

### A: Doing more with less: improving resource efficiency

The amount of natural resources and products consumed by the UK economy has decreased by 10 per cent since 1970.

Between 1990 and 2002 the output of the economy increased by 31 per cent whilst energy consumption only increased by about 6 per cent. Household energy use has increased broadly in line with household growth.

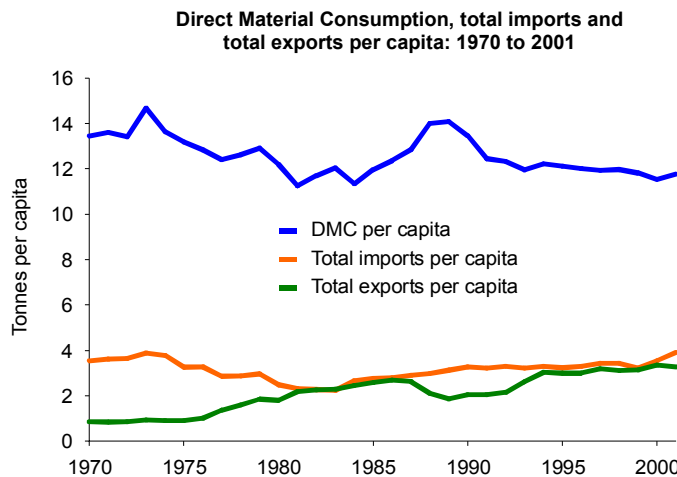
Over the last few years, household waste has grown by 2 to 3 per cent per year. In 2001-2, over half a tonne was generated per person. The proportion recycled has risen from 9 per cent in 1998-9 to 12 per cent in 2001-2. A total of 75 million tonnes of waste was generated by industry and commerce in England and Wales in 1998-9. Industry recycled 45 per cent of its waste and commerce recycled around a quarter.

Between 1990 and 2001, aluminium can recycling increased from 5 per cent to over 40 per cent of cans consumed. The rate of paper recycling increased from 32 per cent to 37 per cent of consumed material.

Ref. no.	Indicator		QOLC 1999		QOLC Updated Assessment		
			Change since		Change since		
			1970	1990	1970	1990	Strategy
A1	UK resource use <sup>†</sup>		☹	☹	☑	☑	≈
A2	Energy efficiency of economy		☑	☑	☑	☑	☑
A3	Energy use per household		≈	≈	≈	≈	≈
H15	Waste (headline)	Waste arisings & management	☹	☹	☹	☹	≈
A4	Waste by sector <sup>†</sup>		☹	☹	☹	☹	☹
A5	Household waste and recycling	Waste arisings	☹	☹	☹	☹	☹
		Recycling	☹	☑	☹	☑	☑
A6	Materials recycling	Scrap metal	☹	≈	☹	≈	≈
		Paper & board	☹	☑	☹	☑	≈
		Glass	☹	☑	☹	☑	☑
A7	Hazardous waste		☹	≈	☹	☹	≈

**Indicator: UK resource use<sup>†</sup>**

**A1**



Change since

- ✔ 1970
- ✔ 1990
- ≈ 1997

<sup>†</sup> New since QoLC (1999)

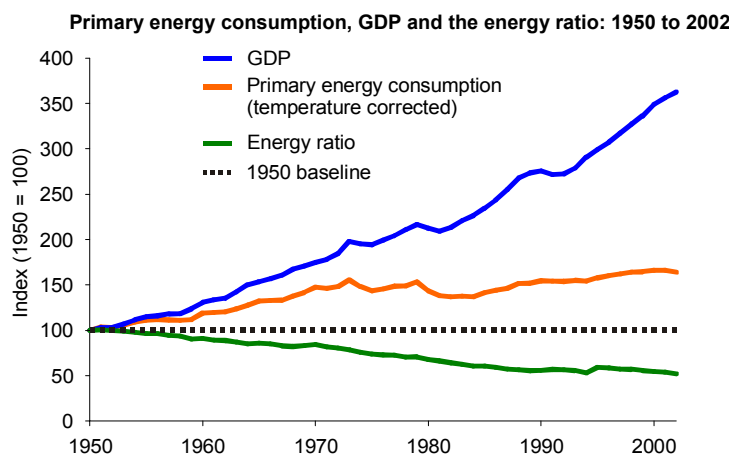
United Kingdom  
Source: ONS

Objective: Greater resource efficiency

- Direct material consumption (DMC) measures the amount of natural resources and products directly consumed by the UK economy by adding together the mass of materials used. It includes all renewable and non-renewable natural resources (except water) extracted domestically or abroad and imported for UK consumption, but excludes exported goods.
- Since 1970, despite fluctuations DMC has decreased by about 10 per cent. Imports have remained roughly constant, while exports have tripled over the same period.

**Indicator: Energy efficiency of economy**

**A2**



Change since

- ✔ 1970
- ✔ 1990
- ✔ 1998

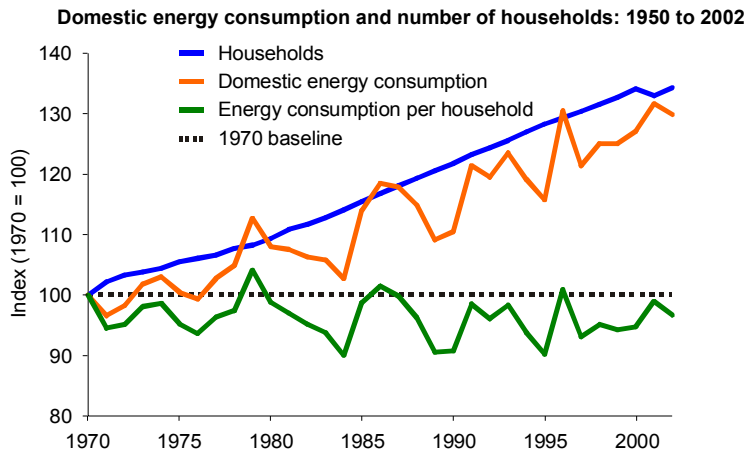
United Kingdom  
Source: DTI, ONS

Objective: Energy efficiency of the economy

- Between 1990 and 2002, the output of the economy increased by 31 per cent whilst energy consumption only increased by about 6 per cent.
- Energy consumption per unit of GDP (the energy ratio) has fallen over the same period by 19 per cent.
- In 2002 the Energy ratio was 10 per cent lower than its level in 1998.

**Indicator: Energy use per household**

**A3**



Change since

- 1970
- 1990
- 1997

United Kingdom  
Source: DTI, ODPM, BRE

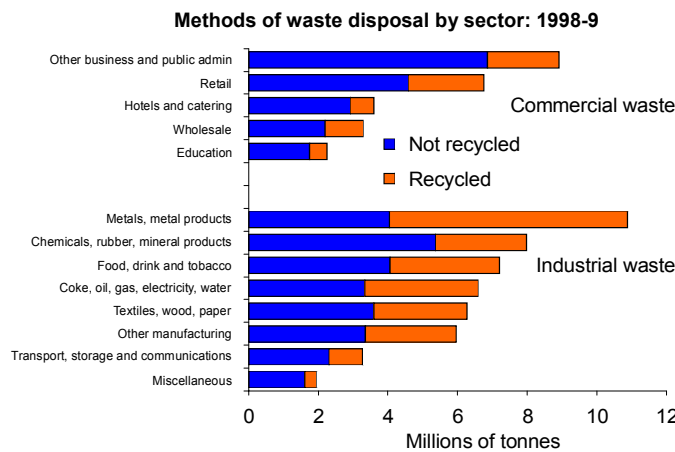
Note: Estimates for households for 2001 and 2002 are based on mid-year population estimates that take into account 2001 Census results. Estimates for 1982 onwards are subject to revision following revisions to population estimates, hence the apparent fall in numbers of households

Objective: Energy efficiency of the economy

- Energy use per household has fluctuated between +4 and -10 per cent of the 1970 level, and there has been no clear change. Household energy use has therefore increased broadly in line with household growth.
- Temperature changes from year to year cause variations in household energy use. For example, energy use per household was 8 per cent lower in 1997 than in 1996 (which had a colder winter).

**Indicator: Waste by sector†**

**A4**



Change since

- 1970
- 1990
- Strategy

† New since QoLC (1999)

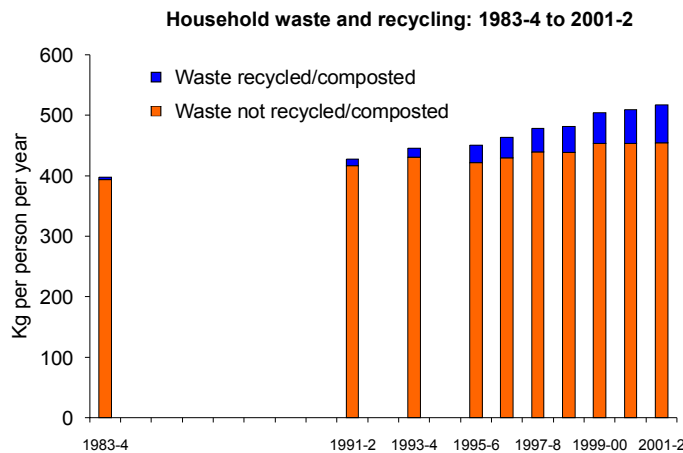
England and Wales  
Source: Environment Agency

Objective: Move away from disposal of waste towards waste reduction, reuse, recycling and recovery

- A total of 75 million tonnes of waste was generated by industry and commerce in England and Wales in 1998-9.
- Industry produced about twice as much waste as commerce but it also recycled more; industry recycled 45 per cent of the estimated 50 million tonnes of waste it generated, while commerce recycled about a quarter of its estimated 25 million tonnes.

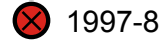
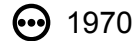
**Indicator: Household waste and recycling**

**A5**



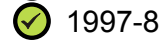
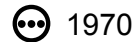
**Waste arisings**

Change since



**Recycling**

Change since



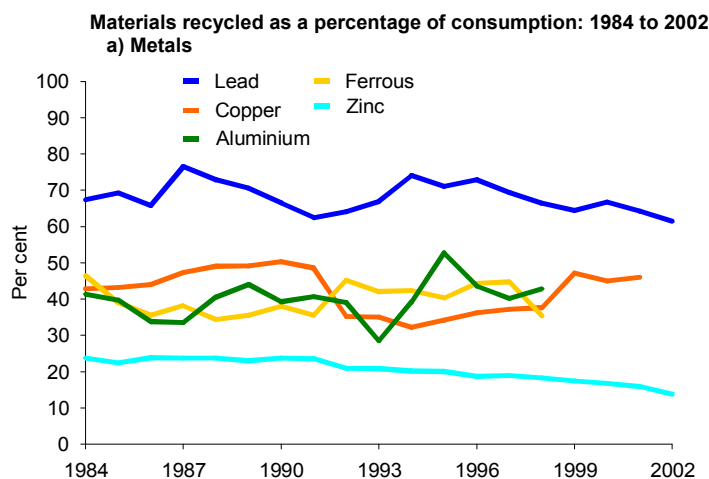
England and Wales  
Source: Defra, EA

**Objective:** Move away from disposal of waste towards waste reduction, reuse, recycling and recovery

- Recently, household waste has grown by 2 to 3 per cent per year. In 2001-2, over half a tonne was generated per person. Whilst the total has increased, so has the proportion recycled; from 9 per cent in 1998-9 to 12 per cent in 2001-2.
- Despite the fact that non-recycled waste represents a decreasing proportion of all waste, overall increases in waste generation mean that the actual amount still increased by about 4 per cent between 1998-9 and 2001-2. The majority of this was disposed to landfill.

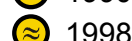
**Indicator: Materials recycling**

**A6**



**Scrap metal**

Change since



United Kingdom  
Source: British Steel et al<sup>1</sup>

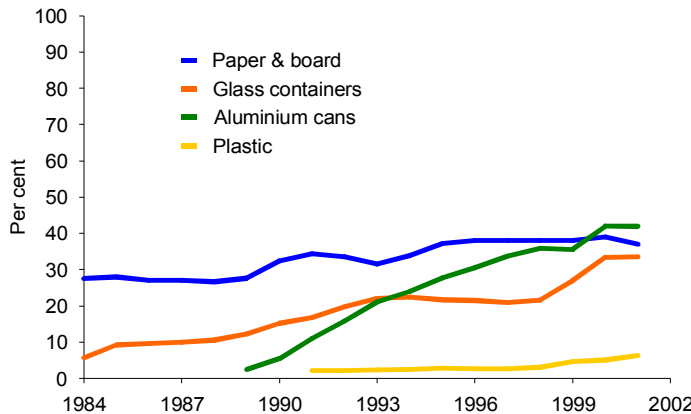
**Objective:** Move away from disposal of waste towards waste reduction, reuse, recycling and recovery

- Trends in recycling rates vary with scrap metal type. The recycling rate for copper increased by about a fifth between 1998 and 2001, but recycling rates for both zinc and lead fell (1998 – 2002: by nearly a quarter and 7 per cent respectively).

**Indicator: Materials Recycling (continued)**

**A6**

Materials recycled as a percentage of consumption: 1984 to 2001  
b) Other materials



**Paper and board**

Change since



**Glass**

Change since



United Kingdom  
Source: Defra et al<sup>ii</sup>

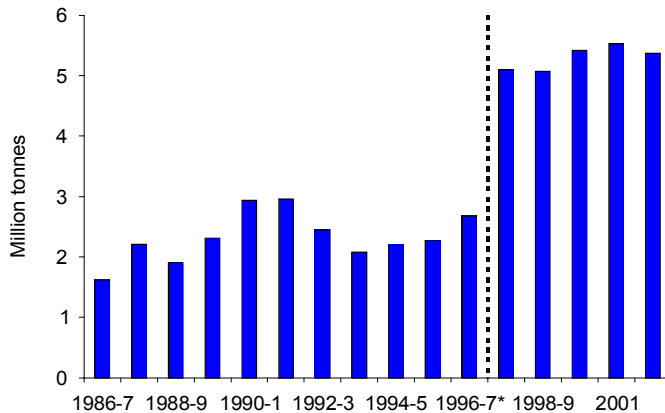
**Objective:** Move away from disposal of waste towards waste reduction, reuse, recycling and recovery

- Between 1990 and 2001, aluminium can recycling increased from 5 per cent to over 40 per cent of cans consumed. The rate of paper recycling increased from 32 per cent to 37 per cent of consumed material.

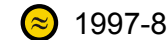
**Indicator: Hazardous waste**

**A7**

Special waste arisings: 1986-7 to 2001



Change since



United Kingdom  
Source: Environment Agency

Note: \* The definition of special waste changed in October 1996.

**Objective:** Move away from disposal of waste towards waste reduction, reuse, recycling and recovery

- Prior to 1997-8, the amount of hazardous waste generated was between 2 and 3 million tonnes per year.
- The definition of hazardous waste was extended in 1996 to include further waste types such as waste oil. Since then the level of waste generation has stayed roughly constant at between 5 and 5.5 million tonnes per year.

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Additional Notes

- i. World Bureau of Metal Statistics, Iron and Steel Statistics Bureau, Aluminium Federation
- ii. Paper Federation of Great Britain Ltd, British Glass Manufacturers Confederation & British Glass, Aluminium Can Recycling Association; British Plastics Federation