WORKSHOP ON EU LEGISLATION

WASTE

The Landfill Directive 99/31/EC
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Background information

The main policy aims of this Directive are to seek to encourage Member States to push waste management higher up the waste hierarchy, so to reduce the desire or need for final disposal, especially by landfill; and to have greater “true” costs applied in relation to landfilling of waste.

Additional info: The landfill directive complements the Waste Framework Directive with regard to the main method of waste disposal in most EU Member States. In accordance with the waste management hierarchy disposal to a landfill shall be the last resort.

The main policy aims of this Directive are to encourage Member States for waste prevention, recycling and recovery, so reducing the need for final disposal. The result should be higher environmental standards and a reduction in the amount of waste going to landfill.

Overall objective of the Directive (Article 1)
The Landfill Directive is intended to prevent or reduce the adverse effects of the landfilling of waste on the environment, in particular on surface water, groundwater, soil, air, climate and human health.

Additional info: The landfill directive complements the Waste Framework Directive with regard to the main method of waste disposal in most EU Member States. In accordance with the waste management hierarchy disposal to a landfill shall be the last resort.

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Status Report (see COM(2009)633 final) on implementation of the Community waste legislation for the period 2004 – 2006 based on answers from Member States on questions.

Additional quote from the Report:

The Commission receives on a daily basis a vast number of complaints related to illegal landfills lacking the permits required by EU waste legislation, causing serious adverse effects to the environment and risks to human health. These complaints have demonstrated a general and persistent nature of significant implementation deficiencies in a large part of the EU. In the cases observed, Member States have often tolerated serious deficiencies for long time periods without ensuring that illegal activities are brought to an end and punished. A large number of landfills do not comply with the requirements of the Directive and there is a real risk that a vast majority of Member States will not meet the deadline of 16 July 2009 by which all sub-standard landfills that existed before the introduction of the Directive need to comply with its requirements.

The problem seems particularly acute in the EU-10 where landfilling remains a predominant option since no alternative waste management infrastructure is available. Despite a quick progress in these countries in closing sub-standard landfills, efforts need to be stepped up to ensure full compliance.
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Scope of application of the Directive

Definition of landfill in Article 2 g):

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

- internal waste disposal sites (i.e. landfill where a producer of waste is carrying out its own waste disposal at the place of production), and
- a permanent site (> one year) which is used for temporary storage of waste,

but excluding:

- facilities where waste is unloaded in order to permit its preparation for further transport for recovery, treatment or disposal elsewhere, and
- storage of waste prior to recovery or treatment for a period less than three years as a general rule, or
- storage of waste prior to disposal for a period less than one year;

There are some additional exemptions: For instance: Landfill sites for non-hazardous or inert waste in isolated settlements can be exempted from certain directive requirements by a MS if the landfill site is destined for the disposal of waste generated only by that isolated settlement (Art.3 (4) (b).
Exclusions from application of the Directive:

Article 3.2 (Scope)

The following shall be excluded from the scope of this Directive:

- the spreading of sludges, including sewage sludges,
- the use of inert waste which is suitable, in redevelopment/restoration and filling-in work, or for construction purposes, in landfills,
- the deposit of unpolluted soil or of non-hazardous inert waste resulting from prospecting, extraction, etc. of mineral resources as well as from operation of quarries.
Means of the Directive

The Directive provides for a range means to achieve its objective. This slide provides for an overview of the most relevant means and targets which will be explained in more detail with the following slides. The directive is very complex and technical!
Landfill Classes (Articles 4, 6)

- Landfills are divided into three classes:
  - landfills for hazardous waste
    → only for hazardous waste as defined and that fulfills criteria set in accordance with Annex II (4);
  - landfills for non-hazardous waste
    → only for municipal waste and non-hazardous waste that fulfills criteria set in accordance with Annex II;
  - landfills for inert waste
    → to be used for inert waste only.

- MS may create subcategories of landfills for non-hazardous waste.
- Co-disposal will no longer be permitted, i.e. special landfills will be required for hazardous waste.

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Landfill classes

1. Hazardous waste: Any waste covered by Article 1(4) of Directive 91/689/EEC on hazardous waste – listed showing the nature, constituents or properties listed in Annex I, II and III. Such waste types should, however not be accepted on the list without prior treatment if they exhibit total contents or leachability of potentially hazardous components that are high enough to constitute a short-term occupational or environmental risk or to prevent sufficient waste stabilisation within the projected lifetime of the landfill.

2. Landfill for non-HW: Municipal waste, Waste not covered by paragraph (c), i.e. HW.

3. Landfill for inert waste: Waste that does not undergo significant physical, chemical or biological transformation; Waste will not dissolve, burn, biodegrade or react.

Sub-categories for non-HW: see Annex B of Decision 2003/33/EC with examples
Bio-Waste reduction on landfills (Article 5 (1) and (2))

- Produce a national strategy for the reduction of biodegradable waste going to landfill not later than 16 July 2003 and notify the Commission of it.
- Reduction of biodegradable municipal waste going to landfills to:
  - 75% by 16 July 2006
  - 50% by 16 July 2009 and
  - 35% by 16 July 2016
- Calculated on the basis of the total amount of bio-waste produced in 1995.
- Directive leaves the choice of the instruments to reach the national targets to the Member States.
- Member States that landfilled more than 80% of their municipal waste in 1995 may postpone each of the targets by a maximum of four years.

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Bio-waste reduction

Measures to achieve those targets should include in particular recycling, composting, biogas production or materials and energy recovery. Consequently this Directive does not only promote recycling and composting but even more waste incineration which is for the time being the only proven and efficient technology to destroy organic matter.

Many MS use landfill tax to reach target.

The four years transition period applies to all 10 new MS and UK, ES for instance.
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Waste not accepted in landfills

Article 5 lists diverse waste sorts that shall not be landfilled at all.
Dilution of waste is also prohibited (also see waste framework directive on HW, Article 18 “mixing prohibition of HW including prohibition of dilution”)

- 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;
  - whole used tyres (from 2003), shredded used tyres (from 2006 with certain exceptions);
  - any other type of waste which does not meet the waste acceptance criteria laid down in Annex II.

- Dilution of waste solely in order to meet waste acceptance criteria is prohibited. (Article 5 (4))
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Waste Acceptance Criteria (WAC)

Waste treatment is a condition for landfilling (either biological-mechanical or thermal) in order to reduce quantity or hazardousness of waste deposited. Exemption: Inert waste for which treatment is not technically feasible nor to any other waste for which such treatment does not contribute to the objectives of this directive.

WAC have been determined in a complementary decision (2003/33/EC).
WAC – general procedures for testing and acceptance of waste (Annex II)

Three level hierarchy for general characterisation & testing of waste:

- **Level 1: Basic characterisation**
  Thorough determination, according to standardised analysis and behaviour-testing methods, of the short and long-term leaching behaviour and/or characteristic properties of the waste.

- **Level 2: Compliance testing**
  Periodical testing by simpler standardised analysis and behaviour-testing methods to determine whether a waste complies with permit conditions and/or specific reference criteria.

- **Level 3: On-site verification**
  Rapid check methods to confirm that a waste is the same as in level 2 and in the accompanying documents (may consist of a visual inspection of a load of waste before and after unloading at the landfill site).

*EU Legislation on Waste*

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**WAC (waste acceptance criteria) – general procedures from Annex II Nr. 3 of the Directive**

The Landfill Directive specifies general criteria and principles to be obeyed for the acceptance of a waste or residue on a landfill. Each country is obliged to define procedures and set standards which have to be met by a material to be listed for a specific class of landfill.
Essentials of permitting regime

- **Application contains specified minimum information (Article 7)**
  - incl. methods for pollution prevention and abatement, operation, monitoring and control plan, financial security or equivalent

- **Conditions shall include requirements that (Article 8)**
  - landfills are managed by technically competent persons;
  - adequate financial security is provided for the management and aftercare of the site;
  - necessary measures are taken to prevent accidents and limit their consequences;

- **Content of the permit shall state at least (Article 9)**
  - defined types and quantity to be deposited;
  - requirements for landfilling operations, monitoring & control procedures
  - obligation to report annually, e.g. on monitoring programme results;

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**Permitting Regime** (for new landfills)

3 permitting aspects with precise requirements, namely application, conditions and content of permit, see content of Articles 7-9.
Closing and aftercare (Article 13)

- After closure of a landfill site (in accordance with the specified procedures):
  - the operator remains responsible for the maintenance, monitoring and control of the site for as long as is required by the competent authority;
  - the operator shall notify the competent authority of any significant adverse effects revealed by controls and corrective measures to be taken;
  - operator of a site shall be responsible for monitoring and analysing landfill gas and leachate from the site and the groundwater regime in the vicinity of the site (Art. 13 c) and d) and Annex III).

- Financial security shall be kept as long as required by maintenance and after-care-operation of the site (Article 8 a) iv))

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Closing and aftercare

Article 13 sets a number of obligations for the period beyond closure of a landfill.

Financial security shall be kept as long as required by maintenance and after-care operation, Article 8 a) iv) in connection with Article 13 d)
Existing landfill sites (Article 14)

- Existing landfill sites may not continue to operate after 16.07.2009 unless these steps are accomplished:
  - Operator of landfill prepares and presents to competent authorities a conditioning plan including corrective measures to comply with the Directive;
  - Competent authority takes a definite decision on whether operations may continue on the basis of the plan and the Directive;
  - Competent authority lays down a transitional period for completion of the plan.

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Existing landfill sites

One of the priority within the Community Waste Strategy is the elimination of uncontrolled, unmonitored and mismanaged landfills and landfills without permits. Therefore requirements of Article 14 for existing landfills.

Any existing landfill shall comply with the requirements of the Directive within 8 years = as of 16 July 2009. (Article 14 c) sentence 2.
General requirements for all classes of landfills (Annex I)

Location: Distance to residential areas, recreational areas, waterways, water bodies, agricultural or urban sites - Existence of water or nature protection zones - Geological and hydrogeological conditions - Risk of flooding, landslide or avalanches - Protection of nature

- **Water control, leachate management**
- **Soil and water protection** through geological barrier, sealing system
- **Gas control**: collect, treat & use landfill gas
- **Minimize nuisance & hazards** (odour, dust, noise, traffic, birds, fires)
- **Ensure stability** of the mass of waste
- **Barrier**: Prevent free access to the site so to detect and discourage illegal dumping

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**General requirements for all landfills**

Slide gives a summary of the text of Annex I.

The general requirements are required for all new landfills (Article 8: the competent authority does not issue a landfill permit unless it is satisfied that the landfill project complies with all the relevant requirements of this Directive, including the Annexes);

and also:

Any existing landfill shall comply with the requirements of the Directive within 8 years (= as of 16 July 2009), Article 14 c sentence 2.

All aspects named as general requirements must be taken into consideration by competent authorities.
ECJ Case C-6/03 (Deponiezweckverband Eiterköpfe)

Facts of the case and plaintiff position

- Plaintiff seeks from competent German authority a permit to fill two landfill cells with waste that has previously been treated by mechanical processes only.
- Domestic regulation states:
  - Waste treated by mechanical and biological processes (1)
  - may be deposited only if severe TOC criteria (2) are met,
  - with earlier time-limits (3) as set by the Directive.
  - The regulation concerns not only biodegradable waste but non-biodegradable organic waste (4), too.
  - It also addresses more than just municipal waste (5).

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ECJ Case C-6/03

Facts of the case and plaintiff position leading to questions

Case from Germany, preliminary ruling concerns the interpretation of Article 5 of Landfill Directive and of Article 176 EC and of the principle of proportionality.

Plaintiff: Association operating the Eiterköpfe central landfill site in Germany. It seeks to obtain from the Land Rheinland-Pfalz, the defendant in the main proceedings, a permit to fill, after 31 May 2005 and until 31 December 2013 at the latest, two landfill cells with waste that has previously been treated by mechanical processes only. The Land Rheinland-Pfalz argues that the national regulation applicable does not allow that.

Domestic regulation (Regulation on the environmentally sound deposit of municipal waste):

Waste treated by mechanical and biological processes (1) may be deposited only if severe TOC (total organic carbon) criteria (2) are met. The timelines are more strict than in Article 5.2 Directive (3). The German regulation of 2001 concerns not only biodegradable waste but also non-biodegradable organic waste (4) (waste that cannot be broken down by other living organisms).

The German regulation of 2001 covers not only municipal waste but also waste which may be disposed of with or as municipal waste (5), in particular sludge from the treatment of waste water, waste from building-sites and waste connected to manufacturing.
ECJ Case C-6/03 (Deponiezweckverband Eiterköpfe)

**Complaint:**

1. The national regulation in question is too strict (goes beyond Directive requirements and timelines).
2. The national regulation is against the Community-law principle of proportionality.

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Complaint (questions):

1. Is the national regulation in question too strict (as it goes beyond Directive requirements and timelines - Article 5 (2)).
2. Is the national regulation against the Community-principle of proportionality?
ECJ Case C-6/03 (Deponiezweckverband Eiterköpfe)

Preliminary ruling of ECJ, Reply to the first question:

It is not contrary to Article 5(1) and (2) that a measure of domestic law:

- fixes limits in respect of the acceptance of biodegradable waste for landfill lower than those fixed by the Directive,
- even if those limits are so low that they call for treatment by mechanical and biological processes or the incineration of such waste before it is landfilled,
- fixes earlier time-limits than those under the Directive in order to reduce the amount of waste going to landfill,
- applies not only to biodegradable waste but also to non-biodegradable organic substances, and
- applies not only to municipal waste but also to waste that may be disposed of as municipal waste.

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ECJ on question 1 (Articles 5 (1) and (2)):

Using a method of measurement such as TOC or combustion loss is not an end in itself, like the objectives referred to in Article 5(2) of the Directive, but simply a means by which those objectives may be attained.

The German regulation of 2001 demands that biodegradable waste should be treated before being landfilled. In the case of waste treated mechanically and biologically, that treatment involves processes such as crushing, sorting, composting and fermenting. For other waste thermal treatment is used, in this case incineration. All those forms of treatment are in keeping with the Directive. Article 6(a) of the latter requires the Member States to take measures so that only waste that has already been treated is landfilled. Treatment is defined in Article 2(h) of the Directive as ‘physical, thermal, chemical or biological processes, including sorting, that change the characteristics of the waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery’. That makes it apparent in particular that the Directive provides for thermal treatment of waste so as to lessen its hazardousness.

The use of the expression ‘not later than’ in Articles 5(2) and 18 of the Directive shows that the Member States are at liberty to apply earlier time-limits if they deem it necessary.

Third, Article 5(1) and (2) of the Directive applies to biodegradable waste only.

Although Article 5 of the Directive specifically concerns a strategy the purpose of which is to reduce waste going to landfill, the Directive as a whole plainly applies to waste in the liberal sense of the word, as it is defined in Article 2(a).

Article 1(1) of the Directive lays down strict technical and operational requirements applicable to waste and to landfills, without restricting the kind of waste or landfill. Moreover, in accordance with Article 3(1) the MS are to apply that act to any landfill, a concept defined in Article 2(g) as ‘a waste disposal site …’ with no limitation of the kind of waste covered by that provision. It follows that a measure of domestic law, which, in order to authorise landfilling, extends restrictions not to biodegradable substances only but to all organic substances, pursues the same goals as the Directive.

Fourth, Article 5(2) of the Directive refers to municipal waste. While it is true that Article 5(2) of the Directive refers to municipal waste only, the national strategy, the purpose of which is to reduce biodegradable waste going to landfill, provided for in Article 5(1) includes all waste within the definition given in Article 2(a) of the Directive. Likewise, the obligation imposed on the MS by Article 6(a), that they should take measures to ensure that only previously treated waste is landfilled, applies to non-municipal as well as to municipal waste. In addition, Article 1(1) of the Directive makes it clear that the latter as a whole has as its aim the reduction of the amount of waste going to landfills, without any distinction drawn between municipal and other waste.
ECJ Case C-6/03 (Deponiezweckverband Eiterköpfe)

Article 176 EC (now: Article 193 TFEU)
Protective measures adopted [...] shall not prevent any MS from maintaining or introducing more stringent protective measures.

Preliminary ruling of ECJ:
Reply to the second question:
The Community-law principle of proportionality is not applicable so far as concerns more stringent protective measures of domestic law adopted by virtue of Article 193 TFEU (former Article 176 EC) and going beyond the minimum requirements laid down by a Community directive in the sphere of the environment, inasmuch as other provisions of the Treaty are not involved.

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ECJ Case C-6/03

Reply to second question:
Article 176 EC authorises the Member States to maintain or introduce more stringent protective measures, on condition that they are compatible with the Treaty and notified to the Commission.

As may be deduced from the reply given to the first question, measures of domestic law such as those about which the national court has referred questions to the Court constitute more stringent protective measures for the purposes of Article 176 EC.

It is clear from the broad logic of Article 176 EC that, in adopting stricter measures, Member States still exercise powers governed by Community law, given that such measures must in any case be compatible with the Treaty. Nevertheless, it falls to the Member States to define the extent of the protection to be achieved.

Inasmuch as other provisions of the Treaty are not involved, that principle is no longer applicable so far as concerns more stringent protective measures of domestic law adopted by virtue of Article 176 EC (now: Article 193 TFEU) and going beyond the minimum requirements laid down by the Directive.