



Experiences with the implementation of EC legislation on landfilling of waste

Findings from previous events



“Information Exchange Event on landfill of Waste“

Helsinki, 15 to 16 September 2008



Topics



- 1. State of implementation of the Landfill Directive**
- 2. Major problems and deficits**
- 3. Examples of good practice**
- 4. Priority activities**
- 5. Suggestions to the European Commission**





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State of implementation of the Landfill Directive

➔ The situation is comparable in quite a number of Member States

(1) Low priority of waste management

→ “waste doesn’t pay



(2) High share of landfilling in waste management

→ overall share of landfilling ~ 80-90% (cheap & easy) → slow activity towards separate collection systems and treatment facilities



(3) High content of biodegradables and **combustible** in landfills

→ fraction of biowaste in MSW ~ 30-50% (75%)



(4) Deficits in organisation of waste collection system/Limited coverage with public collection system in rural areas



(5) Huge number of “old, low standard” landfills





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State of implementation of the Landfill Directive

(6) Limited separation at source, limited quality of recovery material

- poor separate collection system at household level
- installation of collection points for household waste (glass, paper & cardboard, plastics) and civic amenity sites just started



(7) Illegal dumping of waste

- use old unmanaged dump sites, littering



(8) No adequate implementation of the Acceptance Criteria Decision

- certain steps of the control procedure during operation are disregarded



(9) Implementation of the “treatment prior to landfilling” principle

- requirement of treatment of mixed MSW before landfilled widely ignored
- only measure taken is compacting of waste



(10) Long-term storage of waste at temporary storage facilities

- due to lack of treatment facilities



Major problems and deficits

Deficits

Deficits in planning and administrative instructions

Deficits in practical enforcement

Other problems

Problems derived from lack of acceptance, awareness and cooperation

Technical problems and uncertainty with interpretation of technical provisions



- (1) Organisational problems with waste collection** due to market situation
→ waste collection is often a free market system (contracting between citizens and collecting company) → provision of services mainly in profitable areas
- (2) Lack of investments** into landfill standard due to uncertainty on future exploitation
→ in some countries the decision process which landfills will be authorised to operate after 2009 still ongoing → uncertainty hinders improvement of technical standards and adaptation to technical requirements in European legislation
- (3) Deficits in closing and re-cultivation** of old landfills
→ local responsibility and autonomy for waste management and reluctance of local authorities to cooperate in waste management → hinders faster approach
→ costs are most important obstacle for realisation of re-cultivation
- (4) Low or wrong incentives** arise from the fee system and reimbursement structure
→ fees for collection of waste at household level generally too low (no incentives)
→ fees mostly not graded by weight → separation does not pay for citizens



- (1) Deficits in basic characterisation, sampling and visual control** during on-site verification and sampling for MSW
→ ‘waste acceptance criteria’ seem not to be consistently enforced → basic characterisation documents for mixed MSW do not exist or are quite limited; visual on-site verification does not take place → *control restricted to oral or written reporting on waste type and origin and documentation of weight*
- (2) Deficits in execution of conditioning plans** for landfills
→ need of elaboration of conditioning plan and prompt execution of measures necessary for adaptation of technical standard requirements – but: often old landfills continue operation until 2009 although it is already obvious that they will not be able to meet EU technical requirement by that time
- (3) Deficits in control of closed dump sites and illegal landfills**
→ large number of closed “old” dumps and illegal landfilling, limited infrastructure and limited personal capacity (in env. Inspectorates) → *control of closed dumps is not frequent and persecution of illegal dumping is difficult*

Problems derived from lack of acceptance, awareness and cooperation



(1) Lack of acceptance and understanding in population

- environmental issues (need for separation of waste, appropriate treatment of waste...) generally low priority in civil society in majority of EU 10
- lack of habit to pay for waste; low acceptance for waste fees

(2) Reluctance and objections of local authorities against regional cooperation

- responsibilities: *national / regional*: general planning; *municipalities*: local waste management services
- *resistance of local authorities against inter-municipal cooperation* (local authorities prefer to keep municipal dumps and try to avoid construction of regional landfills or treatment facilities on their territory)

(3) Missing market for compost generated of biowaste

- major problem in all countries: due to legal restrictions and lack of knowledge and acceptance by farmers

Technical problems and uncertainty with interpretation of technical provisions



There are some aspect of European legislation which are not well understood or which leave significant space for diverging interpretations.

(1) Interpretation of the principle of “treatment prior landfilling”

→ facilities for prior treatment (sorting lines, shredders, MBAs...) not introduced or only planned

(2) Difficulties with the interpretation of “basic characterisation”

(3) Interpretation of technical requirements

→ hydrological conductivity restrictions (Landfill Directive: $k < 10^{-9}$) has been questioned

→ use of shredded/whole tyres as engineering material in drainage layers is practiced differently in MS

→ need for degassing of closed landfills, energy use of gas from smaller landfills, collection and treatment of leachate water were discussed

(4) Representativity of samples

(5) Qualification and independence of analysis laboratory

Technical problems and uncertainty with interpretation of technical provisions



(6) Exceedance of limit values set in Decision 2003/33/EC

- specific limit values are exceeded in certain types of waste (e.g. soils, C&D wastes) for which alternative treatment methods currently do not seem to be feasible
- in some MS chemical analysis is currently not practiced in MSW management

(7) Classification as waste or as secondary raw materials

- need for guidance and harmonisation of classification of specific substances as waste or secondary product
- need for guidance on question when waste becomes a product again

Examples for good practice



- ➡ Implementation of the Landfill Directive and development of a modern waste management structure is still underway in EU 10 MS
(*technical standard, operation, aftercare, separation and recovery*)
- ➡ In the **past years important steps** have been undertaken to **change the waste collection system and the management infrastructure** to make it compatible with European landfill requirements

(1) Closure of non-compliant landfills

(2) Identification and **elimination of illegal dumps**

→ inventory on uncontrolled landfills using GIS technology, questionnaires and field data collection → list of priority actions for closure and re-cultivation measures

(3) Construction of **modern landfills with separation lines**

→ in all of the MS a first set of modern regional landfills has been constructed or is projected for the near future

→ high technology separation lines for effective recovery of recoverable fractions (paper, glass, plastics...) from mixed municipal waste

→ storage facilities for hazardous waste, dismantling of WEEE and waste metals



(4) Start of **composting**

- in all of the MS composting has been started at modern landfill sites
- initiatives for home composting have been presented

(5) Use of **biogas for energy recovery** from degassing of closed landfill

- in all of the MS recovery of biogas has been started or is foreseen (techniques for gas collection vary)

(6) Installation of **civic amenity sites** at landfills

- in addition to civic amenity sites in modern landfills (free of charge), storage facilities may be used from collectors during selective kerbside collection activities

(7) **Leachate collection** and treatment

- leachate is either recycled in case annual evaporation outweighs precipitation (*HU*) or is treated by reverse osmosis; in *PL* treated waste water is directed to municipal waste water treatment plants

(8) Installation of **collection points**

- collection points for separate collection of glass, paper, metal and plastics from citizens



In different MS initiatives have been taken for:

- Redirection of waste streams
- Enforcement of compliance with legal requirements
- Education of regional and local authorities, waste operators and general public

- (1) **Combined control activities** of environmental inspectorates and police
- (2) Standardised **documents and guidelines for basic characterisation**
- (3) **Training** of regional authorities; **regular meetings** with central authorities
- (4) Early evaluation of **waste management plan** by means of indicators
- (5) Investigation in **alternative treatment and recovery methods** for waste
- (6) **Training** concerning legal and technical requirements for operators



(7) Qualification standards for landfill operator and the working staff

(8) Education of the public

→ Information material, visits and open days organised by landfills for information of the population with focus on children

→ “Private” initiatives of landfill operators and collectors (e.g. Green Dot Latvia) for separate collection systems and environmental education including specific school activities

(9) Raised landfill taxes and raised **waste fees**

(10) Ban of landfilling **green wastes** from gardens and parks

(11) Environmental Funds based on taxes and fines to support investment projects



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Priority activities for implementation of landfill directive requirements



Increase awareness and cooperation of citizens

Speed up process of complete coverage of population

Change waste management fees for citizens to increase separation

Change reimbursement for municipalities to give incentives for better development of take-back systems, separation and collection

Speed up action to reduce amount landfilled

National register of illegal landfills

Speed up reduction of organic fractions in landfilled waste

Speed up closure, recultivation and aftercare of "old" dumpsites



Priority activities for implementation of Waste acceptance requirements

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On-site

Common understanding of basic characterisation

Sampling plan and harmonisation of analysis methods

Physical on-site verification of waste identity and effective „pre-treatment“

Increase separation for recoverables, organics, hazardous, bulky
(separation line, composting site, bulky and hazardous waste storage
and/or dismantling spaces, MBT)

At source

Increase separation for recoverables, organics, hazardous, bulky
(container, collection sites, civic amenity sites, home composting)



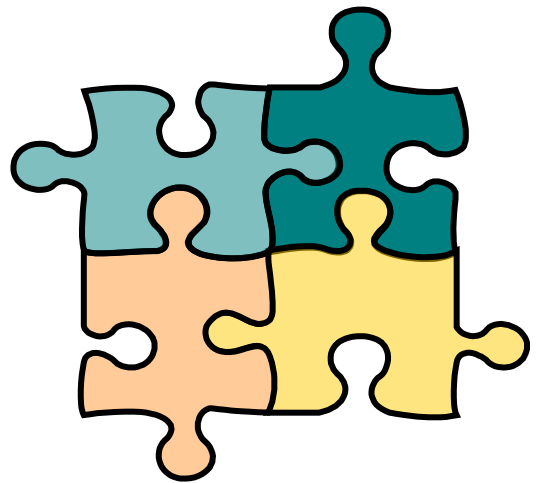
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Suggestions addressing the European Commission for supporting the implementation

Provide guidance on legal requirements
(e.g. basic characterisation, treatment prior to landfill, sectors, sampling-analysis, on-site verification, waste tyres for engineering purpose)

biodegradable waste
(Harmonised calculation method)

Enhance cooperation within the **IMPEL Network** and support special projects for better implementation.



Establish procedure for **re-categorising certain waste-streams** as secondary material