



EU Legislation – Legal Background for waste management

Waste Framework Dir.
(2006/12/EC)

New Waste Framework Dir.
(2008/98/EC)

into force on 12.12.2010

Hazardous Waste Dir.
(Dir. 91/689/EEC)
with
Dec. 2000/532/EC

Waste Shipment Regulation
(Reg. (EC) 1013/2006)

**Specification of waste
treatment operations**

Landfill Directive
(Dir. 1999/31/EC)

Acceptance Criteria
(Council Decision
2003/33/EC)

IPPC
(Dir. 2008/1/EC)

Incineration
(Dir. 2000/76/EC)

Specification for single waste streams

Sewage
Sludge
Dir. 86/278

Batteries and
Accumulators
Dir. 2006/66

Packaging
and
Packaging
Waste
Dir. 94/62

PCBs
Dir. 96/
59

End-of Life
Vehicles
Dir.
2000/53

Waste oil Dir.
75/439

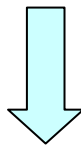
WEEE
Dir. 2002/96

Mining
Waste
Dir.
2006/21



General objectives Landfill Directive

- provide for measures, procedures and guidance to prevent or reduce as far as possible negative effects on the environment
- in particular the pollution of surface water, groundwater, soil and air
- as well as any resulting risk to human health
- during the whole life-cycle of the landfill



High priority of European policy to adopt adequate measures to avoid the abandonment, or the uncontrolled or illegal landfill or elimination of waste



Definition for landfills (Article 2 (g))

'Landfill' means a site for the deposit of the waste onto or into land (i.e. underground), including:

internal disposal sites

a permanent site used for temporary storage

Excluded only installations for:

preparation for **further transport** for recovery, treatment or disposal elsewhere

Storage prior to **recovery or treatment**
<3 years

Storage prior to **disposal**
<1 year



Operations excluded (Article 3)

Excluded:

- Spreading of sludges for the purpose of fertilisation
- The use of inert waste for redevelopment/restoration or construction in landfills
- The deposit of non-hazardous dredging sludges along waterways
- The deposit of unpolluted soil, non-hazardous inert waste from mining and quarrying

Waste NOT to be accepted in landfills (Article 5 (3))

Liquid waste

Waste which is:
explosive, corrosive, oxidizing, highly flammable (defined in Annex III of Directive on haz. waste)



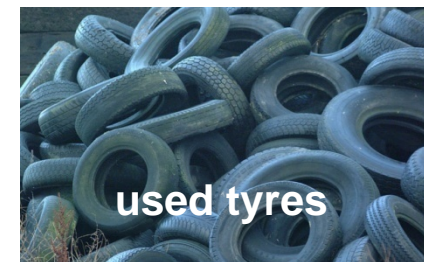
Hospital and clinical waste

from medical and veterinary establishments
(defined as infectious in Annex III of Directive on hazardous waste)



Whole and shredded **used tyres**

excluded:
whole tyres used as engineering material
bicycle tyres and tyres with an outer diameter of
>1,400 mm



Dilution or mixture of waste in order to meet the waste acceptance criteria is prohibited



Reduction targets for biodegradable municipal waste (Article 5)



FI, IT

Reached in 2003



FR



AT, BE (Flan.), DE, DK, NL, SE

...of amounts stated for 1995 in EUROSTAT (or latest year before)

* Possible derogation for MS which put more than **80% of Municipal Waste** (EUROSTAT 1995) into landfills

MS shall develop national strategies for reduction of biodegradable waste using recycling, composting, biogas production and material/energy recovery

Directive 1999/31 – Acceptance requirements (Article 6)

Only waste that has been subject to treatment may be landfilled*

Treatment (Art. 2 (h)) :

- Physical
- Thermal
- Chemical
- Biological

including sorting,

in order to reduce waste volume or hazardous nature, facilitate its handling or enhance recovery



* May not apply to inert waste whose treatment is technically not feasible or for other wastes if such treatment does not contribute to prevention and reduction of negative impacts



Permit requirements for disposal operation (Art. 7 and 8)

Information to be provided:

- (a) Identity of applicant and operator
- (b) Description of wastes & quantities
- (c) Proposed capacity
- (d) Description of site
- (e) Methods for pollution prevention and abatement
- (f) Operation, monitoring & control plan
- (h) EIA/SIA if required
- (i) Financial security

Requirements to issue permit:

- a) relevant requirements fulfilled
- b) management in hand of technically competent person;
- c) development and training provided
- d) necessary measures taken to prevent accidents and limit consequences
- e) adequate provisions to ensure obligations including after-care
- f) In line with relevant WMP

- Additional IPPC permit for landfills > 10 t/d or a total capacity of 25 kt, except for class A landfills
- Inspection by competent authority prior to commencement of disposal
- Annual reporting obligation (acc. Art. 12/13 and Annex III)



Siting and technical requirements for landfills (Annex I)

1. Location

- Distances
(residential, recreational, waterways protection zones)
- Waterbodies, agricultural or urban sites
- Geological and hydrogeological conditions
- Risks
(flooding, subsidence, landslide, avalanches)
- Protection of nature or patrimony

2. Water control & leachate management

- Precipitation
- Surface or ground water
- Leachate

3. Protection of soil and water

- Geological barrier
- Sealing system



Siting and general requirements for landfills (Annex I)

4. Gas control

Collect, treat, use

5. Nuisance and hazards

Minimise odour, dust, noise, traffic, birds, vermin, insects, fires

6. Stability

Place in a way to avoid slippage and settling

7. Barrier

Prevent free access and establish system to detect illegal dumping

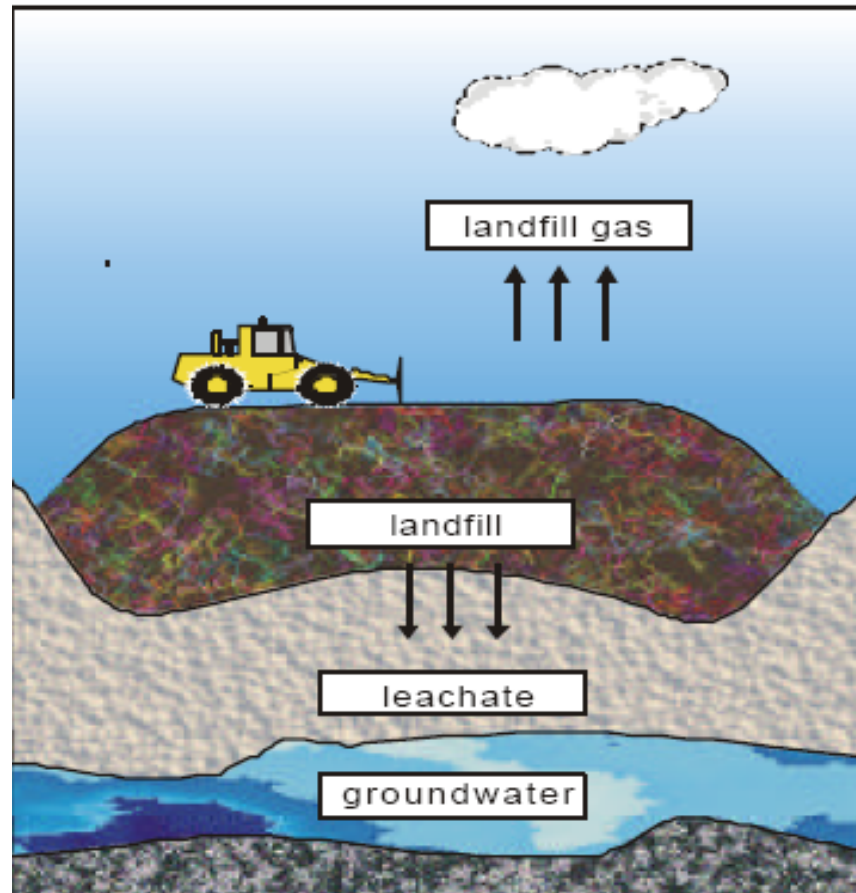
Engineering standards for landfills (Annex I)

Recommended

- Top soil cover > 1m
- Drainage layer $\geq 0,5\text{m}$
- Impermeable mineral layer
- Artificial sealing liner (C)
- Gas drainage layer (B)

Mandatory

- Artificial sealing liner (B/C)
- Drainage layer $\geq 0,5\text{m}$
- Artificial barrier $\geq 0,5\text{ m}$
- Geological barrier
 $K \leq 10^{-7}, 10^{-9}\text{ m/s}$
thickness $\geq 1\text{ m}$ ($\geq 5\text{ m}$)



- MS may set general or specific requirements for:
- inert waste landfills
 - the characteristics of the technical means



Directive 1999/31/EC – Cost calculation (Art. 10)

Landfill fees for disposal shall cover costs for :

1. Setting up
2. Operation
3. Financial security (as far as possible)
4. Estimated costs of closure and after-care for a period of at least 30 years

MS shall assure transparency in collection and use of necessary cost information



Waste acceptance procedures (Art.11)

to show that waste acceptable in accordance with permit and Annex II

- Checking of documentation (incl. haz. waste and shipment)
- Visual inspection
- Sampling if relevant (see Annex II (3)3)

Register on :

- Quantity
- Characteristics
- Origin (producer, collector)
- Location on site (mapping of landfill cells)

Written acknowledgement of receipt

Notification of non-acceptance



Control and monitoring procedures acc. Annex III of Landfill Directive

Meteorological data



temperature, volume of precipitation, wind , evaporation, humidity

Surface water, leachate and gas control



volume and composition

Groundwater



level and composition

Topography of the site







structure, composition, setting behaviour



Adaptation of existing installations (Art. 14)

Existing installations may not continue operation unless the following steps have been accomplished:

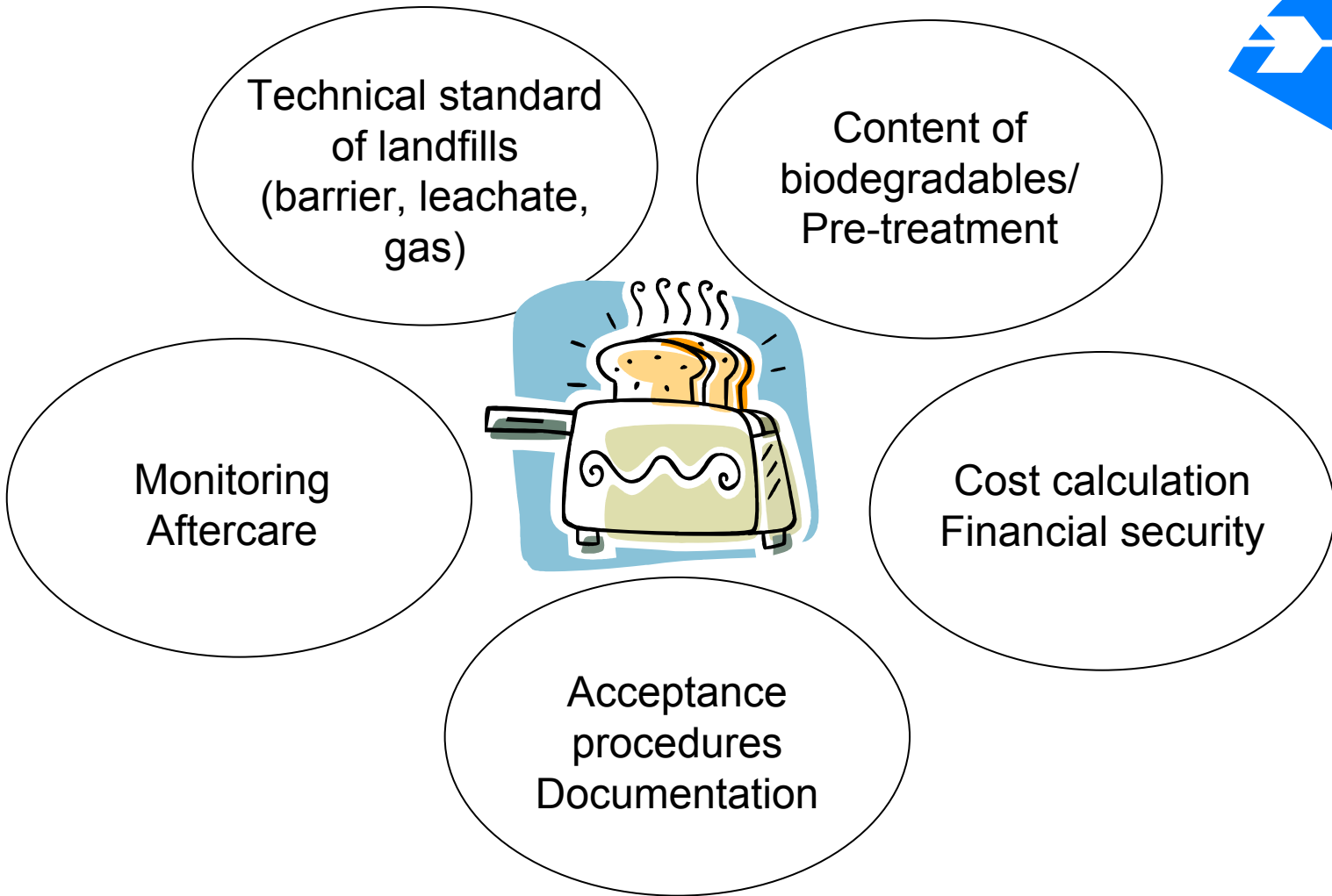
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- conditioning plan to adapt to 99/31/EC requirements
- 
- authority decision whether operation can continue on the basis of the plan and the requirements of 99/31/EC
- 
- authorisation of necessary work within transitional period for completion set



Any landfill shall comply with 99/31/EC requirements by 2009



Conclusions on major priorities and potential deficits





Thank you for your attention !