

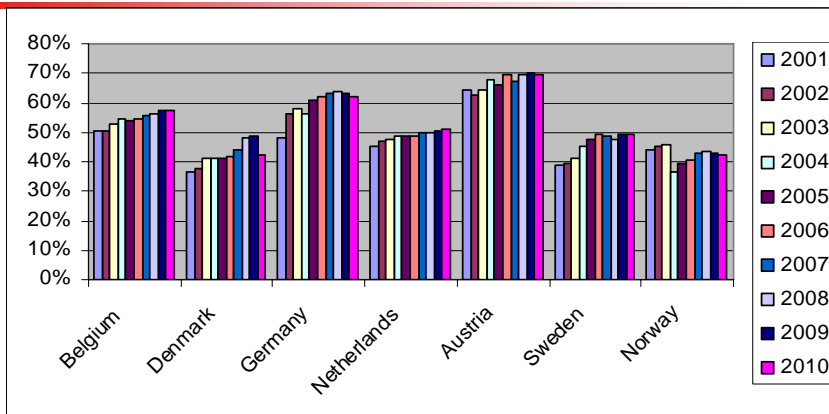
# Genanvendelse af husholdningsaffald i Europa - Styringsmidler

DAKOFA 29 Februar 2012

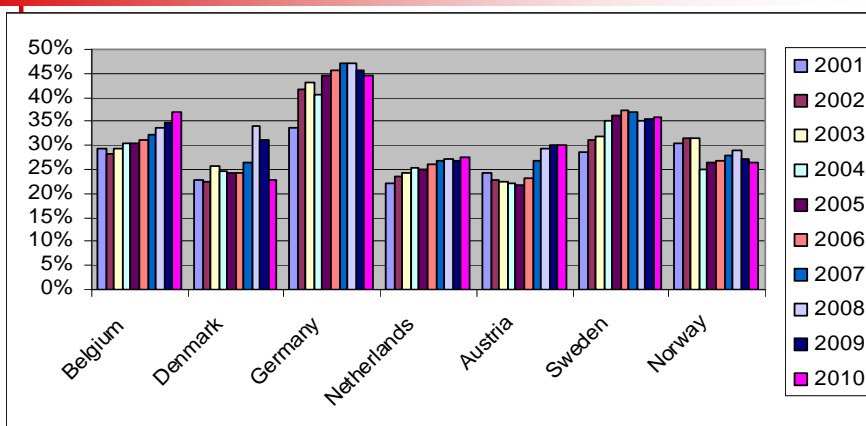
## Indhold

- Hvordan er niveauet og hvad bliver genanvendt?
- Kan tallene sammenlignes?
- De anvendte styringsmidler
- Hovedforskelle mellem DK og andre lande
- Situationen i Tyskland
- Konklusioner

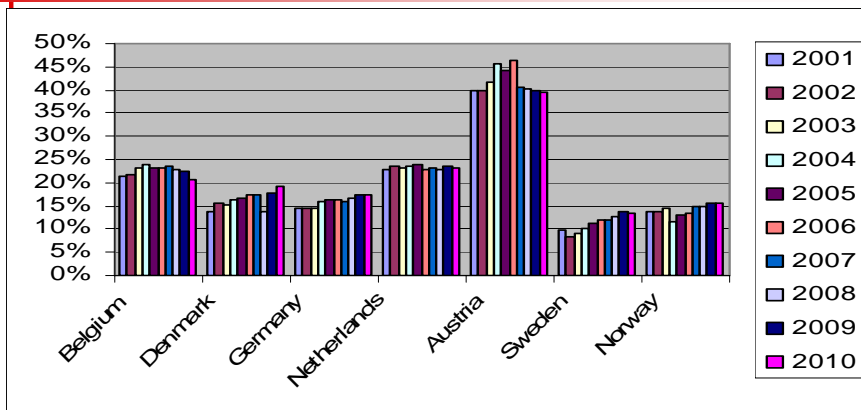
## Total recycling of Municipal Waste in selected countries 2001-2010



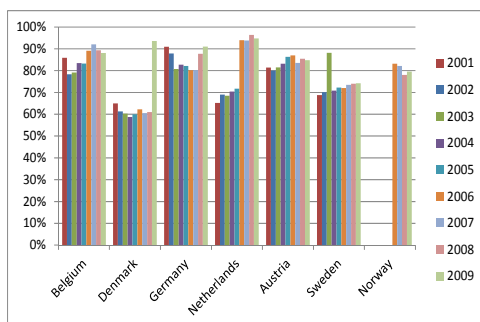
## Material recycling of total generated Municipal Waste in selected countries 2001-2010 (excluding compost)



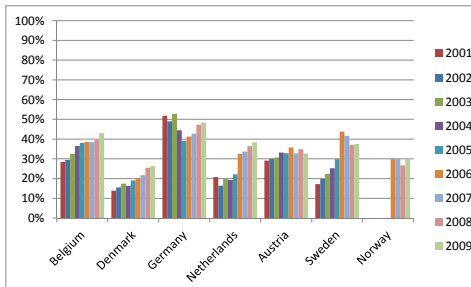
## Other recycling (compost) of total generated Municipal Waste in selected countries 2001-2010



## Paper&cardboard packaging -recycling



## Plastic packaging-recycling



## Municipal Waste Data

- Amounts are seldom comparable
  - Denmark until 2010: All household waste + Waste from commerce, offices and institutions, which is domestic waste, garden waste, hazardous waste as well as separately collected paper, glass, plastic, iron&metal and food waste
- Percentages can better be compared
- Trends can normally be compared
  - Total MSW recycling
  - DK lower starting point by 2001 than other countries
  - Apart from Norway the other countries have still increased their recycling since 2001

## Municipal Waste Data

- Trends can normally be compared
  - Material recycling
    - DK lower starting point by 2001 than other countries except the Netherlands
    - Apart from Norway the other countries have still increased their recycling since 2001
  - Compost/MBT
    - DK lower starting point than AT, BL & NL but higher/same as DE, NO & SE. DK has the highest increase since 2001!!
    - Denmark: garden waste-not green kitchen waste

Selected policy interventions							
Country	Mandates for paper waste	Landfill ban	MSW recycling targets	Producer responsibility on packaging	Incineration tax	Landfill tax	National waste management plan
AT	source separation (newsprint)	max 5% carbon content *		Y	Y	Y	Y
DE		max 5% carbon content		Y			Regional
BE	collection, recycling, take back	unsorted waste		Y	Y	Y	Regional
NL	recycling	combustables	Y			Y**	Y
SE	collection, recycling, take back	combustables & organic	Y	Y	Y**	Y	Y
DK	source separation, collection,	combustables	Y		Y	Y	Y
NO				Y	Y**	Y	Y
** Tax has been repealed							

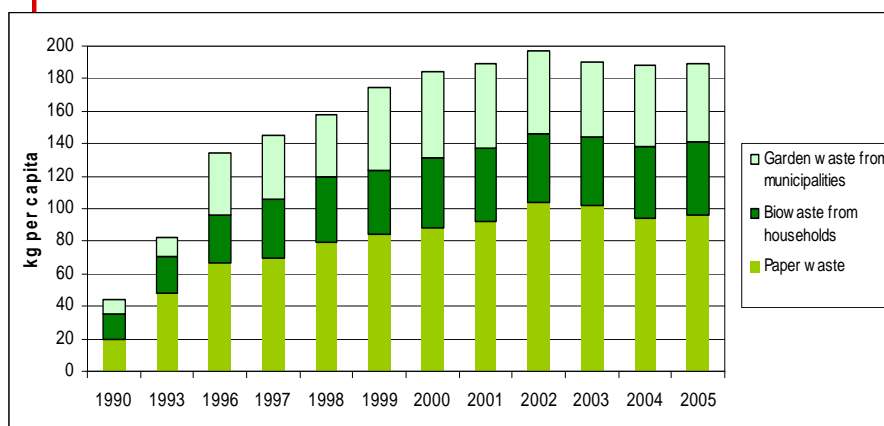
## What are the main difference between DK and the other countries?

- Very high incineration capacity per capita
  - Denmark: 700 kg
  - Sweden: 486 kg
  - Netherlands: 364 kg
  - Germany: 328 kg
  - Belgium: 260 kg
  - Austria: 251 kg
  - Norway: 230 kg
- Producer responsibility is much more used (except NL where voluntary agreements are used)

## What are the main difference between DK and the other countries?

- **Producer responsibility**
  - Sweden: 75 % of the newspapers and other waste paper (other than packaging) shall be collected and recycled
- **Target on residual household waste to incineration**
  - Flanders: 225 kg by 1998, 220 kg by 2001, 180 kg by 2003 and 150 kg by 2007
    - All other household wastes should be recycled.
    - Part of the revenue from the landfill tax is returned to municipalities in the form of subsidies if they manage to meet the requirements.
  - Recycling % including composting by 2008:
    - Flanders:72%, Wallonia:53% and Brussels 20% !!!

## Separate collection of biodegradable waste fractions in Germany



## Waste regulation in Germany

- Packaging waste
  - national legislation, EPR system, 65% of the waste volume has to be recovered (55% recycling)

[http://www.bmu.de/files/pdfs/allgemein/application/pdf/verpackv\\_lesef.pdf](http://www.bmu.de/files/pdfs/allgemein/application/pdf/verpackv_lesef.pdf)

- Paper recycling (excluding packaging)
  - national voluntary agreement between the Ministry of Environment and the paper industry (AGRAPA), 80% recycling

[http://www.bmu.de/abfallwirtschaft/abfallarten\\_abfallstroeme/altpapier/doc/3149.php](http://www.bmu.de/abfallwirtschaft/abfallarten_abfallstroeme/altpapier/doc/3149.php)

## Waste regulation in Germany

Developments in the waste sector and infrastructure planning

- Until 1993 „Planfeststellung“, today only technical requirements,
- Ban for disposal of untreated waste after 2005,
- High energy prices boosted small substitute fuels incinerators (RDF)

## Economic incentives by technical standards in Germany

- Technical Guidance MSW (TASi);  
 Since 2005 landfilling of waste without previous treatment is not allowed anymore; 20 billions Euro investments  
[http://www.bmu.de/files/pdfs/allgemein/application/pdf/tasi\\_ges.pdf](http://www.bmu.de/files/pdfs/allgemein/application/pdf/tasi_ges.pdf)
- Federal emissions regulation (BImSchV);  
 Extremely high standards for emissions made incineration expensive in relation to recycling; about 1/3 to 1/2 of incineration costs  
[http://www.gesetze-im-internet.de/bimschv\\_17/index.html](http://www.gesetze-im-internet.de/bimschv_17/index.html)

## Municipal level in Germany

- Specific regulations for the separate collection of materials; including economic incentives due to reduced waste fees:
  - Biowaste, paper, glass, ...
  - New: special bin for raw materials
  - The payment for residual waste and the EPR reduce the fees on recycling. No fees on paper and packaging waste
- Specific targets in (some) local concepts, e.g. Berlin:
  - Decoupling of waste generation and GDP
  - Reduction of residual waste by 100.000 tonnes until 2020
  - Waste prevention included in green public procurement



## Waste fees- My own experience

DK.kr.	Hvidovre (Single house)	Berlin (flat)
Administration	420	
Residual waste	990	960
Glass & paper	510	
Bulky waste	390	
Hazardous waste	30	
Recycling centre	520	
Garden waste/bio waste	440	
Total	3300	960

## Conclusions

- Apart from producer responsibility we use very much the same political instruments in Denmark as in other countries
- It seems that our high incineration capacity dictates also future waste management options
  - Does the existing waste regime in DK hinders a transition towards a waste management based on more recycling?
- The high Danish incineration tax is not sufficient to encourage recycling
- The fees paid by households for recycling seem to be lower in other countries and support in that way recycling

