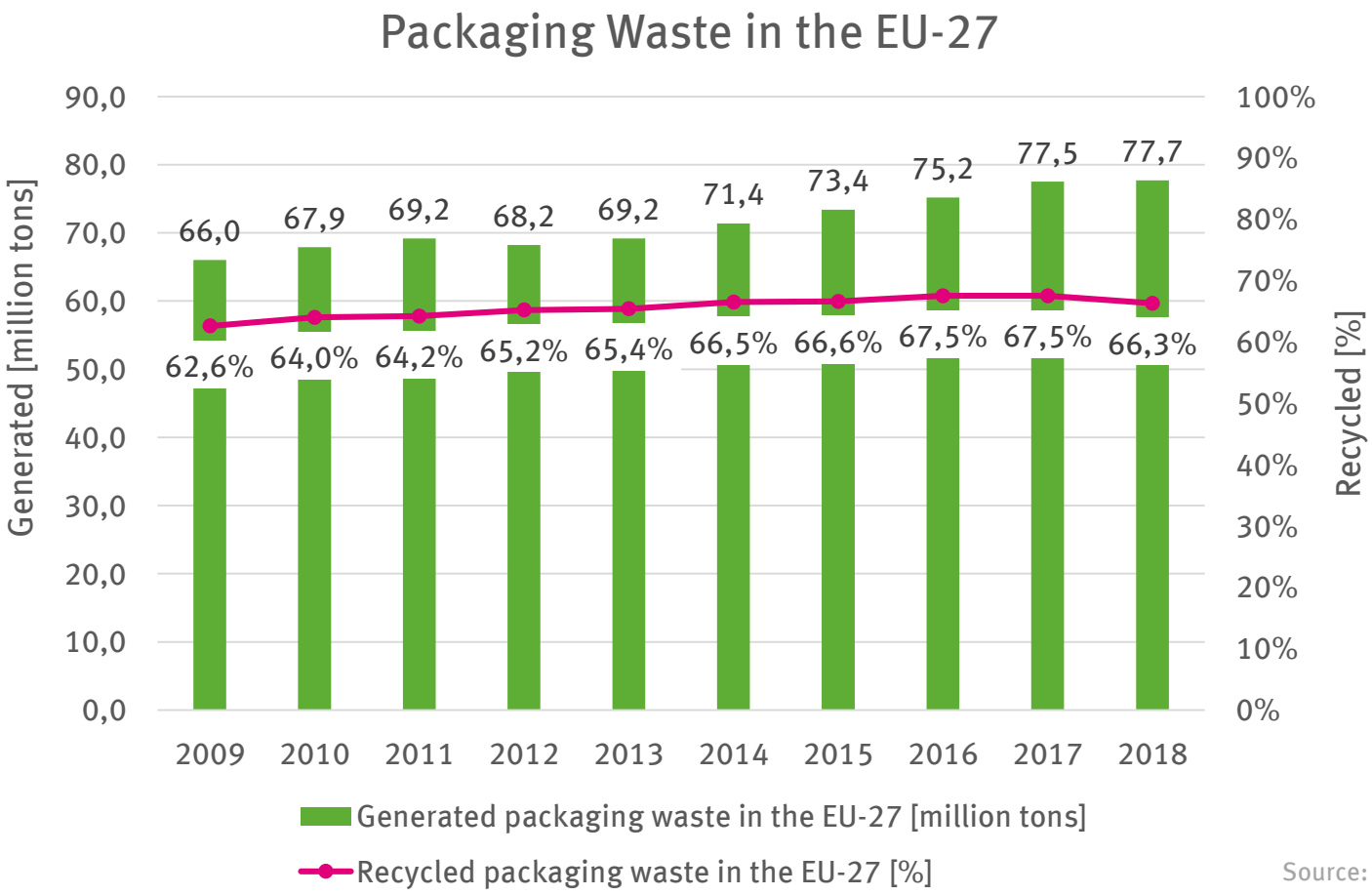
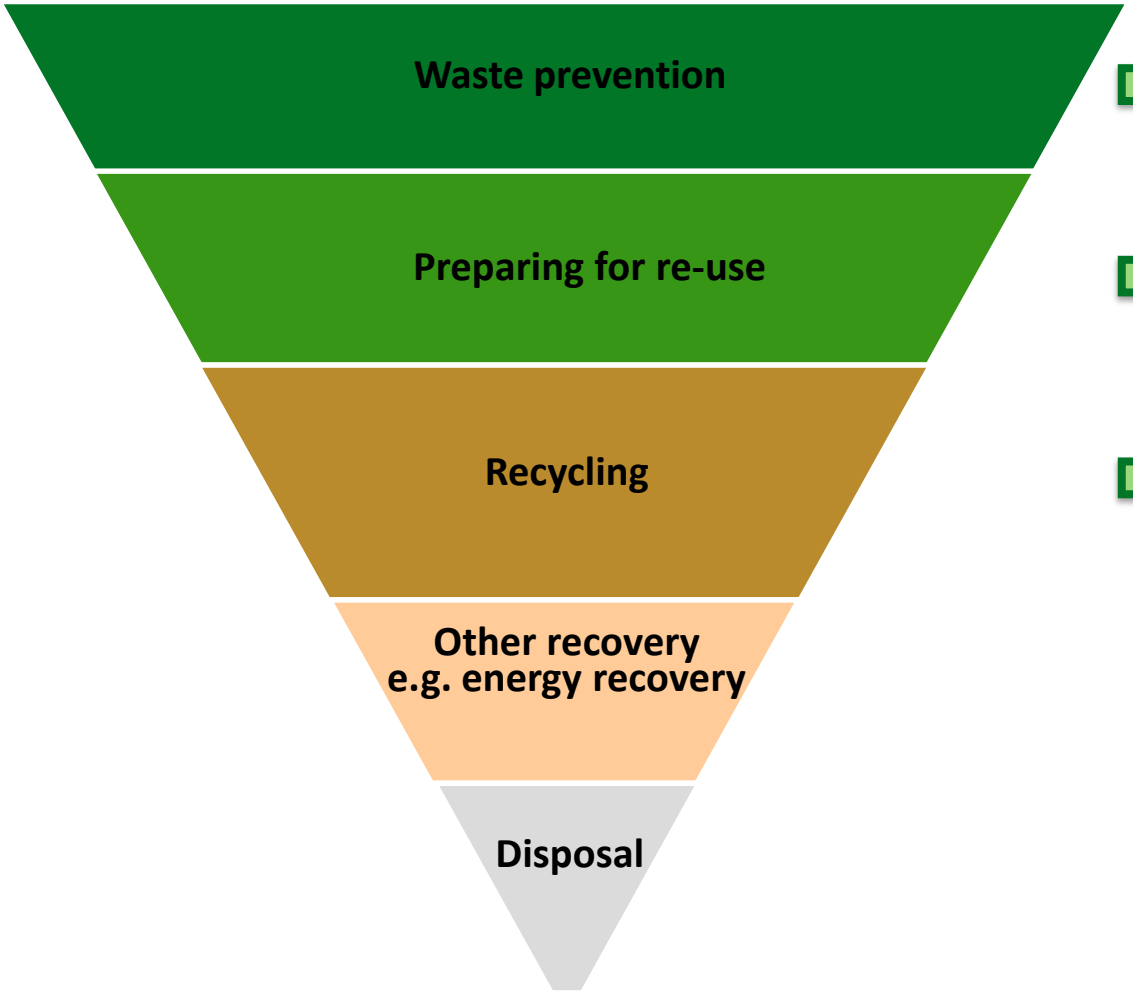
1. What is UBA's Mandate?

2. Development of Packaging Waste Generation & Recycling in the EU



Source: Eurostat

3. Environmentally Friendly Packaging Design and the Waste Hierarchy



avoid packaging,
fit size to content,
reduce material intensity,
use refillable packaging

design packaging for several cycles of re-use

design packaging for recycling,
use recyclates if possible

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The Recyclability of Packaging

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1. What is Recyclability?

Current law

- No legal definition for recyclability
- Recycling definition (WFD)
- Essential requirements (PPWD): packaging design must enable recycling

Envisaged objectives

- High-quality recycling (CEAP)
- Use of recyclates; mandatory recycled content targets
- Saving virgin resource material
- Reinforcement of Essential Requirements to promote high-quality recycling

Recyclability for high-quality recycling as a design guideline

1. What is Recyclability?

Reference points for recyclability:

High-quality mechanical recycling

- To enable feeding back into the product cycle for circular economy

Not only theoretically recyclable

- To prevent greenwashing

Practice of sorting and recycling on the market

- To support meeting recycling targets

1. What is Recyclability?

Minimum Standard for Determining the Recyclability of Packaging Subject to System Participation (section 21 (3) Packaging Act)

Recyclability:

- Refers to high-quality mechanical recycling

  mechanical recycling: new, physically identical material is produced or the material remains available for another material use (s. 3 (19) Packaging Act)

- Fundamental and gradual suitability of any given packaging to substitute virgin material in applications typical for that material after undergoing recycling processes available in an industrial scale.

2. Determining the Recyclability of Packaging Waste in Germany

How to Determine the Recyclability of Packaging?

Minimum Standard by Central Agency Packaging Register and UBA – 3 criteria:

1) **Availability of sorting and recycling infrastructure** (for high-quality mechanical recycling) for this packaging

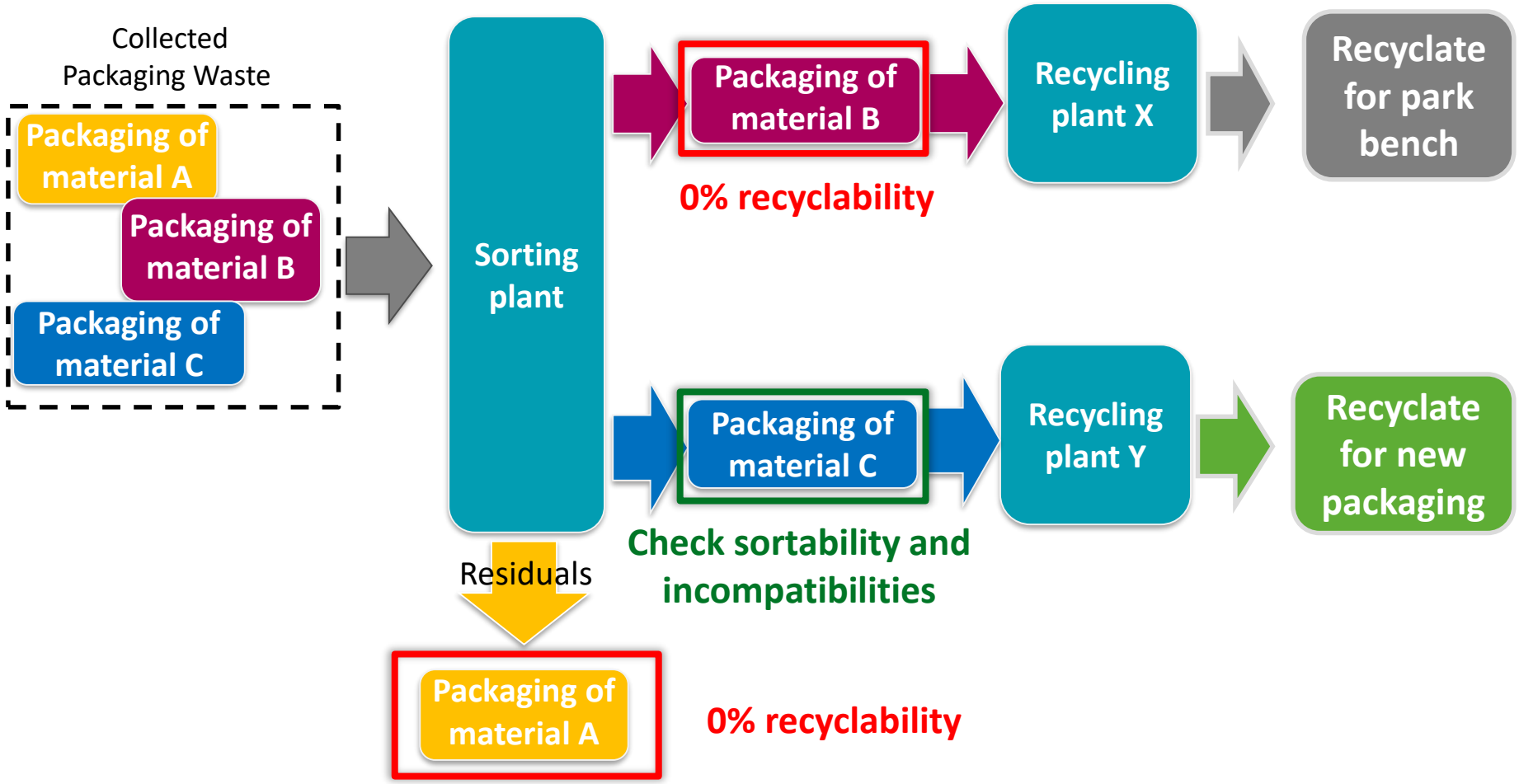
2) **Sortability** of the packaging, **separability** of its components

3) **No recycling incompatibilities** of packaging components or substances

➡ Available recyclable content determines the (maximum) recyclability

2. Determining the Recyclability of Packaging Waste in Germany

Availability of Sorting and Recycling Infrastructure



2. Determining the Recyclability of Packaging Waste in Germany

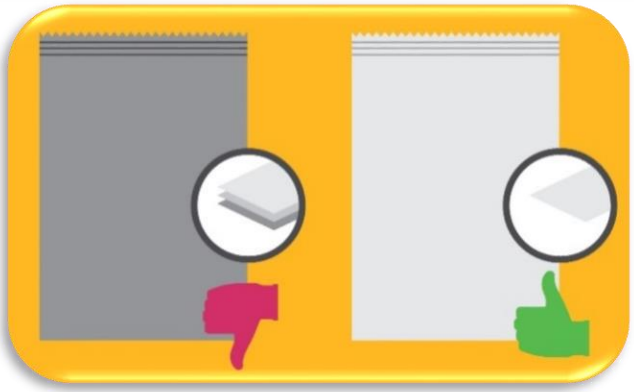
Sortability

Not sortable packaging assigned to residual or wrong fraction

Plastic packaging

- Large labels (taking up > 50% of the surface) made from foreign material
- Full sleeve label
- Multi-layer structure (excluding PE/PP EVOH)
- Metallisation (excluding on the inside/in the middle layer)
- Dark colours using soot-carbon-based pigments (also when used for internal layers
- Different types of plastic used on front and back sides

Source: Appendix 2 of the Minimum Standard by Central Agency Packaging Register and UBA



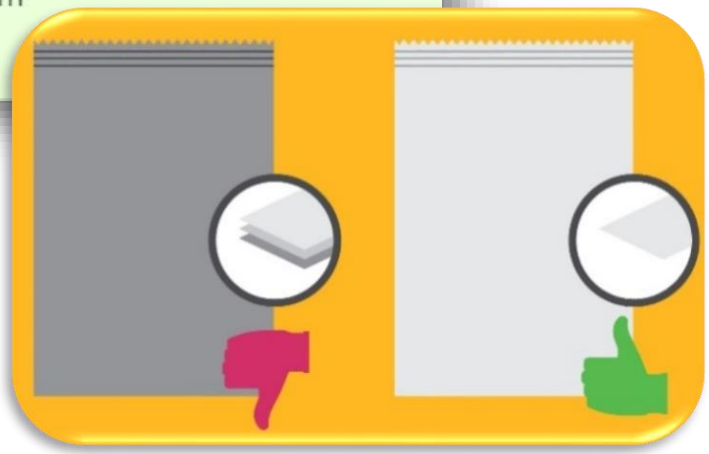
2. Determining the Recyclability of Packaging Waste in Germany

Material-specific Recycling Incompatibilities

Leading to reduced quality of the recycled material

Group/sort	Incompatibilities
Film and LDPE	Water-insoluble adhesive applications in combination with wet-strength paper-based labels; PA barriers, PVDC barriers, non-polymer barriers (excluding SiOx/AlOx/metallisations), non-EVOH barriers.
Rigid PE	Silicone components; components of foamed non-thermoplastic elastomers; water-insoluble adhesive applications in combination with wet-strength paper-based labels; PET sleeves with a density of < 1g/cm³ PA barriers, PE-X components, PVDC barriers non-PO plastics with a density of < 1 g/cm³.

Source: Appendix 3 of the Minimum Standard by Central Agency Packaging Register and UBA



Thank you for your Attention

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