Waste selective collection: crucial factor in the circular economy

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Best Environmental Management Practices for the Waste Management sector

Learning from frontrunners

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Organisers:

lipor
ACR+
Best Environmental Management Practices for the Waste Management sector

Content of this presentation

Who we are and what we do

Best Environmental Management Practices (BEMPs)

Examples of Waste Management BEMPs

The way forward: a Green Best Practice Community
The Joint Research Centre (DG JRC)

- We are the science and knowledge service of the European Commission
- Our mission is supporting EU policies with independent evidence throughout the whole policy cycle
- We work on nearly all science and policy areas
- We are policy neutral

3000 staff, 30+ nationalities, 6 locations
The Joint Research Centre and the circular economy – some examples
Sectoral Reference Documents on Best Environmental Management Practice (BEMP)

➡ Legal basis: EMAS Regulation (EC) No 1221/2009

➡ BEMP supports all businesses and other organisations to improve environmental performance, not only EMAS registered organisations.
11 Sectors

- Retail
- Tourism
- Construction
- Public Administration
- Agriculture
- Telecommunications
- Metal products manufacturing
- Electronic equipment manufacturing
- Car manufacturing
- Food and Beverage manufacturing
- Waste Management
Working together with stakeholders
Best Environmental Management Practices for the Waste Management sector

The scope

- Municipal solid waste
- Construction and demolition waste
- Healthcare waste

Waste management companies

Waste authorities (local authorities)

Waste management strategy → Waste prevention → Waste collection → Waste re-use → Waste treatment → Material recycling, energy recovery, waste disposal
A few examples of BEMPs for municipal solid waste

- Waste monitoring
- Awareness raising
- Waste advisors
- Pay-As-You-Throw

- Local waste prevention programmes
- Logistics optimisation for waste collection
- Inter-municipal cooperation
- Re-use schemes
- Treatment of waste mattresses for recycling
Pay-as-you-throw

- Introduce a system where citizens **pay per weight** or **per bag** of residual waste generated.
- Ensure that **infrastructure to collect and to process the recyclables** is available and efficient.
- Residents are **well informed**.
- **Organic waste** and **bulky waste** are also weighted.
Awareness-raising campaigns
Establish a network of waste advisers

- Set up a local network of “waste advisers” to:
  - raise awareness on waste management;
  - offer a service to residents and entrepreneurs/small businesses;
  - gain a better understanding of what happens on the ground (drivers, reasons).

Indicators
- Number of waste advisers per 100,000 residents.
- Share of population advised by waste advisers (e.g. % of residents per month).

Benchmarks of excellence
- A network of waste advisers is in place with at least 1 waste advisor per 20,000 inhabitants.
- Awareness campaigns are systematically implemented for different types of target groups (e.g. pupils, general public, users of civic amenity sites) and the annual budget devoted to awareness raising activities is at least 5€ per resident.
Common indicators for Municipal Solid Waste

**Generation**
- Total municipal solid waste generation [kg/capita/year]

**Collection**
- Amount of mixed waste collected [kg/capita/year]
- Bio-waste in mixed waste [kg/capita/year]
- Capture rate for glass [%]
- Impurity rate for separately collected glass [%]
- Capture rate for paper/cardboard [%]

**Treatment**
- Waste sent to energy recovery and/or disposal [kg/capita/year]
- Waste sent to disposal [kg/capita/year]
Residents and businesses

Municipal Waste Collection

Amount of glass in mixed waste (or other streams) 17 kg/inh/yr

Separately collected glass 19 kg/inh/yr

Sorting / Recycling Plants

Recycled 17 kg/inh/yr

Rejects 2 kg/inh/yr

Composition analysis of mixed waste

Glass waste generation 36 kg/inh/yr

Separately collected glass capture rate: 53%

Separately collected glass impurity rate: 10%

Example: use of capture rates and impurity rates

Glass example
Municipal solid waste (MSW) generation - Benchmark of excellence:
The annual generation of MSW in the territory administered or managed (collected by all different waste collection systems available in the area) is:
- lower than 75% of the national average of municipal waste generation, using the national definition of municipal waste of their own country; or
- lower than 360 kg/capita, if calculated only for the following waste fractions: (i) organic/biowaste (e.g. green cuttings, food, kitchen waste), (ii) co-mingled packaging, (iii) paper and cardboard, (iv) glass, (v) plastics, (vi) metals, (vii) bulky, (viii) WEEE and (ix) mixed waste.

Frontrunners: Ljubljana (SI), Bristol (UK), Val di Non (IT)

MSW sent to energy recovery and/or disposal - Benchmark of excellence:
The annual amount of collected mixed MSW sent to energy recovery and/or disposal is:
- lower than 15% of the national average of municipal waste generation; or
- lower than 70 kg/capita.

Frontrunners: Treviso (IT), County of Aschaffenburg (DE), Val di Non (IT)

MSW sent to disposal - Benchmark of excellence:
The annual amount of MSW sent to disposal is:
- lower than 2% of the national average of municipal waste generation; or
- lower than 10 kg/capita.

Frontrunners: Vienna (AT), Ljubljana (SI), County of Aschaffenburg (DE)
The concept for a Green Best Practice Community

- Continuous identification of BEMPs
  - Are there new best practices in the sector?
  - Are some BEMPs outdated?
  - Let frontrunners and organisations tell us

- Getting the message out
  - Meet actual needs of organisations
  - User friendly format
  - Partner with relevant multipliers

- Broaden stakeholder engagement
  - Stimulate contributions
  - Engage key sectoral actors
Welcome


Sector

Tourism  Waste Management  Public Administration  Food and Beverage

News

Heading
Nunc vestibulum condimentum nisi.
Read more

Heading
Nunc vestibulum condimentum nisi.
Read more

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1. Cost benchmarking
2. Advanced waste monitoring
3. Pay-As-You-Throw
4. Performance-based waste management contracting
5. Awareness raising
6. Establish a network of waste advisers
7. Home and community composting
BEMP: ESTABLISH A NETWORK OF WASTE ADVISERS

Set up a local network of “waste advisers” to:
- raise awareness on waste management;
- offer a service to residents and entrepreneurs/small businesses;
- gain a better understanding of what happens on the ground (drivers, reasons).

Key features:
- home/community visits (+ schools);
- working together to identify possibilities to reduce waste generation;
- improving source separation with practical what goes where sessions;
- focus on waste streams that are considered more problematic (food waste, WEEE, bulky waste, etc.).

INDICATORS
- Share of population in the waste management catchment area having contact with waste advisers over a given period of time (e.g. % population per month)
- Number of waste advisers per 100,000 inhabitants

BENCHMARKS
- A network of waste advisers is in place with at least 1 waste advisor per 20,000 inhabitants

CASE STUDIES

STYRIA
- Very dense network: an adviser every 20,000 inhabitants
- Target: children (including schools and kindergartens), private households and SMEs
Possibility to propose a BEMP, indicator, benchmark or case study (if your organisation is implementing a best practice and you would like to be featured in the website)

SUBMIT:

BEMP
Indicator
Benchmark
Case study

Information:
<insert data>

Include:

+ Indicator
+ Benchmark
+ Case study

Associate to:

+ BEMP
+ Indicator
+ Benchmark
+ Case study

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CASE STUDIES

STYRIA

- Very dense
- Target: children (including schools and kindergartens), private households and SMEs
Download the BEMPs for waste management:

Get in touch with us at
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to be involved in the Green Best Practice Community
Thanks

Any questions? Interested to stay in touch?

You can reach me at

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