



www.acrplus.org

ASSOCIATION
OF CITIES
AND REGIONS
FOR RECYCLING
AND SUSTAINABLE
RESOURCE
MANAGEMENT

EUROPEAN WASTE POLICY ...and the issues of material and energy resources

Introduction to the International Experts Seminar
Sevilla, 16 June 2010

Jean-Pierre Hannequart
President, ACR+



www.acrplus.org

- KEY NEW EU POLITICAL ORIENTATIONS FOR WASTE
- FEW DATA ON WASTE MANAGEMENT (THE RESIDUAL FRACTION OF MSW / SEWAGE SLUDGE)
- SOME ORIENTATIONS SUPPORTED BY ACR+



www.acrplus.org

1. KEY NEW EU POLITICAL ORIENTATIONS FOR WASTE

1.1. WASTE HIERARCHY

1.2. WASTE DEFINITIONS

1.3 RECYCLING TARGETS

1.4. EUROPEAN RECYCLING SOCIETY



www.acrplus.org

1.1. WASTE HIERARCHY... WITH 5 LEVELS

- waste priority order:

- ▶ Prevention (including Product Reuse)
- ▶ Preparing for re-use (= Waste Reuse without complex pretreatment)
- ▶ Recycling
- ▶ Other recovery, e.g. energy recovery
- ▶ Disposal

...shall apply as a priority order in waste legislation and policy (art.4)

- Except...“life-cycle thinking”

= ???

EC Guidelines ?



www.acrplus.org

1.2. DEFINITIONS

Recycling means:

any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes.

It **includes the reprocessing of organic material but does not include energy** recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Recovery includes :

« incineration facilities dedicated to the processing of municipal solid waste only where their **energy efficiency is equal to or above:**

-0,60 for installations in operation and permitted before 1 January 2009;

-0,65 for installations permitted after 31 December 2008

using the following formula...

$$\rightarrow (E_p - (E_f + E_i)) / (0,97 \times (E_w + E_f)) = ???$$



ACR+

www.acrplus.org

1.2. DEFINITIONS

(Art.6) END-OF-WASTE

Waste ceases to be waste when...

a useful and safe product is placed on the market if

- commonly used
- a market or demand exists
- meets technical requirements, legislation and standards
- no overall adverse environmental or human health impacts

Cfr JRC REPORT
(300 pages)

Priority Flows:
Glass, Paper and Metal !!!

...COMPOST and DIGESTATE



www.acrplus.org

1.3. RECYCLING TARGETS

(Art. 11)

« By 2020, the preparing for re-use and recycling of:

- ▶ **Min.** 50% by weight of **at least paper, metal, plastic and glass** from **household** and possibly other origins as far as these waste streams are **similar** to waste from households;
- ▶ **Min.** 70% by weight of non-hazardous **construction & demolition waste**

... can include transition periods for Member States which, in 2008, recycled **less than 5 % of either categories** of waste ”



www.acrplus.org

1.3 RECYCLING TARGETS

→ «HOUSEHOLD + SIMILAR = ???»

→ « RECYCLING » + « PREPARING FOR RE-USE » target=?

→ « RECYCLING RATE » = %

Numerator =? Denominator=? /Calculation methodology = ???

1.3 EU RECYCLING TARGETS



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



www.acrplus.org

1.3 RECYCLING TARGETS

(art.22) BIOWASTE

MS shall take measures, **as appropriate**,...to encourage:

- the separate collection of bio-waste with a view to the composting and digestion

« *Biowaste* » = *biodegradable garden and park waste, food and kitchen waste...and comparable waste from food processing plants*

...

The Commission shall carry out an assessment on the management of bio-waste with a view to submitting **a proposal if appropriate**

GREEN PAPER

DECEMBER 2008

IMPACT ASSESSEMENT: 2010

COM(2010)235



ACR+

www.acrplus.org

1.4 EUROPEAN RECYCLING SOCIETY

A society where a high share of resources is coming from waste materials?

The opposite of the throwaway-society?

A society where everything is recycled or re-used?

A society with much lower waste generation?

A society operating at the cost- and eco-efficient optimum of recycling?

75% – 85% – 95% recycling of all waste?



www.acrplus.org

1.4 EUROPEAN RECYCLING SOCIETY

- EUROPEAN TARGETS ?
(more coherent recycling targets)
(common calculation methodology)

- EUROPEAN STANDARDS?
(for eco-design)
(for green public –and private -procurement)
(for selective collection - main flows /EU marking)
(for sustainable recycling - cfr Dumping to Asia-Africa)

- ECONOMIC INSTRUMENTS ?
(Taxes on raw materials)
(Taxes on landfill and incineration)
(Differentiated VAT)
(Producer responsibility 100% financial)
(Green certificates for recycling)

- BEST PRACTICES?
(Exchange of information and experience with involment of LRAs – cfr ACR+)



www.acrplus.org

2 . A FEW DATA ABOUT WASTE MANAGEMENT

2.1. WASTE PRODUCTION AND COMPOSITION

2.2. MSW TREATMENT (THE RESIDUAL FRACTION ?)

2.3. SEWAGE SLUDGE

2.4. WASTE AND CO₂

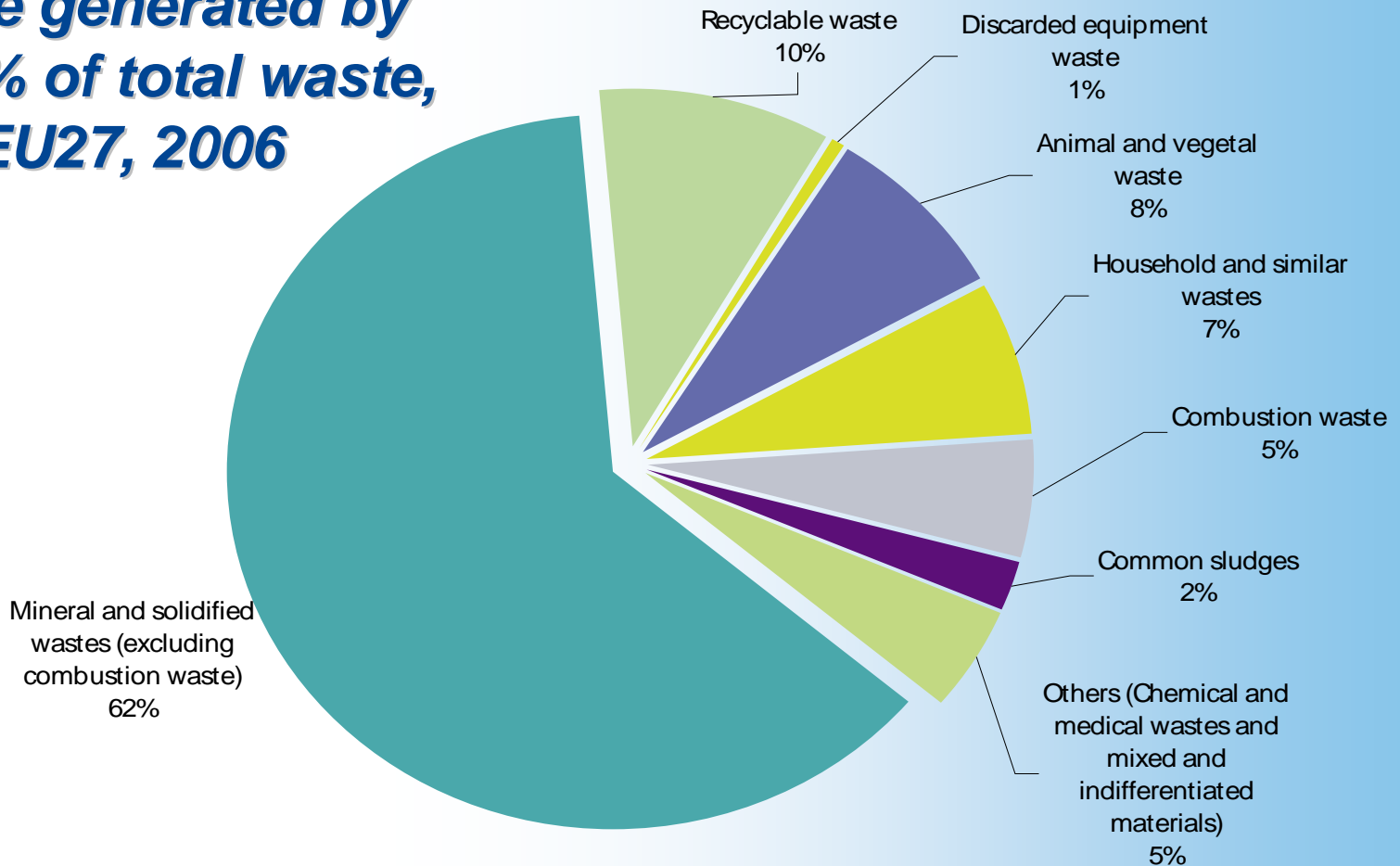


ACR+

www.acrplus.org

2. 1 WASTE PRODUCTION AND COMPOSITION

Waste generated by type, % of total waste, EU27, 2006





www.acrplus.org

2.1. MSW PRODUCTION

**HOW MUCH
MUNICIPAL WASTE ?
(KG/ INH / YEAR)**



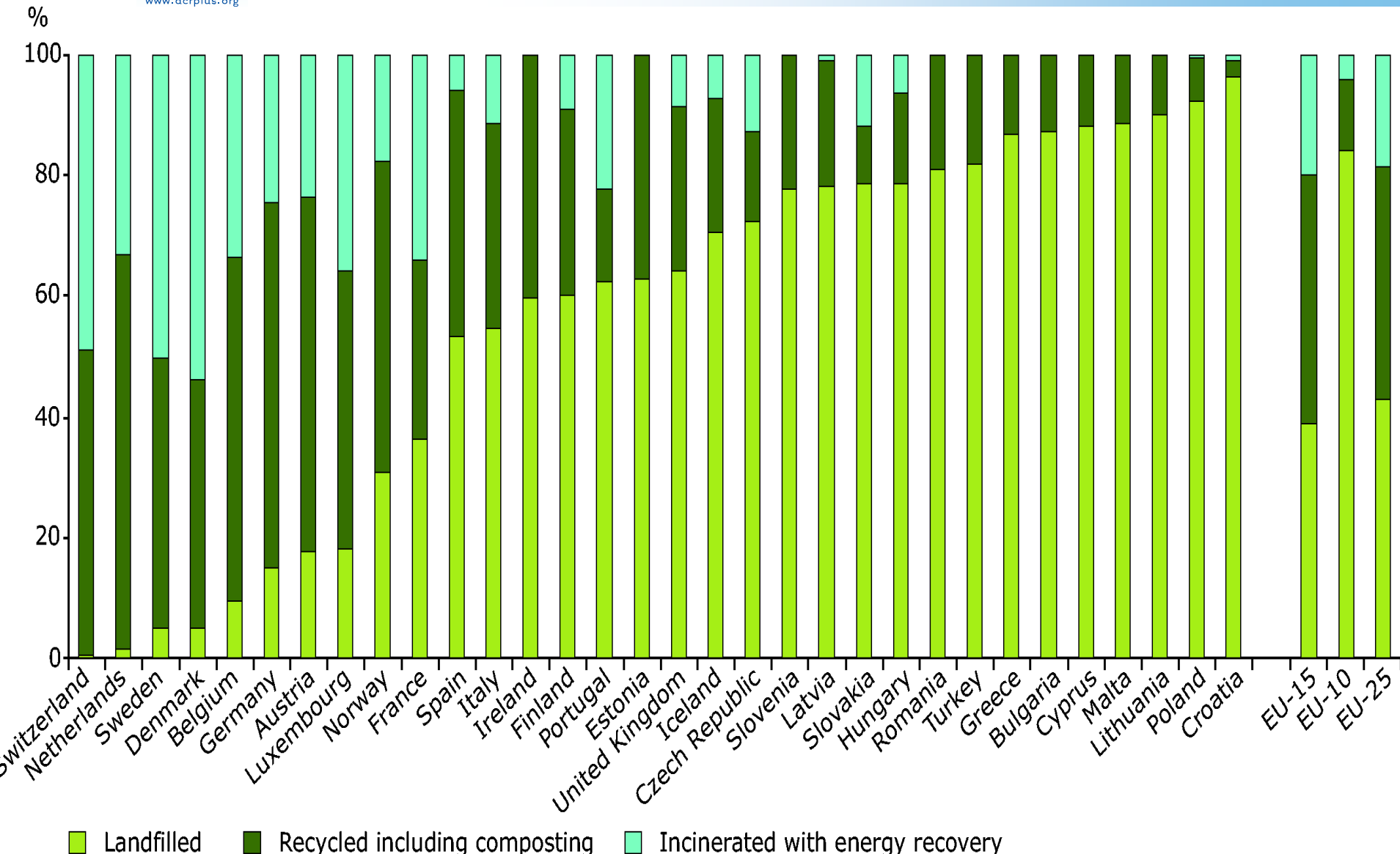
<u>Denmark</u>	801.....740
Ireland	786..... 800
Cyprus	754.....
Luxembourg	694..... 680
Malta	652.....
Netherlands	630..... 625
Austria	597..... 585
Spain	588.....600
United Kingdom	572..... 585
Germany	564..... 565
Italy	550..... 550
France	541.....535
Estonia	536.....
Sweden	518.....495
Finland	507.....495
Belgium	492.....480
Portugal	472.....445
Bulgaria	468.....
Hungary	456.....
Greece	448.....440
Slovenia	441.....
Lithuania	400.....
Romania	379.....
Latvia	377.....
Poland	322.....260
Slovakia	309..... 280
<u>Czech Republic</u>	294.....300

EUROSTAT 07 / OCDE 06



www.acrplus.org

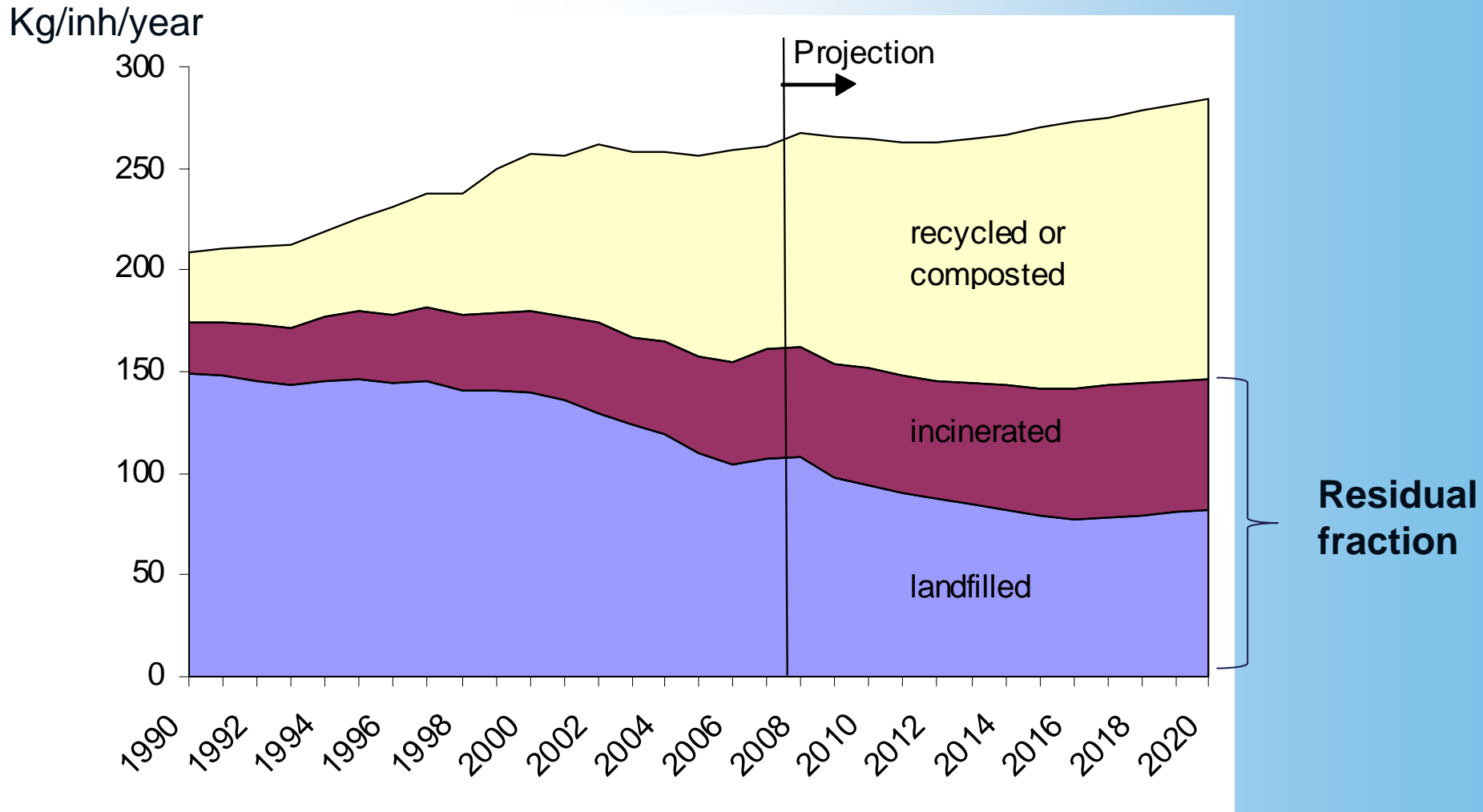
2.2. MSW TREATMENT (THE RESIDUAL FRACTION?)





www.acrplus.org

2.2. MSW TREATMENT (THE RESIDUAL FRACTION?)



Source: European Environment Agency



www.acrplus.org

2.3 ...about SEWAGE SLUDGE

EU currently assessing whether the Dir. 86 should be reviewed:

- **assess environmental, human & animal health risks from the application of sewage sludge on land:**
- **preparation of a baseline scenario in terms of policies and practices accross the EU for the next 10 years**
- **identify policy options for the possible revision of the Dir. 86**
- **+ cost/ benefit analysis of the different options**



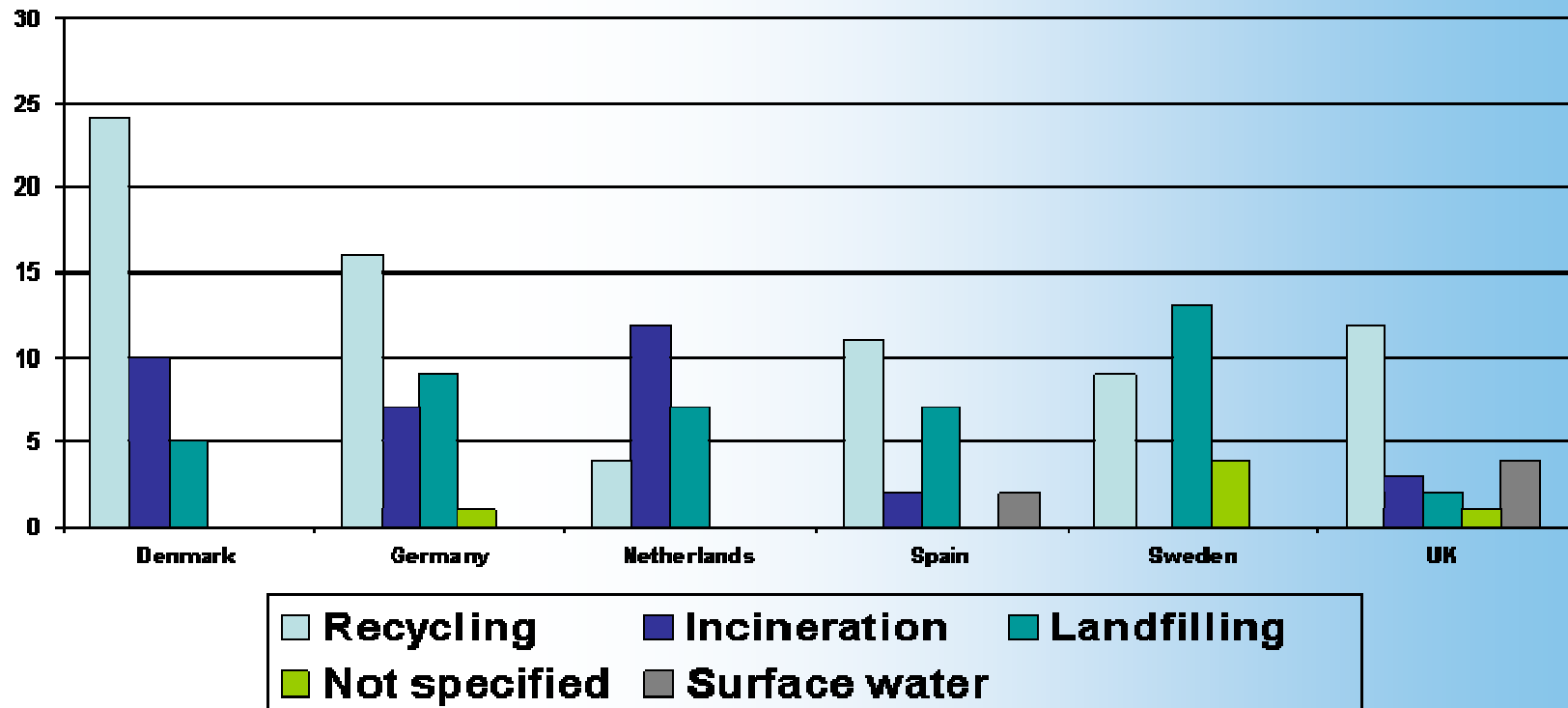
ACR+

www.acrplus.org

2.3 STATISTICAL DATA... ON SEWAGE SLUDGE

Treatment of sewage sludge in 1998 (kg/pers)

(source : Europe an Environment Agency)



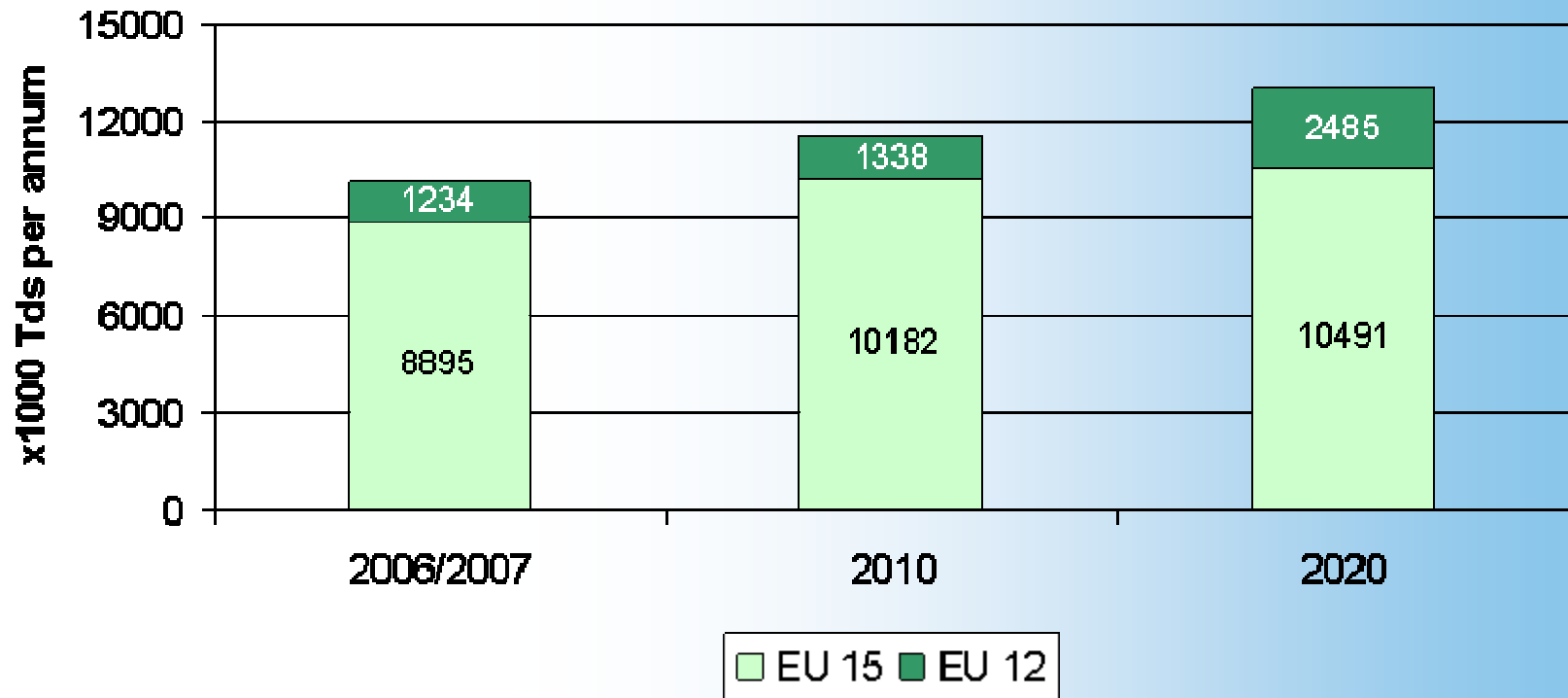


ACR+

www.acrplus.org

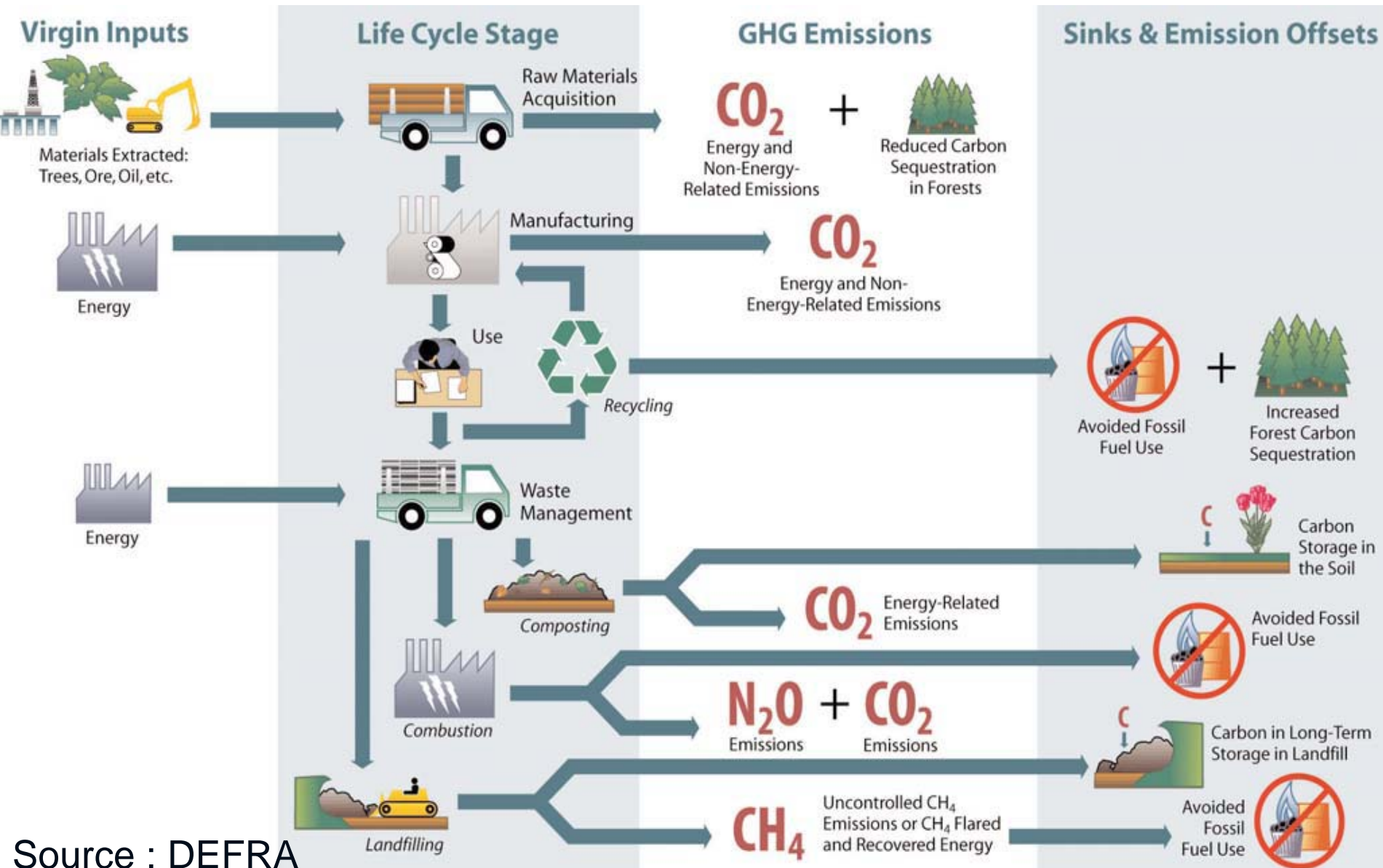
2.3. STATISTICAL DATA... ON SEWAGE SLUDGE

Current arisings and estimated arisings of sewage sludge for 2010 and 2020



Source: draft final report IA sewage sludge

2.4 WASTE AND CO₂



Source : DEFRA



www.acrplus.org

2.4. WASTE AND CO₂

Waste disposal =
2.6% of total GHG emissions in the EU25

If waste volumes of EU were stabilised at 2006 levels, 1.1 billion tonnes of CO₂ equivalents would be saved by 2020

Binding minimum EU recycling targets of 50% for municipal waste could save more than 89 million tonnes of CO₂ equivalent per year



www.acrplus.org

2.4. WASTE AND CO₂

	CO2 eq/tonne of landfilled fraction	CO2 eq/per tonne of incinerated fraction	CO2 eq/per tonne of recycled fraction
Paper & cardboard	2.20	1.40	1.30
Plastic packaging	3.10	5.00	1.50
Textiles	18.00	9.00	2.00
Glass packaging	0.84	0.84	0.53
Steel packaging	3.00	1.30	0.70
White goods	3.00	3.00	0.70
Aluminium packaging	11.05	11.05	2.00
Garden waste	0.2	-0.14	-0.12
Kitchen waste	4.50	4.20	4.08

Source : Friends of the Earth Europe, oct. 2009



www.acrplus.org

3. ORIENTATIONS SUPPORTED BY ACR+

3.1. THE LRAs ARE KEY- PLAYERS

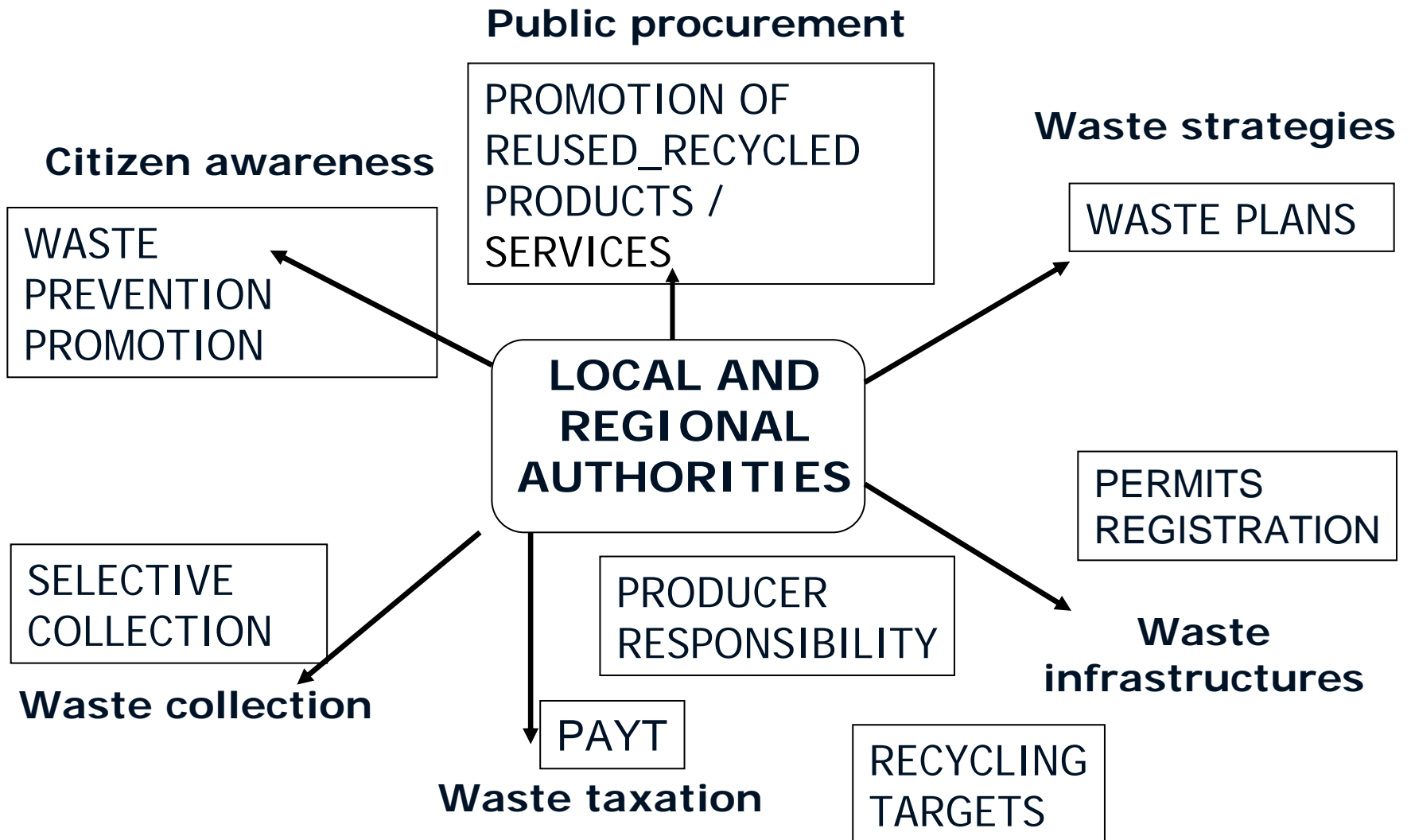
3.2. THE BEST WASTE IS NOT PRODUCED

3.3 NEED TO CLARIFY THE TARGETS FOR MSW

**3.4. WE NEED A EUROPEAN OBSERVATORY ABOUT
RECYCLING PERFORMANCE**

**3.5. WE ARE OPEN TO DEBATE THE EXACT PLACE FOR
THE « CO-PROCESSING »**

3.1. THE LRAs ARE KEY- PLAYERS





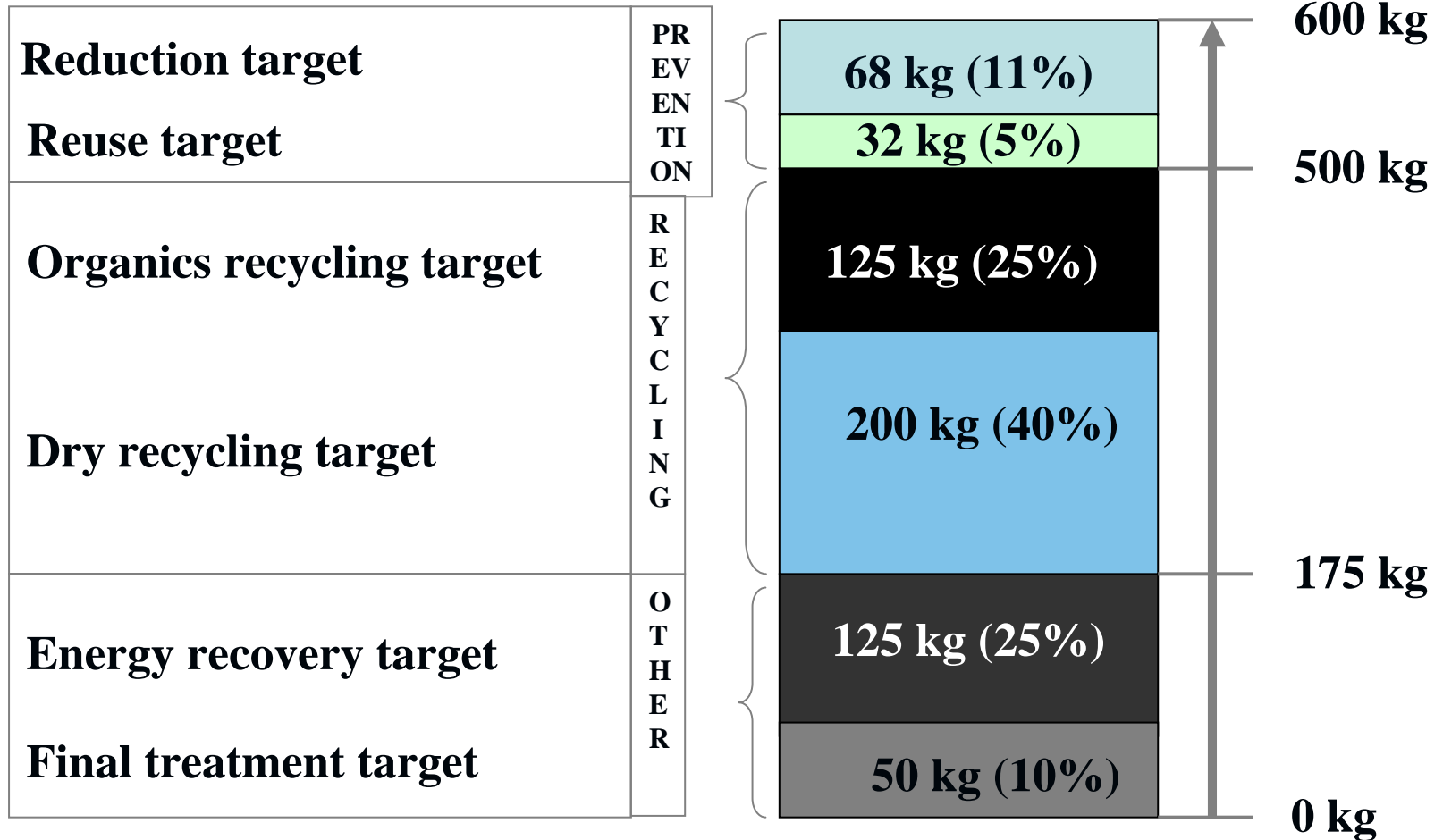
ACR+

www.acrplus.org

3.2. THE BEST WASTE IS NOT PRODUCED

Less 1 kg	Less kg eq. CO2	Less eq. km (car 7l/100 km)
1kg paper Or 200 (A4) sheets	1,15	7
1 kg PET Or 24 bottles of 1.5l	5,02	29
1kg aluminium Or 77 cans	11,58	67
1kg textile or 1.5 jeans	9,20	53
Glass Or 2.5 bottles of 1l	1,13	7

3.3 WE NEED TO CLARIFY THE TARGETS FOR MSW





www.acrplus.org

3.4 WE NEED A EUROPEAN OBSERVATORY ABOUT RECYCLING PERFORMANCES

- pioneer group of regional and local authorities of comparable sizes (typology of cities/regions)
- with simple shared objectives of quantitative benchmarking
- with a common set of indicators
- with comparative methodology thinking
- with share-comments about results

**International ACR+Conference in Paris (with ORDIF)
15-16 September 2010**



www.acrplus.org

3.5 WE ARE OPEN TO DEBATE THE EXACT PLACE FOR THE « CO-PROCESSING »

- **Recycling 2/3 of MSW is achievable and beneficial**
- **The 1/3 that remains may be a good source of energy (MBT)**
- **Balance Co-processing \Leftrightarrow Energy Recovery should be based on relative resource and energy efficiencies ...for some specific waste flows**



www.acrplus.org

Thank you for your attention