



An EU funded project

Strategies on the management of C&D waste in different European Countries

3rd Workshop
Waste Management Plan
on hazardous Construction & Demolition Waste

3rd of February 2017
(Belgrade)

C&D Waste Management within the EU

Definition of the C&D waste stream

C&D waste arises from activities such as

- the construction and maintenance of buildings and civil infrastructure,
- total or partial demolition of buildings and civil infrastructure,
- road planning and maintenance.

C&D waste is covered by chapter 17 of the EWL.

Under Art. 2, 1, c of 2008/98/EC - uncontaminated excavated soil/other natural occurring material used at the site of generation may be excluded from waste definition – different statistical approach in MS

C&D Waste Management within the EU

Waste Stream in general

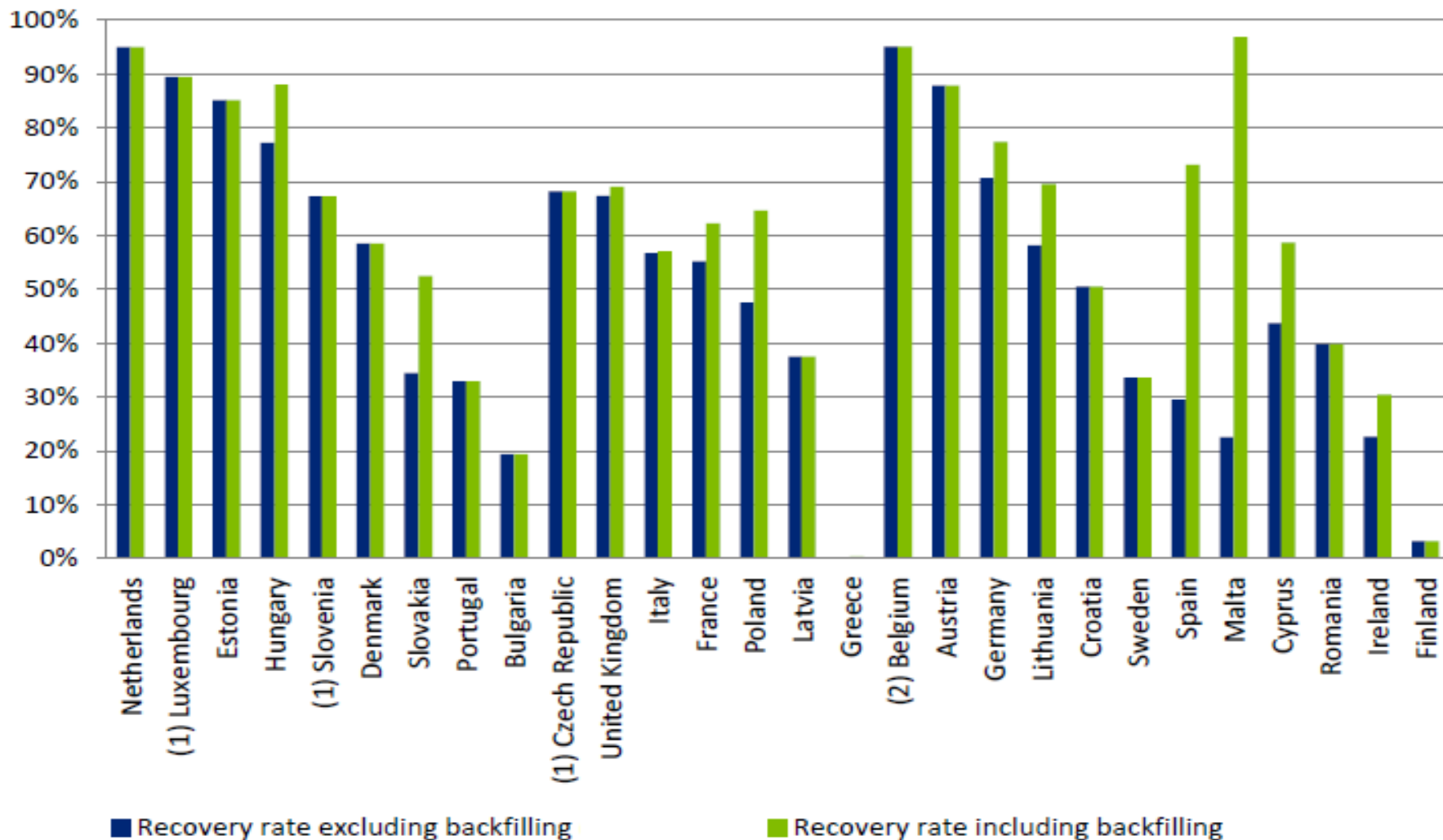
- C&D waste accounts for about 1/3 of waste generated in the European Union (800 million tonnes per year)
- Excavated soil can account up to 50% - 60% of C&D waste (depending on application of Art. 2, 1, c of 2008/98/EC)
- Indicator for generation (EU-28): 148.7 tonnes/€ million
- 2020 Union target for mineral C&D waste (excluding excavated soil): 70%
- Mineral C&D waste: Recycling vs. Backfilling

How to compare data

What type of C&D waste is covered

- a) Mineral C&D waste – including/excluding soil?
- b) Plastics (including insulation material?) – (17 02 03, 17 06 04)
- c) Wood (17 02 01)
- d) Metals (17 04 01, 17 04 2, 17 04 05, 17 04 07)
- d) Mixed waste (17 09 04)

Recovery rates of CDW in EU-28 MS in 2012



Source: Workshop "Improving management of construction and demolition waste", Brussels, 25 May 2016

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Explanatory note

- Only mineral C&D waste covered (?)
- Different statistical approach in different MS
 - e.g. excavated soil covered/not covered
 - e.g. on site recycling = non-waste
 - e.g. production of recovered aggregates as non-waste
 - e.g. no differentiation of the fate of recovered aggregates (counted for backfilling only)

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Obstacles for recycling/recovery

- Legal issues (license requirements for waste treatment, unclear EoW status, etc.)
- Liability issues (lack of acknowledged quality criteria)
- Legacy problems (contamination with obsolete substances like asbestos, MMMF, PCB, etc.)
- Financial aspects (costs of recycling vs. disposal costs)

C&D Waste Management within the EU

Instruments for promoting recycling/recovery

- End of waste regulation for recovered aggregates (Art. 6, 2 of 2008/98/EC – end of waste criteria)
- Harmonized quality standards (CEN)
- Financial incentives (landfill tax as driving factor, public tender as pulling factor)
- Sectoral and regional Waste Management Plans

MS examples – Netherlands (2012)

Recovery rate 93% to 95% (of nearly 25 million t/a)

CDW waste type	2012
Glass wastes	48,543
Plastic wastes	34,091
Wood wastes	1,321,587
Waste containing PCB	76
Mixed and undifferentiated materials	11,870
Soils	6,494,428
Metal wastes, ferrous	701,882
Metal wastes, non-ferrous	163,898
Metal wastes, mixed ferrous and non-ferrous	74,758
Mineral waste from construction and demolition	21,855,155
Dredging spoils	49,150,419
Other mineral wastes (W122+W123+W125)	380,619
Total	80,237,326
Without soil/dredging spoils	24,592,479

MS examples - Netherlands

Data include all types of C&D waste (non hazardous, hazardous, non mineral fraction, etc.) but no soil; recovery includes also energy recovery

Relevant factors

- National WMP and national guidelines for environmental quality criteria
- Promoting co-operation with industry (“greendeals”, voluntary agreements, etc.)
- Landfill ban for specific wastes (energy recovery)
- Landfill tax (€ 13/t)

MS examples - Netherlands

Market situation

- High demand on mineral construction material (lack of virgin material)
- Import of (contaminated) mineral waste (e.g. PAH contaminated C&D waste - thermal cleaning and recovery)

Obstacles

- Lack of harmonized quality standards for recovered C&D waste (as construction material)
- Lack of specific knowledge at Local Authorities (licensing)

MS examples – Romania (2010)

In 2010

- Estimated 952.000 t C&D waste were generated
- 497.000 t C&D waste were collected separately
- 146.000 t C&D waste were recovered

Main obstacles for proper recycling:

- Cheap landfill cost (decreasing landfill tax: € 5,6 up to 100 m³ to € 3,3 for 300 m³ and more)
- Low demand (virgin raw material/gravel quite cheap)
- Lack of recycling installations, long transport distance to recycler

MS examples – Romania (2010)

Mineral C&D waste is mainly used for backfilling and/or road construction. Share of recovered mineral C&D waste is less than 1% of sand, gravel and stone from primary production.

Measures taken

- Changes in legislation and taxation system
- More stringent compliance control
- Introduction of quality standards for recycled aggregates

MS examples – Romania (2010)

- Criteria for EoW status for specific quality of recovered aggregates based on Law on Waste Management (Law 211/2011) – no specific legislation implemented yet
- Subsidies for building up a recovery and storage infrastructure
- Certification of environmentally friendly and sustainable construction (BREEAM - Building Research Establishment Environmental Assessment Method)

MS examples – Austria (2013)

Generation of C&D waste

- Mineral C&D waste from construction (bricks, concrete, etc.) 5,3 million tonns/year
- Asphalt, bitumen, etc. 2,4 million tonns/year
- Track ballast 200.000 t/year
- Mixed (organic) C&D waste 300.000 tonns/year
- Excavated soil, etc. 16.6 million tonns/year

Recovered C&D waste

- Mineral C&D waste 7,1 million tonns/year (89%)
- Recovered organic C&D waste 140.000 tonns/year (41%)
- Energy recovery (R1) 160.000 t/year (59%)

MS examples – Austria (2013)

Measures taken

- Mandatory separation (since 1993)
- Quality criteria (QC) promoted by recycling industry
- Endorsement of QC by Federal Waste Management Plan; decommissioning plan for buildings
- Increasing landfill tax
- Landfill ban for organic waste (limit 5% for organic carbon)
- Mandatory decommissioning plan for buildings (effective by 2016)
- EoW regulation (effective by 2016)

MS examples – Germany (2012)

Generation of C&D waste

- Concrete, bricks, ceramics 52,2 million tonns/year
- Bituminous mixtures 18,1 million tonns/year
- Metals 7,9 million tonns/year
- Gypsum based material 600.000 tonns/year
- Wood, plastics, glass 4,1 million tonns/year
- Mixed (organic) C&D waste 3,7 million tonns/year
- Asbestos and mineral fibres 980.000 tonns/year
- Excavated soil and dredging spoil 113,7 million tonns/year

MS examples – Germany (2012)

Recycling/Recovery rate

- 55,5 million tonns recycled (68%)
- 23 million tonns other recovery (28%)
- 3,6 million tonns landfilled (4%)

Specific situation – “other recovery” includes energy recovery (R1) and landfill rehabilitation

Obstacles

Different legal situation in the 16 Federal Provinces, quality standards not fully harmonized

Different landfill taxes in the Federal provinces

MS examples – Germany

Measures taken

- Harmonized technical guidelines for recycling/recovery (LAGA = Cooperation of the Waste Authorities of the Federal Provinces)
- Sectoral/Local WMP
- Certification system for recyclers

In preparation

- General Regulation for (mineral) C&D waste on federal level (in preparation since 2010 – latest draft 2016) – regulates quality criteria, environmental performance, use of “secondary construction material” (recovered mineral C&D waste *and* industrial residues e.g. slag)

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MS examples – UK (2012)

C&D waste generation

- C&D waste non-hazardous 44,79 million tonns/year
- C&D waste hazardous 1,06 million tonns/year
- Excavated soil 54,39 million tonns/year

Recovery rate

- C&D waste non-hazardous 38,8 million tonns/year
i.e. 86,5%

MS examples – UK (2012)

Measures taken

- WMP (England, Wales, Scotland, Northern Ireland)
- REAP (Resource Efficiency Action Plan)
- Government Programs (including public tenders)
- Landfill tax
- Industrial commitments (zero waste2landfill targets, BREEAM certification)
- Quality Protocols for recovered aggregates, plastics (non packaging), glass (non packaging), gypsum (EoW status)

MS examples – UK (2012)

Obstacles

- Distributed competences (4 governing bodies with increasing competences in the UK)
- Transport costs (including “transborder waste shipment” within the UK)
- Licensing issues

Promoting C&D waste recycling

Institutional Framework

- Clear licensing competences
- Targets and measures in WMP
- Quality standards (national standards, acknowledged industrial guidelines, quality protocols, EoW – regulation)
- Mandatory source separation (including identification and removal of hazardous components, pre-demolition audit)
- Landfill taxes
- Ban on dumping, compliance control
- Public tenders

Thank you!

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