

Recycling in Europe

29 November 2012

EIMPack International Conference

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Municipal Waste Europe

Secretary General



Municipal Waste Europe

Municipal Waste Europe is a non-profit association which represents European municipalities and their public waste management companies, in their responsibility to manage municipal waste.

Throughout Europe, municipalities are responsible for the recovery of material resources from European households.

The members of Municipal Waste Europe therefore play a pivotal role in driving Europe to becoming more resource-efficient.

In effect, the members of Municipal Waste Europe form the bridge between the actors in resource efficiency.



Municipal Waste Europe

- Our members are national public waste associations: EU Municipalities and their public waste management companies
- 14 Member States
- They serve over 60% and up to 100% of their national population





Austrian Association of
Cities and Towns, *Austria*
www.staedtebund.gv.at



Association of Local
Authorities in Iceland
www.samband.is



Interafval,
Belgium, Flanders
www.interafval.be



Federambiente,
Italy
www.federambiente.it



RenoSam,
Denmark
www.renosam.dk



NVRD,
Netherlands
www.nvrd.nl



Jätelaitosyhdistys,
Finland
www.jly.fi



Avfall Norge,
Norway
www.avfallnorge.no



AMORCE,
France
www.amorce.asso.fr



EGSRA,
Portugal
www.egsra.pt



VKU,
Germany
www.vku.de



Avfall Sverige,
Sweden
www.avfallsverige.se

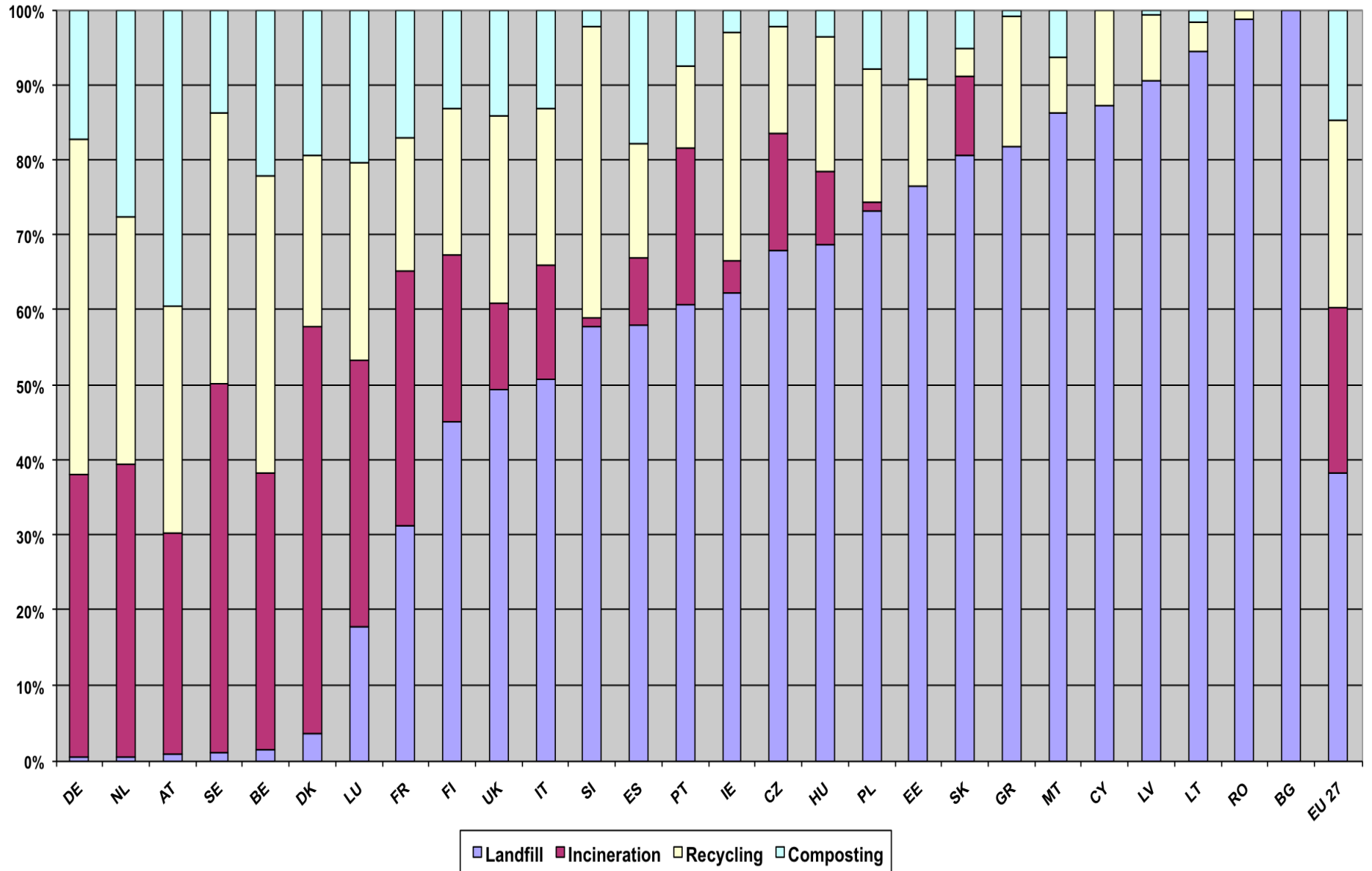


Di.Fo.Di.S.A,
Greece
www.dyfodisa.gr



LARAC,
United Kingdom
www.larac.org.uk

Municipal waste treatment (2010)



	EU MS		Criterion																	Overall score	
	1.1 Decoupling	1.2 WPP	1.3 Amount of municipal waste recycled	1.4 Amount of municipal waste recovered (energy recovery)	1.5 Amount of municipal waste disposed	1.6 Development of municipal waste recycling	2.1 Existence of ban/restrictions for the disposal of municipal waste into landfills	2.2 Total typical charge for the disposal of municipal waste in a landfill	2.3 Existence of pay-as-you-throw (PAYT) systems for municipal waste	3.1 Collection coverage for municipal waste	3.2 Available treatment capacity for municipal waste	3.3 Forecast of municipal waste generation and treatment capacity in the WMP	3.4 Existence and quality of projection of municipal waste generation and treatment	3.5 Compliance of existing landfills for non-hazardous waste	4.1 Fulfilment of the targets related to biodegradable municipal waste going to landfills	4.2 Rate of biodegradable municipal waste going to landfills	5.1 Number of infringement procedures – WFD and Landfill Directives	5.2 Number of court cases – WFD and Landfill Directives			
CZ	2	0	0 D	1 D	1 D	2	0	1	1	2	2	0	0	1	0	0	1	2	18		
PL	1	2	1 D	0 D	1 D	2	1	1	1	0	2	0	0	1	0	0	1	2	18		
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SK	2	0	0 D	1 D	0 D	1	1	0	1	2	2	0	0	1	2	1	1	1	17		
IT	0	0	1 D	1 D	1 D	0	1	2	1	2	0	0	0	0	2	1	0	0	15		
LV	2	0	0 D	0 D	0 D	1	1	1	0	0	2	0	1	2	0	0	2	2	14		
CY	0	0	1 D	0 D	0 D	2	0	0	0	2	0	0	1	0	0	0	2	2	11		
RO	2	0	0 D	0 D	0 D	1	0	0	0	0	2	0	1	0	0	1	2	2	11		
LT	2	0	0 D	0 D	0 D	1	1	0	1	0	0	0	0	0	0	0	2	2	9		
MT	0	0	0 D	0 D	0 D	2	0	0	0	2	0	0	0	2	0	0	1	2	9		
BG	2	0	0 D	0 D	0 D	0	0	0	0	0	0	0	0	0	2	1	1	2	8		
GR	1	0	0 D	0 D	0 D	0	0	0	0	2	0	0	0	0	0	0	0	0	3		

Note: Scores for the criteria 1.3, 1.4 and 1.5 (marked with 'D') are doubled for overall scoring

Amsterdam, Netherlands



Lund, Sweden



Naples, Italy



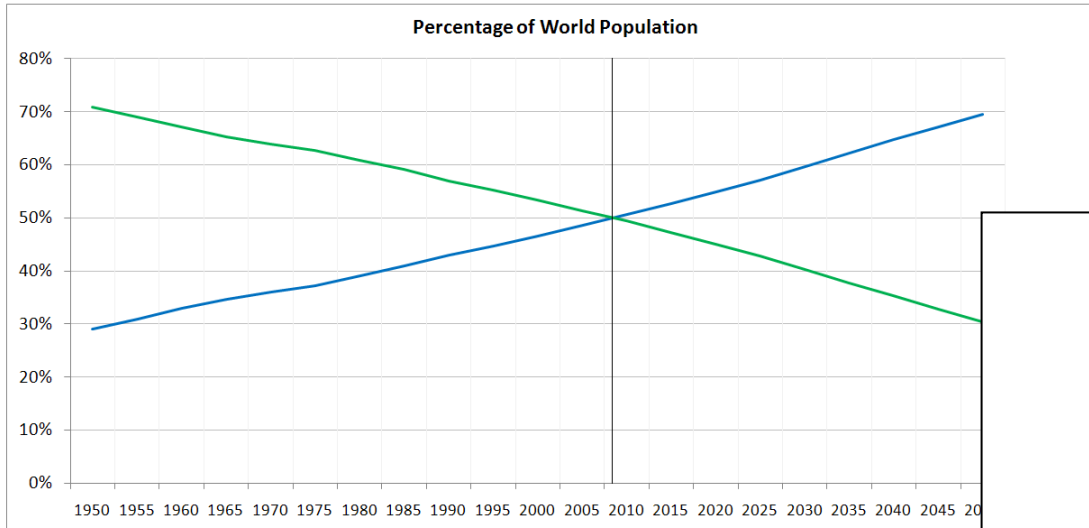
Waste Management

- Service of general interest = Public responsibility



Local authority has the expertise and responsibility

Urbanisation and use of resources



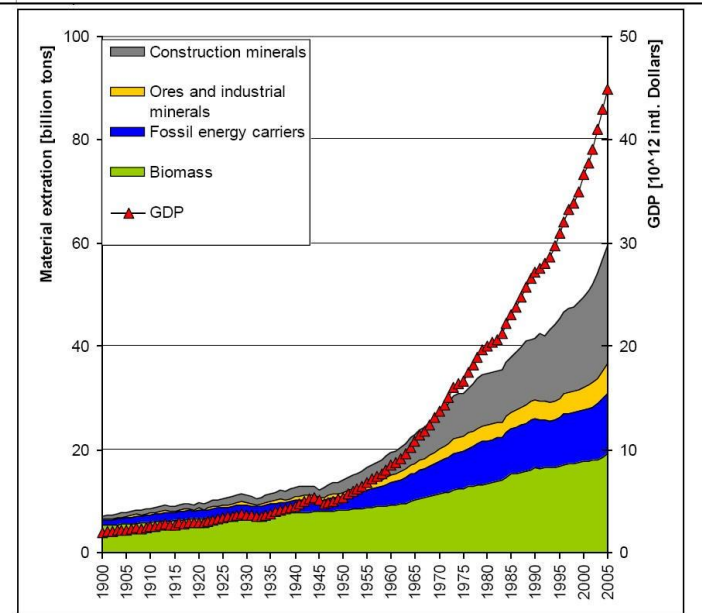
Data Source: United Nations, <http://esa.un.org/unup/p2k0data.asp>

More urbanisation: (mega-)cities

More use of **material resources**

(Sustainability is not just energy!)

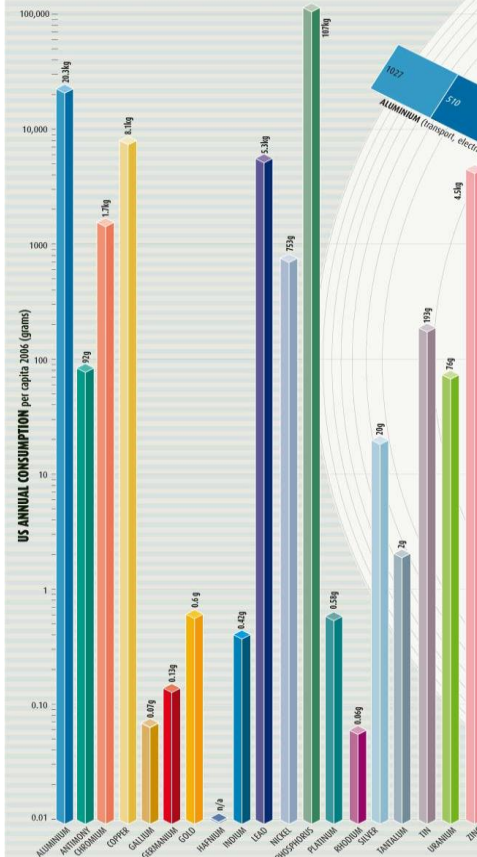
Yet collection and recycling is more difficult in (mega-)cities with highrise



Figuur 1. Mondiale grondstofextractie in miljarden tonnen, 1900 - 2005³

Scarce resources

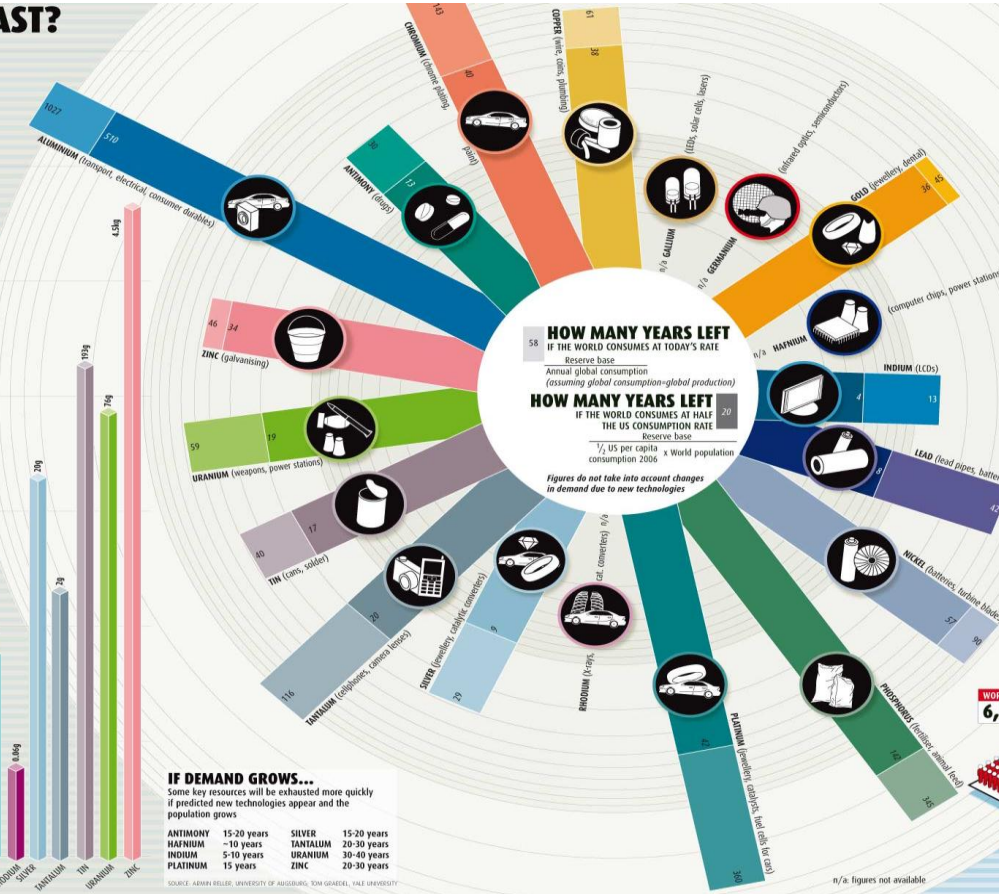
HOW LONG WILL IT LAST?



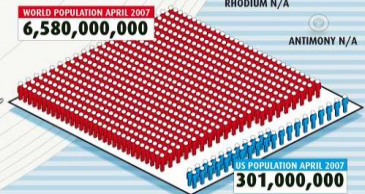
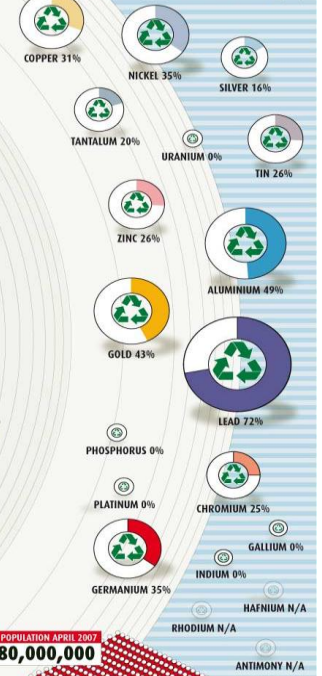
IF DEMAND GROWS...
Some key resources will be exhausted more quickly if predicted new technologies appear and the population grows

ANTIMONY	15-20 years	SILVER	15-20 years
HAFNIUM	-10 years	TANTALUM	20-30 years
INDIUM	5-10 years	URANIUM	30-40 years
PLATINUM	15 years	ZINC	20-30 years

SOURCE: ARMIN BELLER, UNIVERSITY OF HOCHSCHULE, BOHN GIEDEL, TALE UNIVERSITY



PROPORTION OF CONSUMPTION MET BY RECYCLED MATERIALS (%)



Producers Responsibility



The Bridge

M U N I C I P A L I T I E S

RESOURCES

PRODUCER

RESOURCES

CONSUMER /
CITIZEN

RESOURCES

PRODUCER

Municipality 1st Port of Call

Citizens' first point of reference for any questions on their waste collection and treatment is their municipality

Waste or Resources?

M U N I C I P A L I T I E S



PRODUCER



CONSUMER /
CITIZEN



PRODUCER



Waste or Resources?

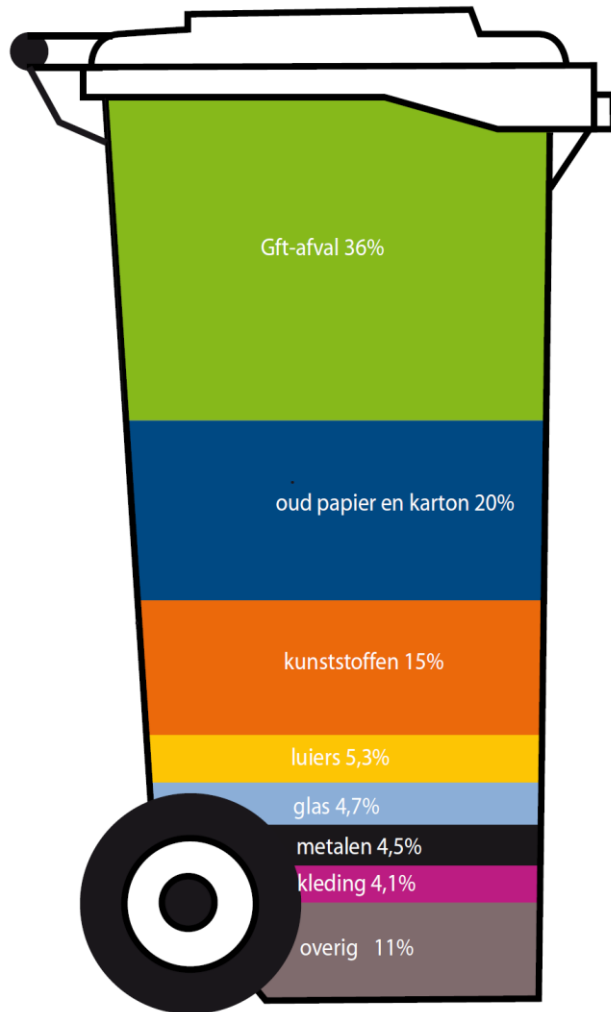
- The wider European Union has 502 million inhabitants (2011 Eurostat)
- On average, each person generates 520kg waste per year (stabilised in 2002, Eurostat)
= 260.5 billion kg/yr OR

260.5 million tons/yr

Waste or Resources?

- Municipal Solid Waste on average, contains:
 - Organic matter: 30 to 60%
 - Material recoverable as energy or materials : 30 to 60%
 - Other, including hazardous: 10%
- = up to **156.5 million tons/yr** are recoverable

Feasibility: overall result



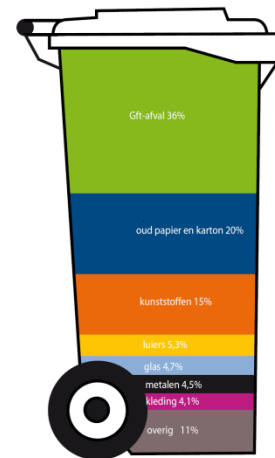
Less waste

Resources back in the loop

Private money polluters organised

Municipalities deliver higher service

Lower claim on public infrastructure



Waste or Resource?

LOST RESOURCES



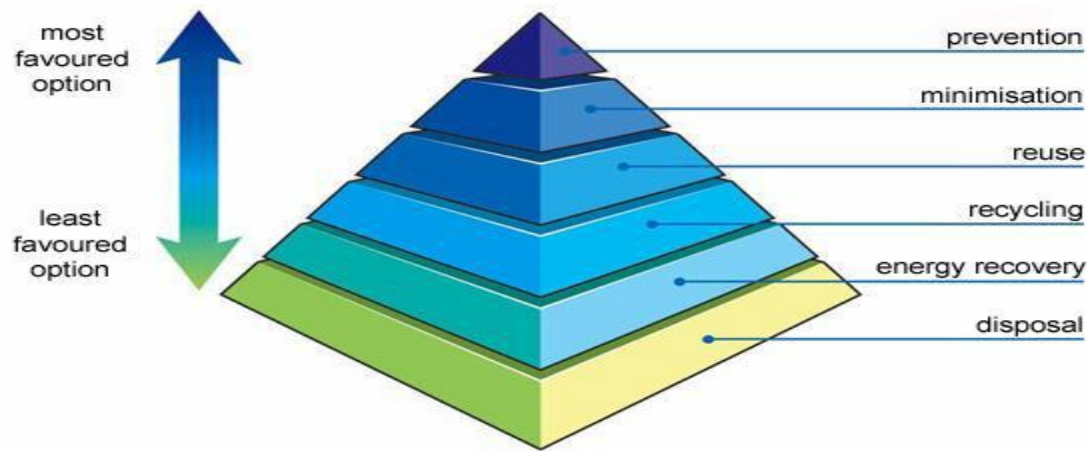
OR

?



GAINED RESOURCES

EU Approach: The Waste Hierarchy



Instead of landfilling shift to sorting and recycling, organise sufficient but not too much waste to energy, then focus on prevention and reuse

Chain Management

Changing the dynamics of patterns of production and consumption through WASTE management



EU Enterprise Policy

- Within the EU, exploration and extraction have to face increased competition for different land uses and a highly regulated environment
- There are also important challenges to overcome in improving how Europe can increase the **recovery of materials from waste**

EU Export of Waste

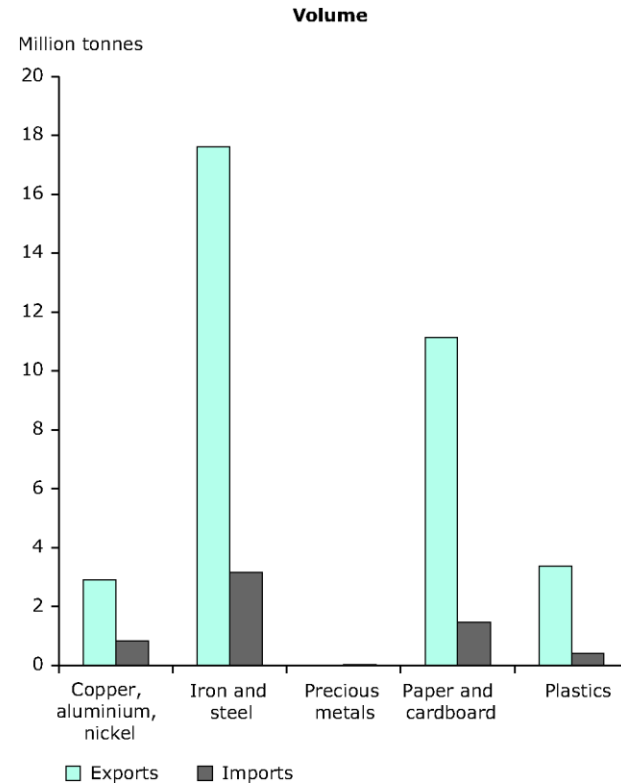
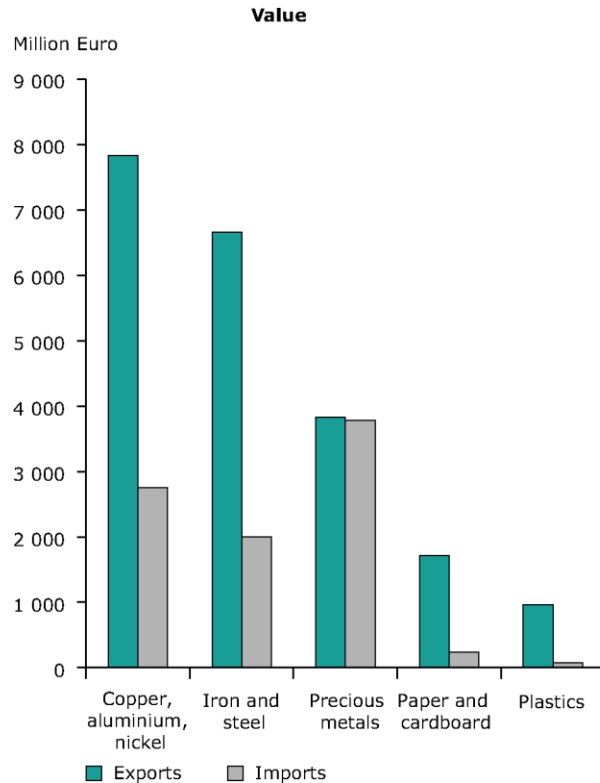
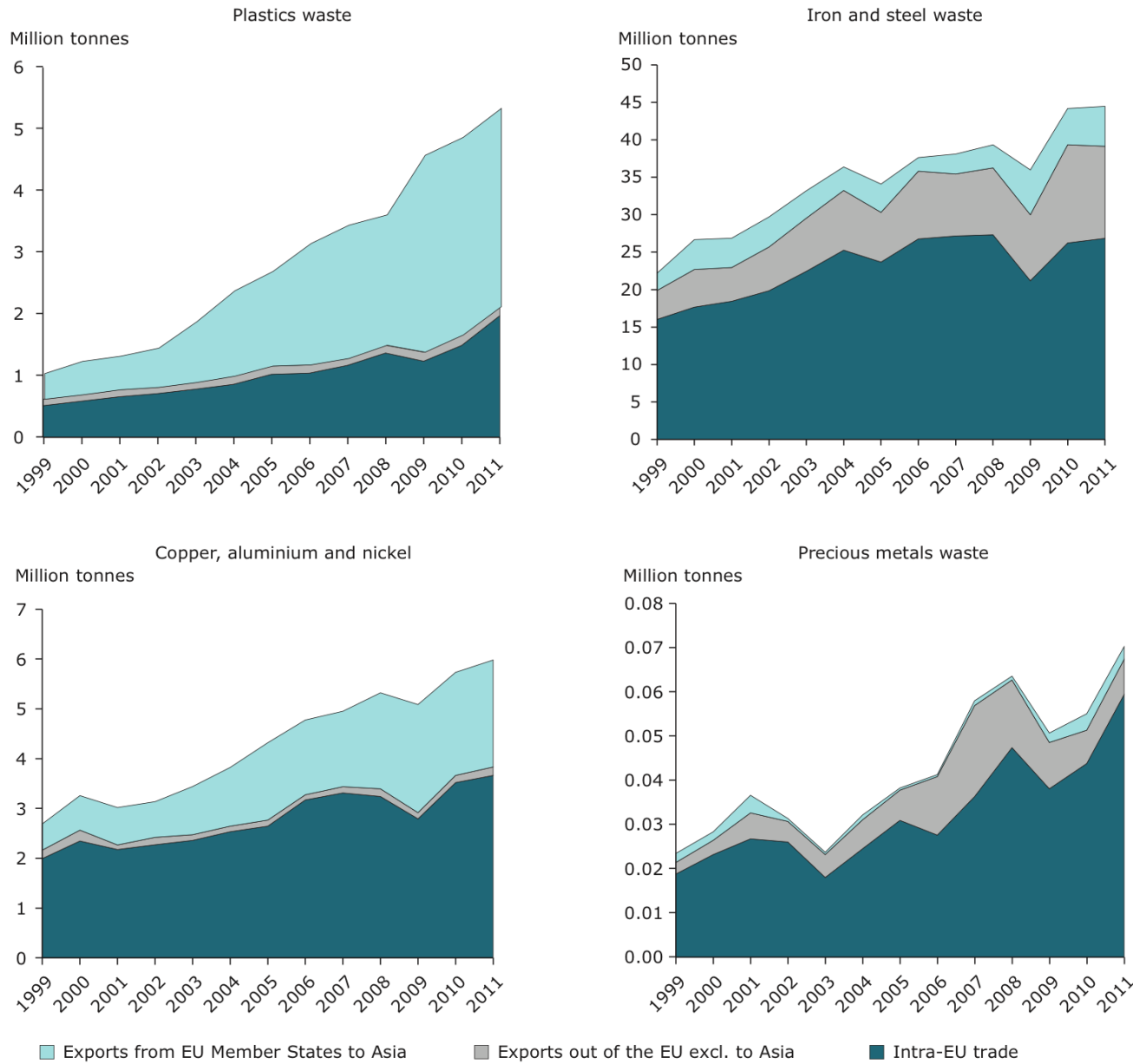


Figure 4.1 Exports of waste plastics and selected waste metals from EU Member States, 1999–2011



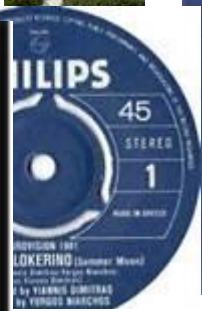
Source: Compiled by ETC/SCP based on Eurostat, 2012b.

The real end of our current production process... 90% landfilling in Brasil, no better in Asia & Africa



**Health, Hygiene
Environment, Climate
Social Responsibility
=> Sustainable?**

Products and some producers



Towards a green economy

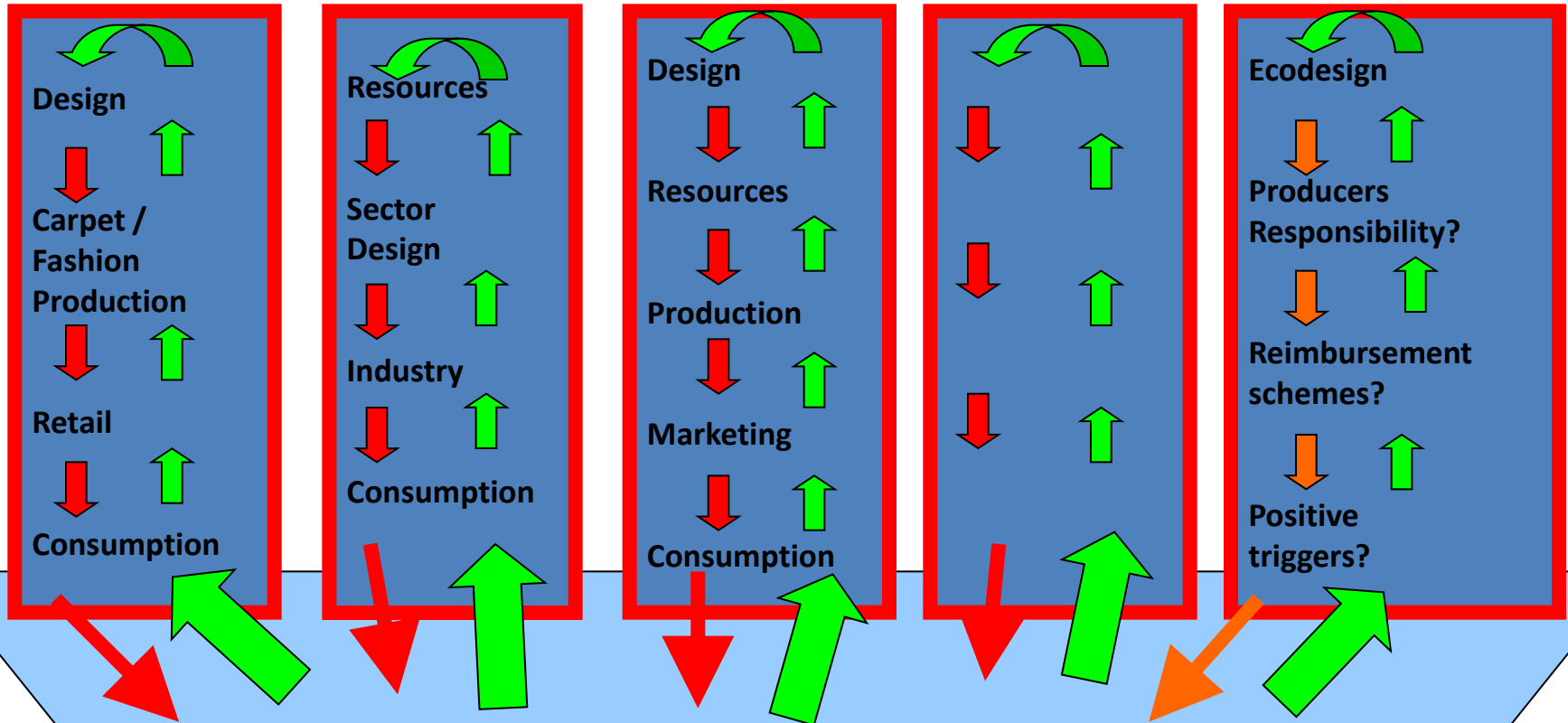
Textile

Aluminium

Electronics

X/Y/Z

Instruments



Waste Management

- Knowledge
- Sorting (treatment)
- Logistics

Relevance Waste & Recycling

Motor green economy, cross-cutting impact



Result Producers Responsibility

€475/ton plastics



€65/ton furniture



€80/ton electronics



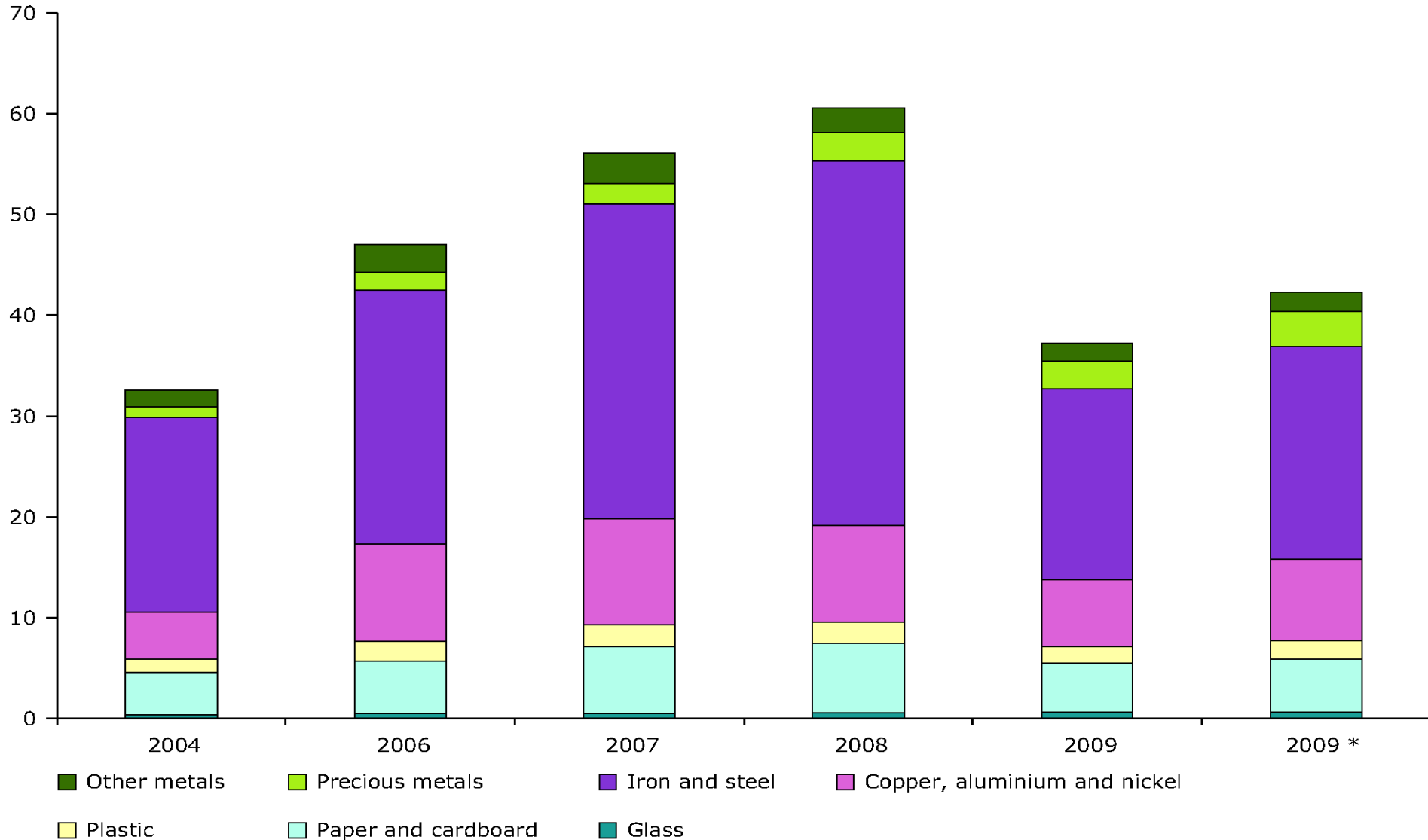
€60/ton textiles



Total turnover of recycling of seven key recyclables in the EU

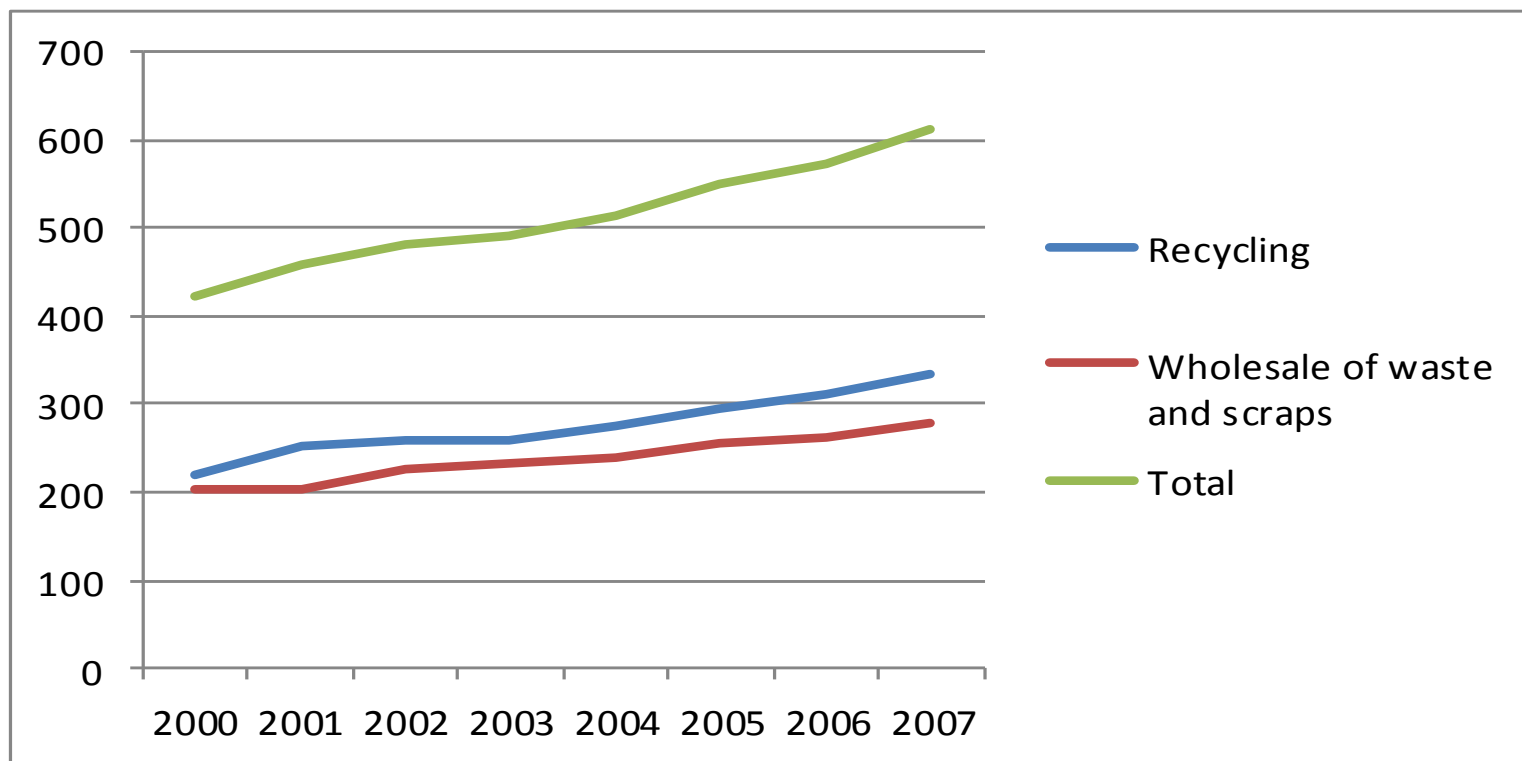
2004 and 2006–2009

Billion EUR in current prices



People employed in recycling activities in the EU per million inhabitants: the business & the jobs!

Overall employment related to materials recovery in Europe increased from 422 inhabitants per million in 2000 to 611 in 2007, **increase of 45 %**

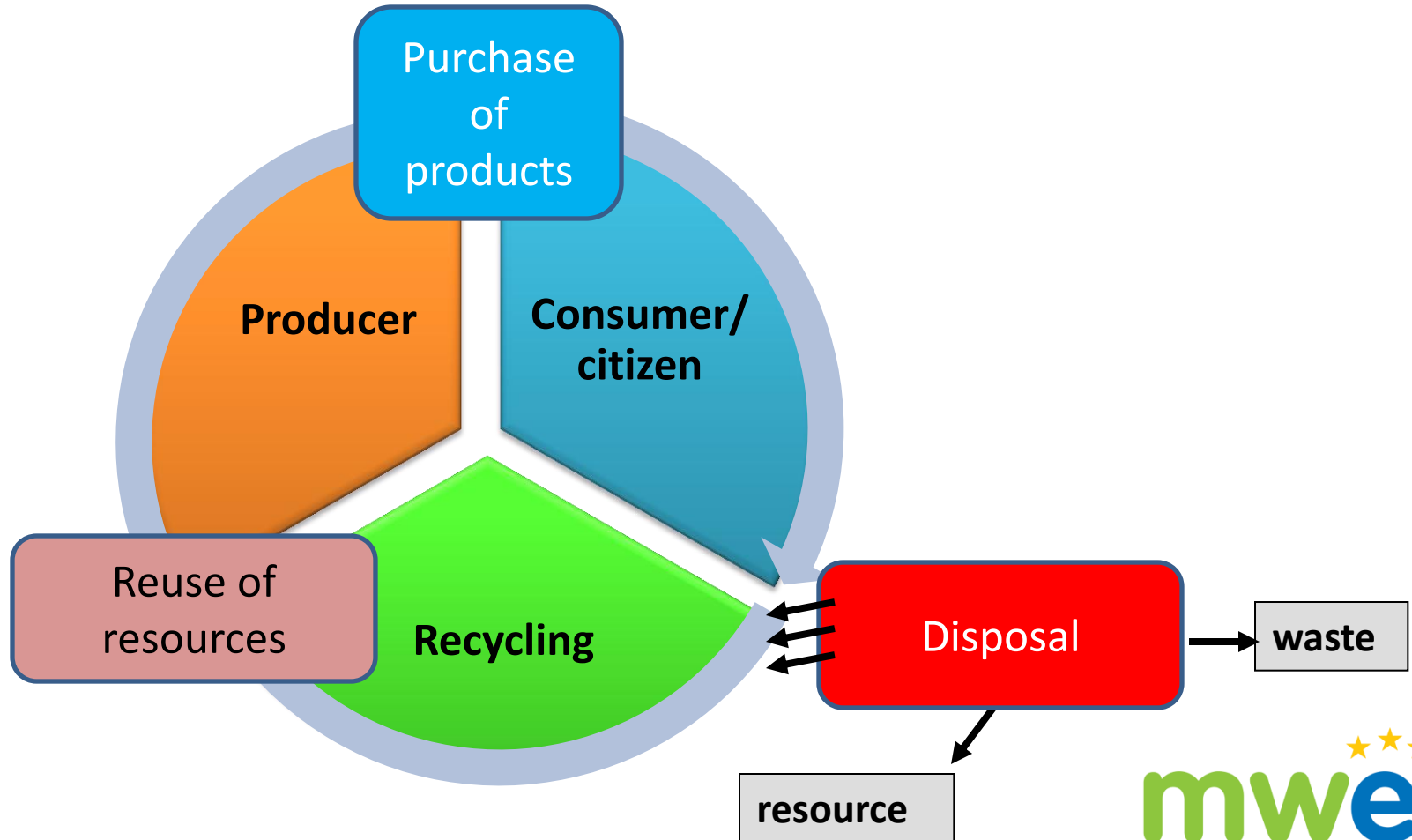


EU Roadmap to a Resource Efficient Europe - AWARENESS

- Many enterprises and consumers have not yet realised the **scale and urgency** of the required transformations
- **RESOURCE EFFICIENCY MAKES SENSE...SO**
- It is an **INTEGRAL PART** of the EU's agenda for **GLOBAL COMPETITIVENESS**

RESOURCE EFFICIENCY is a key part of the answer to the economic crisis and employment

Recycling society and economy including Producers Responsibility



EPR consequences

EPR digs into the municipal responsibility for waste collection

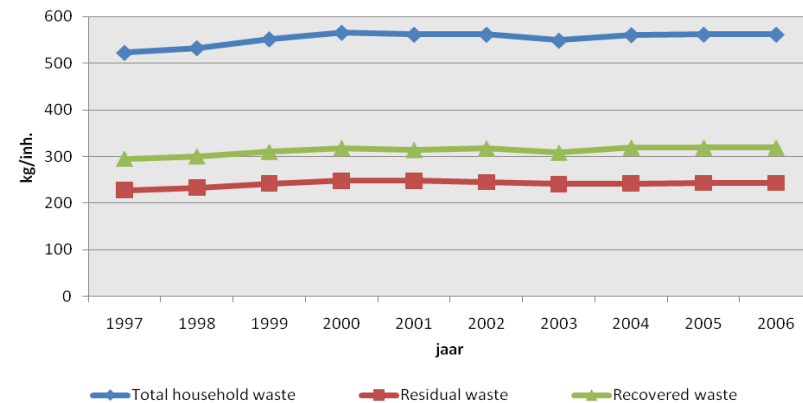
- Municipalities desire:
 - Coherent waste system for their public space
 - Control over service level degree municipality
 - Acceptable costs citizens
- Producers desire:
 - Control over resources stream for their specific material
 - Best results waste collection at lowest cost
- **Clear distribution of responsibilities in law needed**
 - **Separate collection of wastes by municipalities**
 - **Financing by producers/importers for their resources**
 - **The polluter pays: producers pay for their claim on public waste management**



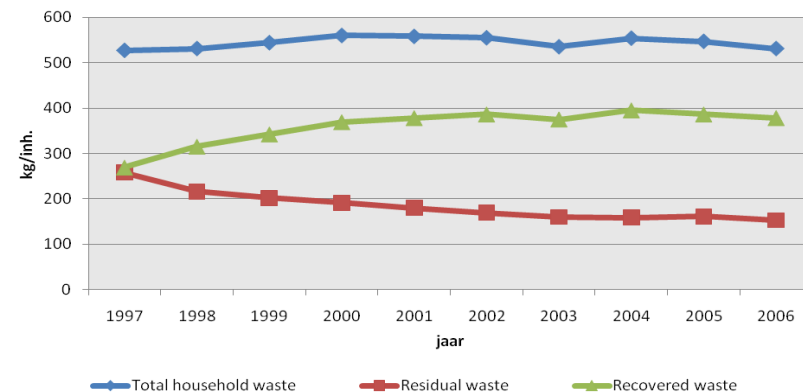
Financial & policy instruments

- National instruments:
 - Landfill ban and tax
 - Incineration tax (Flanders)
 - Minimum standards recycling / treatment
 - **PRODUCERS RESPONSIBILITY**
 - Recycling fees for products (WEEE/package)
 - Recycling targets for producers
 - Max. residual waste for municipalities
- Municipal Waste Tax per household
- Variable pricing (pay as you throw)
 - Per kg of waste offered
 - By size of the bin
 - By frequency of collection
 - Or combinations of the above

Municipal Waste Netherlands

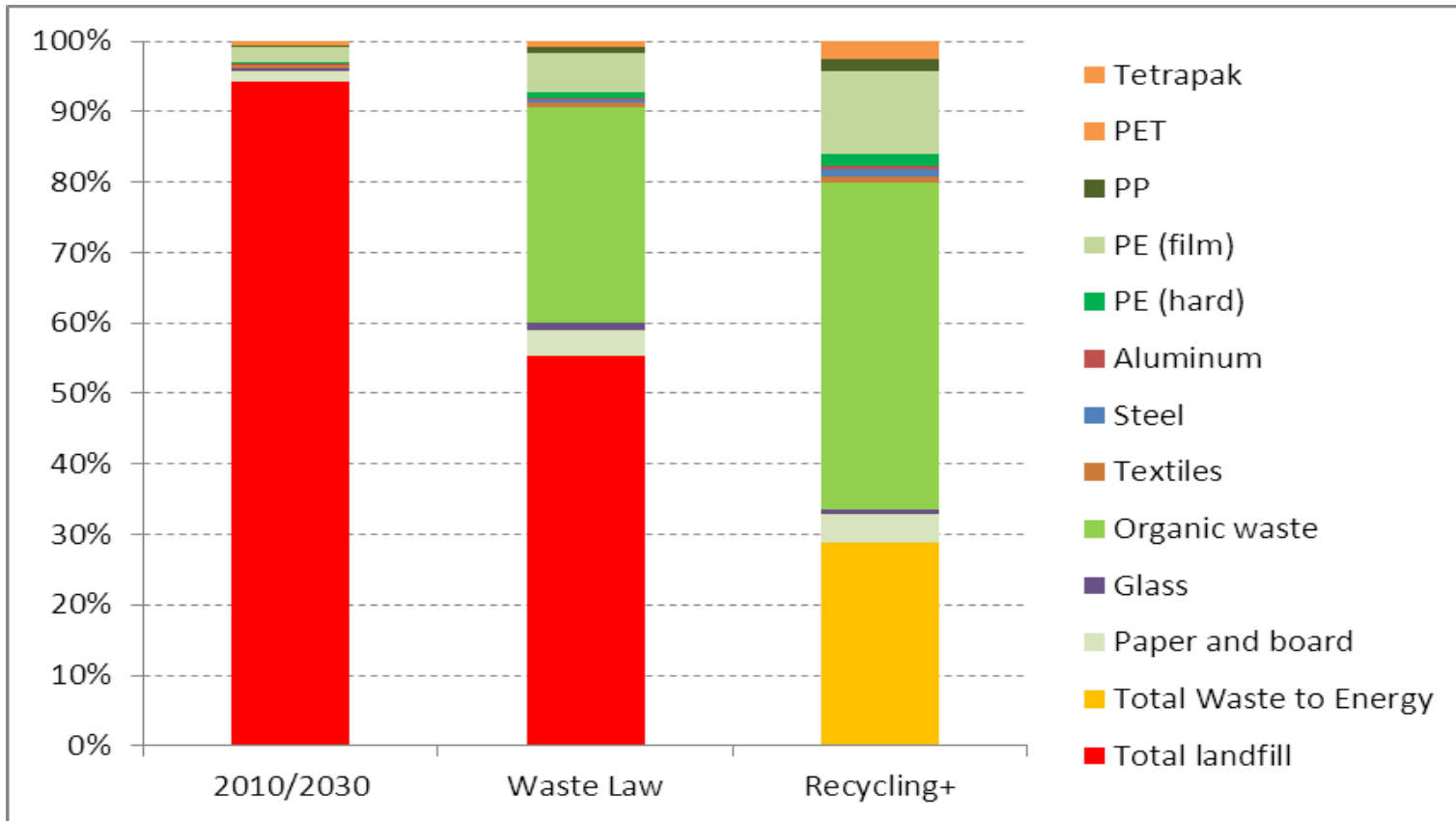


Municipal Waste Flanders



Rio+20 Brasil: Waste & Recycling potential

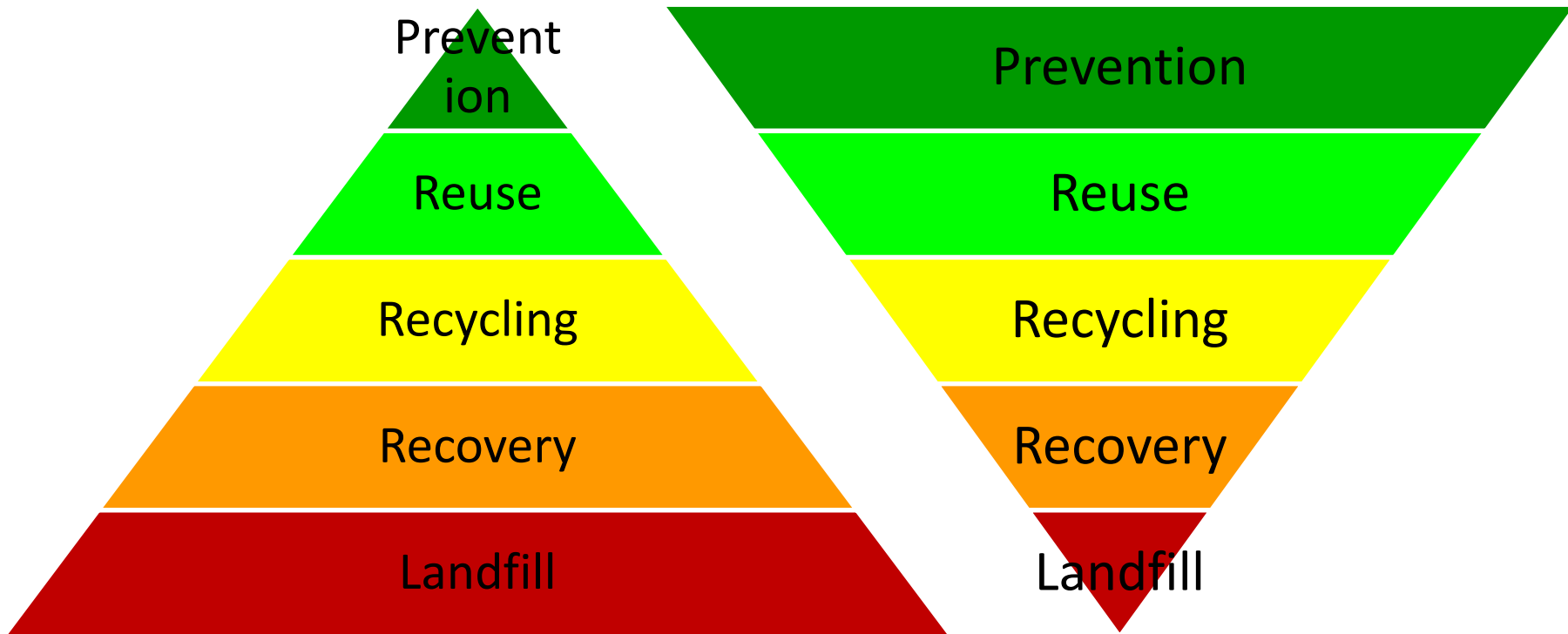
Landfill – Waste to Energy - Recycling



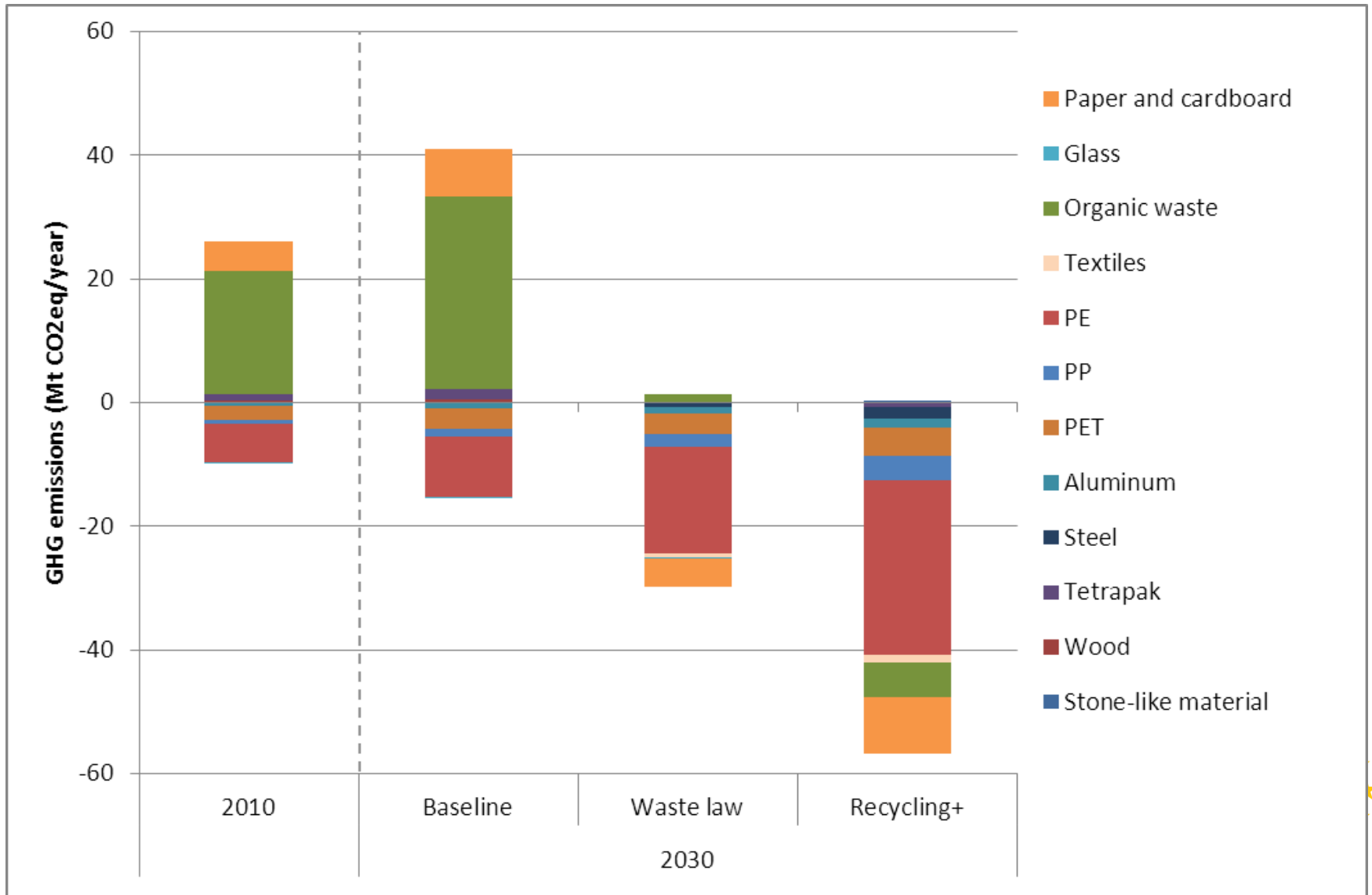
EU Approach: impact Waste Hierarchy, on climate and... jobs

bottom-up

CO2-impact



Rio+20 Brasil: Waste & Recycling potential GreenHouseGas-emissions



EU Roadmap to a Resource Efficient Europe - CONSUMPTION

- **Over 20th C the world has:**
 - Increased Fossil Fuel use by a factor of 12
 - Extracted 34 times more material resources
- **Today in the EU:**
 - Every person uses 16 tons of material every year!
 - Of which: **6 tons become waste**
 - AND (taking the EU average of 50%)
 - **3 tons go to landfill**

EU Roadmap to a Resource Efficient Europe - CONSUMPTION

- **QUOTE: 'Businesses are facing rising costs for essential raw materials and minerals...**
- **...whose scarcity and price volatility are damaging the economy**
- **In ONLY 38 years from now (2050) we will need 2 planets to survive at this rate**

EU Roadmap to a Resource Efficient Europe - IMPORTS

- The EU is the highest **NET IMPORTER** of resources per person!
- **Over half** of these resources end up in our waste streams – sooner or later

AND WE STILL MOSTLY:

- BURY THEM (LANDFILL)
- BURN THEM (INCINERATION)
- EXPORT THEM AS WASTE...for someone else to use as raw materials...

EU Roadmap to a Resource Efficient Europe – **EU LOOSING RESOURCES!**

- ...Because we don't collect clean recovered material streams
- ...Because many EU companies have moved their production to 'cheap labour' countries outside Europe...With no or poor control on working conditions/ Environmental impact
- ...Because we need to create a recycling market

EU Roadmap to a Resource Efficient Europe – **MUNICIPALITIES**

- MUNICIPALITIES are a key player in the **VALUE CHAIN**
- Commissioner Potocnik sent a message to Municipal Waste Europe's Seminar this autumn saying just this
- The Commission recognises that to return to a producing economy, Europe **MUST** give higher priority to reuse and recycling

EU Roadmap to a Resource Efficient Europe - **MILESTONES**

- ✓ By 2020, waste is managed as a resource.
- ✓ Waste generated per capita is in absolute decline.
- ✓ Recycling and re-use of waste are economically attractive options for public and private actors due to widespread separate collection and a developed, functional market for secondary raw materials.

EU Roadmap to a Resource Efficient Europe - **MILESTONES**

- ✓ More types of materials are recycled
- ✓ Waste legislation is fully implemented
- ✓ Illegal Shipments have been eradicated
- ✓ Energy recovery is limited to non recyclable materials, landfill is virtually eradicated and high quality recycling is ensured

The EU Umbrella organisation

MUNICIPAL WASTE EUROPE makes sure it is instrumental in directing EU policy changes toward facilitating and supporting municipalities' task of communicating, organising, learning and achieving a resource efficient, sustainable Europe

THANK YOU FOR YOR ATTENTION

www.municipalwasteurope.eu