ISWA EUROPEAN GROUP MEETING
WASTE HIERARCHY -------------- CHALLENGES

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CHALLENGES FROM THE WASTE HIERARCHY

RECYCLING RATES

- No definition of recycling (30% 50% 60%)
- Even low value output counts
- Chain recycling may count more than once
- Refilling bottles do not count

Misleading figures on recycling

Meaningless. Recycling rates are often misleading with regard to the real degree of recycling. Rules and logic describing how to evaluate recycling are missing.

Recycling of bottles

A common and unfortunate example is that for low-value material such as PET bottles in the Danish recycling system. The recycling rates for PET bottles are based on the weight of the bottles, as defined by the producer, and not on the actual weight of the material recovered. This means that the weight of the bottles is divided by the weight of the raw material, giving a recycling rate of 100%. However, this is not a true measure of recycling, as the weight of the bottle is not a measure of the actual material recovered. The weight of the bottle is affected by factors such as the thickness of the bottle, the material used, and the manufacturing process. Therefore, the recycling rate should be based on the weight of the material actually recovered, rather than the weight of the bottle. This would give a more accurate measure of the actual recycling rate, as it takes into account the actual material recovered.
WASTE-TO-ENERGY RECOVERY DEFINED

R1 = \[
\frac{2.6 \times \text{ELECTRICITY-out} + 1.1 \times \text{HEAT-out}}{\text{WASTE ENERGY-in}} > 0.65
\]

Ensures high level of energy efficiency…

…by counting the produced OUTPUT as:

- Electricity
- Steam
WASTE-TO-ENERGY

1 ton waste

2 MWh steam/heat 2/3 MWh electricity

60€ 40€

COMPOSTING

1 ton waste

H2O ½ ton compost

CO₂ CH₄ (methane)

?€
THE WASTE HIERARCHY

CONCLUSION: • Recycling and recovery must be evaluated based on total value of output
• There shall be no distinction between recycling and recovery