CONSTRUCTION AND DEMOLITION WASTE - LANDFILLING
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Landfilling – the last option for CDW treatment

The waste management hierarchy:

• Waste prevention
• Preparation for reuse
• Recycling
• Other recovery procedures
• Waste disposal - landfilling
The Landfill Directive (1999/31/EC)

Objective of the Directive:
- to encourage MS for waste prevention, recycling and recovery,
- reducing the need for final waste disposal
- prevent or reduce the adverse effects of the landfills of waste on the environment
The Landfill Directive (1999/31/EC)

- Sets operational requirements for landfill sites, permitting, monitoring
- Restrictions on type of waste that can be landfilled:
  - Landfilling of all waste suitable for recycling or other recovery by 2030
- Treating waste requirements before landfilling it
  - Only waste that has been treated may be landfilled
- The price for disposing of waste should cover all the costs involved from opening to final closure of the site
- **Goal**: Municipal waste landfilled - 10% by 2035
The Landfill Directive (1999/31/EC)

Landfills are divided into:

- landfills for hazardous waste
- landfills for non-hazardous waste
- landfills for inert waste
  - CDW - composed mainly from inert waste
Transposing Landfill Directive in Croatia

- Ordinance on methods and conditions of waste disposal, categories and working conditions for landfills (OG 114/15, 103/2018, 56/19)

Defines:

- categories of landfills,
- procedures and conditions for waste disposal
Disposal bans

• Waste Act, Art 39 and Ordinance on waste disposal:

The following wastes may not be accepted in a landfill:

• liquid waste;
• flammable waste, explosive or oxidising waste;
• hospital and other clinical waste which is infectious;
• used tyres
• animal and slaughterhouse waste,
• waste batteries and accumulators,
• end-of-life vehicles waste
• WEEE
• all other types of waste that do not meet the criteria for acceptance of waste at landfills according to Annex III of the Ordinance
Waste Management Act - disposal of waste

Art 39 - Prohibits disposal on landfills:

• separately collected waste

➢ Exception: waste generated by treatment of separately collected waste if disposal gives the best outcome for the environment

• waste must undergo pre-treatment of waste, except:
  o inert waste treatment not technically feasible
  o such disposal would not be contrary to the goal of waste management

➢ do not include ban on landfilling of recyclable waste, energy recoverable waste and inert waste
Ordinance on waste disposal: waste disposal costs

- The polluter pays principle
- Includes costs (art 19):
  - design, construction and rehabilitation of landfills,
  - operational costs of the landfill,
  - special charges for environmental pollution by waste,
  - estimated costs of landfill closure, maintenance and post-closure monitoring for a period of at least 30 years

- Issuance of waste disposal permit - financial guarantee for insurance of waste disposal costs (Art 17)
CDW Backfilling/landfilling distinction

**Backfilling** (R5) - recycling / reclamation of other waste inorganic materials (Waste Act Art 4, par 1)

- the waste is used instead of non-waste material
- In the amount necessary to achieve a purpose
- no permit required
- entry to Waste Recovery Register

**Landfilling** (D 1) - disposal of waste in or on the ground

- all types of final disposal of waste at designated sites
- permits for waste disposal activities

➢ Ordinance on waste management (OG 81/200)
  - If an unjustifiably large amount of waste is used, the procedure is not considered recovery but waste disposal
Construction waste treatment procedures (2020)

CDW Landfilling in HR 24% - 273,581 tonnes (2020)

- Recycling of inorganic materials (R5), 40,80%
- Landfilling (D1); 23,90%
- Backfilling; 15%
- Recycling of metals (R4); 7,70%
- Other recovery/disposal procedures, 12,60%
- CDW Landfilling in HR 24% - 273,581 tonnes (2020)
Landfill tax: instrument to restrict the landfilling

- **Landfilling tax** - Art 100 Waste Management Act
  - not implemented
  - Landfill operator pay the tax
Thank you

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