

CHAPTER 5

Further analysis of the indicators; integration and uncoupling

SUMMARY

The analysis presented in this chapter highlights:

- the importance of climate change and the need for greater uncoupling of energy consumption from economic growth, and of carbon dioxide emissions from energy consumption;
- links between growth and environmental impacts for households, industry, services and transport;
- environmental impacts of changes in agricultural structure and practices;
- the increase in poverty despite higher living standards for most people.

Focus in the past has been on improving labour productivity. In the future, greater focus may be needed on resource efficiency. Meeting the challenges beyond 2010 is likely to entail significant changes in energy production, cutting road traffic emissions, improvements in the energy efficiency of industrial processes, homes, offices, appliances, and changes in behaviour to promote more efficient use of natural resources.

Energy

In the UK over the last 30 years, total carbon dioxide emissions in relation to total economic output have fallen by a factor of two. In the longer term, global emissions of carbon dioxide will need to fall in relation to economic output by a factor of 10 or more (ie to a tenth or less of current levels) to combat the threat of climate change.

Scope for uncoupling carbon dioxide emissions from energy consumption in future rests largely on technological change and renewables: the UK has a target to increase the proportion of electricity met from renewables from 2 per cent to 10 per cent as soon as possible and hopes to achieve this by 2010.

In the past, the main savings in energy have been achieved by industry; in future, a larger proportion of savings will need to come from households, transport and the services sector. Households and transport now account for almost two-thirds of energy consumption.

Households

Household energy consumption has been growing generally in line with household numbers over the past 30 years. Increased consumption has broadly offset improvements in energy efficiency.

Household emissions of carbon dioxide declined by a quarter between 1970 and 1997. This is primarily because of the switch from coal to gas in homes for heating and by power stations – there is limited scope for future uncoupling of household energy consumption from carbon dioxide emissions through further switching to gas.

Domestic waste arisings are growing faster than household numbers.

Householders have little awareness of the need to change behaviour.

Industry

Industry has made significant gains in labour and energy productivity between 1970 and 1998.

In 1998 the sector accounted for under a quarter of total final energy consumption and current initiatives should produce further energy savings.

There has been greater success in uncoupling other pollutants like sulphur dioxide from economic growth than in uncoupling carbon dioxide.

Large single sources of emissions have generally reduced their environmental impacts significantly over the past 30 years, though further cuts in emissions will be needed in the longer term.

Services

This is the fastest growing sector – now accounting for two thirds of GDP.

In 1998 final energy consumption was only around 13 per cent of the total, but consumption is increasing.

Transport

In 1998 final energy consumption for transport was 34 per cent of the total.

There has been little success in uncoupling carbon dioxide emissions from growth in road traffic between 1970 and 1997.

In 1998 motoring was relatively more affordable than it was in 1974, despite increased taxes and duties. Relative price changes favoured the use of the car rather than public transport over this period.

Overall, road passenger travel has not become more energy-efficient between 1970 and 1997, as modal shift and other trends have balanced improvements in efficiency of individual vehicles.

Freight transport has become less fuel efficient between 1970 and 1997 – the same tonnage of goods is being moved but over longer distances, and energy consumption per tonne kilometre has also increased, despite the introduction of larger vehicles.

Agriculture

Over the 25 years up to 1998, underlying economic trends, reinforced by the CAP, promoted progressive restructuring and steady productivity growth through intensification of production and greater efficiency.

In order to increase yields and overall production, there were large increases in the use of fertilisers and pesticides, and in the removal of hedgerows particularly during the 1970s and 1980s.

Farmland bird populations declined by 35 per cent between 1973 and 1998.

The 1992 reform of the CAP began the move away from production related subsidies towards less distorting direct payments and introduced subsidies for environmental management.

In 1997/98, total public expenditure on under the CAP amounted to £3.4 billion, of which around £140 million (4 per cent) was for agri-environmental and conservation schemes.

Poverty and social exclusion

While most of the population has seen living standards rise significantly between 1970 and 1998, poverty increased particularly during the 1980s; the situation has been more stable in subsequent years.

The proportion of children in households with low incomes more than doubled between the late 1970s and early 1990s.

By 1996, men in professional occupations could expect to live 9 years longer on average than those in unskilled jobs, and the gap has widened over the period since 1980.

INTRODUCTION

- 5.1 A quarter of the world's people currently have to survive on incomes of less than one US dollar per day. Over the next 50 years, the world's population is expected to increase from around 6 billion today to around 9 billion people. This increase – much of it in the developing world where standards of living need to increase fastest – will add to pressure on the environment and resources. Some of the environmental impacts of global economic growth are already manifesting themselves: emissions of greenhouse gases, largely caused by energy consumption, are causing the global climate to change.

The changing globe

	1900	1970	1990s
Population (billions)			
– Total	1.65	3.7	6.0 ¹
– More developed regions	...	1.0	1.2 ¹
– Less developed regions	...	2.7	4.8 ¹
People in extreme poverty			
– Living on less than \$1 a day (billions)	...	...	1.2 ²
– Percentage	...	...	24.3%
CO ₂ emissions (billion tonnes) ⁴	2	15	24 ³

1. 1999 data

2. Estimates for 1998

3. 1995 data

4. Emissions from fossil fuels consumed and cement manufacturing

- 5.2 Just to keep the UK's resource use at 1998 levels would require resource efficiency to improve at a rate which matches the growth in the economy. At a global level, resource efficiency will have to improve both to reduce current severe environmental pressures and to match increases in global consumption necessary to eradicate extreme poverty.
- 5.3 Within the European Union, there is an increasing emphasis on the need to take an integrated approach to policy development – ensuring that economic, social and environmental objectives are taken into account in decision-making, as well as the likely impact of regulatory measures on the economy. The EU is committed to integrating an environment dimension across a number of sectors, including energy, transport, industry and agriculture. This reflects the importance attached to sustainable development in the Amsterdam Treaty. The EU is also undertaking a “Global Assessment” of the impact of the 5th Action Programme, before deciding on the follow up to the Programme.
- 5.4 This chapter uses the indicators from chapter 4 to present some illustrations of the extent to which uncoupling or de-linking of economic growth and improvements in living standards from environmental impacts has occurred in key sectors or areas of socio-economic activity. It shows where past measures have been successful and indicates where further improvements may be necessary. The analyses also help to illustrate some of the balances between achievement of economic, social and environmental objectives.

Cleaner growth: doing more with less¹

- global emissions of carbon dioxide amount to about 5 tonnes of carbon dioxide per person per year; the United Kingdom produces 10 tonnes per person;
- the world's population is expected to increase to around 9 billion by 2050, compared with 6 billion today; at the same time, global prosperity, particularly in developing countries, needs to increase;
- to combat the threat of climate change, significant reductions in global greenhouse gas emissions are likely to be needed: over time, emissions must therefore fall significantly beyond the targets set in the Kyoto protocol. All countries will need to play their part in this. The UK's goal of a 20 per cent cut in its carbon dioxide emissions by 2010 can be seen as a first step in the process;
- as economies grow, significant global emissions reductions will require continually greater reductions in emissions relative to economic output, eventually rising to ten fold and beyond;
- it is not possible at this stage to forecast what reductions in UK emissions will be required, or by when. But, as an illustration, if the UK economy were to be three times larger around the middle of the next century² a five fold improvement in the ratio between emissions and economic output would correspond to carbon dioxide emissions falling by 40 per cent.

ENERGY

5.5 Consumption of fossil fuels is one of the key sustainable development issues because it is the single largest factor causing emissions of greenhouse gases. It causes almost all carbon dioxide emissions which account for 80 per cent of greenhouse gas emissions in the UK (indicator H9). Some fossil fuels are also a major cause of emissions to the air of pollutants like sulphur dioxide and nitrogen oxides. Uncoupling the impacts of energy consumption, i.e. air emissions, from future economic growth may be achieved through:

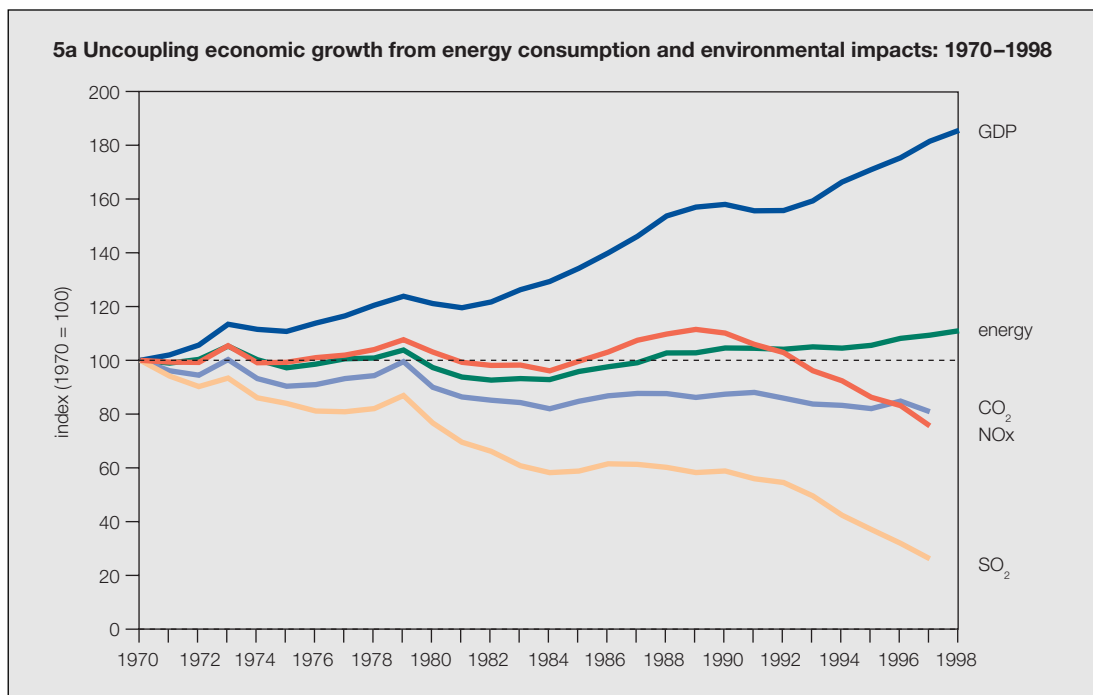
- increasing energy efficiency by reducing energy consumption per unit of output through, for example, Combined Heat and Power (CHP), improved technology for individual vehicles and appliances, increasing efficiency of producing electricity, better insulation of buildings, reducing waste of energy; and
- reducing environmental impacts per unit of energy consumed, for example by switching to less polluting fuels, greater use of renewables, installing equipment to remove pollutants in power stations, vehicles etc.

5.6 As chart 5a shows, the UK has made improvements in energy efficiency at the whole economy level between 1970 and 1998. Primary energy consumption has risen by around 10 per cent while GDP has increased by over 80 per cent. Energy consumption has been rising steadily since the early 1980s although at a significantly slower rate of growth than the economy as a whole.

1 Box after paragraph 3.29 in *A better quality of life*.

2 UK economic growth has averaged around 2¹/₄ per cent per year over the past 30 years. If average growth were to continue at this rate, the output of the economy would increase by over 3 times by 2050.

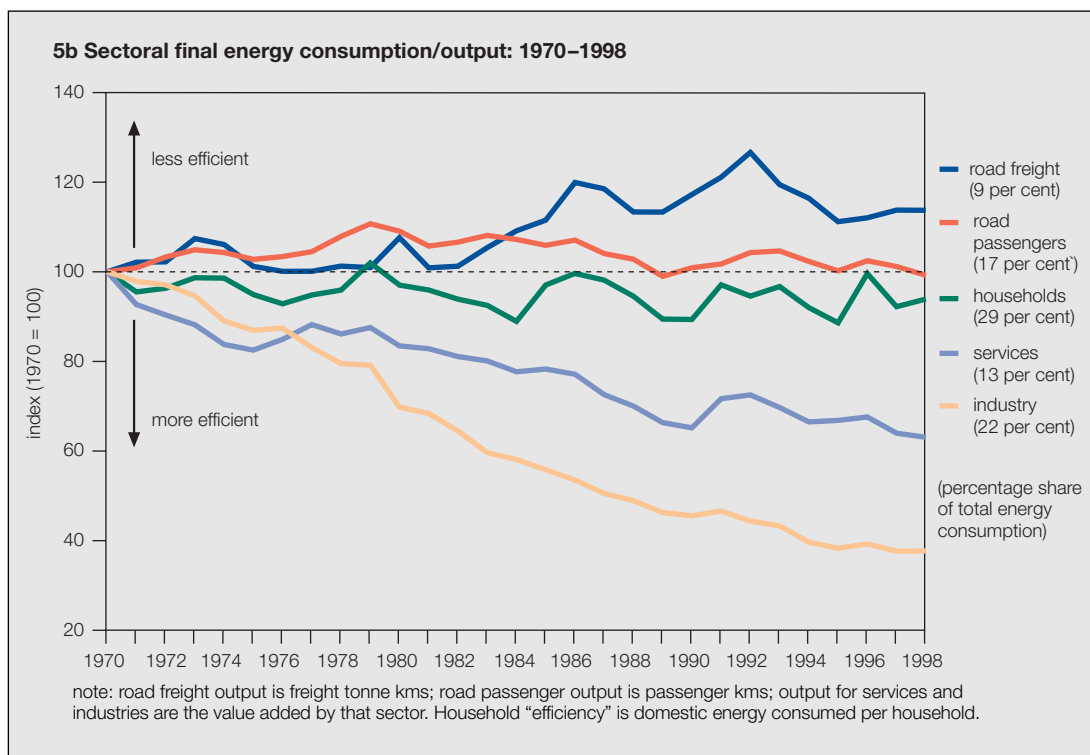
- 5.7 There has been some success in uncoupling energy consumption from carbon dioxide emissions, mainly because of the switch from coal and oil to gas and nuclear power in power stations, and because of significant restructuring of the economy (the relative decline in manufacturing industry and the growth in services). Between 1970 and 1998, carbon dioxide emissions in relation to output have fallen by a factor of 2 (ie by a half).
- 5.8 Scope is limited for future reductions in carbon dioxide per unit of energy consumed, except through a switch to renewable sources. It is likely that nuclear power's contribution to reducing emissions will decrease in the first decades of the 21st century as existing capacity is retired, although it may prove possible to extend reactor lifetimes by several years. There is limited further scope for achieving savings through switching fuels. Currently around 2 per cent of electricity demand is met from renewable sources (indicator N4) – the government has announced that it intends to work towards a target of 10 per cent of all UK electricity being supplied by renewable sources as soon as possible and hopefully by 2010. Measures are in place to ensure 5 per cent will be supplied by renewable resources by 2003.
- 5.9 If the UK is to achieve its goal of major long term cuts in greenhouse gas emissions, a very significant contribution will have to come from reducing energy use and increasing energy efficiency. Combined Heat and Power (CHP) – the simultaneous generation of usable heat and power in a single process – is an efficient energy-generating technology. The government has a target for the installation of 5,000 MWe of CHP electrical capacity by the year 2000. Installed capacity at the end of 1998 stood at 3,929 MWe. The government is considering a target for future years.



- 5.10 There has been greater success in uncoupling other pollutant emissions from energy consumption. Emissions of sulphur dioxide have fallen by 76 per cent between 1970 and 1997, for example. The reduction in sulphur dioxide emissions is mainly because of the switch from coal to gas and use of de-sulphurisation plant in power stations. The recent sharp fall in emissions of nitrogen oxides has occurred mainly because of catalytic converters in vehicles.

Sectoral energy efficiency

- 5.11 Chart 5b shows the changes in efficiency of energy use for various sectors, in terms of energy consumption in relation to “output”.
- 5.12 It is in the industrial sector that the major energy efficiency savings have been made between 1970 and 1998. Much of this is because of structural change – the decline in heavy industries like ship-building and steel, and the growth of high-technology industries like electronics, for example. Since 1990, the rate of efficiency gain has been much slower in the industrial sector. In 1998 it accounted for 22 per cent of total final energy consumption. There is still a need for further energy savings, which will be encouraged through the new Climate Change Levy and associated sectoral agreements.
- 5.13 Smaller gains in energy efficiency have also been made in the services sector (which includes public administration). However, overall energy consumption in the service sector is rising and the size of this sector is still expanding. In 1998 it accounted for 13 per cent of total energy consumption.



- 5.14 In the transport and household sectors no overall energy efficiency gains have been made between 1970 and 1998. Between them, these sectors accounted for almost two thirds of total final energy consumption in 1998, and both are areas projected to increase in activity/size over the next twenty years.

- 5.15 If the UK is to meet the longer term challenge of climate change, much greater technological and/or behavioural changes are likely to be required in the future than have been achieved in the past to conserve energy, particularly in the transport and household sectors. Further significant savings will also be needed in the service sector and in energy-intensive industries. The reductions agreed at Kyoto were only a small step on the path to tackling climate change. In the longer term, much more significant reductions in greenhouse gas emissions will be required.

HOUSEHOLDS

- 5.16 On average, people in Britain have become significantly better off in many respects over the last thirty years. But improved standards of living have been accompanied in many cases by greater use of energy, transport and other resources, putting pressure on the environment.

Changing Britain

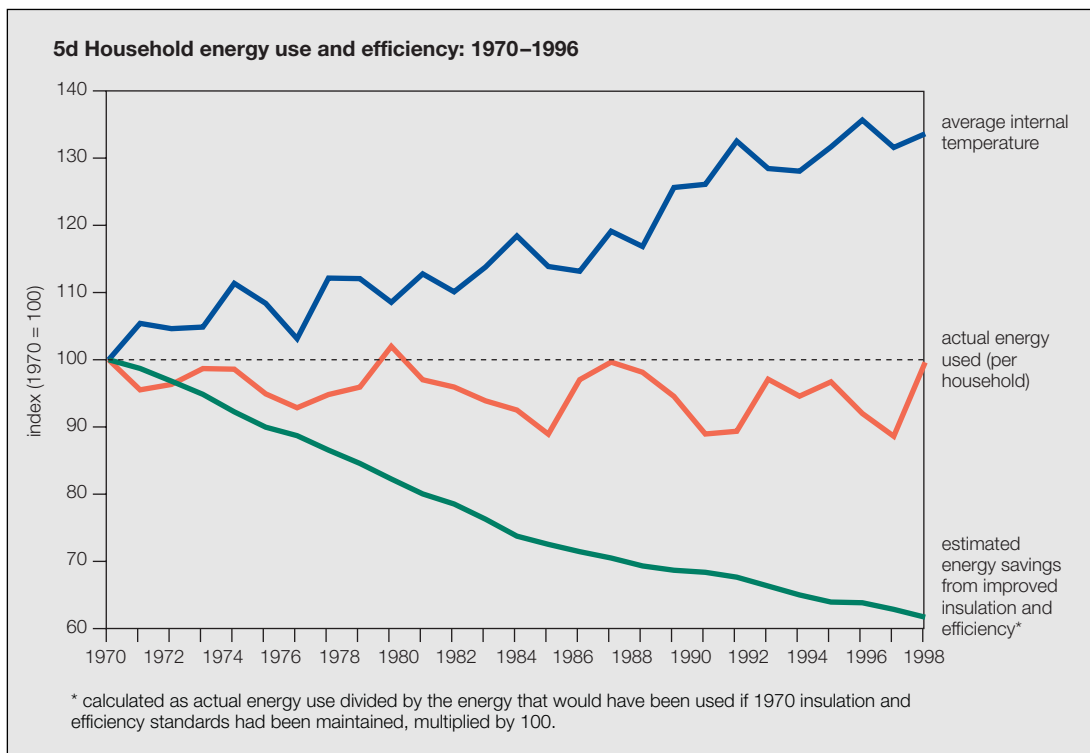
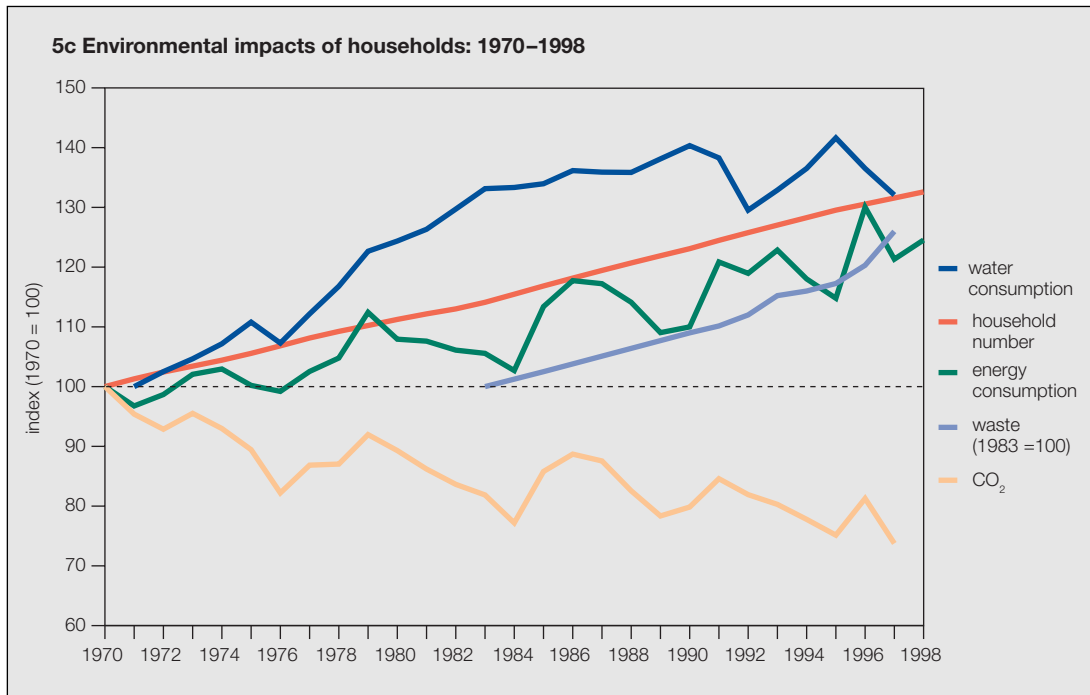
	1970	1997	Change
Population	55.6 million	59.0 million	+ 6%
Households	18 million	23.7 million	+ 32%
Proportion of households with:			
Central heating	30%	69%	+130%
Washing machine	65%	91%	+40%
Telephone	35%	93%	+166%
Television	91%	98%	+8%
Personal computer		29%	
Internet link		15%	
Cars on the road	10.3 million	22.3 million	+115%
Average journey to work	5.2 miles	8.1 miles	+ 56%
Average life expectancy:			
Men	71 years	74 years*	+ 4%
Women	74 years	79 years*	+ 7%
Infant mortality	18 per 1000	5.8 per 1000	Fallen by 2/3
Education standards:			
NVQ level 2 (% at age 19)	45%	72%**	+ 60%
NVQ level 4 (% of economically active adults)	15%	25%**	+ 67%

*1995 **1998

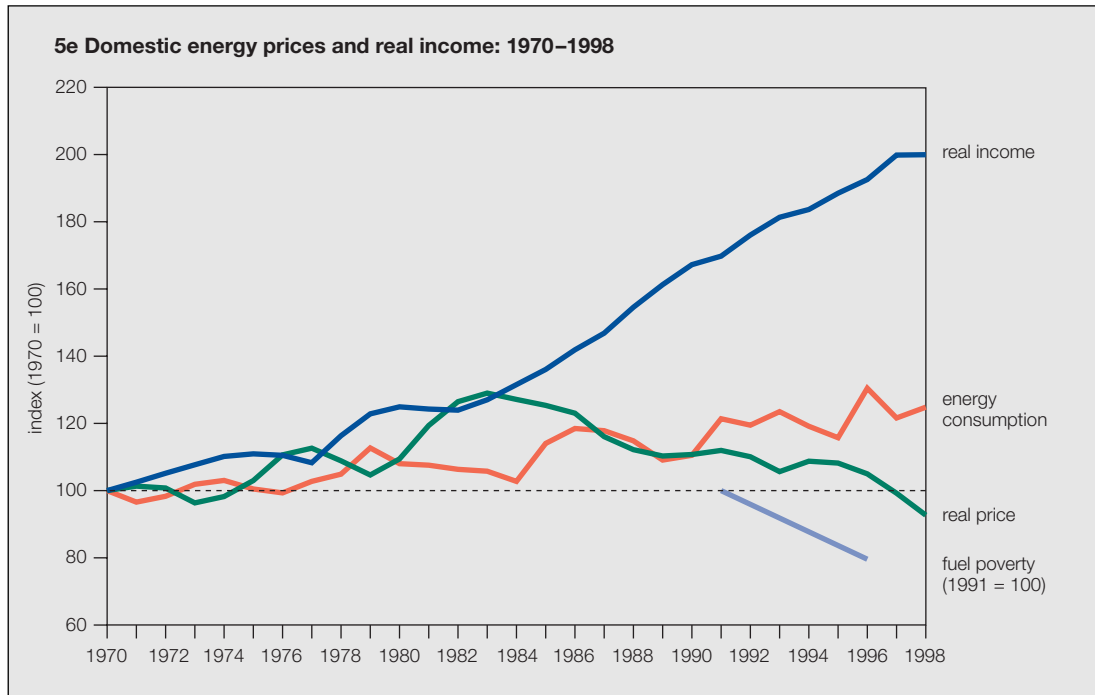
- 5.17 Domestic energy consumption³ has risen in line with the increase in the number of households between 1970 and 1998 (chart 5c). Chart 5d shows how, in the past, there have been improvements in eco-efficiency through technological change – for example, improved thermal efficiency of housing and improved energy efficiency of individual

3 Energy used in the home for heating, lighting etc. Does not include energy used for personal transport – see later section

appliances. But these improvements have been counterbalanced by other trends – people heating their homes to a higher temperature and using more appliances. Between 1970 and 1997 there was some uncoupling of CO₂ emissions from energy consumption in this sector – primarily because of the switch from coal to gas both in homes for heating and by power stations in electricity generation. Further scope for such switching in future is limited as about three quarters of households in Great Britain now use gas for heating. If household energy consumption is to reduce in future, it seems likely that significant behavioural change will be necessary, as well as technological change.



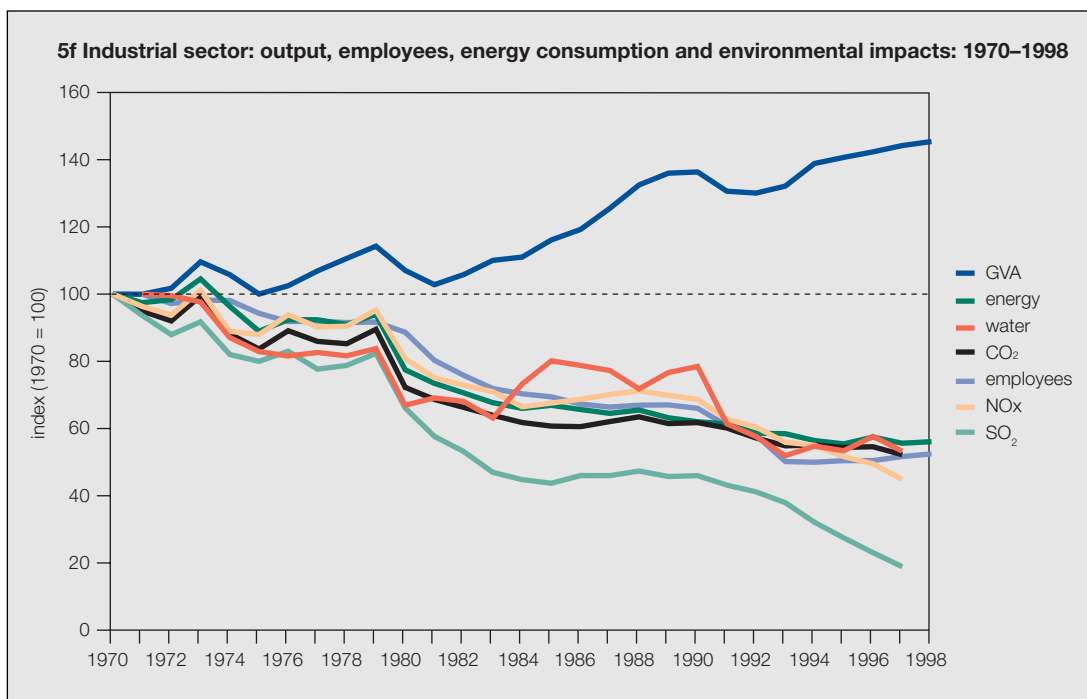
- 5.18 Energy prices have fallen in real terms since the early 1980s, while real incomes have on average been rising (chart 5e). Cheaper energy reduces industry's costs and benefits consumers, thus boosting the economy. It reduces the incidence of fuel poverty. But it also reduces the incentive for people to use energy more efficiently. It will be important to raise public awareness of the links between energy consumption and global climate change which, according to a recent survey, remain relatively low (indicator T7).



- 5.19 Domestic waste has been increasing faster than household numbers – that is, amounts per household are increasing. Households recycle and compost only around 8 per cent of waste. The government's goal is to increase this to 30 per cent by 2010 in England and Wales. Producers have reduced packaging by lightweighting but switching to materials such as plastic makes recycling more difficult. The increasing number of (on average) smaller households, centralising distribution patterns and changes in lifestyle (more convenience and exotic foods) have all contributed to increasing the amount of packaging and packaging waste.

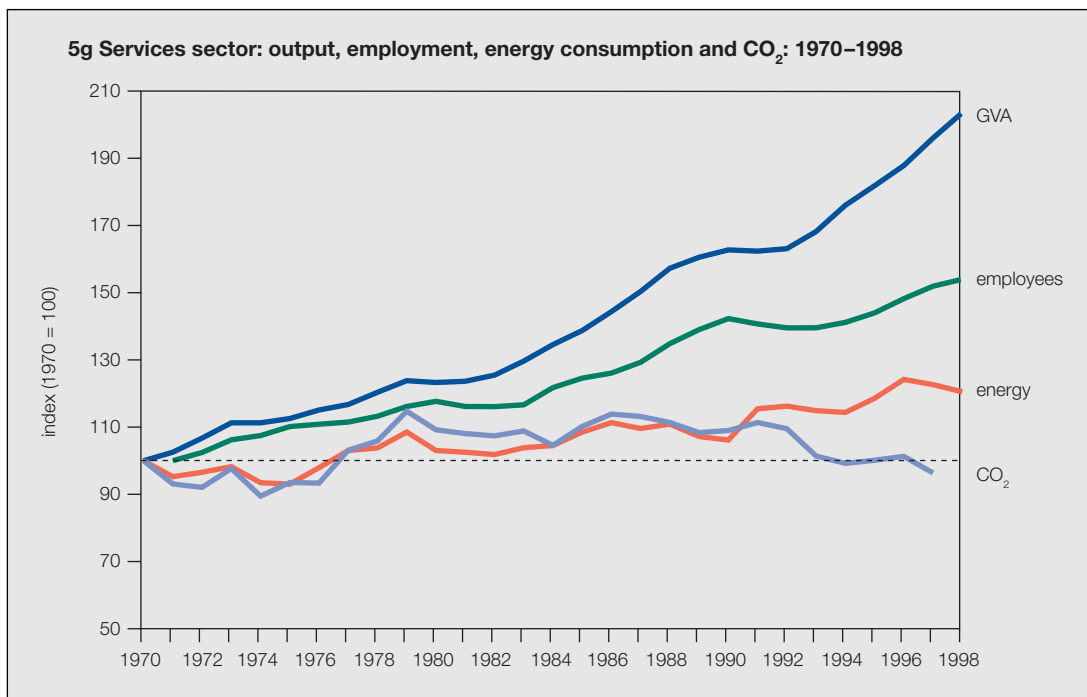
INDUSTRY

- 5.20 In 1970, industry accounted for 45 per cent of GDP, and employed 11 million people, 48 per cent of the workforce. By 1998, industrial output had grown in real terms by 45 per cent but accounted for only 31 per cent of GDP and employed 6.2 million people, 24 per cent of the workforce.
- 5.21 There has been a 180 per cent increase in labour productivity (output per unit of labour) over the period 1971 to 1998. There have also been gains in overall energy efficiency (energy consumption in relation to output), though since 1992 energy consumption has broadly been constant. Industry now accounts for under a quarter of total final energy consumption. There is still a need for further energy savings which will be encouraged through the new Climate Change Levy and associated sectoral agreements.



5.22 No information is available on trends in waste arisings – growing output is often assumed to be accompanied by increasing waste, but the significant restructuring in the sector over the last 30 years is likely to have led to reducing amounts of waste per unit of output. Waste arisings from industry in 1998 are estimated to be around 50–70 million tonnes for England and Wales.

SERVICES



- 5.23 In 1970, the services sector accounted for 44 per cent of GDP and employed 11 million people. In 1998, the services sector accounted for 68 per cent of GDP and employed 20.2 million people.
- 5.24 The services sector accounts for over two thirds of UK output, and is the fastest growing sector of the economy. Employment in services is increasing overall, though less than half as fast as output, so labour productivity has improved by 32 per cent since 1970.
- 5.25 While there have been some gains in energy efficiency (energy consumption in relation to unit of output) in this sector over the last thirty years, the uncoupling has been relative, rather than absolute – ie total energy consumption is still rising.
- 5.26 It is estimated that in 1998 waste from commercial companies amounted to around 20–30 million tonnes in England and Wales. No information is available about the trend of waste arisings in this sector.

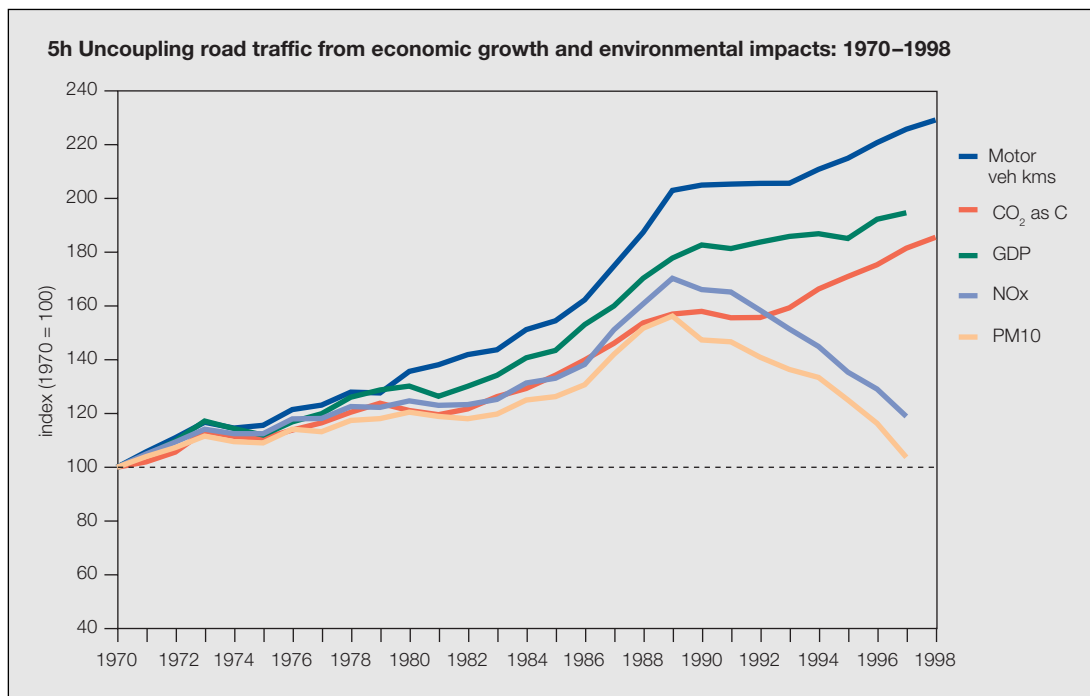
TRANSPORT

- 5.27 Increasing use of the car has brought many economic and social benefits, bringing greater freedom and widening horizons. However, it has also brought problems. Road passenger transport is a major source of carbon dioxide emissions (indicator N3). Between 1970 and 1989, the growth in motor vehicle use outstripped that of economic growth (chart 5h). Since 1993, there has been some uncoupling of road traffic growth from economic growth – motor vehicle traffic has increased by 11 per cent to 1998 while GDP has increased by 16 per cent. This coincides with the period when the fuel price, gross of tax, has been rising in real terms (indicator T3).
- 5.28 Since about 1989, technological improvements (the introduction of cleaner fuels and catalytic converters) have allowed significant uncoupling of emissions of some pollutants (such as particulates and nitrogen oxides) from the growth in road traffic. EU Directives based on many of the recommendations of the Auto Oil Programme will mean cleaner petrol and diesel and significantly tighter emission standards for new vehicles from 2000, and further improvements in 2005. However, in the longer term (beyond 2015), increases in traffic volumes could result in a reversal of these trends unless further technological advances are made.
- 5.29 Of particular concern, however, is the impact of growth in traffic on emissions of carbon dioxide. Between 1980 and 1998 there has been only limited success in uncoupling carbon dioxide emissions from road traffic growth, despite advances in vehicle technology. As part of the EU CO₂ from Cars Strategy, major car manufacturers have agreed voluntarily to reduce carbon dioxide emissions from new cars sold in Europe by 25 per cent below current levels by 2008. All new cars will shortly be labelled to show their fuel consumption and carbon dioxide emissions. The government is also committed to reforming vehicle excise duty and company car taxation to encourage the selection of more fuel efficient new cars.

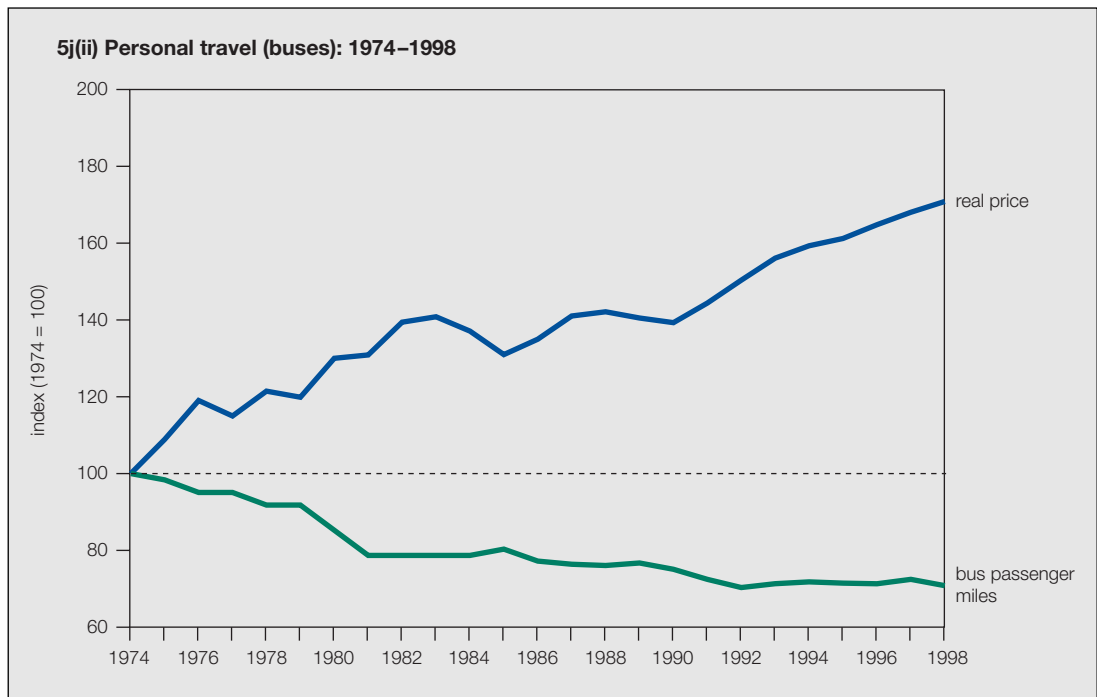
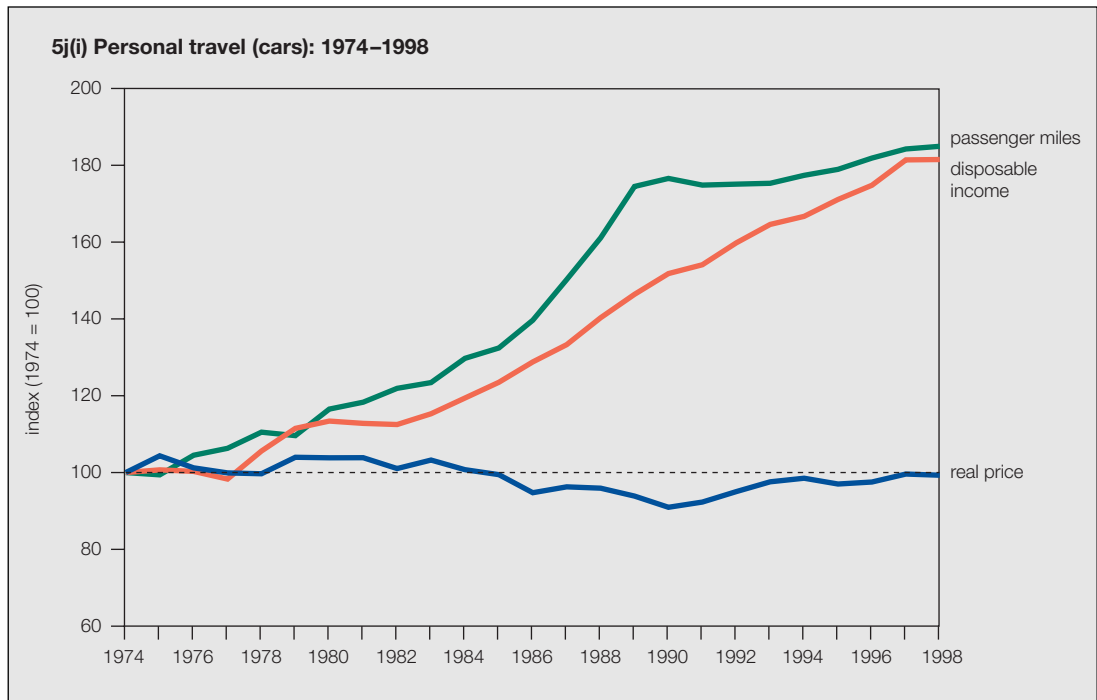
- 5.30 If the UK is to achieve its objective of reversing past growth in greenhouse gas emissions from transport, a combination of changes in both vehicle technology and in life-style or behaviour will be necessary. The government's new integrated transport policy is designed to improve the choice in transport, reduce the need to travel while improving access to jobs, leisure and services and reduce environmental impacts. It also aims to improve transport safety and security.

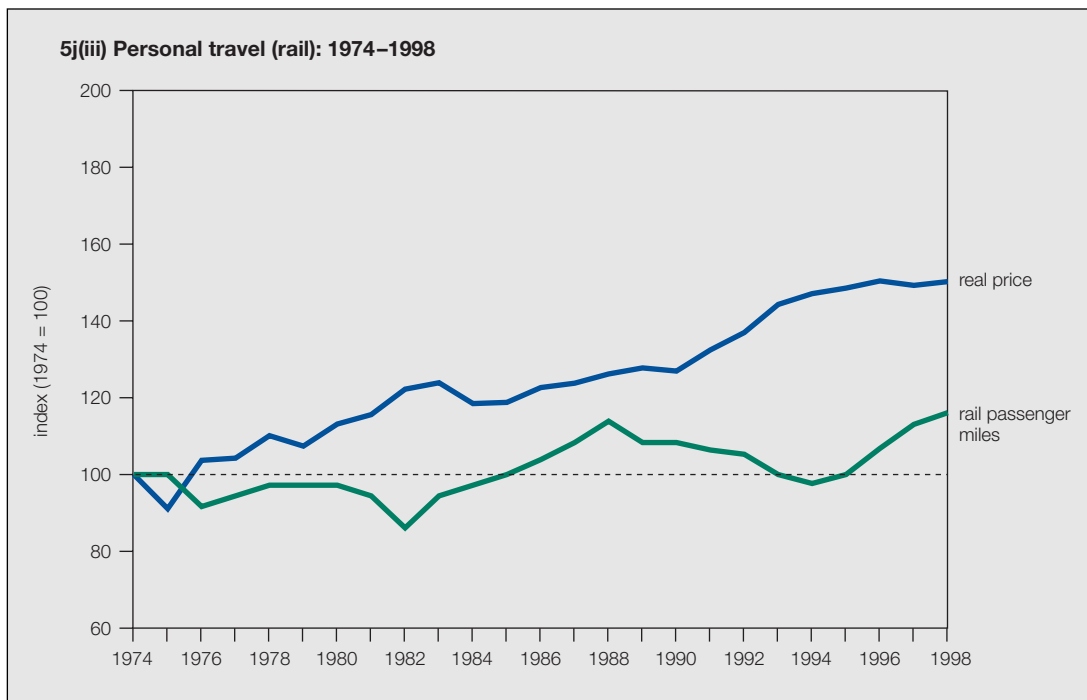
Personal transport

- 5.31 Road passenger travel increased by over 80 per cent between 1970 and 1998, primarily because of increasing journey lengths. Chart 5b shows that road passenger travel has not become more energy-efficient per passenger km over the same period. This is because improvements in fuel efficiency have been counteracted by trends towards larger-engined vehicles and other features, and because of the relative decline in use of public transport compared with the car, and the decline in average number of passengers per car (the latter is a function of increasing car ownership and declining average size of household).



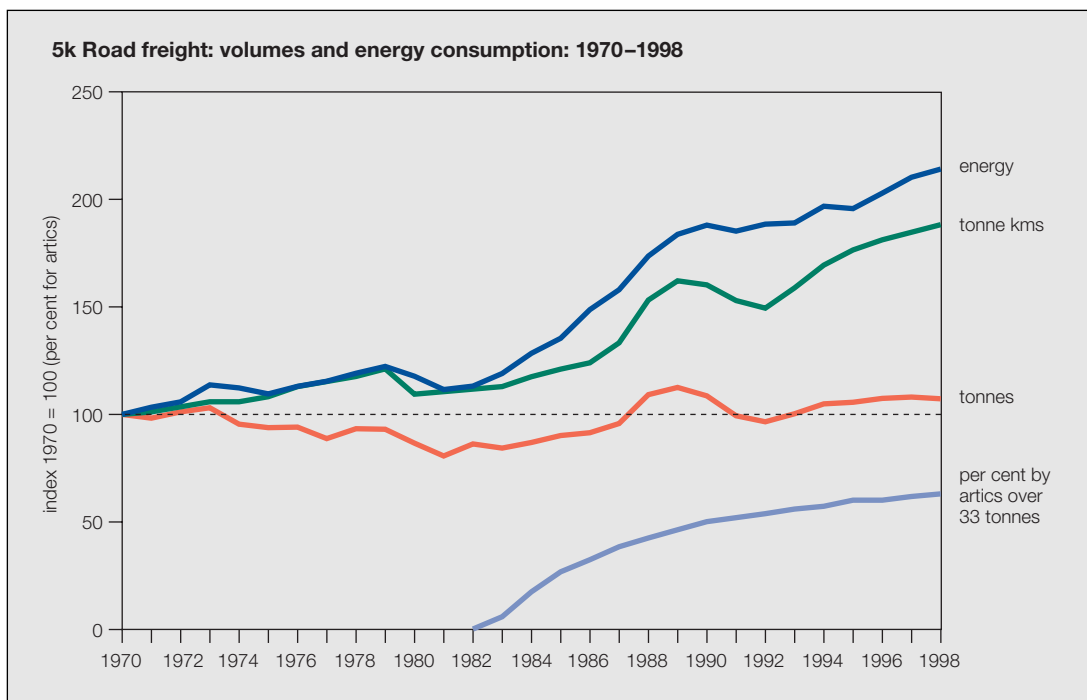
- 5.32 Passenger travel by car has increased by 85 per cent between 1974 and 1998, slightly faster than the increase in personal incomes. Over this period, the real price of motoring has remained the same, despite increases in duty and taxes on vehicles and fuel, while real incomes have risen on average by about 80 per cent. Thus, motoring has become far more affordable since 1974, undoubtedly contributing to the growth in car ownership and use.





5.33 Over the same period, there has been a fall of 30 per cent in bus passenger mileage, while fares have increased in real terms by over 70 per cent. Rail passenger mileage was the same in 1995 as in 1974, but has increased nearly 17 per cent between 1995 and 1998.

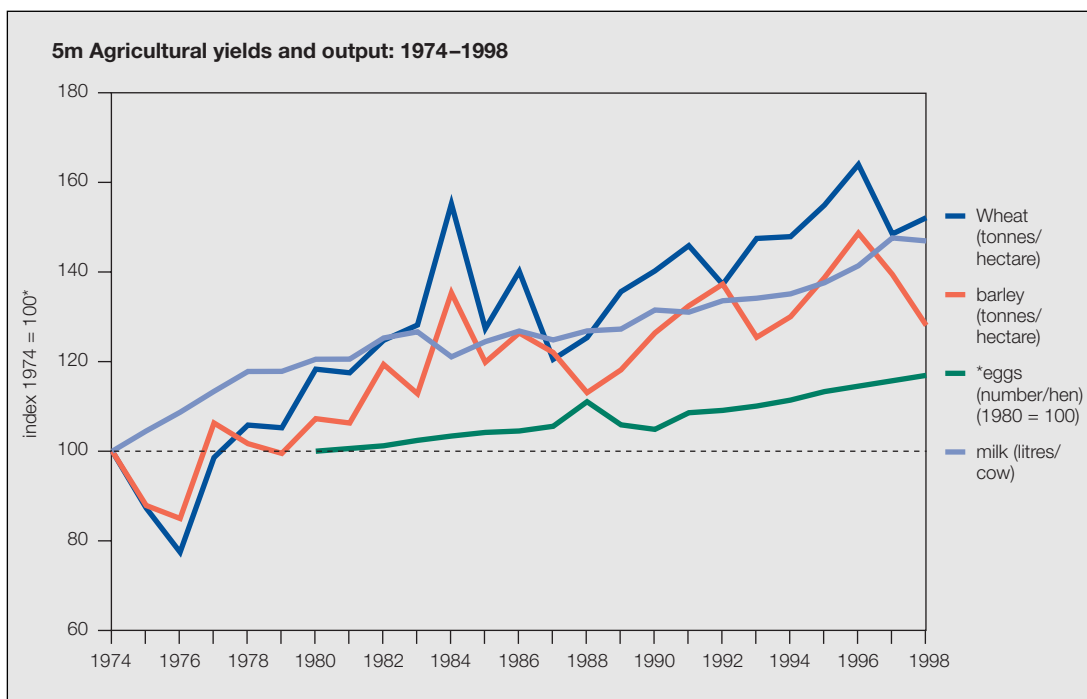
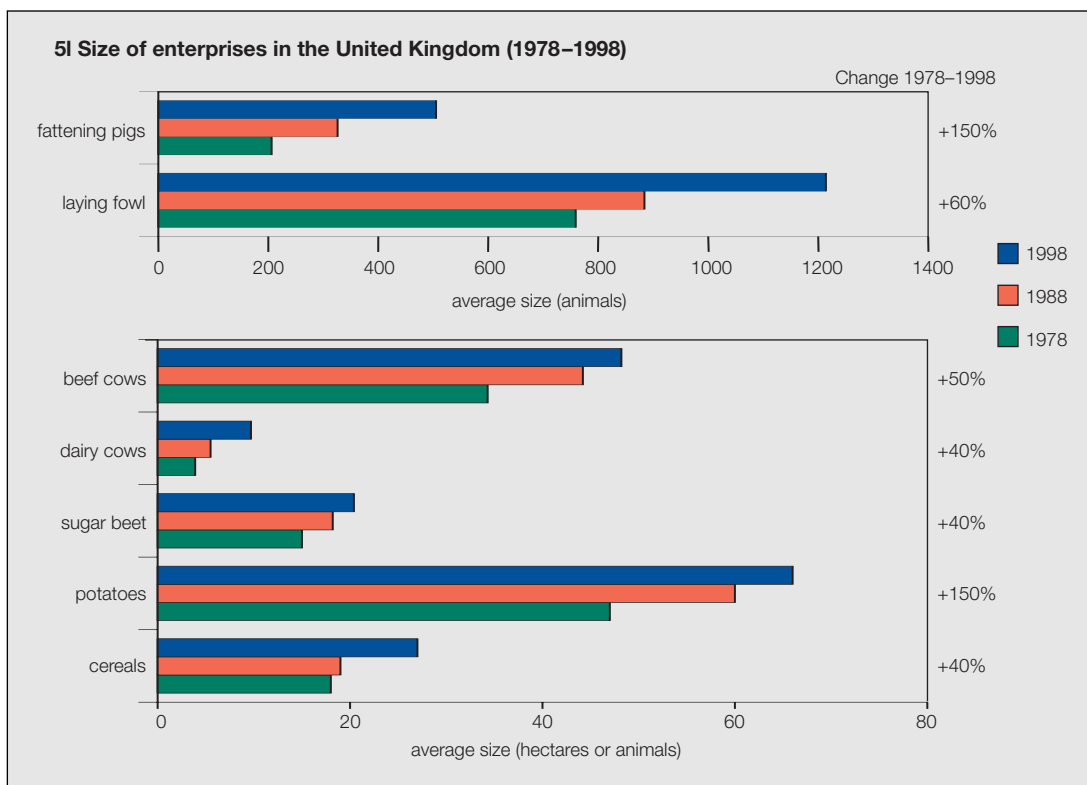
Freight transport



- 5.34 Whilst road freight tonnage has remained at roughly the same level as 1970, the composition of loads has shifted towards less dense, but bulky, commodities such as food and electronics. More lorries are needed to carry the same weight of goods. Freight is also carried over much greater distances, partly due to changing distribution patterns (eg delivery from larger, centralised warehouses) and the increased globalisation of markets. These changes in type of commodity and in manufacturing practices are reflected in:
- the total amount of freight moved – measured in tonne-kilometres – rising by nearly 90 per cent between 1970 and 1998;
 - the amount of energy consumed in transporting goods by road doubling over the same period; and
 - changes in the HGV fleet so that nearly 70 per cent of road freight is now carried by articulated vehicles over 33 tonnes, resulting in some improvement in recent years in the energy efficiency of freight moved.

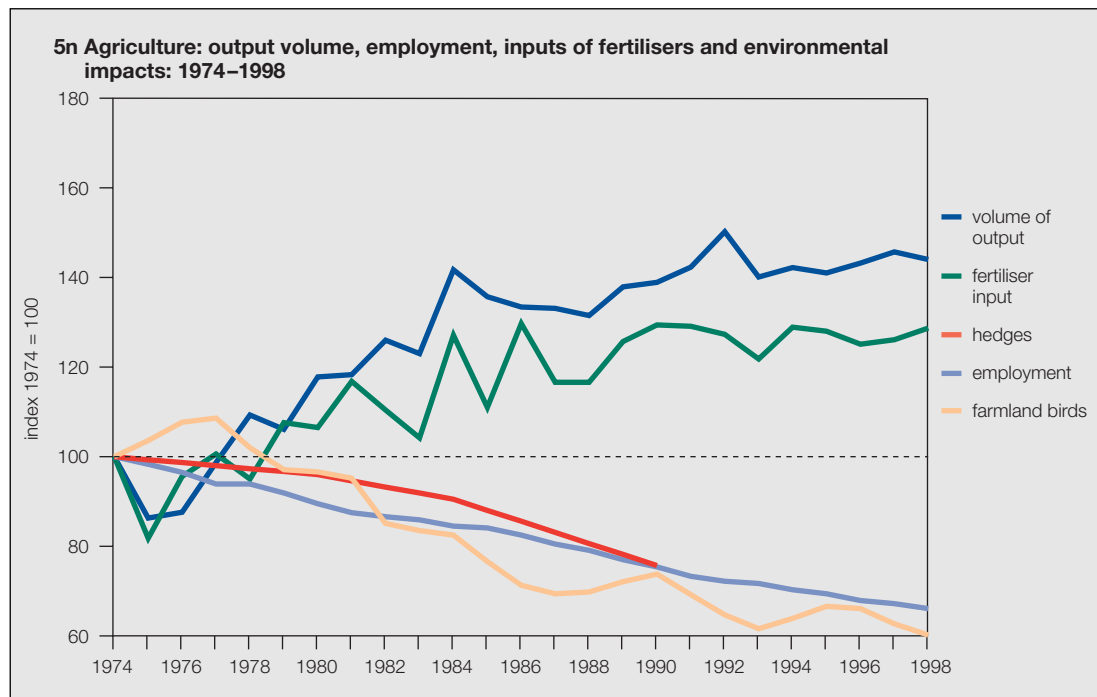
AGRICULTURE

- 5.35 Agriculture has a vital role to play in contributing to the rural economy and rural communities and in protecting and enhancing our countryside. Agriculture is the major user of rural land. Its relative importance in the overall UK economy has however been declining from 3 per cent of GDP to 1 per cent between 1974 and 1998. As standards of living have risen, consumers have spent a smaller share of the family budget on food; and prices for agricultural commodities have increased considerably less than general inflation in the same period.
- 5.36 During this period, there has been considerable support for agriculture under the Common Agricultural Policy (CAP). One of the main strands of support has been the use of intervention prices to maintain producer prices (often significantly) above world levels, while export refunds have allowed producers to compete on world markets. Encouraged by this CAP support, the overall volume of output increased by 44 per cent between 1974 and 1998. For consumers, such support has meant prices higher than they would otherwise have been.
- 5.37 The underlying economic trends, reinforced by the CAP, promoted progressive restructuring and steady productivity growth through intensification of production and greater performance efficiency. Chart 5l shows how the size of individual farm enterprises grew to take advantage of economies of scale. Chart 5m shows how some yields rose between 1974 and 1998. Labour productivity doubled, while a more efficient utilisation of labour, including greater numbers of part time workers, reduced the size of the workforce by one third, from 602,000 Full Time Equivalentents (FTE) in 1973 to 390,000 FTE in 1998.



5.38 For arable crops, increasing quantities of pesticide and fertiliser were used, whilst fields were merged to maximise production areas and facilitate the use of larger machinery and exploit economies of scale. For livestock and livestock products the size of enterprises increased dramatically and antibiotics were increasingly used, both to prevent infection and promote growth.

- 5.39 The changes in structure and performance of the agricultural sector have led to significant increases in output and efficiency but at the same time have been accompanied by detrimental effects on the environment. Plant and bird numbers and diversity have decreased between 1974 and 1998 as a result of practices such as hedgerow removal, wetland drainage, monoculture and increased pesticide usage. Farmland bird populations in particular declined by 35 per cent between 1973 and 1998 (indicators H13, S3,S5).

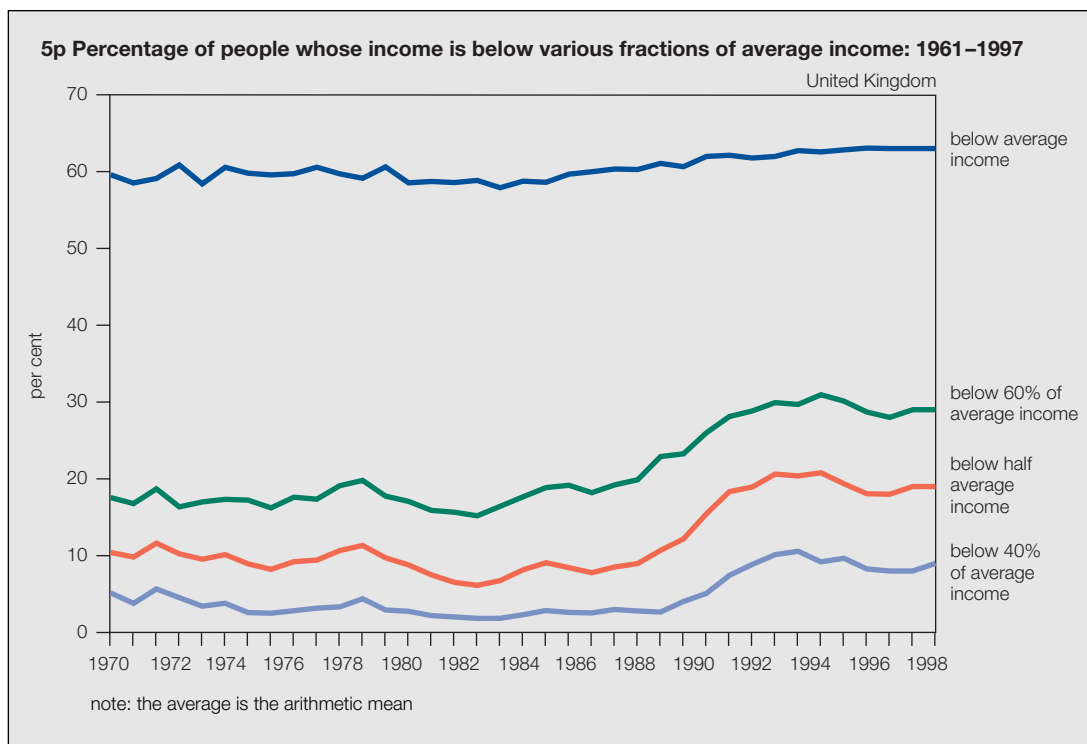


- 5.40 In addition to the consumer costs of the CAP, the 1980s saw rising budgetary costs. The cost of intervention rose as production increased and surpluses could only be disposed of on world markets with large export refunds. The 1992 reform of the CAP began the move away from production related subsidies towards less distorting direct payments and introduced subsidies for environmental management.
- 5.41 Agenda 2000 reinforced this process. Price support for three major regimes – cereals, beef and dairy – were further reduced while the second pillar of the CAP, the Rural Development Regulation provided a regulatory framework for redirecting CAP support into targeted measures to support environmentally sustainable agriculture. In 1997 agricultural output amounted to £18 billion. Total public expenditure under the CAP in 1997/98 amounted to £3.4 billion, of which around £140 million (4 per cent) was for agri-environmental and conservation schemes.

POVERTY AND SOCIAL EXCLUSION

- 5.42 Although most people in Britain between 1970 and 1998 have enjoyed higher living standards and greater prosperity, not everybody has benefited. Some regions are much less prosperous. Within regions there are local areas of high deprivation. Those in more advantaged social classes can expect to live longer and be more healthy than the less advantaged, and the gap between the two has widened. A key sustainable development objective is to tackle poverty and social exclusion and the interwoven issues of unemployment, low educational achievements, poor quality housing, and poor health.

- 5.43 The government published in September 1999 its first annual report, *Opportunity for All: tackling poverty and social exclusion*⁴, which sets out its policies and actions, and the indicators of success against which progress will be measured. These correspond with several of the sustainable development indicators, including the headline indicator on poverty and social exclusion, and those on employment, education and housing quality. There are also other aspects to poverty and social exclusion captured elsewhere in the core set of indicators (listed in table 5.1). This section draws the threads together, first by looking at how the numbers with relatively low income have been changing, and then considering poverty and social exclusion in particular groups – children and young people, those of working age, older people, other groups such as ethnic minorities, lone parents, the disabled. It also touches on the issue of multiple deprivation in deprived neighbourhoods and discusses some of the links between poverty, social exclusion and sustainable development.
- 5.44 Average incomes nearly doubled in real terms between 1970 and 1998. But the numbers of people living in relative poverty increased. The proportion of people living on incomes less than half the contemporary average rose from 9 per cent in 1970 to 19 per cent in 1997, with most of the increase occurring between 1982 and 1990 (chart 5p).
- 5.45 Since 1990 the numbers on low incomes have remained broadly unchanged; over this period there was also a decline in the number of working age people with no qualifications (indicator H4) and a reduction in elderly households experiencing fuel poverty (indicator J6). Since 1990 the increase in working age people in workless households has slowed, and the numbers have begun to fall since the mid-1990s (indicator C5).



4 Department of Social Security (September 1999). *Opportunity for all: tackling poverty and social exclusion*. TSO, London (Command no 4445)

- 5.51 Lack of skills is one of the key barriers to work. Only half of working age adults with no qualifications are in work compared with over 80 per cent of those with A level and above qualifications¹⁰. Poor qualifications can lead to poor job prospects, unemployment, poor housing and ill health. Men in professional occupations live on average some 9 years longer than people in unskilled jobs (indicator F3). Around 6 per cent of 16 year olds in England had achieved no qualification at GCSE level in 1998/99 (indicator C1).
- 5.52 The longer people are out of work, the less likely it is that they will return – they may lose skills and motivation, suffer from deteriorating health, or employers may be less willing to employ people without recent work experience¹¹. Long periods out of work can have an impact on people's prospects for the future. In 1999, 13 per cent of unemployed people of working age have been out of work for more than 2 years. The proportion has remained relatively stable over the ten years up to 1999 (indicator C6).

Older people

- 5.53 Low income and poor housing are key aspects of poverty and social exclusion amongst older people in particular¹².
- 5.54 Fuel poverty affected over half of single older people, and older people accounted for around half of all fuel poor households, in England in 1996. Fuel poverty has declined mainly through a combination of improvements in the general economy, a fall in fuel prices and higher income benefits, as well as improved energy efficiency in homes through programmes such as the Home Energy Efficiency Scheme (HEES). But substantial numbers of pensioners still have problems keeping their houses warm, and so HEES is being radically improved to help make a permanent difference.
- 5.55 People today are living longer. Life expectancy at birth in 1995 is around 74 years for men and 79 years for women. Those who have already reached age 65 can expect to survive into their eighties. However, a longer period towards the end of their life may be spent in poor health. The expectation of healthy life (based on people's own assessment of their health) is some 8 years less for men and 11 years less for women than total life expectancy, and the difference widened between 1981 and 1995 (indicator H6).

Other groups

- 5.56 Inability to find work is a key cause of low incomes and social exclusion. Unemployment rates among people from ethnic minorities have been consistently higher (by between 2 and 6 percentage points) than in the general population throughout the 1980s and 1990s (indicator E5). Seven out of ten households with a Pakistani or Bangladeshi head were in the poorest fifth of the income distribution in 1996/97, and this was also true for three out of ten households with a Black or Indian head¹³. Lone parents are another group particularly likely to be affected by poverty. In the UK just over 40 per cent of lone mothers work – much lower than the proportion in many other European countries. Most working lone parents work part time and have relatively low earnings.

10 Labour Force Survey, winter 1998.

11 *Persistent Poverty and Lifetime Inequality: The Evidence*. CASE and Her Majesty's Treasury

12 Department of the Environment, Transport and the Regions, 1998. *English House Condition Survey 1996*. TSO

13 Department of Social Security, 1998, *Households below average income: a statistical analysis 1979–1996/97*, Corporate Data Services.

Children and young people

- 5.46 In 1994, 19 per cent of children were living in families with persistently low incomes (indicator H4). Continuous data on persistent low incomes are not available but snapshot estimates show that the proportion of children living in households with relatively low incomes (below 60 percent of contemporary median income) more than doubled between the late 1970s and the early 1990s⁵. And the proportion of children living in households with low incomes in absolute terms remained broadly constant despite the substantial increase in average living standards. An important factor in this is the increase in the number of households in which nobody works. The proportion of households without a worker rose from 8 per cent in 1979 to 20 per cent in 1996 (indicator C5), partly because of the increase in lone parent households. The proportion of children living in workless households increased substantially in the early 1990s but has remained relatively constant in recent years.
- 5.47 Children in low income families are less likely to eat a healthy and balanced diet, and are more likely to become smokers. Equally, children in families where the head of the household is in an unskilled occupation are five times more likely to die in accidents as children from families headed by someone in a professional job⁶. Children growing up in families experiencing financial difficulties are less likely to stay at school, have poorer attendance records⁷ and are up to ten percentage points more likely to have no qualifications by the age of 23. Poverty and social exclusion not only impact on the quality of life of children on a daily basis, but can also affect their future.
- 5.48 Teenage motherhood, as well as reducing life chances for the mother, increases the risk of poverty and social exclusion for the child. In 1997 there were 46 conceptions by women under 18 per 1000 women in the in the relevant age group (indicator E3), the highest teenage birth rate in Western Europe⁸.

Working age population

- 5.49 In the four years between 1991 and 1994, 8 per cent of working age adults lived in households with relatively low incomes (below 60 percent of contemporary median income) in at least 3 out of the 4 years. Living in a household where no-one works, whether through unemployment or economic inactivity, is an important cause of poverty and social exclusion for those of working age⁹.
- 5.50 Employment is the single most effective and sustainable way to tackle poverty and social exclusion for those who can work. Three quarters of the working age population are in work, but still too many are unable to find work, contributing to a large number of people living in workless households – nearly one in five working age households has no-one in work. The proportion of working age adults in workless households rose from 10 per cent in 1990 to peak at just under 14 per cent in 1995. Estimates suggest there had been a similar increase during the 1980s. The main drivers have been a fall in employment rates across all types of households and an increase in the proportion of single adult households.

5 Department of Social Security, 1998. *Households below average income: a statistical analysis 1979–1996/97*. Corporate Data Services.

6 Department of Health 1999 *Saving Lives: Our Healthier Nation* (Command 4386) TSO

7 Social Exclusion Unit 1998. *Bringing Britain together: a national strategy for neighbourhood renewal* (Command 4045) TSO.

8 Social Exclusion Unit 1999. *Teenage Pregnancy* (Command 4342) TSO.

9 Department of Social Security, 1998, *Households below average income: a statistical analysis 1979–1996/97*. Corporate Data Services.

- 5.57 People with disabilities are around six times more likely than those without a disability to be out of work and claiming benefits¹⁴. In 1996, around 40 per cent of the disabled people surveyed in a DSS survey reported difficulties in obtaining access to goods and services. Social exclusion can be reinforced by difficulties in obtaining access. Households without access to a car are likely to be poorer households, and 17 per cent of carless households in 1997/98 found it difficult to obtain access to a supermarket (indicator J1).

Communities

- 5.58 The decline in traditional industries and lower availability of unskilled jobs have had disproportionate effects in some parts of the UK. Migration patterns have reinforced economic and social decline – people have moved out of major cities, often in parallel with job losses in these areas. Deprived areas can slide into cycles of decline. Those who can afford to move out do so, leaving behind families with lower incomes. The area becomes poorer, businesses close and services decline. For people who live in the area, prolonged periods out of work can lead to disaffection and exclusion, and a lack of commitment to the area. This can lead to higher levels of crime and vandalism, reinforcing the decline. People who live in the poorest areas tend to be ill more often, and to die earlier. Mortality rates in the most deprived local authority districts in England are 30 per cent higher than the rest¹⁵. In 1998, one fifth of local authority areas in England had high levels of deprivation (indicator E2) and many more contained pockets of severe deprivation.

The balance between economic, environmental and social objectives

- 5.59 It is in discussing the issue of poverty, social exclusion and inequality that some of the challenges faced in simultaneously meeting the economic, environmental and social objectives of sustainable development become most apparent.
- 5.60 Poorer people often live in poor quality housing, with inefficient heating systems and poor insulation, which cost more to keep warm, as well as being environmentally more damaging. In many poor neighbourhoods services such as shops and banks have disappeared. As a result, the poorest often have to travel further to shop, and have to pay higher prices.
- 5.61 Environmental impacts are often tackled by economic instruments (ie taxes on pollution or consumption) so that the prices reflect “externalities” (ie the extra costs imposed upon society through the pollution and degradation associated with product production and consumption). However environmental improvements should not be at the expense of hurting the most vulnerable in society. They must target the environmental problem without generating undesirable side effects.
- 5.62 Over the past thirty years rates of taxes and duties on resources and on consumption eg energy and motoring have generally increased. However, underlying real prices have been falling, so prices to the consumer have remained steady or fallen relative to people’s incomes. This has benefited the less well off (fewer elderly people are now experiencing fuel poverty, for example) and increased business profitability and competitiveness.

14 Office for National Statistics, 1999, Labour Force Survey Spring 1999 in *Labour Market Trends*, TSO.

15 Social Exclusion Unit, 1998. *Bringing Britain together: a national strategy for neighbourhood renewal* (Command 4045) TSO.

- 5.63 In order to maintain economic growth, businesses have sought to improve profitability and competitiveness by improving labour productivity, which has meant increasing automation and loss of unskilled or low-skilled jobs, reducing job opportunities for some groups, especially those with few or no qualifications. The government is proposing to introduce the Climate Change levy, which will encourage industry to be more energy efficient, helping the UK to meet targets for reducing greenhouse gas emissions. It will also encourage employment opportunities – since the levy will be offset by cuts in National Insurance contributions.
- 5.64 The drive for efficiency to improve profitability may also have a direct impact on the environment. Increased intensification of agriculture has led to more cost-efficient food production and this has caused real food prices to fall, helping those on lower incomes, who spend a proportionately higher amount of their income on food than those in high-income groups. However, intensification has a cost to the environment – loss of hedgerows and associated loss in biodiversity, and more agri-chemicals which may leach into soils, rivers and the sea.

Measuring progress

- 5.65 There are a number of indicators in the national core set which are related to poverty and social exclusion. The extent to which the key objectives identified in the Strategy are being achieved, as reflected by the indicators, is illustrated in the table overleaf:

Table 5.1 Indicators relating to poverty and social exclusion

Objective	Ref no.	Indicator	Data used	Change		Specific targets/goals
				1970–1998	1990–1998	
Headline Indicators						
Maintain high and stable levels of employment so everyone can share greater job opportunities	H3	Proportion of people of working age who are in work	1970-1999	≈	≈	An increase in the proportion of working age people in employment, over the economic cycle, in the UK
Tackling poverty and social exclusion	H4	Indicators of success in tackling poverty and social exclusion (Children in low income households, adults without qualifications and in workless households, elderly in fuel poverty)	1990-1999	X	≈	Reduction in the proportion of elderly households experiencing fuel poverty in England; the proportion of working age people living in workless households in the UK; the proportion of children in households with persistently low incomes in the UK; and the proportion of working age people with no qualifications in England
Equip people with the skills to fulfil their potential	H5	Qualifications at age 19	1984-1999	...	✓	85 per cent of 19 year olds in England to have a 'level 2' qualification by 2002; 75 per cent in Wales by 2002 and 85 per cent in Northern Ireland by 2001
Improve health of the population overall	H6	Expected years of healthy life	1981-1995	✓	≈	An increase in healthy life expectancy at age 65, in England
Reduce the proportion of unfit housing stock	H7	Homes judged unfit to live in	1986-1996	...	≈	
Other Core Indicators						
Raise educational standards at all levels and close the widening gap between high and low achievers	C1	16 year-olds with no qualifications	1988/89-1998/99	...	✓	95 per cent of 16 year-olds to achieve 1 or more GCSE at grades A*-G in England
	C2	Adult literacy/numeracy	1996	...	...
Maintain high and stable levels of employment so everyone can share greater job opportunities	C5	Proportion of people of working age in workless households	1990-1998	...	≈	A reduction in the proportion of people living in workless households in the UK
	C6	Proportion of people of working age out of work for more than two years	1984-1999	...	≈	A reduction in the proportion of working age people claiming out of work benefits for more than two years in GB
	C7	Proportion of lone parents, long term ill and disabled people who are economically active	1984-1999	...	≈	An increase in the employment rates of disadvantaged groups and a reduction in the difference between their employment rates and the overall rate in the UK

Objective	Ref no.	Indicator		Data used	Change		Specific targets/goals
					1970–1998	1990–1998	
Other Core Indicators (continued)							
Closing the gap between the poorest communities and the rest	E2	Index of local deprivation		1998	...	...	Forthcoming national strategy for neighbourhood renewal will produce agreed targets across government for renewing deprived neighbourhoods
Tackling poverty and social exclusion	E3	Truancies and exclusions from school		1994/95-1997/98	...	≈	Reduce number of truancies and school exclusions by one third by 2002 in England
		Teenage pregnancies		1971-1997	✓	≈	To halve the rate of conception of those under the age of 18 by 2010 in England
Reduce disproportionate unemployment among ethnic minorities	E5	Ethnic minority employment and unemployment		1984-1999	...	≈	An increase in the employment rates of ethnic minorities and a reduction in the difference between their employment rates and the overall rate, in GB
Address major factors leading to health inequalities	F3	Health inequalities		1972/76-1992/96	✗	✗	No national targets, but health authorities are expected to set local inequalities targets
Need better access to services	J1	People finding access difficult		1997/98	...	...
Ensure that disabled people have access to a wider range of goods, services and facilities	J3	Access for disabled people		1996	...	...
Ensure that everyone has the opportunity of a decent home	J5	Temporary accommodation		1982-1998	...	≈	
		Rough sleepers		1982-1998	...	✓	Reduce the number of people sleeping rough by two thirds by 2002 in England
Improving significantly the energy efficiency of all residential accommodation	J6	Fuel poverty		1991-1996	...	✓	To install energy efficiency measures in 1 million buildings by 2002
Reduce both crime and fear of crime	K9	Fear of crime	Physical attack	1984-1998	...	...	Reduce fear of crime in England and Wales by March 2002
			Burglary/theft of car		...	≈	
Safeguarding resources and ensuring affordable supplies	Q3	Water affordability		1994/95-1997/98	...	✓	

Key

✓ significant change, in direction of meeting objective

≈ no significant change

na not applicable, in cases where the indicator is for contextual purposes

✗ significant change, in direction away from meeting objective

... trend is uncertain or no quantitative data available