

## **Indicators providing further analysis**

In addition to the 147 headline and core indicators there are 16 indicators that provide further analysis by looking at relationships between issues and examines whether they have been uncoupled. In particular, the indicators look more closely at the inter-play between economic, social and environment trends.

### **Energy**

Between 1970 and 2002, GDP increased by 107 per cent while energy consumption only increased by 11 per cent. In general, energy consumption has risen much more slowly than GDP.

There has been some success in uncoupling energy consumption from carbon dioxide emissions, mainly because of a switch from coal and oil to gas and nuclear power in power stations.

### **Households**

Between 1970 and 2002, domestic energy consumption rose by 30 per cent, roughly in line with the number of households which rose by 34 per cent.

Between 1990 and 2001, household numbers increased by 9 per cent, while household waste increased by 26 per cent and household water use decreased by 8 per cent.

### **Industry**

Since 1970, output (Gross Value Added) from the industrial sector has risen by almost 50 per cent, while its energy use, water use, CO<sub>2</sub> emissions and NO<sub>x</sub> emissions have all fallen by between 40 and 55 per cent and its SO<sub>2</sub> emissions have fallen by 85 per cent. Employment in the sector fell by about 50 per cent.

Since 1998, the number of employees in the industrial sector has fallen by 14 per cent while output has increased by about 1 per cent.

### **Services**

Between 1978 and 2002, service sector Gross Valued Added increased by 92 per cent while employment increased by 42 per cent.

Since 1998, service sector GVA and employment have experienced increases of 13 per cent and 8 per cent respectively, while energy consumption and CO<sub>2</sub> emissions have both decreased by 7 per cent.

### **Transport**

Between 1970 and 2002, road traffic increased by 142 per cent and GDP by 107 per cent. Carbon dioxide emissions from road transport had increased by 130 per cent by 2001.

Since 1974, car passenger travel has almost doubled, while the cost of travelling by car has changed relatively little.

The total weight of goods carried by road has changed relatively little since 1970, but freight traffic (tonne kilometres) has risen by 85 per cent and the energy consumed in transporting goods by 144 per cent. This reflects transportation over greater distances, and of bulkier, but less dense goods - offsetting efficiencies such as the use of large articulated vehicles.

### **Agriculture**

Farmland bird populations fell by 50 per cent between 1974 and 1998, while output rose by 23 per cent and fertiliser use by 44 per cent.

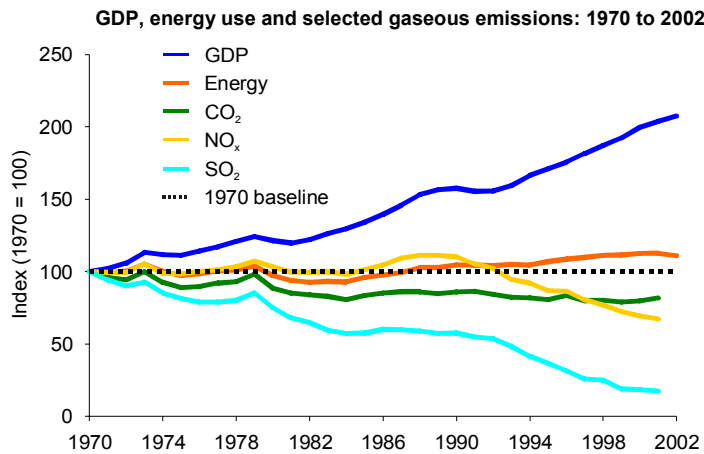
Fertiliser use, volume output and employment have fallen since the mid-1990s, while hedgerow loss has been halted and farmland bird populations have shown signs of stabilising.

### **Poverty and social exclusion**

There has been a steady rise in the proportion of people earning less than average income since the late 1970s. By 2001 about 65 per cent of people fell into this category.

The proportion of people with low incomes (those with less than 40 - 60 per cent of average income) increased markedly during the latter half of the 1980s but has remained roughly constant since 1990. In 2001, 29 per cent of people earned less than 60 per cent of average income, 19 per cent earned less than half of average income, and 9 per cent earned less than 40 per cent of average income.

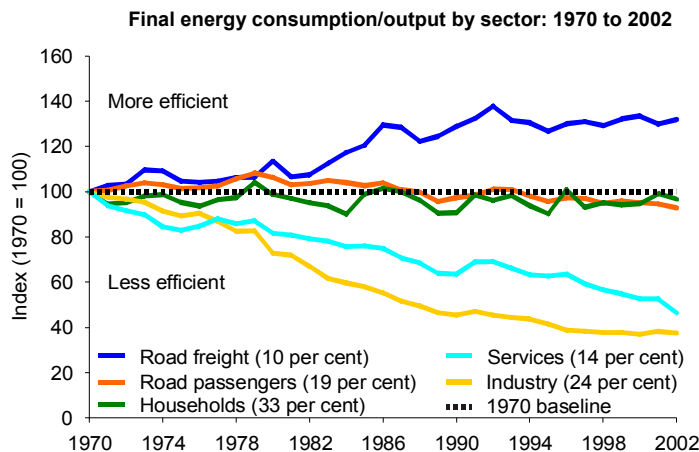
**Indicator: Uncoupling economic growth from energy consumption and environmental impacts** **a**



Coverage: United Kingdom  
 Source: DTI, ONS, NETCEN

- Between 1970 and 2002, GDP increased by 107 per cent while energy consumption only increased by 11 per cent. In general, energy consumption has risen much more slowly than GDP.
- There has been some success in uncoupling energy consumption from carbon dioxide emissions, mainly because of a switch from coal and oil to gas and nuclear power in power stations.

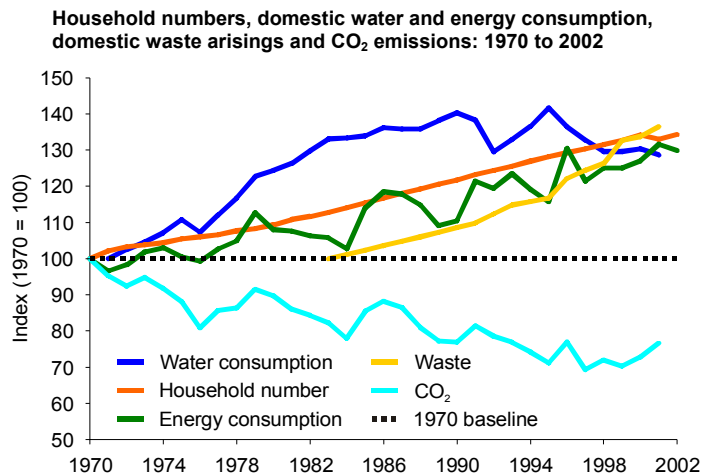
**Indicator: Sectoral final energy consumption/output<sup>1</sup>** **b**



Notes: 1. Road freight output is freight tonne kms; road passenger output is passenger kms; output for services and industries are the value added by that sector; household “efficiency” is domestic energy consumed per household. Percentage in brackets is percentage share of total energy consumption.

Coverage: United Kingdom, except road passengers and road freight which are Great Britain  
 Source: DfT, DTI, ONS, BRE

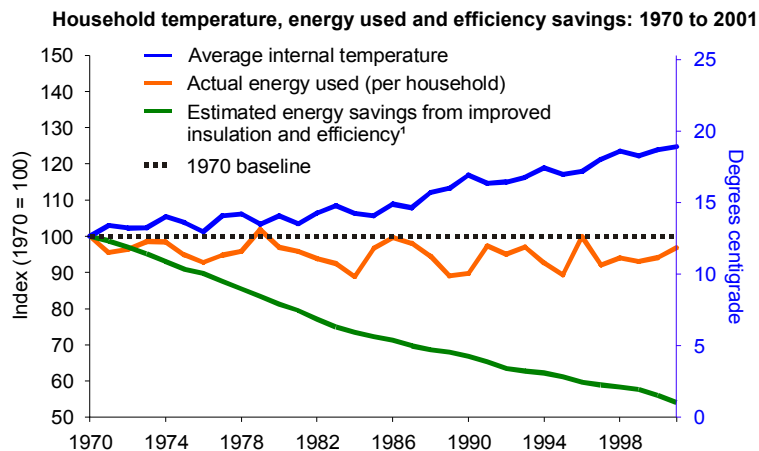
- Between 1970 and 2002, there were large improvements in energy efficiency in both industrial (62 per cent) and service (62 per cent) sectors.
- Over the same period, road freight energy efficiency declined by 32 per cent.
- Since 1998, only the service sector has shown a significant change in energy efficiency; an improvement of 18 per cent.

**Indicator: Environmental impacts of households****c**

Coverage: United Kingdom

Source: DTI, ODPM, Ofwat, NETCEN

- Between 1970 and 2002, domestic energy consumption rose by 30 per cent, roughly in line with the number of households which rose by 34 per cent.
- Between 1990 and 2001, household numbers increased by 9 per cent, while household waste increased by 26 per cent and household water use decreased by 8 per cent.

**Indicator: Household energy use and efficiency****d**

Note: 1. Calculated as actual energy use divided by the energy that would have been used if 1970 insulation efficiency standards had been maintained.

Coverage: Great Britain

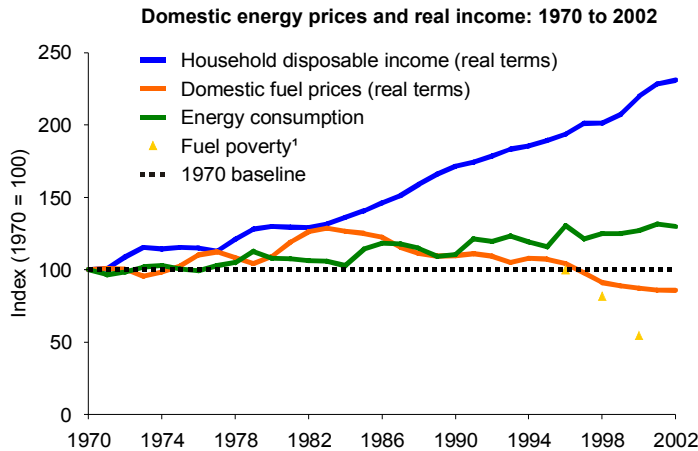
Source: BRE

- Between 1970 and 2001, the average internal temperature of a household has increased from 13 °C to 19 °C.
- In the same period there have been improvements in insulation and efficiency that have meant that the actual energy used per household remained relatively constant.

Further analysis: 4

**Indicator: Domestic energy prices and real income**

e



Note: 1. Index for fuel poverty (1996 = 100)

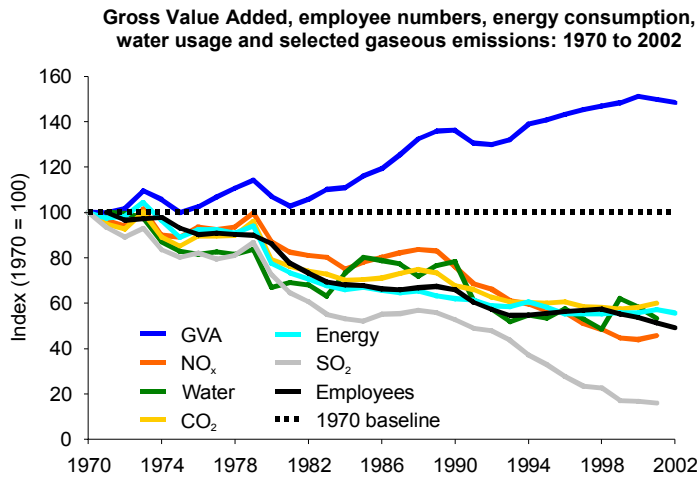
Coverage: United Kingdom

Source: DTI, ONS

- Energy prices have fallen in real terms since the early 1980s, while real incomes have on average been rising.
- The number of households in fuel poverty has fallen from 5.5 million in 1996 to 3.0 million in 2001.

**Indicator: Industrial sector: output, employees, energy consumption and environmental impacts**

f

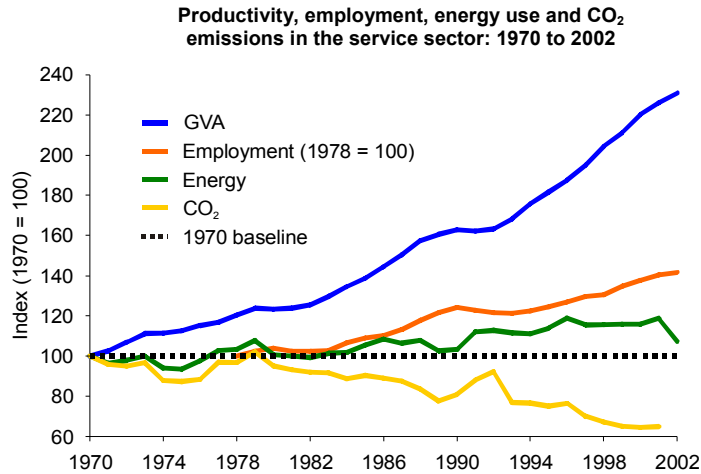


Coverage: United Kingdom

Source: ONS, DTI, OFWAT, EA, NETCEN

- Since 1970, output (GVA) from the industrial sector has risen by almost 50 per cent, while its energy use, water use, CO<sub>2</sub> emissions and NO<sub>x</sub> emissions have all fallen by between 40 and 55 per cent and its SO<sub>2</sub> emissions have fallen by 85 per cent. Employment in the sector fell by about 50 per cent.
- Since 1998, the number of employees in the industrial sector has fallen by 14 per cent while output has increased by about 1 per cent.

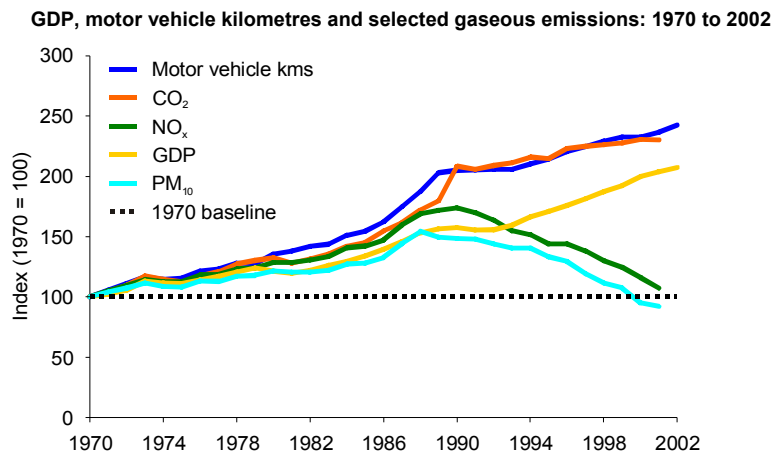
**Indicator: Services sector: output, employment, energy consumption and CO<sub>2</sub>** **g**



Coverage: United Kingdom  
Source: DTI, ONS, NETCEN

- Between 1978 and 2002, service sector Gross Valued Added (GVA) increased by 92 per cent, whilst employment in the sector increased by 42 per cent.
- Since 1998, service sector GVA and employment have experienced increases of 13 per cent and 8 per cent respectively, while energy consumption and CO<sub>2</sub> emissions have both decreased by 7 per cent.

**Indicator: Uncoupling road traffic from economic growth and environmental impacts** **h**

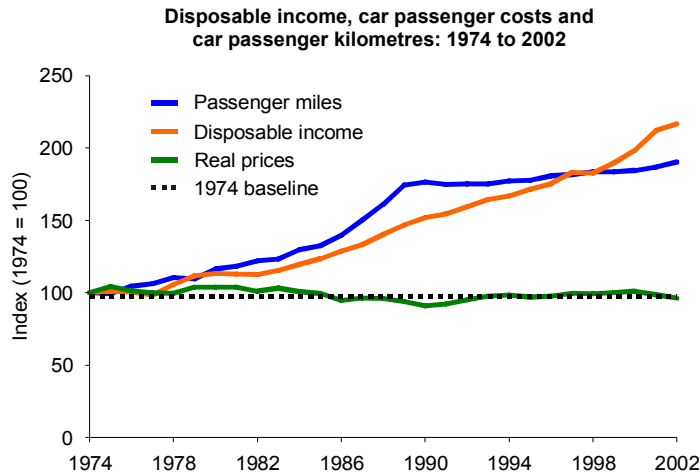


Coverage: United Kingdom, except motor vehicle kms (Great Britain)  
Source: DfT, ONS, NETCEN

- Between 1970 and 2002, road traffic increased by 142 per cent and GDP by 107 per cent. Carbon dioxide emissions attributable to road transport had increased by 130 per cent by 2001.
- Both nitrogen oxides (NO<sub>x</sub>) and particulate (PM<sub>10</sub>) emissions attributable to road transport have decreased since the late 1980s. In 2001, NO<sub>x</sub> emissions were still 7 per cent above their 1970 level but PM<sub>10</sub> emissions were 8 per cent below their 1970 level.

**Indicator: Personal travel (cars)**

**j(i)**

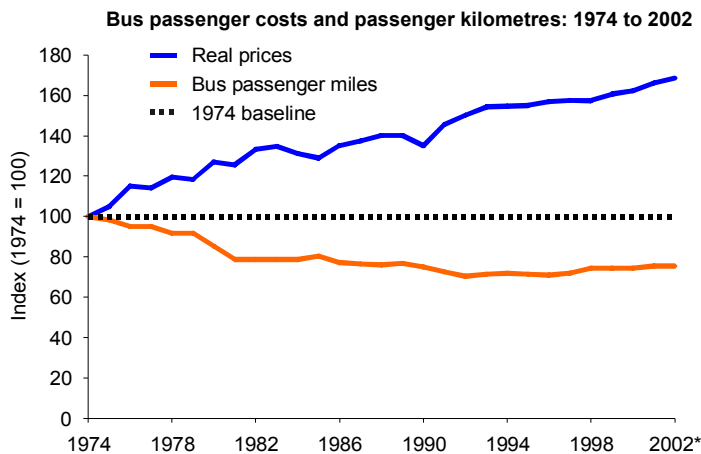


Coverage: United Kingdom, except car passenger kilometres (Great Britain)  
 Source: ONS, DfT

- Since 1974, car passenger travel has almost doubled, while the cost of travelling by car has changed relatively little.
- There has been little change in either car passenger travel or its cost since 1998, but disposable incomes have risen by 19 per cent.

**Indicator: Personal travel (buses)**

**j(ii)**



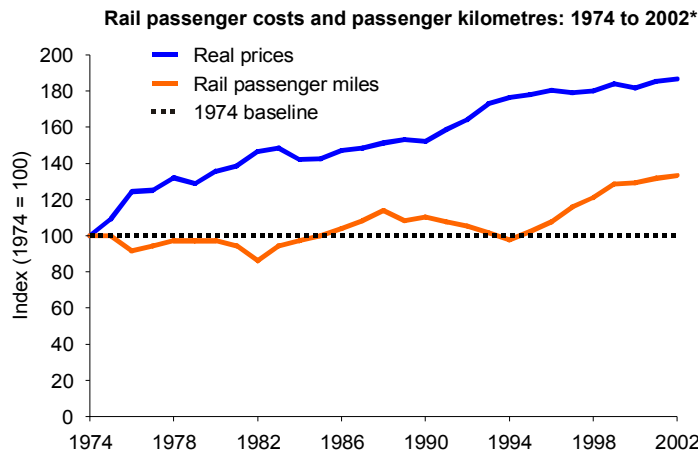
Note: \* 2002 figure for passenger miles is provisional

Coverage: United Kingdom (real prices) and Great Britain (bus passenger kilometres)  
 Source: ONS, DfT

- The real cost of travelling by bus has increased by 69 per cent since 1974 and by 7 per cent since 1998.
- Bus passenger travel declined between 1974 and 1992, since when there has been a modest increase. In 2002, passenger mileages were 25 per cent below the 1974 level, compared with 30 per cent below in 1992 and 26 per cent below in 1998.

**Indicator: Personal travel (rail)**

**j(iii)**



Note: \* Financial years. Includes National Rail, urban metros and modern trams.

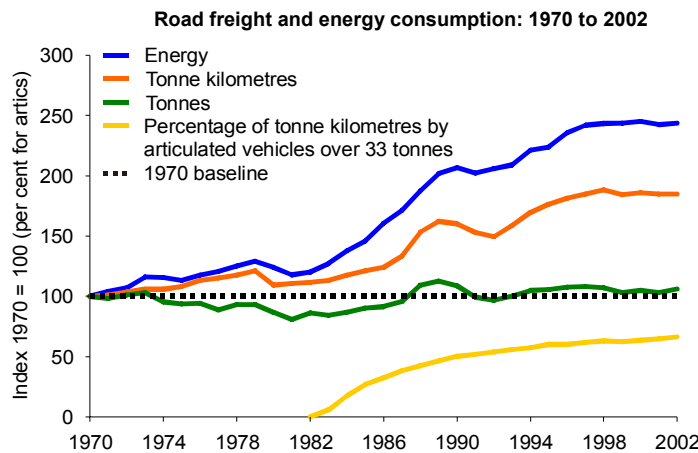
Coverage: United Kingdom (real prices) and Great Britain (rail passenger kilometres)

Source: ONS, DfT

- The real cost of travelling by train increased by 87 per cent between 1974 and 2002, but rose by only 4 per cent between 1998 and 2002.
- Rail passenger travel has increased by 33 per cent since 1974, and by 10 per cent since 1998.

**Indicator: Road freight: volumes and energy consumption**

**k**

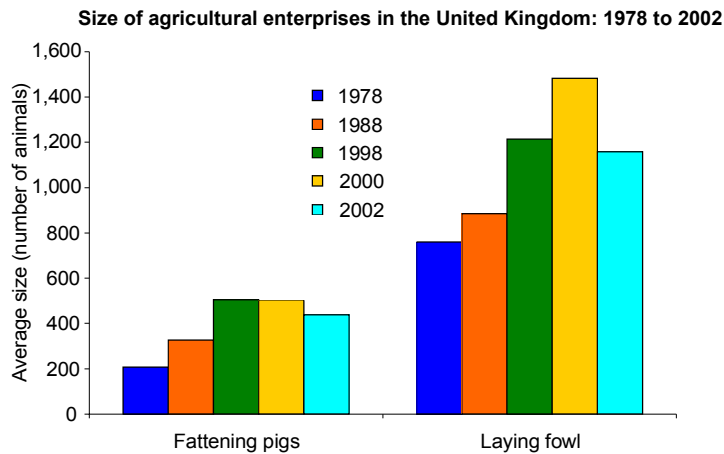
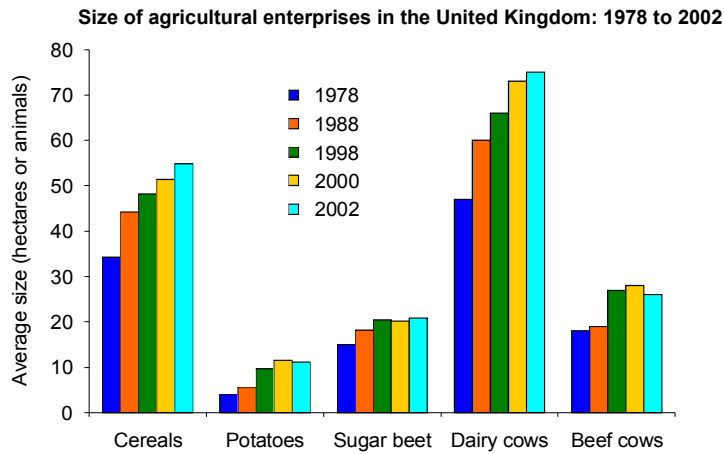


Coverage: United Kingdom energy, Great Britain tonnes and tonne kilometres

Source: DfT, DTI

- The total weight of goods carried by road has changed relatively little since 1970, but freight traffic (tonne kilometres) has risen by 85 per cent and the energy consumed in transporting goods by 144 per cent. This reflects transportation over greater distances, and of bulkier, but less dense goods - offsetting efficiencies such as the use of large articulated vehicles.
- Since 1998, there has been relatively little change in the energy, tonne kilometres, tonnes lifted and percentage share of articulated vehicles over 33 tonnes.

**Indicator: Size of agricultural enterprises in the United Kingdom** I



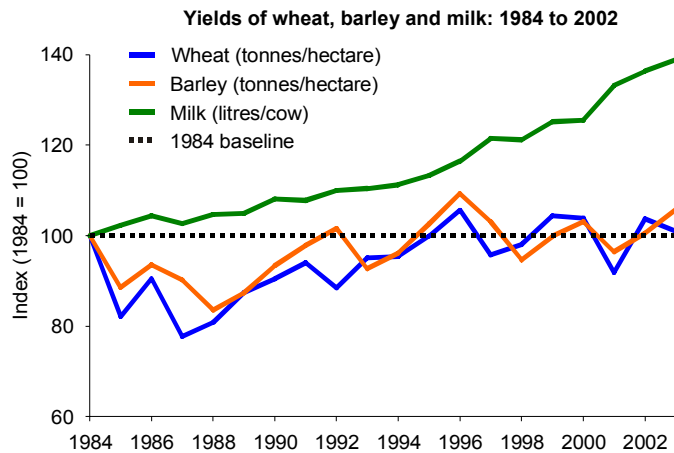
Coverage: United Kingdom

Source: Defra

- The size of dairy and cereal farming enterprises continued to grow between 2000 and 2002.
- Enterprises with laying fowl and fattening pigs decreased in size between 1998 and 2002.

**Indicator: Agricultural yields and output**

m

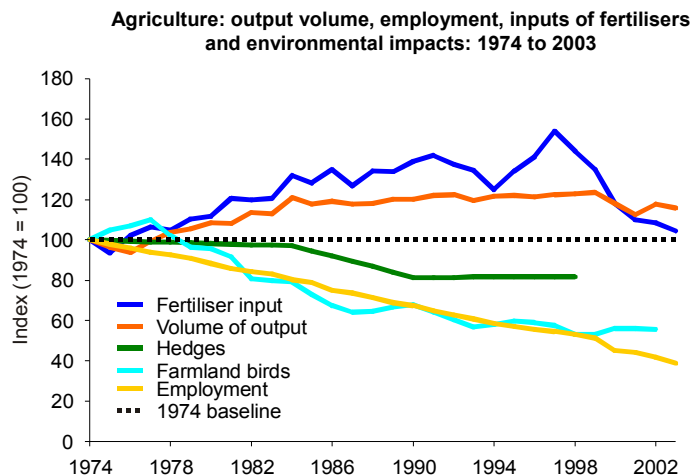


Coverage: United Kingdom  
Source: Defra

- Between 1984 and 2003, barley and milk yields increased by 6 and 39 per cent respectively while wheat yields showed little change (up 1 per cent).

**Indicator: Agriculture: output volume, employment, inputs of fertilisers and environmental impacts**

n

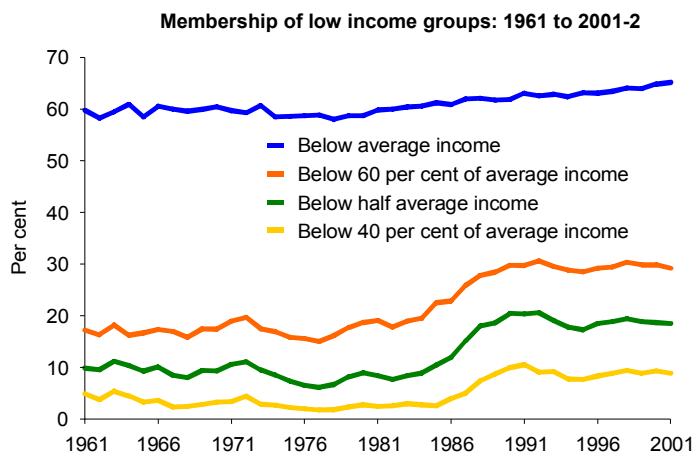


Coverage: United Kingdom  
Source: Defra

- Farmland bird populations fell by 50 per cent between 1974 and 1998, while output rose by 23 per cent and fertiliser use by 44 per cent.
- Fertiliser use, volume output and employment have fallen since the mid-1990s, while hedgerow loss has been halted and farmland bird populations have stabilised.

**Indicator: Percentage of people whose income is below various fractions of average income**

p



Coverage: United Kingdom

Source: Institute of Fiscal Studies

- There has been a steady rise in the proportion of people earning less than average income since the late 1970s. By 2001 about 65 per cent of people fell into this category.
- The proportion of people with low incomes (those with less than 40 - 60 per cent of average income) increased markedly during the latter half of the 1980s but has remained roughly constant since 1990. In 2001, 29 per cent of people earned less than 60 per cent of average income, 19 per cent earned less than half of average income, and 9 per cent earned less than 40 per cent of average income.