

# Drivers towards resource efficiency - the implementation of EU waste legislation

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# Europe 2020: smart, sustainable, inclusive growth

- **March 2010: Communication ‘Europe 2020’**
- **Flagship: Resource Efficiency**



*“Economy that is efficient in use of all its resources...low carbon, resource efficient, climate resistant... biodiversity....”*

# Resource Strategy

1. **Decoupling** - reducing negative impacts of resource use in a growing economy
2. Improving resource efficiency
3. Avoiding overexploitation (biotic)
4. Managing scarcity and shortages

In a life-cycle perspective



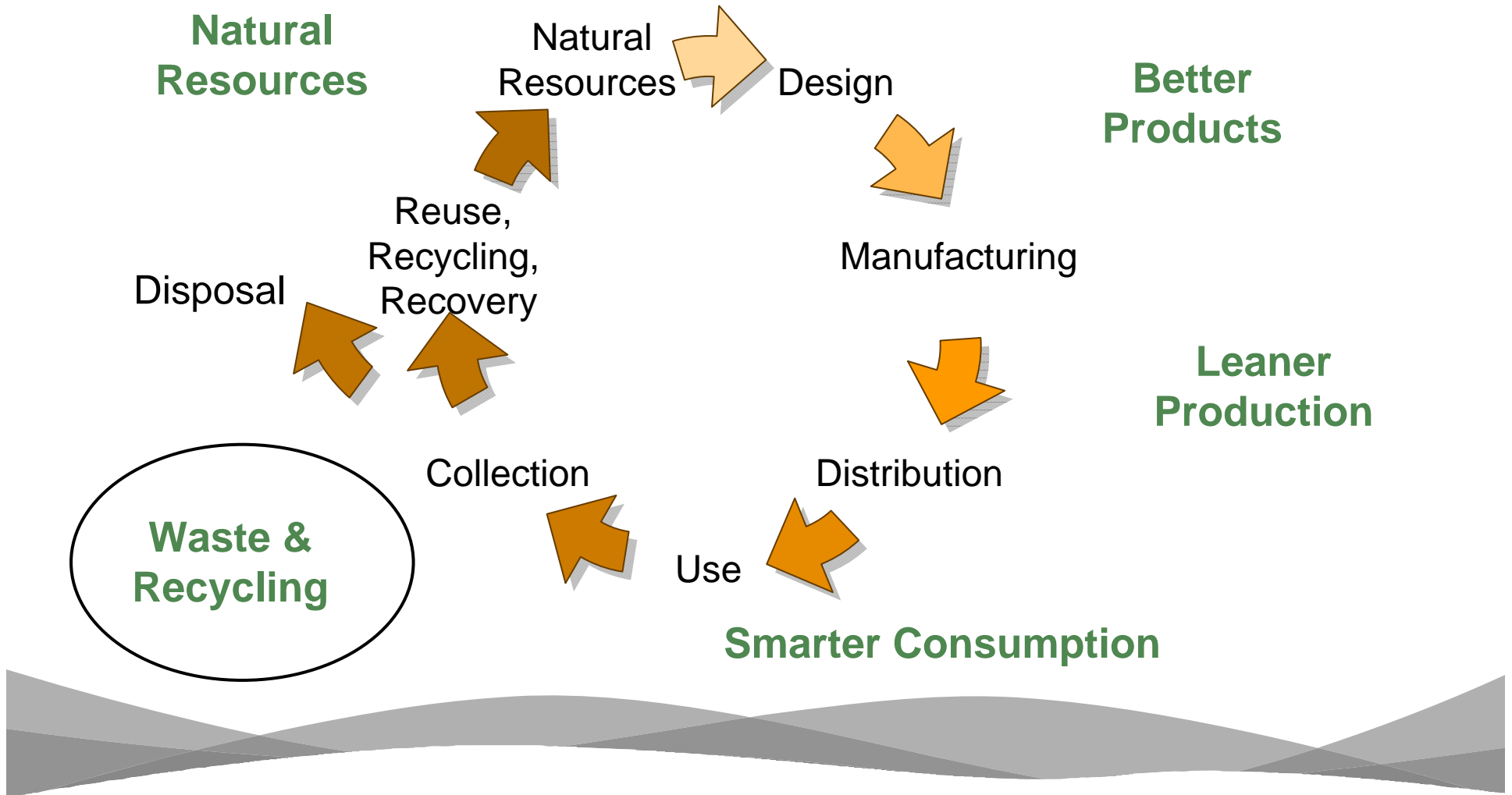
**RAW MATERIALS**  
Minerals-fuels-biomass



**MEDIA**                      **LAND**                      **FLOWS**  
Air                                      Solar  
Soil                                      Wind  
Water                                      Tidal



# EU RESOURCE POLICIES – LIFE-CYCLE





# Contributions of waste policies to resource efficiency

# EU waste management: facts and figures

- Total EU-27 waste generation 3 billion tonnes (6 t/person)
- More than 50% disposed
- Less than 50% recovered (recycling + energy recovery)
- Huge potential of reducing disposal and increasing the use of waste as a resource

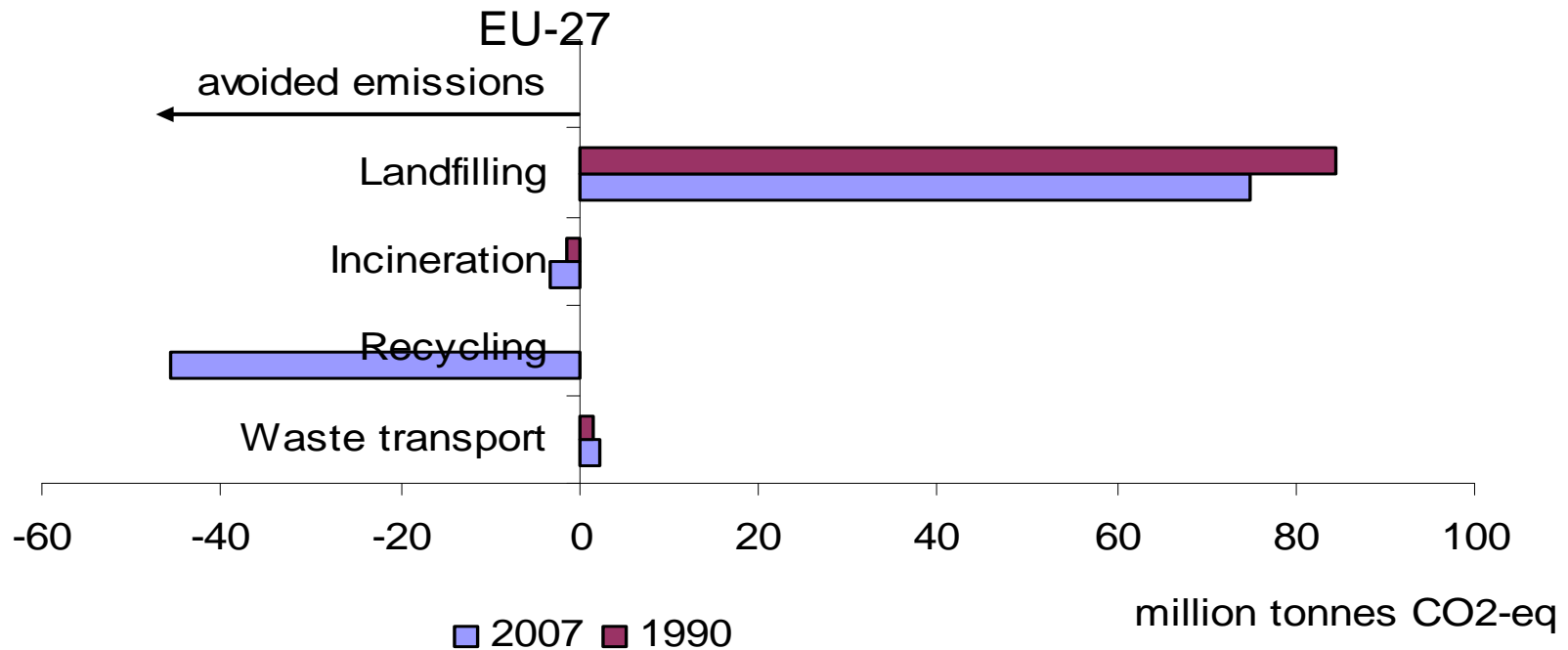
# Contribution of waste management to climate protection

## ■ prognos study 2008:

- Approximately 206 Mt CO<sub>2</sub> equivalent by waste recycling and recovery in the 2004
- 146 to 244 Mt CO<sub>2</sub> equivalents additional emission reduction until 2020
- Waste sector can contribute to the EU 2020 targets 19% to 31%



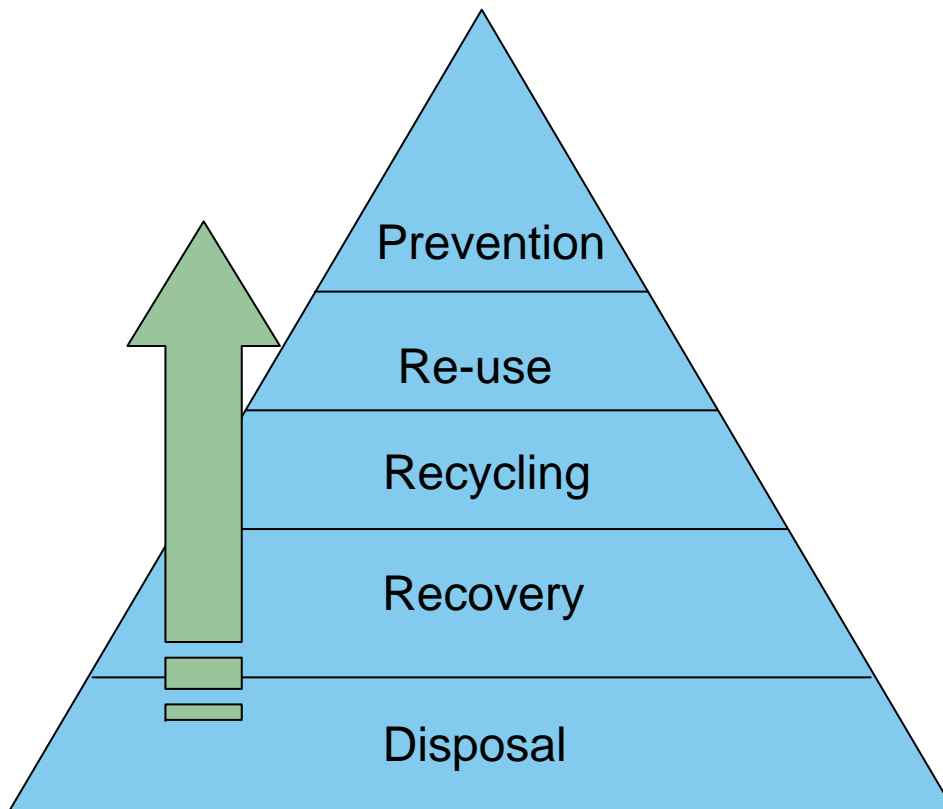
# CO2 emission reduction by better management of municipal solid waste



Source: EEA, upcoming *State and Outlook of the Environment Report 2010*, draft version June 2010



# The Waste Hierarchy

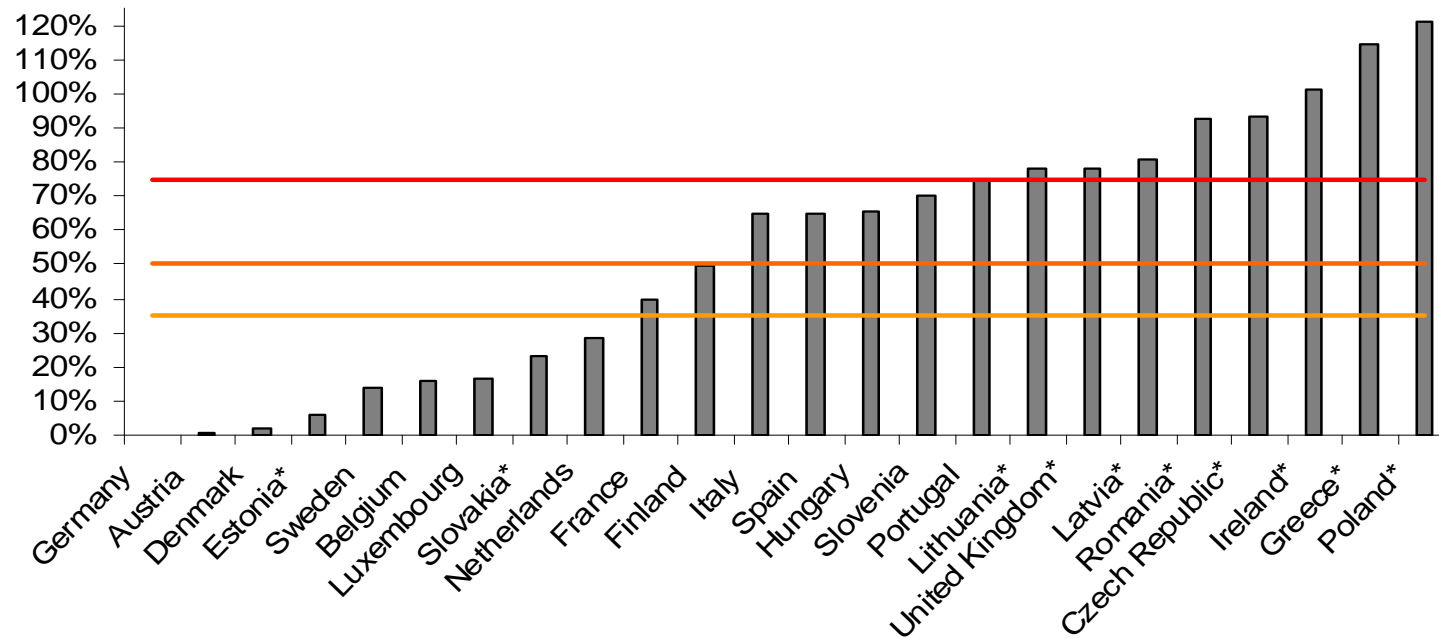


- **Moving waste management in the EU up the waste hierarchy**
- **Reducing landfilling and waste incineration without energy recovery**
- **Enhancing the use of waste as a resource**

# Reducing waste disposal - the Landfill Directive

- **Closing landfills not conform with EU standards**
- **Technical standards for the installation of new landfills**
- **Reduction of landfilling biodegradable waste compared to amount of biodegradable waste produced in 1995**
  - 2006: reduction to 75%
  - 2009: reduction to 50%
  - 2016: reduction to 35%
- **Derogation: prolongation up to 4 years for Member States which in 1995 landfilled more than 80% of municipal waste**

# Diversification of biodegradable waste from landfills - a snapshot of 2006



Landfilling of biodegradable municipal waste in 2006, in % of 1995 levels

Target 2006

Target 2009

Target 2016

\* country with derogation periods of up to 4 years to achieve the target

# Promoting waste-to-energy

- **energy-efficiency-formula in Annex II as part of the recovery definition:**
  - scope: Incinerators for municipal solid waste
  - waste replacing fuels in the plant or in the wider economy
  - 0,60 energy efficiency for installations in operation before 2009
  - 0,65 energy efficiency for new installations
- **incentive to improve energy-use from waste incineration**
- **Commissions intends to prepare guidelines together with an expert working group**

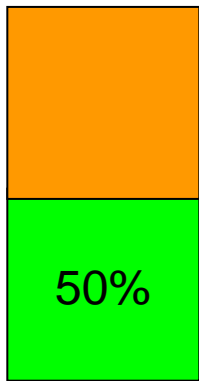
# Promoting recycling by targets set by the Waste Framework Directive

- **targets in Art 11(2) WFD to be achieved by 2020**
  - preparation for re-use, recycling of materials “*such as **at least**” paper, metal, plastic, glass from households* + option for **similar wastes** to be increased to “*a minimum of overall*” **50%**
  - preparation for re-use, recycling and backfilling of **70% construction & demolition waste**
- **Commission is preparing a decision on the calculation of the targets**
- **Commission review of the targets in 2014**



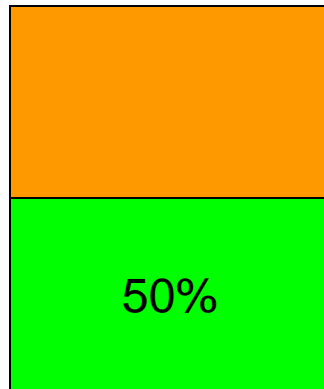
# Member States options to calculate the 50% target

minimum of overall



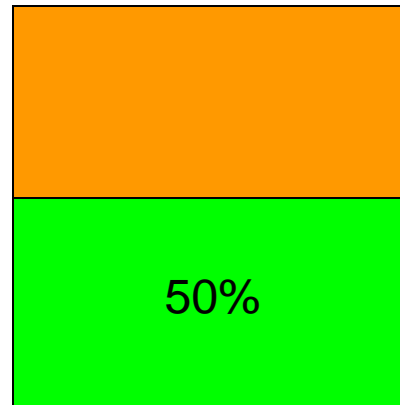
paper,  
glass,  
metal,  
plastic

minimum of overall



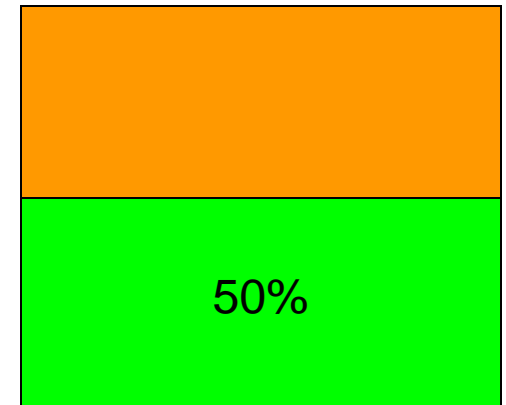
paper, glass, metal, plastic + other household or similar waste streams

minimum of overall



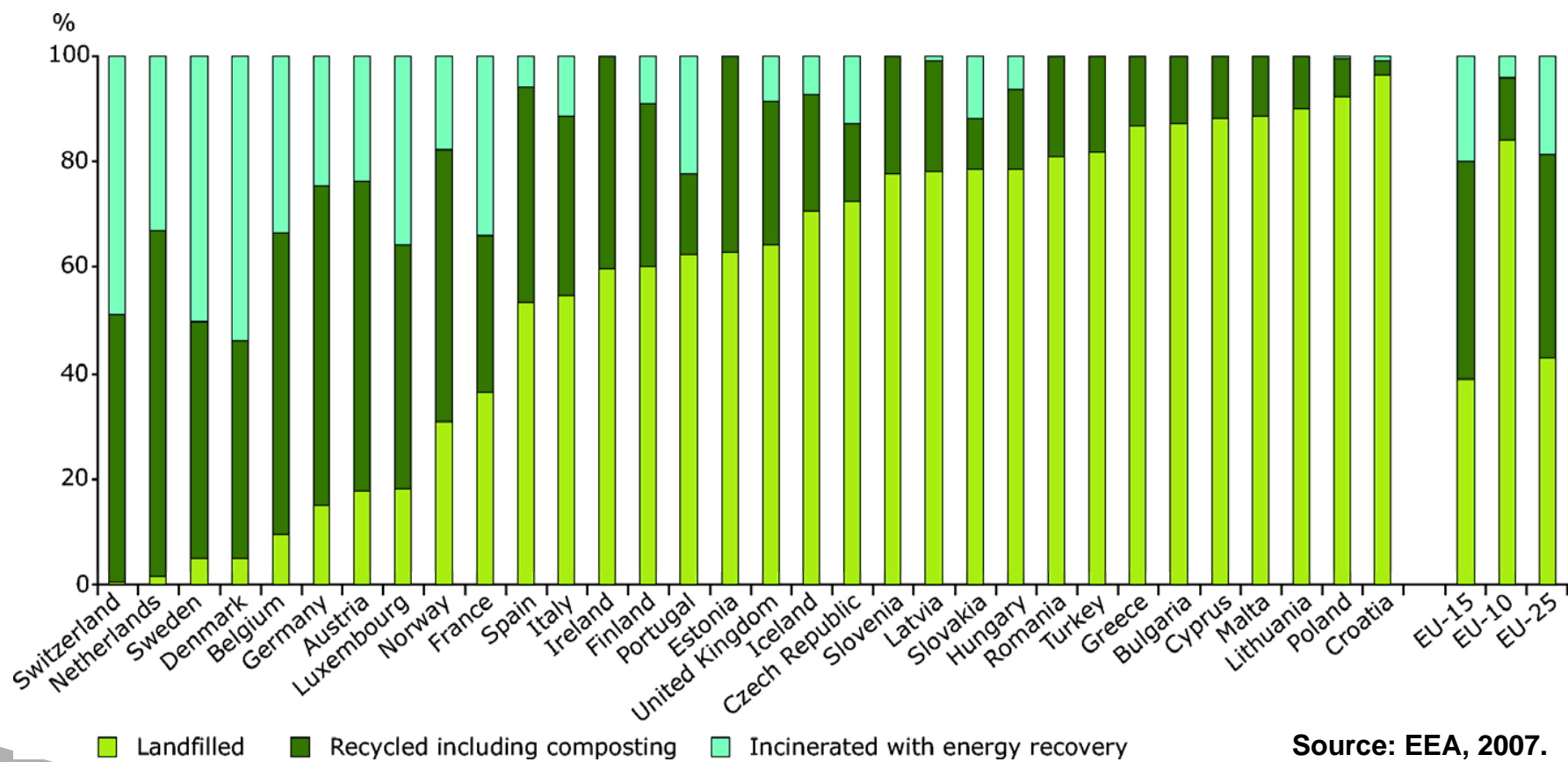
all household waste

minimum of overall



All waste from households + all similar waste streams = all municipal waste

# Recycling, incineration and landfilling of municipal solid wastes in Europe



Source: EEA, 2007.



# TARGETS IN EU WASTE LEGISLATION



		min recovery	min recycling	collection rate
<b>Packaging</b>	<b>2008</b>	<b>60%</b>	<b>55%</b>	
<b>Cars</b>	<b>2015</b>	<b>95%</b>	<b>85%</b>	<b>100%</b>
<b>Electronics</b>	<b>2006</b>	<b>70%</b>	<b>50%</b>	<b>min 4 kg per inhabitant per year</b>
<b>Batteries</b>	<b>2011</b>		<b>50% to 75% (efficiency)</b>	
	<b>2012</b>			<b>25%</b>
	<b>2016</b>			<b>45%</b>
<b>Tyres</b>	<b>2006</b>	<b>0 landfill of tyres</b>		
<b>Biowaste diverted from landfills</b>	<b>2006</b>	<b>reduction to 75% of the 1995 level</b>		
	<b>2009</b>	<b>reduction to 50% of the 1995 level</b>		
	<b>2016</b>	<b>reduction to 35% of the 1995 level</b>		
<b>New targets</b>	<b>2015</b>	<b>Separate collection: at least paper/metal/plastic/glass</b>		
<b>(WFD)</b>	<b>2020</b>	<b>50% household waste</b>		
	<b>2020</b>	<b>70% construction and demolition waste</b>		

# Recycling and recovery of bio-waste

- **Art 22 WFD: Member States shall promote**
  - Separate collection of bio-waste
  - Recovery of bio-waste
  
- **Commission has carried out an assessment: do we need for more specific European legislation on bio-waste?**
  - benefits of **bio-waste prevention**, in particular food-waste
  - Benefits from improving **separate collection and biological treatment** (composting and anaerobic digestion)
  - **Quality standards** for composts
  
- **Commission Communication**  
**COM(2010)235 final**



# Supporting recycling markets by setting end-of-waste criteria

- **End-of-waste criteria should**
  - support recycling markets and
  - improve the implementation of waste management law
  
- **Commission is currently working on**
  - iron and steel scrap
  - aluminium scrap
  - copper scrap
  - paper
  - glass
  
- **Member States and stakeholders in JRC working groups**

# Waste prevention – a new dimension

## ■ Member States to establish waste prevention programmes until 2013

- set out prevention objectives,
- determine qualitative and quantitative benchmarks or targets for waste prevention,
- describe prevention measures, such as
  - Economic instruments for sustainable resource use
  - Promotion of eco-design for products
  - Campaigns to change consumer behaviour
  - Supporting the reduction of industrial waste (EMAS, ISO 14001)
  - Green public procurement



## ■ Breaking the link between economic growth and waste generation

# Waste prevention: framework to be further developed

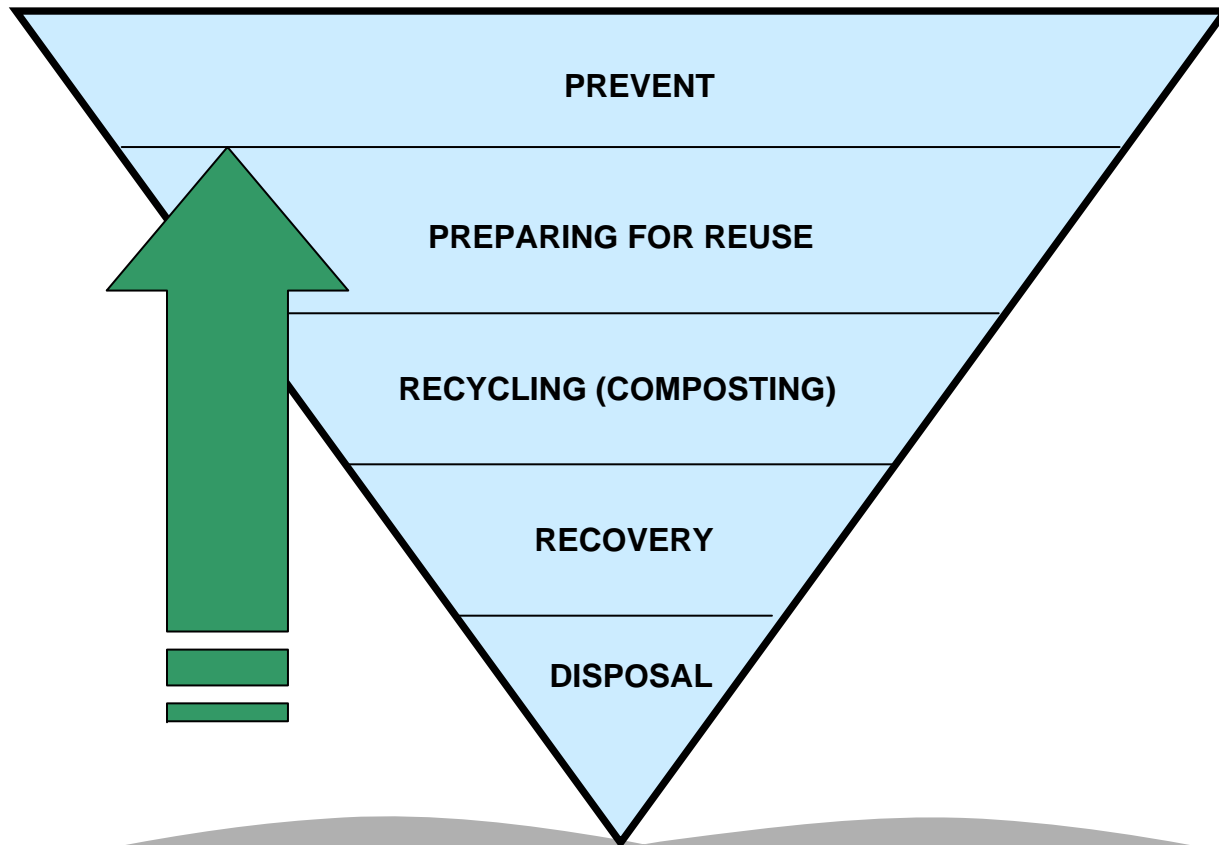
## ■ European Commission

- Establishment of a system for sharing information on best practice regarding waste prevention
- Development of prevention guidelines for Member States
- Development of waste prevention indicators

## ■ 2011: Commission report on the evolution of waste generation and waste prevention

## ■ 2014: Commission to propose waste prevention and decoupling objectives by 2020, if appropriate

# Waste Hierarchy - the future!



## On the horizon ...

- **2010: Review of Commission's waste and resource strategies**
- **2011: Report on waste generation and prevention**
- **2014:**
  - Review of the targets of the Waste Framework Directive
  - Report on waste prevention and decoupling objectives for 2014



# ONLY ONE EARTH



European Commission

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<http://ec.europa.eu/environment/>

