



# Experiences with the implementation of EC legislation on landfilling of waste Findings from previous events



**“Information Exchange Event on landfill of Waste“**

**Lisbon-Amadora, 13-14 May 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





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## 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**



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## Deficits in planning and administrative instructions



- (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



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## Deficits in practical enforcement



- (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*



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## 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



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## 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



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## 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



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## 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



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## Examples for good practice



### (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



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## Examples for good practice



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



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## Examples for good practice



**(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**

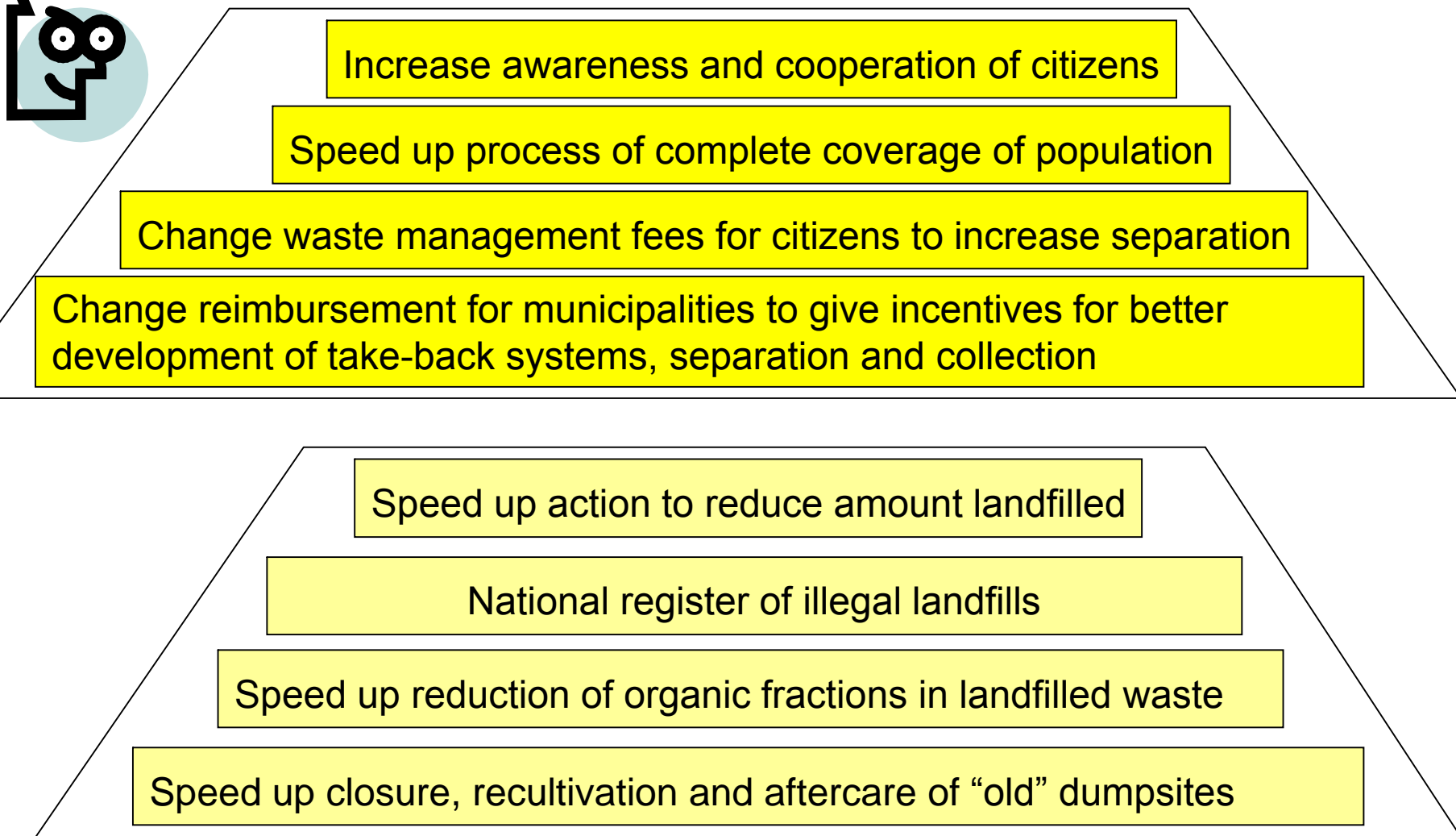
**(10) Ban** of landfilling **green wastes** from gardens and parks

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



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## Priority activities for implementation of landfill directive requirements





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## Priority activities for implementation of Waste acceptance requirements

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



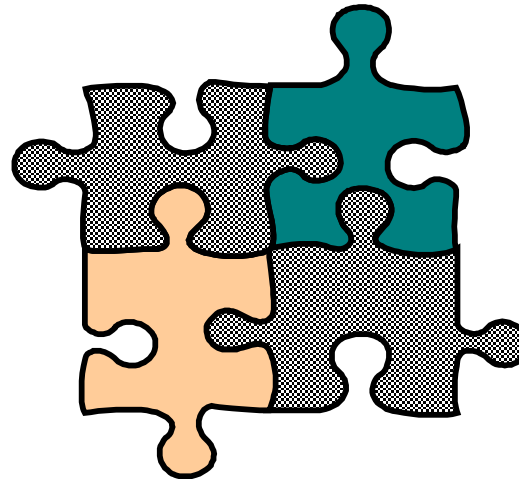
### Provide guidance on legal requirements

(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.



Participate in development of solution for **waste types exceeding limit values**

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