



Consumption and Waste Prevention

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I. The consumption patterns and waste production



The pressures for consumption and waste production

Openess of
the markets

Increase
individualims

New
technologies

Globalization

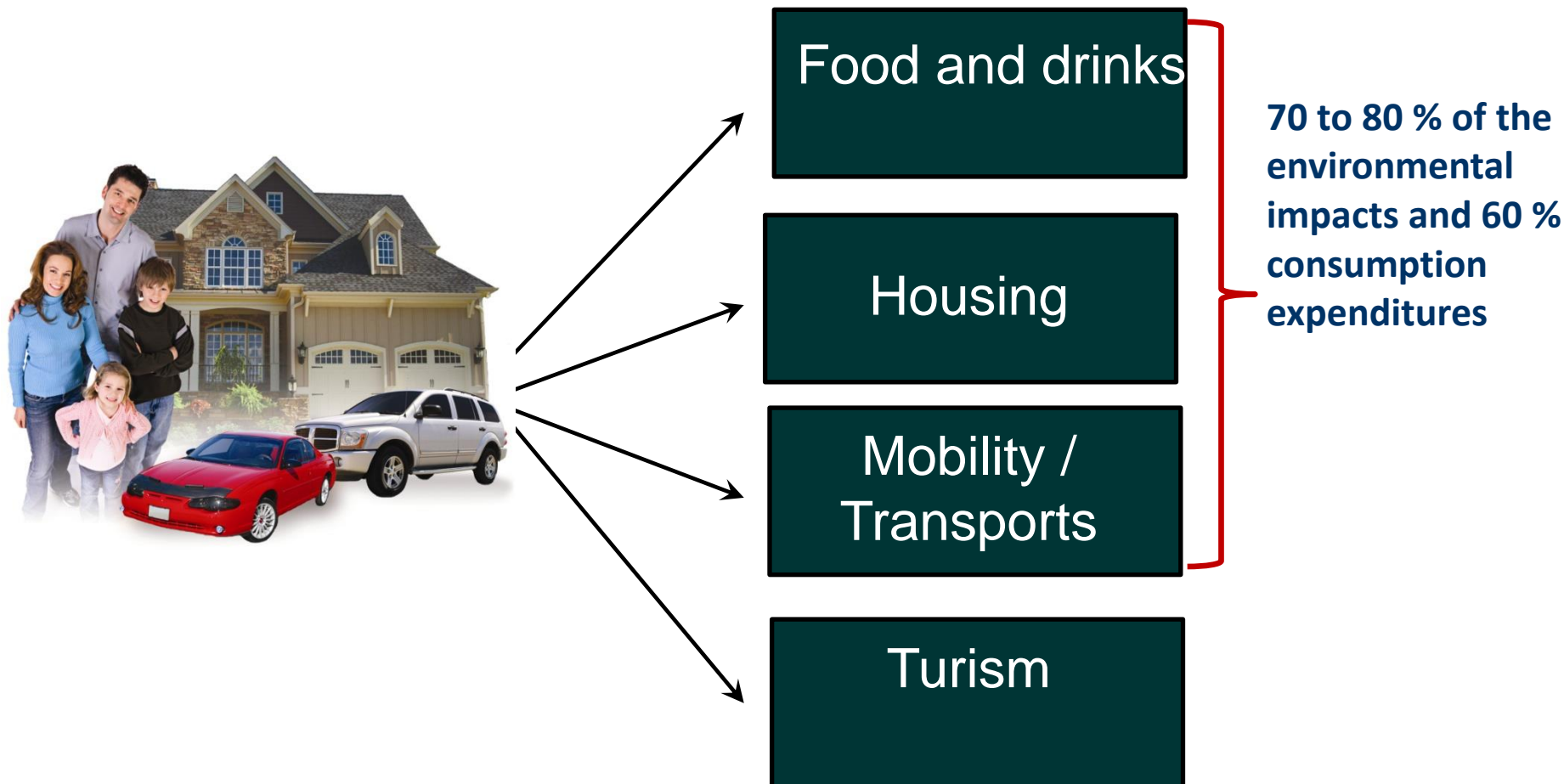
Marketing

Economic
growth

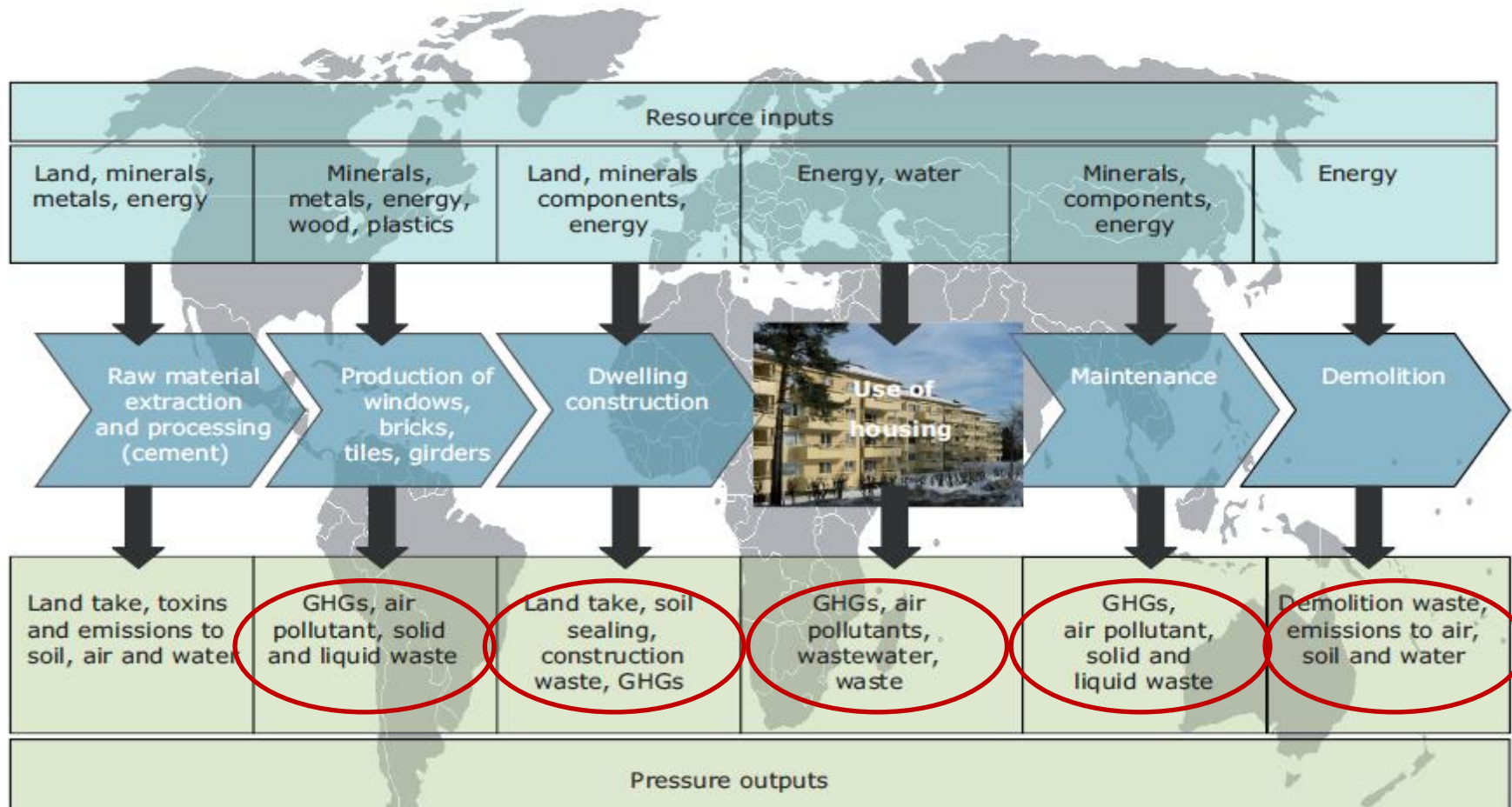


Families and individuals exceed their consumption patterns and
waste production

Integrative domains of consumption according to the European Environmental Agency

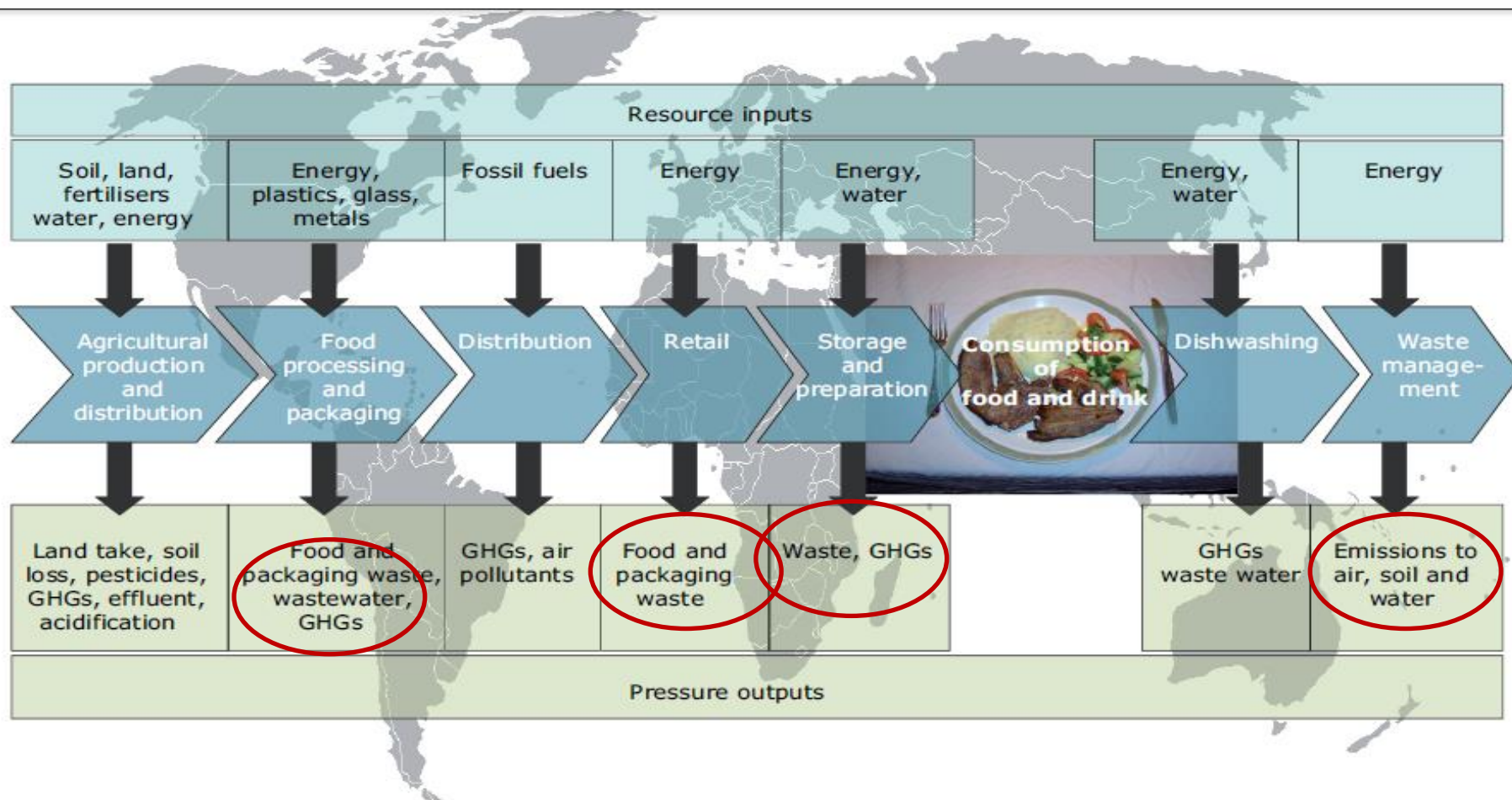


Environmental Impacts of Housing (EEA, 2012)



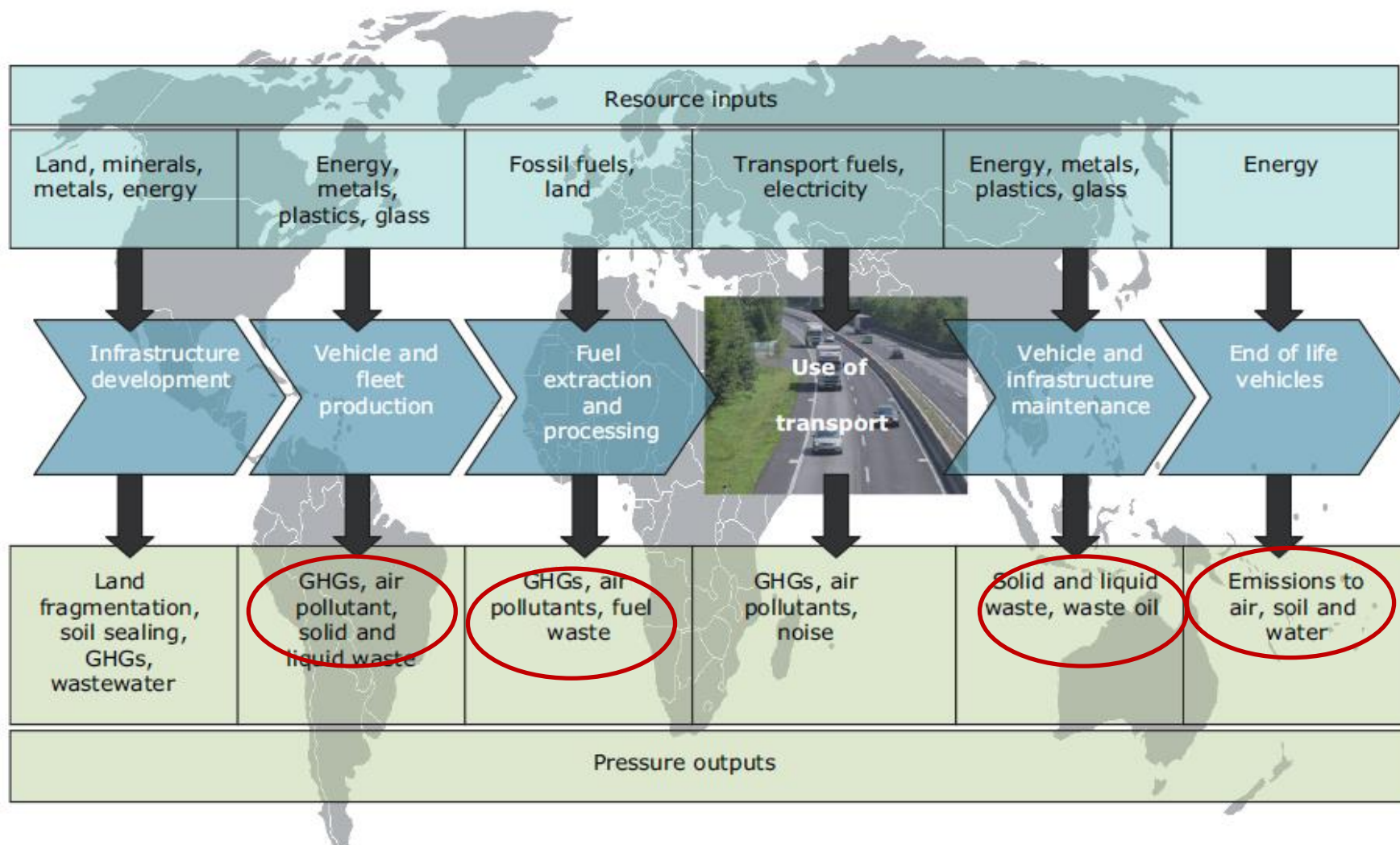
Source: Compiled by EEA-ETC/SCP.

Environmental Impacts of Food and drink (EEA, 2012)

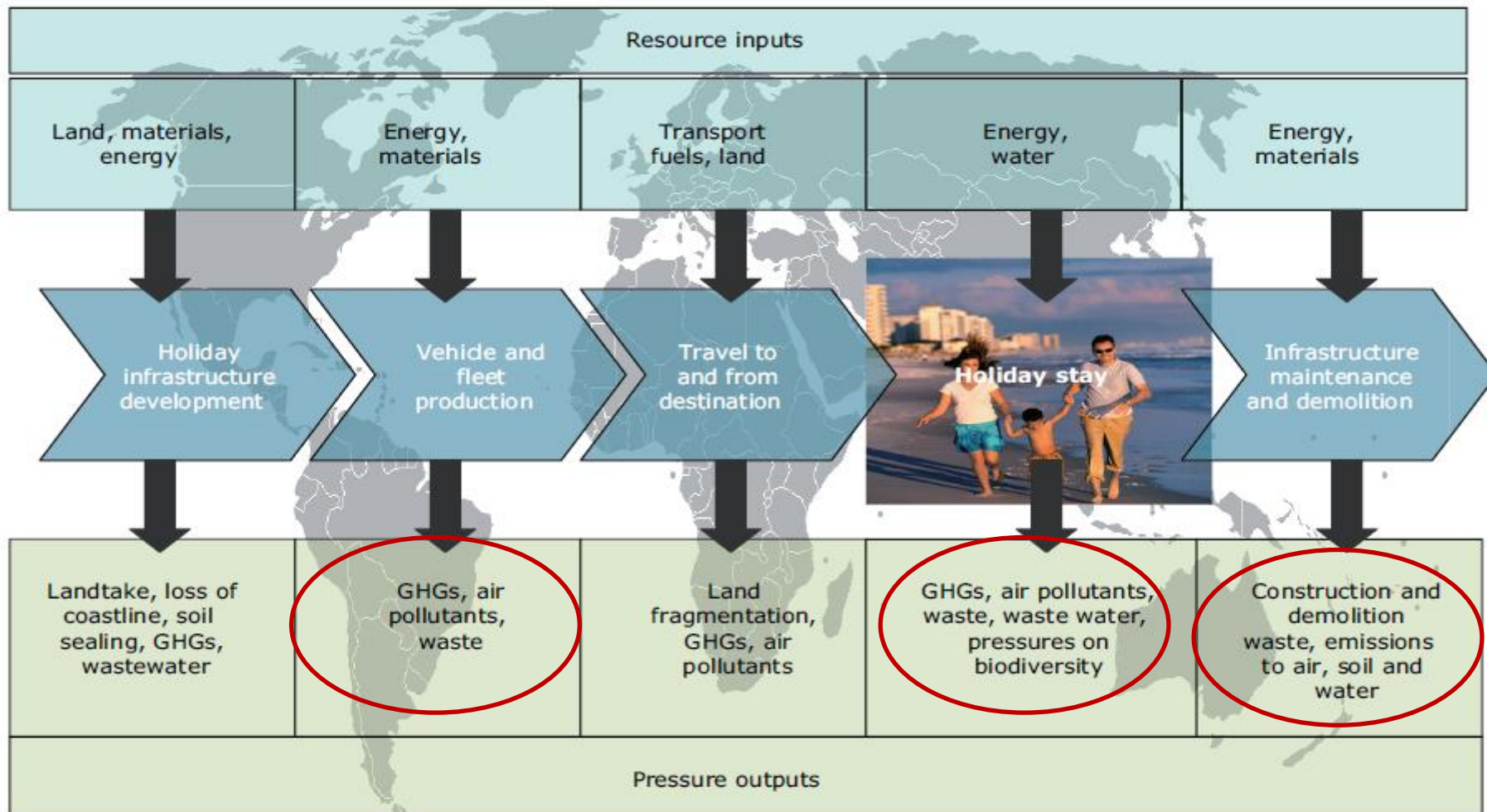


Source: Compiled by EEA-ETC/SCP.

Environmental Impacts of use of transport (EEA, 2012)



Environmental Impacts of tourism (EEA, 2012)

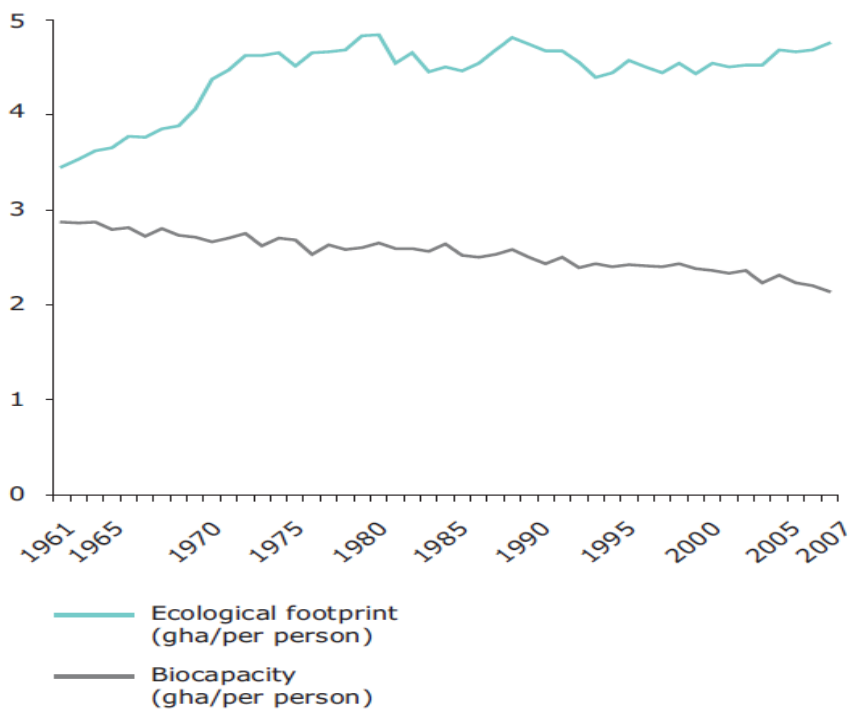


Source: Compiled by EEA-ETC/SCP.

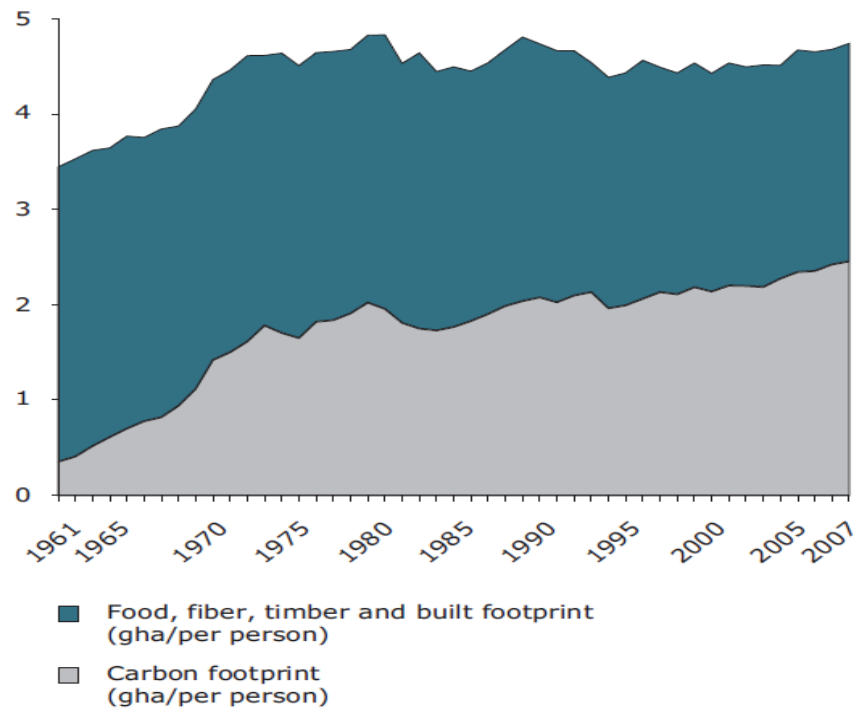
Evolution of the consumption patterns

Development of ecological footprint and available biocapacity per capita in EEA member countries

Global hectares per person

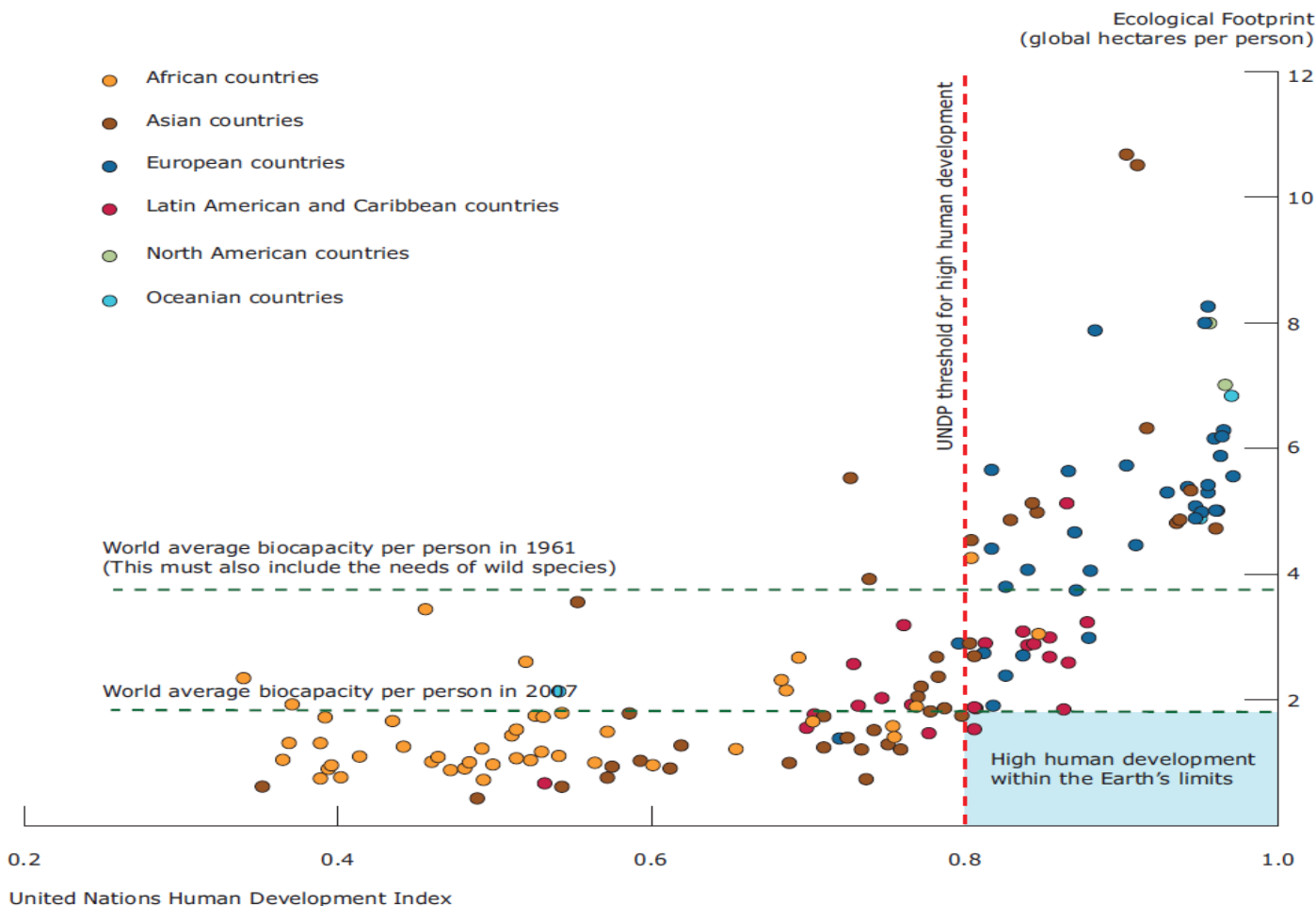


Global hectares per person



Source: Global Footprint Network, 2010a.

Human Development Index and ecological footprint



Note: Both HDI and EF data refer to 2007.

Source: Global Footprint Network, 2010b.

Waste facts...

- Altogether, the European Union produces up to 3 billion tonnes of waste every year.
- This waste has a huge impact on the environment, causing pollution and greenhouse gas emissions, as well as significant losses of materials.



EU waste management policies aim to:

1. reduce the environmental and health impacts of waste and improve Europe's resource efficiency.
2. the long-term goal is to turn Europe into a recycling society, avoiding waste and using unavoidable waste as a resource wherever possible.
3. achieve much higher levels of recycling and to minimize the extraction of additional natural resources.

Proper waste management is a key element in ensuring resource efficiency and the sustainable growth of European economies.



II. Waste Framework Directive



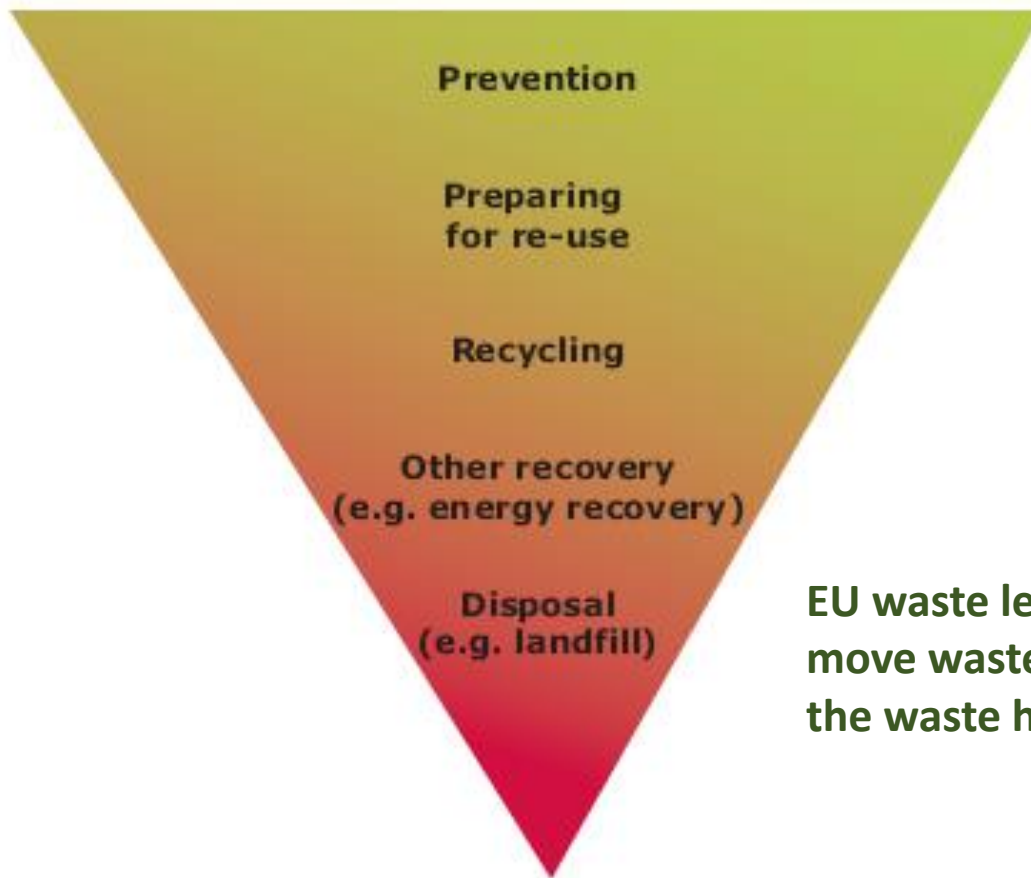
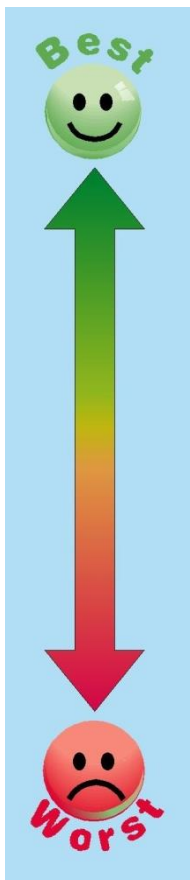


Waste framework directive 2008/98/EC

This Directive lays down measures to protect the environment and human health **by preventing or reducing** the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use.

- waste hierarchy with the prevention at its top - All actions need to encourage primary the prevention or reduction of waste production using cleaner and more efficient technologies;
- Besides the general environmental protection principles of precaution and sustainability, technical feasibility and economic viability need to be taken into account;

The EU waste hierarchy



EU waste legislation aims to move waste management up the waste hierarchy.

Source: ETC/SCP.



Waste framework directive (2008/98/EC) - **OBLIGATIONS**

A short overview shall be given which actions must be performed by the national governments

- ❖ Creation of one or more waste management plans as soon as possible (article 28);
- ❖ Sending a report to the Commission about the implementation every three years. (article 37);
- ❖ Ensuring separate collection of paper, metal, plastic and glass by 2015. (article 11);
- ❖ By 2020 at least 50% by weight of household waste must be re-used or recycled. (article 11);
- ❖ Creation of a waste prevention plan until December 2013.



Waste prevention (program)

Waste framework directive (2008/98/EC)

Member states should provide the following (by the end of 2011):

- ✓ 'an interim report on the evolution of waste generation and the **scope of waste prevention**, including the formulation of a product eco-design policy'
- ✓ 'formulation of an **action plan** for further support measures at European level seeking, in particular, **to change current consumption patterns**'

The setting of waste prevention and its "**decoupling from economic growth**" objective for 2020 must be available by end of 2014.



Waste prevention (program)

Waste framework directive (2008/98/EC)

The waste prevention program, which can be part of the waste management plan, has to be established until December 2013.

It must contain:

- a description of existing prevention measures and evaluation of usefulness
- appropriate specific qualitative of quantitative benchmarks for monitoring the progress towards the targets

The Commission will create a system for **sharing information on best practice regarding waste prevention (BAT)** and the political process linked to it.

Each nation has to evaluate and revise if appropriate its management plan and prevention program at least **every sixth year**.

The Waste Framework Directive has introduced the **concept of life-cycle** thinking into waste policies.

This approach gives a broader view of all environmental aspects and ensures any action has an overall benefit compared to other options.

It also means actions to deal with waste **should be compatible with other environmental initiatives.**



Good waste management begins with preventing waste being produced in the first place – after all, what is not produced does not have to be disposed of.

Key tools to encourage waste prevention:

- **eco-design**, which focuses on environmental aspects during the conception and design phase of a product.
- improving manufacturing methods and influencing consumers so that they demand **greener products and less packaging**.

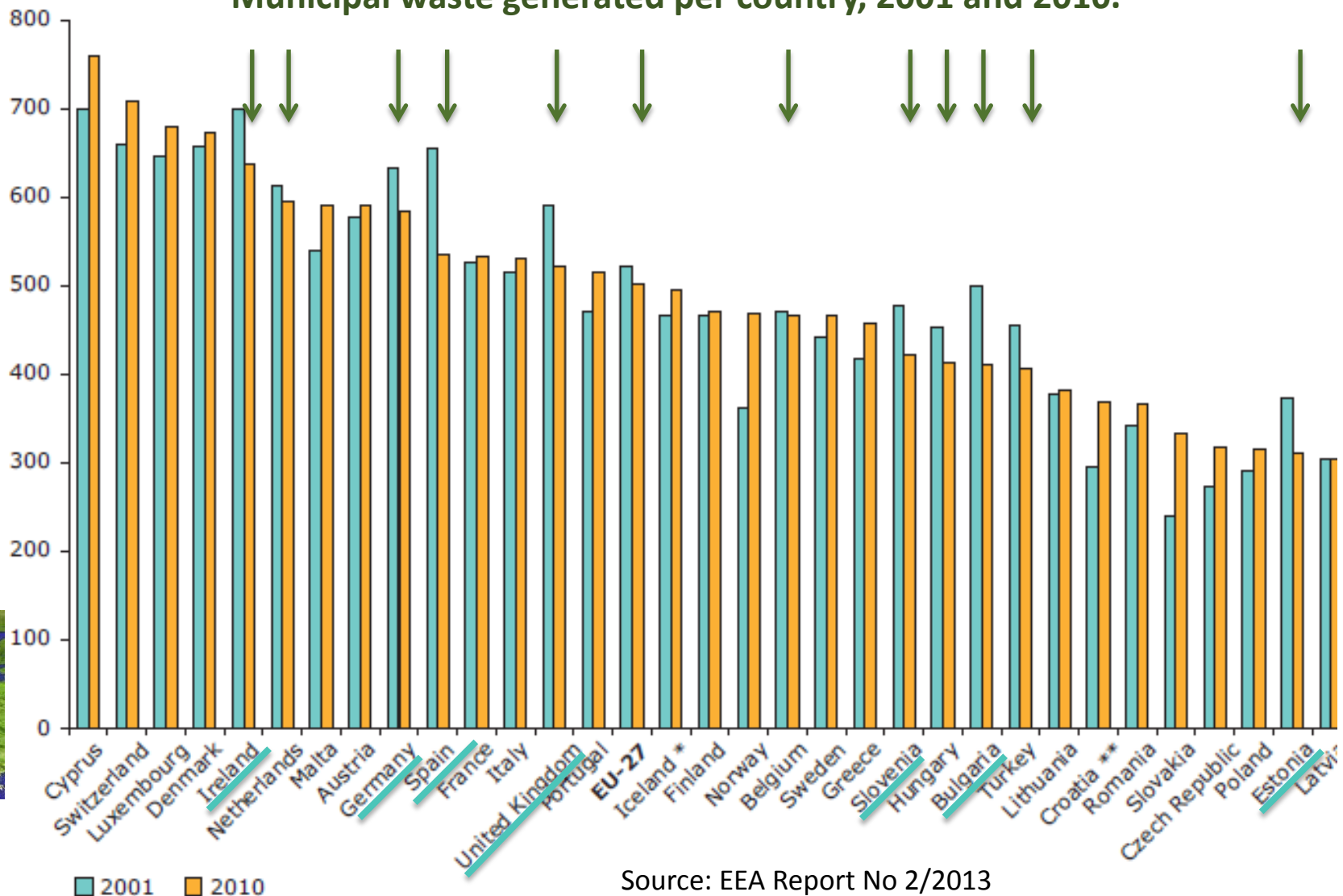
Many Member States are running **awareness-raising campaigns** to educate the public and encourage consumers to demand goods that produce less waste and drive the creation of a more resource-efficient market.



III. 1. Waste in Europe

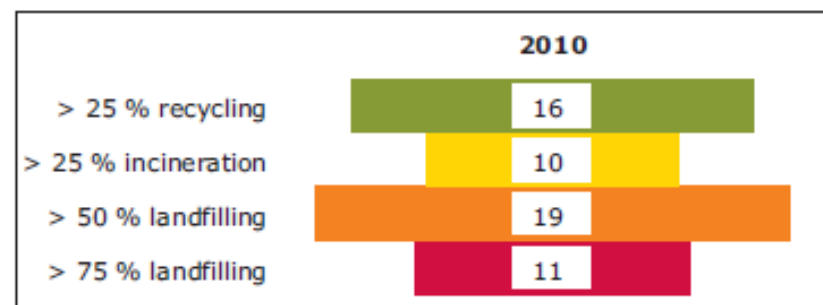
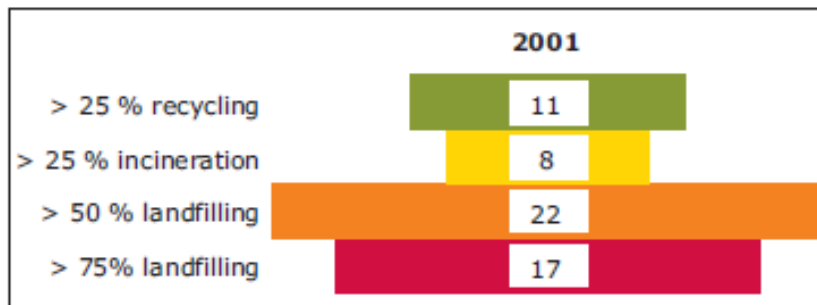
Kg per capita

Municipal waste generated per country, 2001 and 2010.



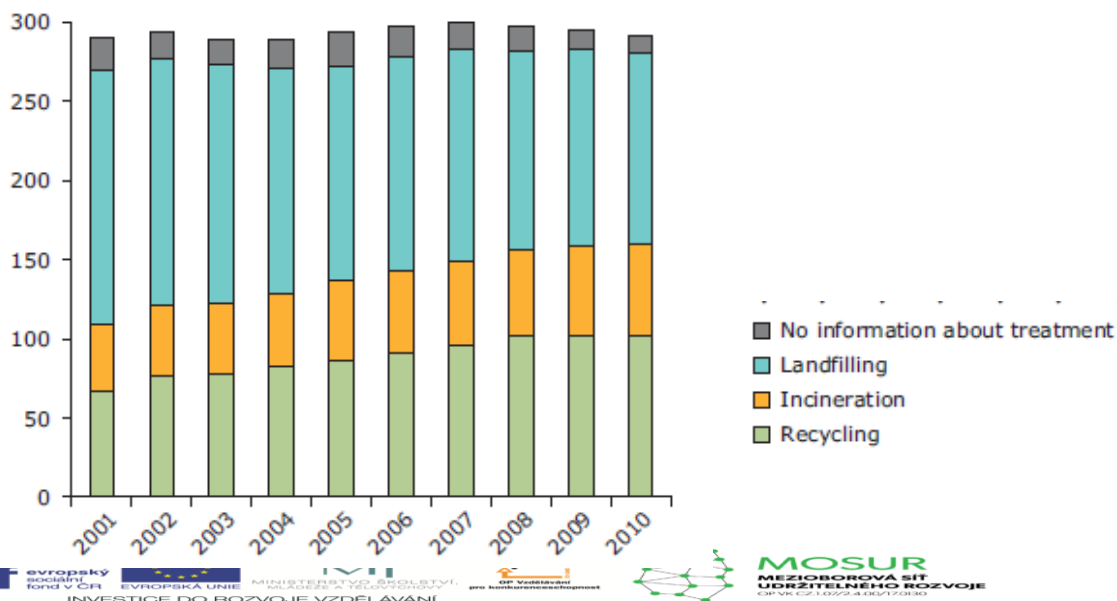
Source: EEA Report No 2/2013

Number of countries at different levels of the municipal waste management hierarchy, 2001 and 2010



Developed of municipal waste management in 32 European countries, 2001 - 2010

Million tonnes

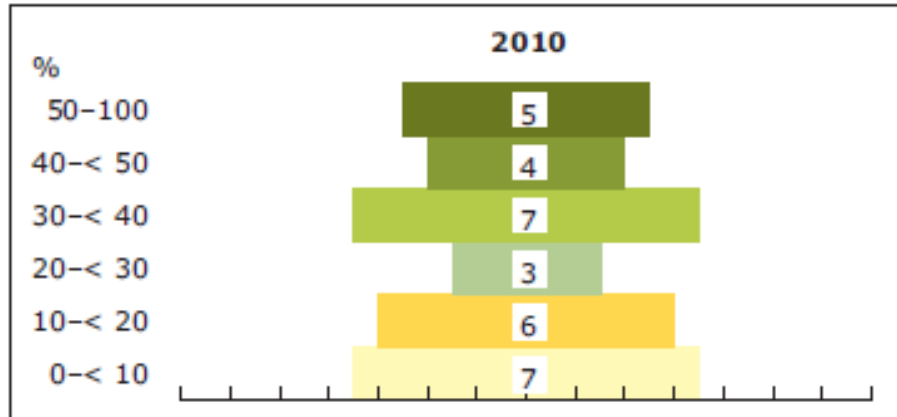
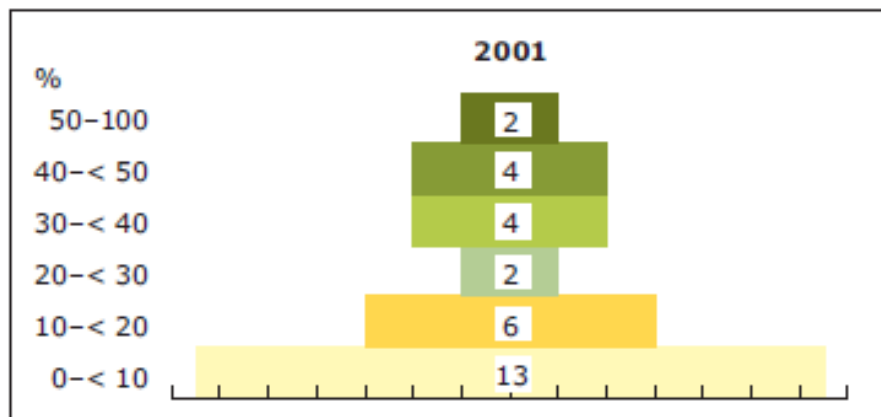


Source: EEA Report No 2/2013



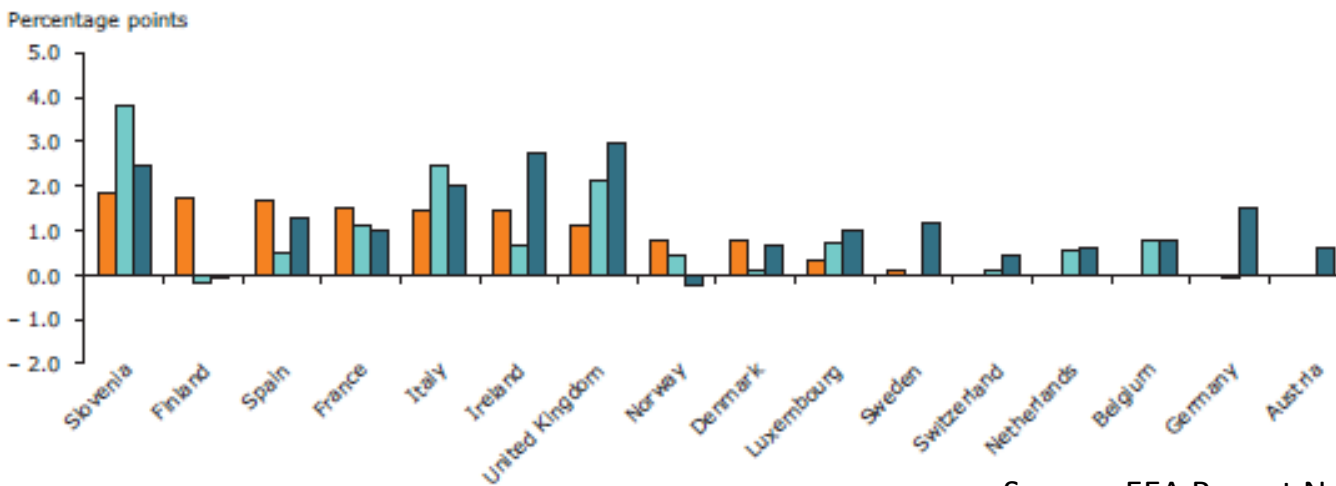
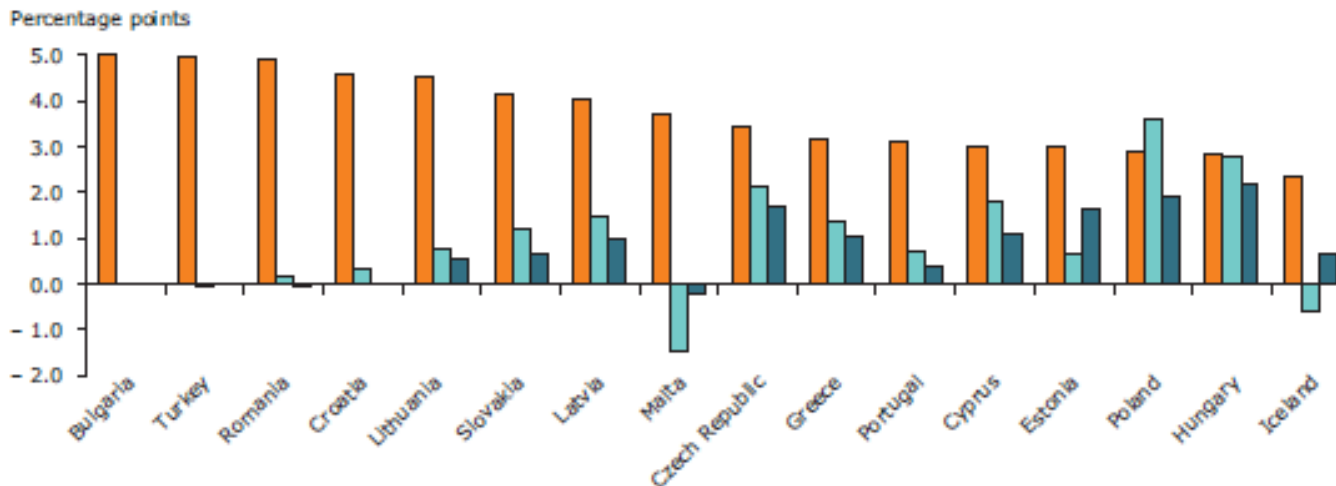
EVROPSKÁ UNIE
 MINISTERSTVO PRŮMYSLU,
 OBCHODU A TĚŽARSTVÍ
 INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

Progress of European countries up the recycling hierarchy (material and bio-waste recycling), 2001–2010



Source: EEA Report No 2/2013

Average annual percentage point increase needed in 32 European countries to reach 50 % recycling by 2020 and past rates achieved

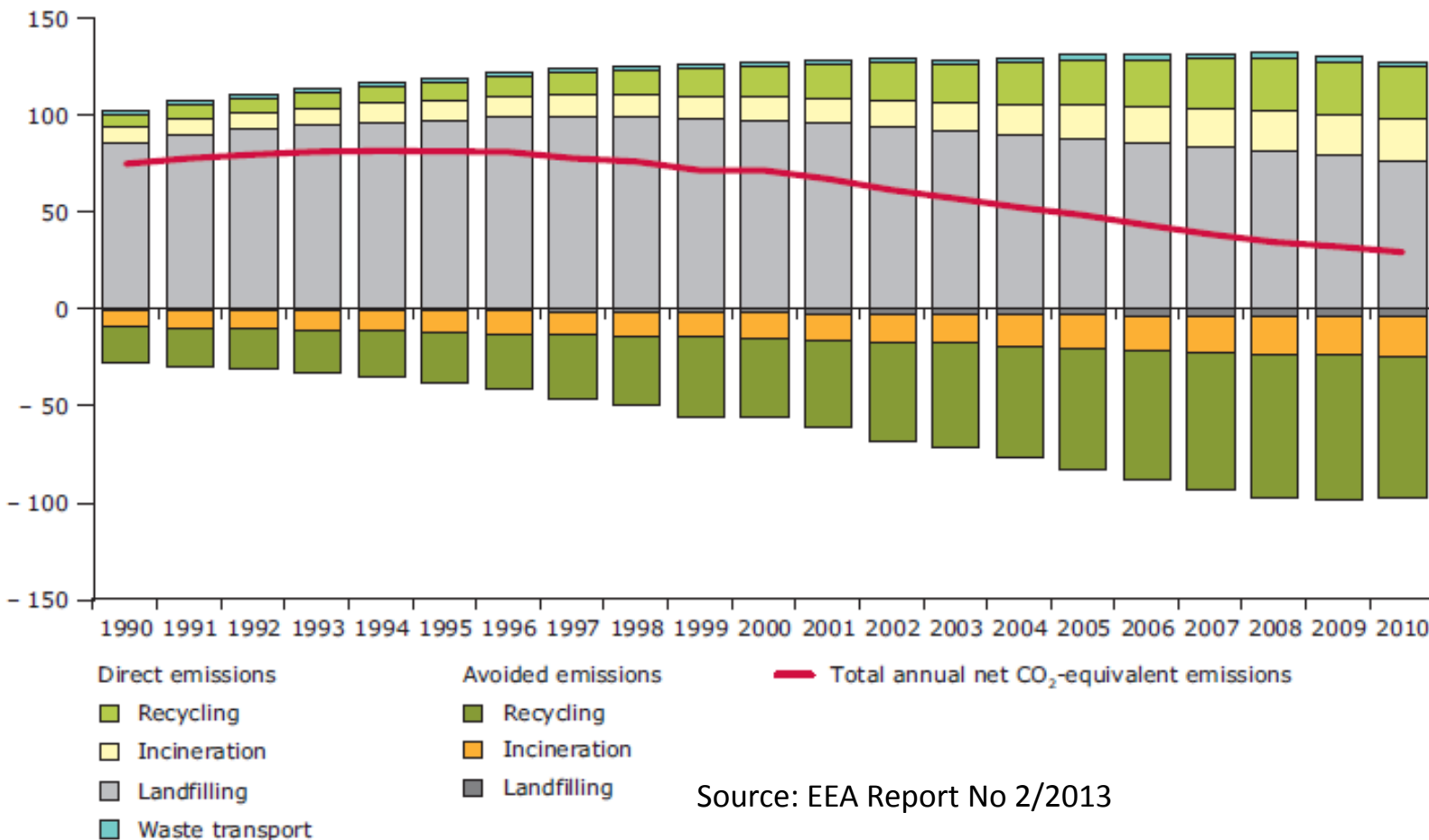


- Yearly increase in percentage point needed from 2010 to 2020
- Average annual percentage point increase between 2006 and 2010
- Average annual percentage point increase between 2001 and 2010

Source: EEA Report No 2/2013

GHG emissions from municipal waste management in the EU, Switzerland and Norway

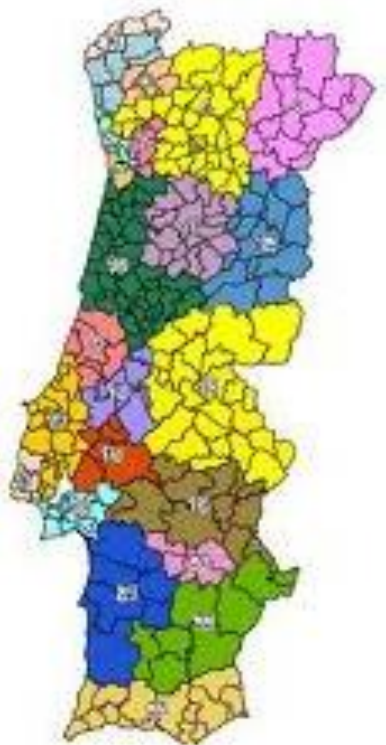
Million tonnes CO₂-equivalent



Source: EEA Report No 2/2013

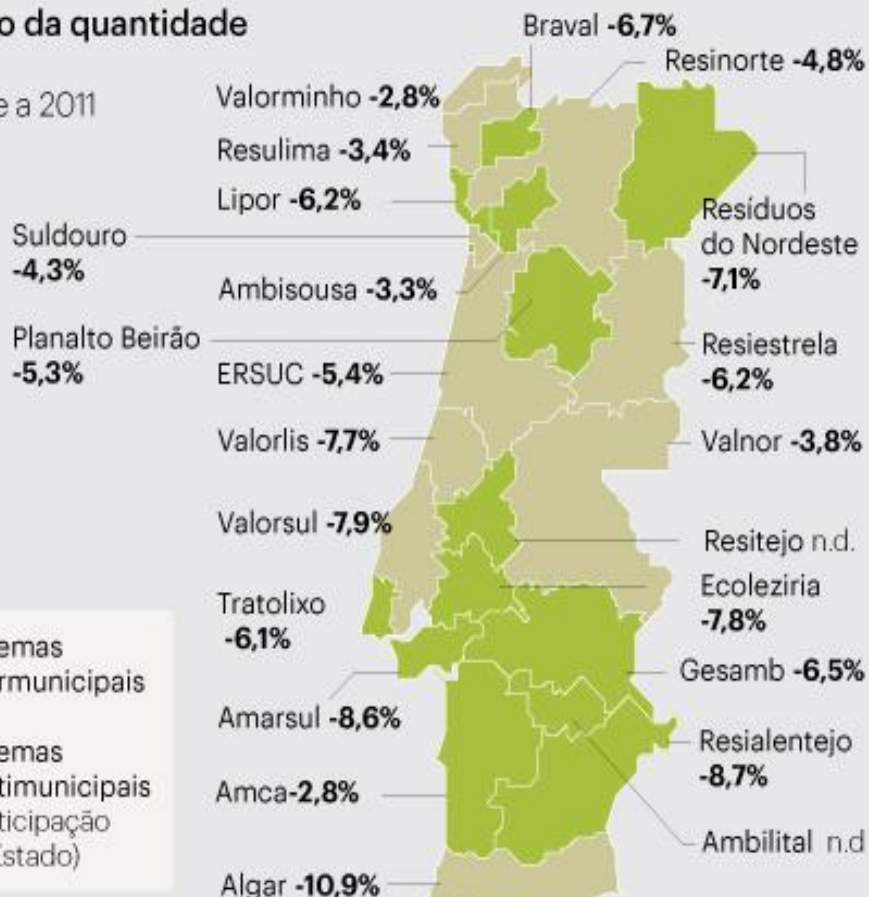


III.2 Waste in Portugal



Waste production in Portugal, 2012 compare to 2011.

Redução da quantidade de lixo 2012 face a 2011



Produção de resíduos no continente Milhões de toneladas



* Valor obtido por extrapolação dos dados de 21 sistemas de gestão de resíduos urbanos para o universo total de 23 sistemas do território continental.

Source: SPV

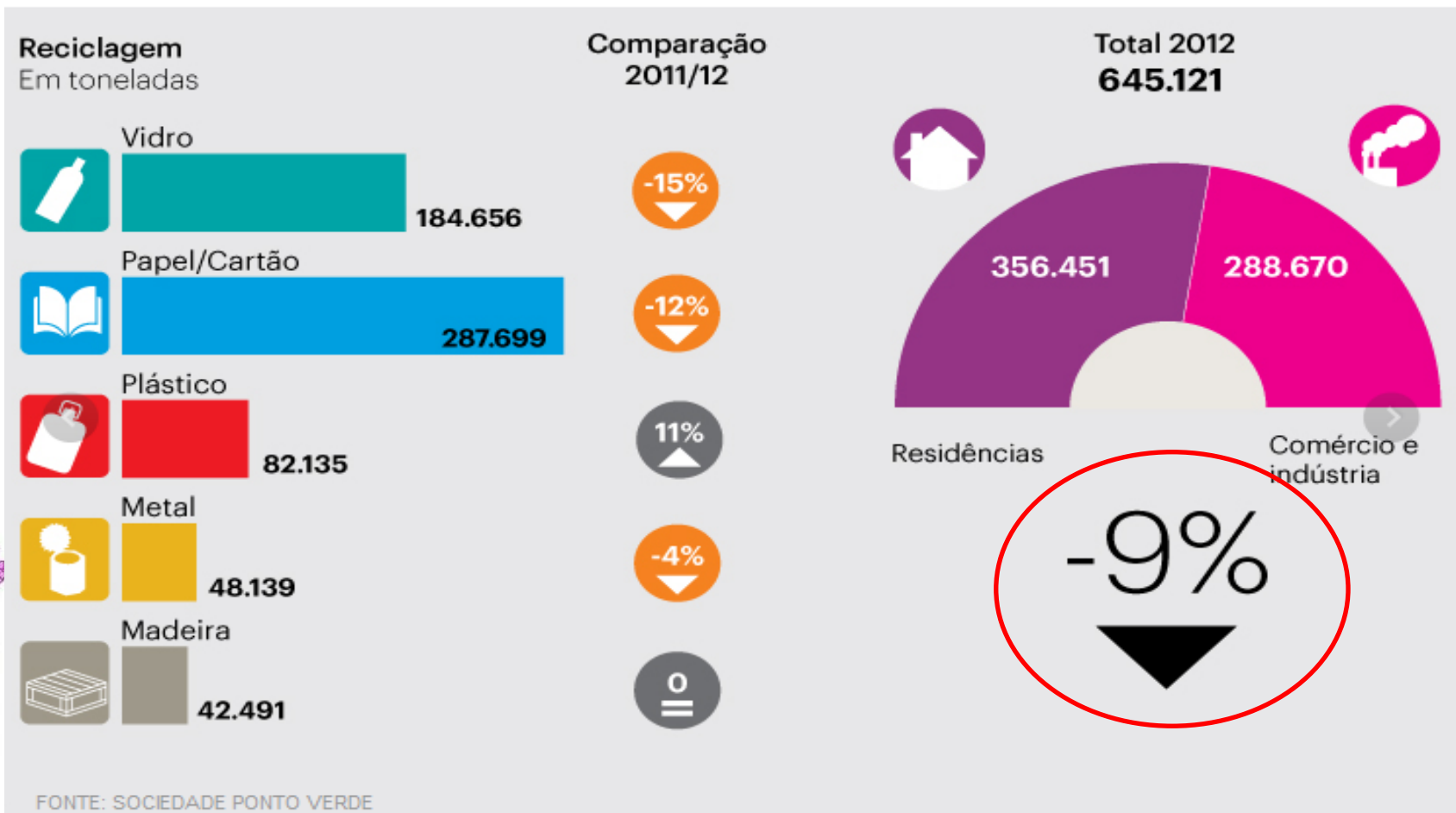
Waste production in Portugal, 2012 compare to 2011 and 2010.

Região	2010	2011	2012
Portugal Continental	5.184	4.888	4.525
Região Autónoma da Madeira	133	124	114
Região Autónoma dos Açores	147	147	143
Total	5.464	5.159	4.782
Variação face ao ano anterior	-	↓6%	↓7%

Source: APA, 2013



Material waste recycling in Portugal, 2012 compare to 2011.



Source: SPV

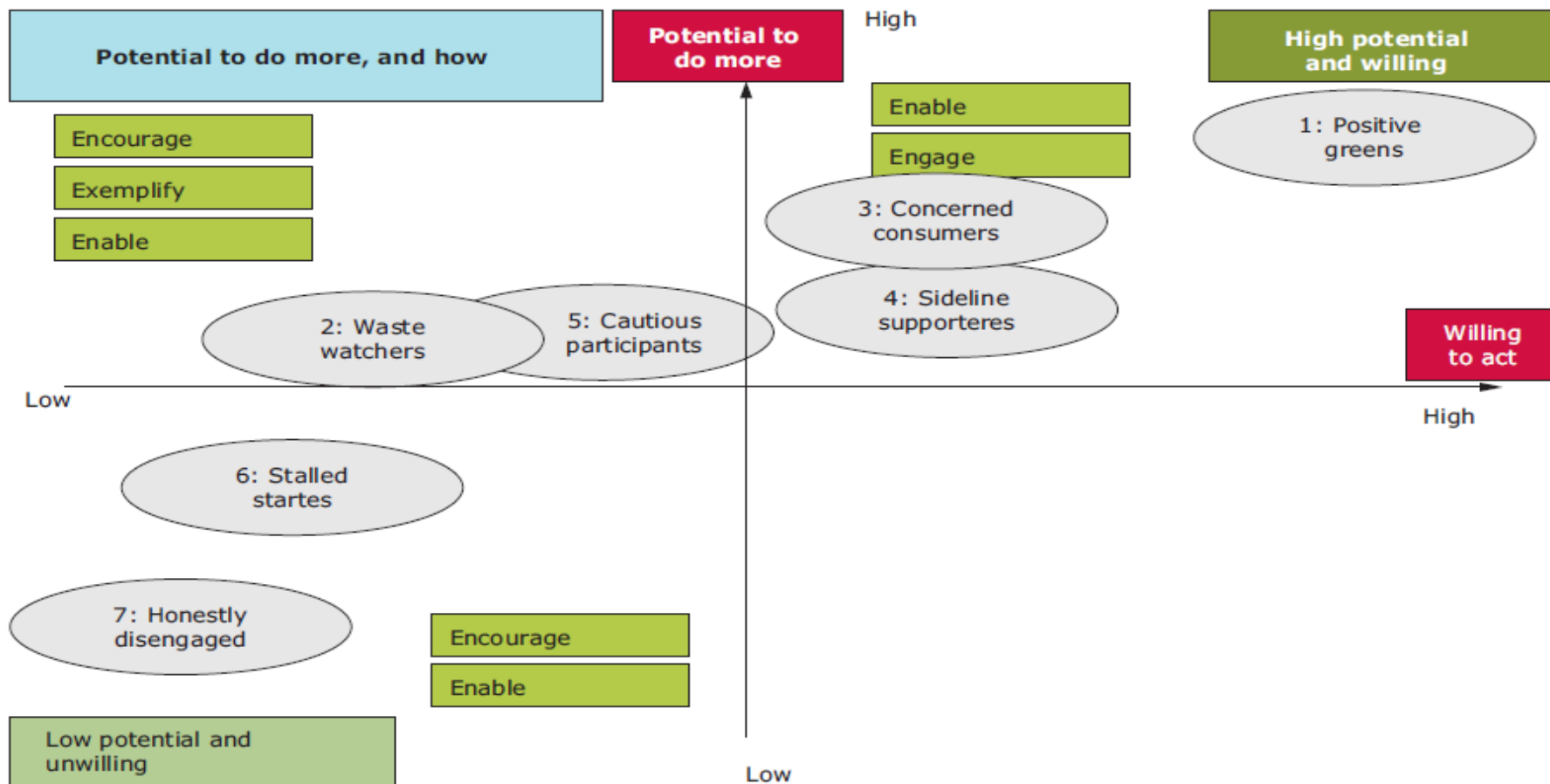


IV The way forward to waste prevention

The way forward for waste prevention

- Economic degrowth
- Technology and innovation
- Urbanization and its infrastructures
- Changing behavior (cultural values...)
- Type of consumers

Type of consumers (EEA, 2012)



Source: Defra, 2008.



What you can do...

Think before you buy!

1. Is the product recycled or recyclable?
2. Avoid packaging waste: food packaged into separate compartments or presented as a mini-kit is not only more expensive but also produces more waste.
3. Buy the amount of fresh food you will use and enjoy your leftovers by turning them into exciting new dishes.
4. Use reusable and high-quality batteries which last longer and produce less waste.
5. Reusable products are better than disposable products such as paper napkins, plastic razors and plastic cups.



What you can do...

Think before you throw!

6. Old clothing has all sorts of innovative uses. As well as raising money for charity, clothing can also be shredded and turned into packaging, insulation or raw material for textiles.
7. Paint and other waste can be taken to a specialised recycling centre.
8. Build a compost bin either in your garden or even a small one in your house.
9. Recyclable glass can be taken to your local bottle bank, but do not leave it in your car until your next trip as the added weight will increase both fuel use and emissions.
10. If you cannot give away or sell your old furniture, recycle it.