2.2 Water pricing

In England and Wales, *OFWAT sets water prices* so as to ensure that: i) the functions of a water or sewerage company are properly carried out; ii) companies can *finance* the proper fulfilment of their functions, in particular by securing reasonable returns on capital; and iii) the interests of the *customers* of regulated water and sewerage companies are protected.

An *annual price increase limit* (price cap) is applied to a "tariff basket" of charges for water and waste water services, covering both industry and households. Charges may be adjusted each year for inflation plus a factor "K", set every five years for each company. In the late 1990s, water prices in UK cities were relatively low in OECD Europe terms (Table 3.6). Unlike in other privatised public services, K factors have generally been positive, implying price increases in real terms, particularly to cover investment needed after a long period of underinvestment. The K factor can be revised before the end of the five-year period for companies with higher profit than expected. Water prices were reduced by around 12% in 2000 and have remained virtually unchanged since, and investment is still being made.

Each company is responsible for its charging structure, which depends on local circumstances and history. Charges must be broadly cost-reflective, and OFWAT must ensure that there is "no undue discrimination or preference" among consumers. This *non-discrimination principle* has meant that prices to industrial users have until recently been comparable with those for metered household consumers. Water companies are also obliged to try to maintain a balance between charges to metered and non-metered customers.

Water pricing for 20% of *household users* is metered; for the rest it is based on property value. Water supply charges for metered households and *industrial users* generally have two components: a fixed (standing) charge, which for industry is

Table 3.6 **Water prices in selected OECD countries,**[a] 1998

(USD/m^3)

		At current exchange rates	Adjusted for PPP[b]
United Kingdom	London	0.62	0.57
	Bristol	0.57	0.52
	Manchester	0.55	0.51
Canada	Ottawa	0.34	0.43
	Toronto	0.31	0.39
	Winnipeg	0.73	0.92
USA	New York	0.43	0.43
	Los Angeles	0.58	0.58
	Miami	0.36	0.36
Japan	Tokyo	0.92	0.74
	Osaka	0.68	0.54
	Sapporo	1.13	0.90
France	Paris (suburb)	1.46	1.28
	Bordeaux	1.16	1.02
	Lyon	1.45	1.27
Germany	Berlin	1.94	1.70
	Hamburg	1.74	1.53
	Munich	1.35	1.19
Italy	Rome	0.28	0.29
	Milan	0.13	0.13
	Naples	0.57	0.59

a) Prices calculated for water supply to a family of four (two adults and two children) living in a house with garden rather than an apartment. Price based on annual consumption of 200 m^3. VAT not included.

b) Purchasing power parities.

Source: International Water Supply Association.

based on the size of the supply pipe, and a variable (volumetric) charge, which depends on consumption. The standing charge for the smallest pipe size is the same for industry and households, as is the volumetric charge. Most water companies have introduced "large-user tariffs". OFWAT is proposing that large industrial users (those consuming more than 250 000 m^3 a year), and possibly new housing or industrial development as well, should be removed from the regulated tariff basket.

Sewerage and waste water treatment charges are calculated in the same way as water supply charges, either according to property value or based on the volume of water delivered, less a small allowance (typically 5%) for water not discharged to sewers. They are independent of the strength of the effluent, except for industrial discharges into public sewers, where charges are based on volume and quality (oxygen demand, suspended solids) according to the Mogden formula. Such charges are averaged across regions (with a minimum of GBP 75 to GBP 219 per year) and so are unlikely to reflect costs incurred at any one sewage treatment plant.

A consultation paper issued by DEFRA in 1997 reviewed proposals for *water pollution charges*. Several such charges exist in Europe (e.g. in France, Germany and the Netherlands). Given current monitoring constraints, at least interim thresholds below which charges are not imposed, or are set at a fixed rate, would likely have to be set. Rates would need to reflect the monetary value of pollution damage to the water environment or the marginal costs of pollution abatement. A charge of at least GBP 1/kg of BOD would be needed to stimulate investments in improved effluent treatment. This would raise an estimated GBP 220-355 million per year. Further income would accrue from charges on other pollutants (DEFRA has identified suspended solids, nutrients, ammonia and dangerous substances as candidates for charges). Questions remain: how would the incentive effect of a charging system be passed on to dischargers to sewers, which account for the vast bulk of industrial effluents? How could the programme be integrated into the water industry's price regulation system? What use would be made of the income and what would be the social and distributional consequences of water pollution charges? It was recently decided not to proceed with pollution charges in the UK, however, as it was felt there was a risk that local improvements in water quality, which are required to meet water quality objectives, might be sacrificed in the interest of improving cost-effectiveness in cleaning up water pollution.

In Scotland, three public water authorities were established in 1995 to take over water supply and waste water treatment from nine regional and three island councils. The water authorities were encouraged to seek private financing for capital investments. In 1999, an economic regulator, the Water Industry Commissioner, was introduced to control price increases. Water prices have risen by 50% in the last two

years. In the three years to March 2002, GBP 1.8 billion was spent to improve and renew infrastructure. The expenditure was shared equally between drinking water supply and sewage treatment. In February 2002, the Scottish Parliament passed the Water Industry (Scotland) Act, merging the three water authorities into a single public authority, Scottish Water. The aim is increase economic efficiency in the provison of water and waste water services. Scottish Water will also have a sustainable development duty, where this is not inconsistent with meeting its statutory functions. (Efforts by members of Parliament to give a similar duty to the Water Industry Commissioner were unsuccessful.) Scottish Water must report annually on how it has fulfilled this duty, and it must prepare a code of practice on consulting the public about the impact of its activities. The Act also established a drinking water quality regulator to take over a task previously carried out by the Scottish Executive.

2.2 *Increased use of economic instruments in waste management*

Landfill tax

The UK introduced a landfill tax in October 1996 with the aim of internalising environmental costs of landfills and thereby *encouraging waste prevention and recovery* and reducing the amount of waste going to landfill. The initial tax rate was set at GBP 7 per tonne for non-inert waste, rising by GBP 1 per tonne per year (i.e. to GBP 13 per tonne in 2002) until April 2004. The rate is fixed at GBP 2 per tonne for inert waste. The tax is revenue-neutral, with taxed companies compensated by reduced national insurance contributions for their workers. Before the introduction of the tax, typical per-tonne fees for non-inert waste were GBP 7-25 and for inert waste no more than GBP 2. Thus, introduction of the tax brought about a significant increase in fees. *The Landfill Tax Credit programme* authorises operators to set aside 20% of tax liabilities for funding environmental projects meeting criteria set by the central government and carried out by registered environmental bodies.

The *amount of waste sent to landfill seems to have fallen since the introduction of the tax*. The reduction mainly involves inert waste (Figure 4.3). The figure for non-inert waste has been stable, with increased waste generation being offset by increased recovery. Some 36 Mt per year of inert waste may have been diverted away from landfills since 1996: one-third by recovery and the rest by diversion to regulation-exempted activities (e.g. landscaping, including golf courses and levelling of fields). The possible abuse of such exemptions at sites where policing is insufficient has been a source of concern.

Aggregates levy

Taxation on newly quarried, mined, dredged and imported aggregates (sand, gravel and crushed rock) came into force in April 2002 in England, Scotland and Wales. Increasing recycling of construction materials and reduction of environmental impacts associated with quarrying are among the main rationales for the tax. Around 600 companies are subject to the levy. At the rate of GBP 1.6 per tonne of aggregates (about 30% of the average aggregate price), the levy is expected to raise GBP 380 million per year. One argument challenging the need for the levy was that demand for aggregates was decreasing. Indeed, demand was about 20% less in the early 1990s than in the 1980s, and it stabilised in the late 1990s at an even lower level (around 220 Mt per year). The drop may be due to more efficient building practices and waste minimisation, as well as increased recycling of construction/demolition waste spurred by the introduction of the landfill tax in 1996 (Chapter 8, Section 1.4). The government estimates that the tax will reduce demand for primary aggregates by a further 10%.

Tradable permits for biodegradable waste

The EU landfill directive sets reduction targets for *biodegradable municipal waste going to landfill*, to reduce methane emissions from landfill sites. To support progress towards the targets, the UK has proposed a *tradable permit system* for such

waste, to start in 2003 and be based on the reduction targets set in the directive (with derogations for the UK): 75% of the 1995 level by 2010, 50% by 2013 and 35% by 2020. Northern Ireland has not yet consulted on the matter. It is proposed that permits will be allocated at no charge to local authorities responsible for municipal waste disposal, possibly in proportion to population size and number of households. Other possible bases for calculating the allocations in Scotland include waste generated in 1994, waste generated in 1998 and waste landfilled in 1998. It is proposed that unlimited banking of permits be allowed, except during the three target years, but no borrowing of permits will be allowed. Ownership and transfers of permits will be recorded electronically on a central registry to be maintained by the Environment Agency. In Scotland, SEPA will likely monitor compliance, although the central registry would remain with the Environment Agency.

Providing permits to local authorities, rather than to landfill operators, is expected to lower the administrative costs of the system, as fewer and more homogeneous participants would be involved. Also, the provision of permits free of charge to local authorities, rather than by auction, is meant to minimise the transfer of wealth into or outside the local authority. These are the *main benefits of the UK's system* by design, in addition to the general benefits of tradable permits (e.g. minimising compliance costs).

Public expenditure for the management of protected areas increased in the 1990s. In England, payments by English Nature under management agreements with owners/occupiers of SSSIs increased by more than 40% between 1991 and 2000, with a gradual shift from compensatory to positive payments (e.g. for habitat restoration). Various grant programmes available to NGOs and local authorities for conservation projects in protected areas were restructured and strengthened. In particular, financial support for local nature reserves in England was substantially boosted in 2000 when a new grant programme, totalling more than GBP 6 million over 2001-06, was launched with national lottery funding.

1.5 Integration of nature conservation into sectoral policies

Agriculture

The UK accelerated its efforts to integrate nature/biodiversity concerns into *agricultural policy* in the 1990s. In its 1995 white paper on rural affairs, the government reiterated that nature conservation is an integral part of agricultural policy. A set of 35 indicators for sustainable agriculture, published in 2000 as part of the sustainable development strategy, includes indicators related to wildlife (e.g. wild bird populations) and to environmental pressures on nature (e.g. pesticide use, nutrient inputs).

The modulation mechanism under the Common Agricultural Policy has expanded the opportunity to encourage environmentally friendly agriculture through public funding, and the UK has been a pioneer in the use of *agri-environmental programmes* to create economic incentives for more sustainable farming. Since the mid-1980s, the UK has developed a range of such programmes, many of which have nature conservation as a central objective. Total annual public expenditure on agri-environmental programmes increased rapidly over the last decade, from GBP 9 million in 1990 to GBP 150 million in 2000. The government announced plans in early 2000 to further increase annual expenditure to more than GBP 200 million by 2006 (Chapter 6, Section 1.3). The first such programme in the UK, designating *environmentally sensitive areas* (launched in 1987), continued to grow in the 1990s. It now involves 11 000 agreements covering 532 000 hectares in 22 areas of high landscape, wildlife or historic value in England

(e.g. the Lake District). Another key agri-environmental programme is *Countryside Stewardship*, begun in 1991 in England and applicable to all land not in an environmentally sensitive area. By 2000, 11 900 agreements covered 263 000 hectares, 22 000 kilometres of arable margins and 17 800 kilometres of linear features (e.g. hedges, stone walls). Similar stewardship programmes were established in Wales in 1994 and in Scotland in 1998. Countryside Stewardship and the environmentally sensitive areas account for more than 80% of total public expenditure for agri-environmental programmes. In England, 13% of farm holdings are under one or the other. Another positive development in agricultural funding since 2001 is a shift in funding for livestock farming in hilly areas from head-based to area-based payments, discouraging overstocking in environmentally vulnerable uplands.

There are *encouraging trends* in areas subject to agri-environmental programmes. For example, the Countryside Survey, a national monitoring programme, found that grasslands covered by Countryside Stewardship in England were of better average quality than those in the wider countryside (though this may reflect the programme's success in attracting higher quality grasslands). *Organic farming* has gained momentum: grants for conversion to organic farming rose from GBP 0.2 million in 1995 to GBP 20.5 million in 2000. Registered organic farms now cover 573 000 hectares in the UK. Nevertheless, room for improvement remains. For example, both the involvement of farmers and the area under agri-environmental programmes could be substantially increased by further boosting expenditure (Chapter 6, Section 1.3). Also, grouping like programmes into a single one would streamline application and other procedures. Grant conditions and rates could be made more flexible to better reflect priorities set in local biodiversity action plans.

Forestry

Forest cover accounts for 11% (2.8 million hectares) of the UK's total land area, which is one of the lowest shares in Europe. It increased by 16% between 1990 and 2000, largely through expansion of broadleaved forests to 40% of total forest cover in 2000. While many broadleaved trees were planted in the 1990s, expansion of coniferous forests was small. Replanting in existing forests was constant in the 1990s, both for coniferous and broadleaved forests. About 20% by area of the UK's forests are of ancient origin. About 5% of the forest area enjoys some form of statutory protection (e.g. SSSIs or ASSIs), and 11% is non-statutorily protected through "protective ownership" by public bodies or NGOs such as the National Trust. A further 33% is under protective management through state grants. The UK's *wood production* supplies only 15% by volume of its annual apparent consumption. Production gradually increased in the 1990s, and in Great Britain is expected to increase by a further 60% between 2000 and 2020.

Development of initiatives and standards for *sustainable forestry practice* was accelerated in the 1990s to promote integration of nature/biodiversity concerns into forestry. The commitments and principles set out in the 1994 sustainable forestry programme were translated into the 1998 UK forestry standard, comprising a range of criteria, indicators and good management practices. The standard is compatible with guidelines adopted at European level (the 1993 Helsinki Guidelines, the 1994 Pan-European Criteria). It sets criteria for new planting, management and felling controls. Sustainable forestry certification systems (the 1993 Forest Stewardship Council programme and the 1999 UK Woodland Assurance Programme) were also developed, and forestry businesses have increasingly applied them. In early 2002, more than 35% of total forest cover (65% of commercial forestry) in the UK was certified by the *Forestry Stewardship Council*. In the 1998 England Forestry Strategy, "environment and nature conservation" was one of the four major areas listed for action.

About 70% by area of UK forest land is privately owned, so public financial support to influence *private landowners* to increase forest area or carry out sustainable forestry management practices is an important policy integration mechanism. State grants to private forest owners have been in place since 1988, paralleling the phase-out of tax relief measures. Most private forests are now supported by such grants for new planting, replanting and forest management. In 2000, of the total GBP 37 million in grants provided to the forestry sector in Great Britain, 64% was for new planting, 10% for replanting in existing forests and 22% for sustainable management. Farmers received an additional GBP 16 million for planting new woodlands on farms. In recent years, to reflect the 1998 UK forestry standard, conditions related to nature/biodiversity conservation attached to these grants have been strengthened and made more detailed.

2.3 Assisting biodiversity conservation in developing countries: the Darwin Initiative

The UK has long supported biodiversity conservation in developing countries. In addition to a range of projects funded by official development assistance, the UK launched a new funding mechanism at the 1992 Rio summit called the *Darwin Initiative for the Survival of Species*. It provides grants to UK organisations and individuals for collaborative projects with partners from public or private organisations or individuals in developing countries. One important function of the

initiative is to help developing countries implement their commitments under the biodiversity convention. It also supports institutional capacity building, training, research, environmental education and awareness raising. The initiative currently has a budget of GBP 3 million to fund 20-30 projects per year.

By 2001, the initiative had committed GBP 24 million to 200-some projects in over 80 countries, involving more than 80 UK institutions, universities and NGOs. Some 28% of the projects have been in Africa, followed by South-east Asia with 16%. The initiative also funded projects in the UK's overseas territories and in Central and Eastern Europe. An evaluation of the initiative up to 2000 recorded 14 200 person-training weeks provided, 119 management or conservation plans and 157 databases produced, resources worth GBP 506 000 left in the host countries and 439 permanent field plots established. In addition, participating organisations and other donors have provided a GBP 2.9 million research fund. The future aims of the initiative will be more closely tied to those of the biodiversity convention.

Agriculture

Agriculture has a *strong impact* on the UK environment, both positive and negative. While its contribution to GDP is less than 1%, farming occupies over 70% of the countryside. Agriculture generates some 10% of total GHG emissions in the UK, 33% of methane and 50% of N_2O. Despite modest decoupling, the nutrient balance shows an annual surplus of about 1.5 million tonnes of nitrogen, some 86 kg per hectare of agricultural area. Half the nutrient input is not taken up in agricultural production but rather contributes to diffuse pollution (Chapter 3, Section 1.3). In 2000, agriculture accounted for 27% of serious or significant water pollution accidents (compared to industry at 17%). The population of farmland birds is declining much more rapidly than bird populations in general, by nearly half since the early 1970s (Figure 5.2). This biodiversity indicator is one of the four "headline indicators" that showed "significant change away from meeting the objective" during the 1990s.

Consumer confidence has been seriously undermined by a series of agricultural crises including bovine spongiform encephalopathy *("mad cow disease"), swine fever and foot and mouth disease*. Despite annual budget expenditure of GBP 3.2 billion on agriculture (over 75% of it EU funded), real farm income is now as low as in the early 1970s. Employment in the sector continues to fall. All major stakeholders recognize that a fundamental reorientation is needed to put UK agriculture and rural economies on a sustainable development path.

The policy context for UK agriculture is to a large extent defined by the EU Common Agricultural Policy (CAP). The UK has long argued for more ambitious, *market-oriented CAP reform*, moving towards direct payments decoupled from output, introducing environmental cross-compliance mechanisms, targeting remuneration to provision of environmental services and broadening rural development support beyond the farming sector. Progress at the EU level has been limited, however. In response to the EU's reform Agenda 2000, the UK Government announced "A New Direction for Agriculture" (1999) and published a white paper called "Our Countryside: The Future" (2000), sketching out an integrated development approach for rural England. By 2006, the England Rural Development Programme is to spend GBP 1.6 billion. Scotland, Wales and Northern Ireland have similar programmes. A high-level policy commission reporting to the Cabinet Office presented a report called "Farming and Food: A Sustainable Future" in early 2002, again outlining the need for policy reform and proposing options.

While the CAP establishes the framework, EU countries do have some latitude when it comes to implementation. The UK was one of the first to establish a major programme of management agreements in environmentally sensitive areas. The UK uses the CAP's *cross-compliance provisions* making commodity-related support conditional on compliance with basic environmental standards. It is also one of the few EU countries already using the "*modulation*" *option*, which permits the reduction of commodity-related direct payments if the money is used to promote other rural development and environment measures. The CAP sets the upper limit for modulation at 20%; the UK is at 2.5% and plans to raise the rate to 4.5% by 2006.

Of the annual agricultural budget, which exceeds GBP 3 billion, only about 5% is spent on targeted *agri-environmental programmes*, such as the Environmentally Sensitive Areas and Countryside Stewardship programmes. Since 1990 such funding

has increased rapidly, from GBP 10 million to almost GBP 200 million. Yet, this is insufficient even to neutralise the negative environmental effects stemming from distorted incentives under mainstream agricultural support measures. Resources for agri-environmental programmes should be increased and the various programmes better integrated. Area coverage should be broadened and greater flexibility provided so that responses can be tailored to local circumstances.

1.4 Market-based integration

Since the early 1990s, the UK Government has shown growing interest in using economic instruments to provide signals to producers and consumers about the true costs of using natural resources and depleting ecosystem buffering capacities. In practice it has taken time, however, for economic instruments to be more widely used to help achieve market-based integration. The 1997 *Government Statement of Intent on Environmental Taxation* affirmed the aim of reforming the tax system so as to increase incentives to reduce environmental damage. The idea is to shift the tax burden from "goods" such as jobs to "bads" such as pollution, all the while encouraging innovation in meeting the higher environmental standards. The statement set out test criteria for good environmental tax design, such as consideration of side-effects, dead-weight compliance costs, distributive impacts and international competitiveness issues. In 2001 the government announced further steps to ensure that taxation and public spending priorities contribute to sustainable development and environmental protection, including initiatives in energy and transport taxation and support for technological innovation.

Energy taxation

While the UK's prices for transport fuel are among the highest for OECD countries (Figure 2.3), its fuel oil and natural gas prices are considerably lower than the OECD and EU averages (Table 2.2). Electricity prices are also well below the EU average. *Taxation of fuels used by households* is low or non-existent. For example, coal, natural gas and electricity are not subject to excise duties. Only a small levy, earmarked for the promotion of electricity generation from renewable sources, is charged on electricity, corresponding to less than 1% of the market price. Kerosene and LPG used for heating are exempt from fuel duty. The VAT rate applied to heating fuels is set at the EU minimum, 5%, rather than the standard UK rate of 17.5%. Overall, economic incentives to increase energy efficiency in households are weak. Households are also unaffected by the climate change levy introduced as part of the Climate Change Programme (2000).

The *climate change levy* is administered on all forms of energy (except renewable sources and fuel oil) consumed by the business and public sectors. It is designed to be broadly neutral between the manufacturing and service sectors, with no net gain

for the Treasury. Thus, levy payments are partly offset by a 0.3 percentage point cut in employers' national insurance contributions. Also, from 2001 to 2004, the Carbon Trust, a non-profit company, is "recycling" GBP 100 million in levy revenue as grants to businesses that install low-carbon technologies. The Carbon Trust also administers an enhanced capital allowance programme for businesses, under which approved energy saving investments are eligible for 100% first-year capital allowance deductions (at an estimated cost of GBP 200 million, depending on rate of uptake). Energy-intensive industries participating in voluntary agreements with the government (which specify quantitative targets for reducing operational energy intensity and GHG emissions) are granted an 80% discount in the levy rates. Firms that more than meet their commitments can be allocated allowances for the extra reductions, which can then be traded in the UK Emissions Trading Scheme (Chapter 6, Section 2.2).

Transport taxation

Fuel duties were first introduced in the UK as a revenue-raising measure in 1928. In 1993, with the announcement that the government intended to increase fuel duties

Table 6.2 **Selected environment-related taxes on energy and transport**

Energy products	*Excise tax*		GBP/litre 1998	GBP/litre 1999	GBP/litre 2000
		Gas oil	0.0282	0.0303	0.0313
		Heavy fuel oil	0.0222	0.0269	0.0313
		LPG	–	–	–
		Kerosene (individual/commercial use)	0.0251	0.0303	0.0313
		Kerosene (heating)	–	–	–
	Exemption	For heating: VAT 5% instead of 17.5%			
	Revenue 1998/99	*GBP 253 million (gas oil only)*			
Climate change levy	*Tax on energy use by business (from April 2001). Recycled to usiness through cut in NICs[a] (0.3% points), capital allowance reductions and Climate Trust funds.*				GBP/kWh
		Electricity			0.0043
		Natural gas			0.0015
		Coal			0.0015
		LPG			0.0007
	Exemptions	No levy for energy from renewable resources or CHP; 80% discount for energy intensive sectors; 50% discount (up to 5 years) for horticulture			
	Revenue 2001/02[b]	*GBP 1.0 billion*			
Transport fuels	*Excise tax*		GBP/litre 1998	GBP/litre 1999	GBP/litre 2000
		Leaded gasoline	0.493	0.529	0.547
		Super-unleaded gasoline	. .	0.523	0.492

		Unleaded gasoline	0.440	0.472	0.488
		Ultra-low-sulphur gasoline	. .	. .	0.478
		Super-unleaded gasoline	. .	0.523	0.492
		Diesel/gas oil	0.450	0.502	0.478
		Ultra-low-sulphur diesel	0.440	0.472	0.472
		Kerosene (propellant)	0.403	0.529	0.549
		LPG (propellant)	0.211	0.150	0.150
	Exemption	Fuel for use on ships other than on inland waters			
	Revenue 1998/99	*GBP 21.6 billion*			
Vehicle excise duty	*Programme changed in 2001: for all new cars, differentiated depending on CO_2 emissions. Annual lump sum collected by Driver and Vehicle Licensing Agency.*				GBP/year
		Private car (engine capacity > 1 100 cc)			155
		Private car (engine capacity 1 100 cc or less)			100
		Motorcycles and tricycles (depending on engine capacity)			15-60
		Goods vehicles < 3 500 kg			155
		Goods vehicles > 3 500 kg			Max. 9 250
		Reduced-emission goods vehicles			155-8 250
		Agricultural machines, electric vehicles			40
	Exemptions	Vehicles in private use constructed before 1 January 1973, vehicles used by persons in receipt of certain disability living allowances			
	Revenue 1998/99	*GBP 4.6 billion*			
Air passenger duty	*Paid by passengers*				GBP/ passenger
		Flights to EEA[c] (economy class) from April 2001			5
		Flights to EEA[c] (other classes) from April 2001			10
		Flights to rest of world (economy class) from April 2001			20
		Flights to rest of world (other classes) from April 2001			40
	Revenue 1998/99	*GBP 837 million*			

a) National insurance contributions.
b) Estimated.
c) European Economic Area.
Source: DEFRA; EU; OECD.

annually by at least 3% in real terms, their environmental guidance function was accentuated. After 1994, the new administration increased the commitment to 5% annually, then 6%. This automatic *fuel duty escalator* was stopped in 1999 after hauliers, farmers and others protested against a spike in fuel prices resulting from a major increase in crude oil prices. There is evidence that the fuel duties, by reducing energy use in the transport sector, helped the UK reduce CO_2 emissions. There are also indications that the escalator affected the modal split, shifting the trend back towards rail and water transport (Figure 6.2). It was concluded, however, that "the environmental benefits of higher fuel prices must be balanced with the Government's social and economic objectives". Consequently, decisions on fuel duties are now made from budget to budget, and any real-term increases go directly into an earmarked fund for the modernisation of roads and public transport. In 2000 and 2001, fuel duties were unchanged in nominal terms, or reduced in real terms, so their environmental guidance function has effectively been weakened.

During the 1990s, the UK encouraged technological innovation and guided consumer behaviour by taxing both ownership and use of cars, with a gradual shift towards the latter. However, since 1999, emphasis in transport taxation has been shifting back towards *taxing vehicle ownership*, with tax differentiation to encourage technological innovation (Table 6.2). As in the 1990s with leaded and unleaded gasoline, *tax differentiation* is now used to promote the use of diesel and gasoline that have ultra-low sulphur content. The duty differential with conventional diesel was increased from GBP 0.01 to 0.03 per litre in 1999. Even though ultra-low-sulphur diesel made up 100% of UK diesel use by 2000, further duty cuts were made in 2000 and 2001 (by GBP 0.03 per litre). In 2000 and 2001, duties were also reduced for ultra-low-sulphur gasoline, which, similarly, already accounted for 100% of the market. The initial environmental incentive thus has effectively turned into a general reduction in fuel tax burden. To further stimulate interest in developing and producing profitable alternative fuels offering environmental advantages, in 2000 the government launched the *Green Fuels Challenge*. Duties were cut for bio-diesel (GBP 0.20 below the ultra-low-sulphur rate) and road fuel gases (for CNG and LPG the duty was cut from GBP 0.15 to 0.09 per kg). These duties will be frozen in real terms until at least 2004.

The *vehicle excise duty* was reformed in 2000. For all new cars purchased from 2001, a four-band graduated system was introduced, whereby vehicles are taxed based on their CO_2 emission potential (Table 6.2). The difference is rather small; owners of the least polluting vehicles now pay up to GBP 70 less. However, reductions in the excise duty for small cars have decreased taxation for nearly one-third of UK car owners since 1999. The duty on goods vehicles was reformed in December 2001, with rate differentiation in favour of more environmentally friendly vehicles. While these reforms are a step in the right direction, the overall reduction in the level of duties charged (up to 50% since 1999) is not. Tax differentials should be increased to improve the incentive for buying less polluting vehicles.

From 2002, *income tax charges* for company cars are calculated as a percentage of the vehicle's list price, graduated according to its theoretical CO_2 emission intensity. Both giving and receiving free fuel for private use in company cars is also discouraged fiscally (Chapter 2, Section 1.4). In tandem with these measures, income tax incentives have been introduced to encourage car-pooling and green commuting.

Despite a number of attempts, *road use charging* has so far not been used except in limited locations (e.g. bridges). However, local authorities in England and Wales were recently given the legislative power to introduce such charges. Several local authorities have proposed road use charges for city centres, including London, where a congestion charge will take effect in late 2002. Also, in the most recent budget, the government announced a distance-related road user charge on haulage vehicles for 2005/06. Use of such economic instruments should be fully explored as means of combatting persistent urban air quality and congestion problems.

2.2 *Economic instruments*

The UK has a long-established and highly developed tradition of *economic analysis* during policy development. The BATNEEC principle has been applied under the IPC system and elsewhere. Furthermore, the Best Value system requires local authorities to ensure that environmental services are delivered in the most cost-effective way (Chapter 7, Section 1.7). Until recently, emphasis on cost-effectiveness analysis applied particularly to regulatory programmes and the country used a relatively limited array of economic instruments to help internalise environmental costs. Since 1997 the UK has put much greater emphasis on development of economic instruments to address specific environmental issues, particularly those related to consumption patterns.

The UK's expressed *interest in using economic instruments* as environmental policy tools dates from the early 1990s (Chapter 6, Section 1.4). In 1997, the government indicated that it would seek to increase taxation of "bads" such as pollution, and use part of the revenue to support "goods" such as jobs, following five principles: i) polluters should face the true costs that their actions impose on society; ii) the social consequences of environmental taxation must be acceptable; iii) economic instruments must deliver real environmental gains cost-effectively; iv) environmental policies must be based on sound evidence, but uncertainty cannot justify inaction; and v) environmental policies must not threaten the competitiveness of UK business.

Polluter and user charges

A range of polluter and user charges are applied to recover the costs of providing environmental services (Table 6.6). *Sewerage and waste water treatment charges* help cover the costs of related services, for example. They contain some provisions for

Table 6.6 **Taxes and charges for water and waste**

Water supply charge	*Cost-covering charge on drinking water supply Households pay either according to actual measurement or a flat rate Industry tariff structure has 3 elements: connection, fixed (pipe size) and volume-based*		GBP/household/year
		Average household bill (metered)	87
		Average household bill (non-metered)	106
	Revenue 1998/99	*GBP 3.1 billion*	
Waste water treatment charge (households)	*Cost-recovery charge based on actual measurement or flat rate (related to property value); includes surface and highway drainage*		
		Average household bill for water use	116
		Average household bill (metered)	102
		Average household bill (unmetered)	119
	Revenue 1998/99	*GBP 3.2 billion*	
Waste water treatment charge (industry)	*Cost-recovery charge for indirect discharges: effluent charge based on volume and strength of effluent*		GBP/unit
		Average charges	71-230
	Revenue 1998/99	*GBP 190 million*	
Charge on water discharge	*Levied on direct discharges to surface and groundwater, two components*		GBP/unit
		Application charge: standard one-off rate	505
		Annual charge: based on volume and content of discharge and type of receiving water	389
	Revenue 1998/99	*GBP 39.8 million*	
Water withdrawal charge	*Depends on criteria such as area, water source and season*		GBP/1 000 m^3
		Minimum rate (1995/96)	6.3
		Maximum rate (1995/96)	16.2
Landfill tax	*Levied on disposal of waste to landfill*		GBP/t
		Standard rate for non-inert waste (1999)[a]	10
		Reduced rate for inert or frozen waste	2
	Exemption	From the reduced rate: waste used in restoration of landfill sites and quarries	
	Revenue 1998/99	*GBP 340 million*	
Charge on municipal waste management	*Cost-recovery user charge on waste collection and disposal*		GBP/t
	For households: part of the council tax		18-33
	For industry: actual measurement		

a) The standard rate was raised in 1999 from GBP 7 to GBP 10 and a 5-year escalator was introduced, raising the tax by GBP 1 each year until 2004, when the standard rate will be GBP 16 per tonne.

Source: Inventory of Taxes in the Member States of the European Union, 17th edition; OECD/EU database on environment-related taxes.

surface drainage (runoff from properties) and highway drainage (runoff from roads and pavements). Overall, application of the polluter pays and user pays principles to *water services* is fairly comprehensive except as regards pollution from fertilisers and pesticides. Particular progress has been made since 1994 concerning municipal and industrial waste water management. For *waste management*, higher priority should be given to raising user charges to achieve full cost recovery and to encourage waste prevention. There is a particular need to develop instruments to internalise the costs of pollution from diffuse sources, especially agriculture and transport.

Under the new IPPC system, the Environment Agency has begun *charging regulated parties* on the basis of the time its experts spend advising them or carrying out inspections. While this is a valid application of the user pays principle, regulated industries complain that the time-based charges polarise the relationship between regulator and regulatee and hinders communication with the agency. Under a proposed new charging system, permit charges would be calculated as a function of an installation's "risk rating". The agency would estimate the installation's risk, based on complexity, emissions, location and operator performance. Such a system would provide incentives by lowering regulatory costs for the cleanest operators in a given industrial branch.

Green taxes

A number of *green taxes* have been introduced in recent years, notably the landfill tax, the aggregates levy and the climate change levy. The *landfill tax* (1996) aims to reduce the UK's heavy reliance on landfilling (Chapter 4, Section 2.2). Although information is limited, there are early signs of a decrease in inert waste sent to landfill since the introduction of the tax, though this likely involves considerable diversion of construction and demolition waste to sites where the waste regulations are not applicable (Chapter 8, Section 1.4). Exemptions from landfill licensing should be reviewed to close such loopholes. As the landfill tax is equivalent to a minuscule proportion of turnover for most industrial sectors, it has not yet created a real incentive for waste prevention. Even with the tax, landfilling costs are much lower in the UK than in many other OECD Europe countries. The *aggregates levy* (April 2002) seeks to increase recycling of construction and demolition waste and thus reduce landfilling (Chapter 8, Section 1.4). The *climate change levy* (2002) is a revenue-neutral levy applying to all energy consumed by business and the public sector, except renewables and fuel oil (Chapter 6, Section 1.4).

It is too early to assess the *cost-effectiveness* of these economic instruments, but in theory they should help lead to market internalisation of environmental concerns. Critics have suggested that the tax rates will need to be gradually raised to create effective economic signals that encourage more sustainable consumption patterns. It may also be necessary to better inform the public about the benefits of such approaches

and to explain that they are revenue-neutral. Public acceptance of the use of fiscal instruments to implement environmental policy has reportedly waned in recent years. Opinion surveys show that this is partly because "green taxes" are widely perceived as fulfilling a revenue-raising, rather than incentive-creating, function (Chapter 7, Section 1.2). A high priority should be regular follow-up analysis and serious review of the effectiveness and role of these instruments.

The UK is implementing a combination of fiscal measures intended to give market signals in favour of *low CO_2* emitting passenger cars (Chapter 2, Section 1.3). In 2001, the annual *vehicle excise duty* was differentiated in favour of more fuel-efficient vehicles. *Company car taxation* has also been differentiated in favour of such vehicles, and other fiscal measures discourage the use of company cars. The UK overhauled the *vehicle excise duties* applied to cars and light goods vehicles in 2001, differentiating the tax in proportion to engine capacity. This reform introduced higher duty rates for diesel cars and lower rates for low-emission vehicles. The maximum differentiation, however, is 10% above or below the rates applied to gasoline cars, and the strength of the resulting incentive to buy less-polluting cars is likely to be correspondingly low.

Transferable permits

The UK is pioneering the establishment of national *emission trading* for GHGs. The voluntary Emissions Trading Scheme, which began operating in April 2002, is the world's first economy-wide trading system of its kind. Participants can buy or sell emission allowances to achieve emission reductions at least costs. A mechanism has been established to connect the markets for relative and absolute reductions. To "kick-start" the trading system, the government made GBP 215 million available for the first five years. An important consideration has been the aspiration to establish London as an eventual centre for international GHG emission trading.

The UK has also proposed introducing a system of *tradable waste permits* to help limit landfilling of biodegradable municipal waste as required by the EU landfill directive. The system would start operating in 2003, with municipal waste management authorities acting as traders (Chapter 4, Section 2.2). The system would create strong economic incentives for local authorities to take measures to reduce municipal waste generation and increase recovery. The Environment Agency is also reviewing the scope for *sulphur and NO_x trading* in the electricity supply industry.

2.4 *Environmental expenditure*

The UK has only recently begun systematically collecting information on current or future *environmental expenditure*, whether public or private (Table 6.8). Thus there is a lack of comparable data over time. Recent analyses suggest, however, that from 1996/97 to 2000/01 average annual growth in public sector net expenditure on environmental protection was higher than GDP growth (7.0% compared to 4.8%) and thus the share in GDP slightly increased. Together with environmental expenditure by industry the share is of the order of 1.0% of GDP.

In 1999/2000, reported *pollution abatement and control (PAC) expenditure* totalled about GBP 7.4 billion, 48% of it public expenditure and 52% by industry (Table 6.8). Less than 15% of public gross expenditure was investment; for industry the share was 33%. In industry, the proportion of capital expenditure on integrated processes, as compared to end-of-pipe solutions, has increased significantly and is now about 50%. By far the biggest portion of public expenditure is for waste management. In industry, priority investment areas were air and climate (53%) and waste water treatment (20%), while for current expenditure waste water treatment accounted for the largest share. A breakdown of 1997 and 1999 *expenditure by firm size* shows that for current expenditure the split between large companies and small and medium-sized enterprises (SMEs, fewer than 250 employees) was roughly 65%

Table 6.8 **Environmental expenditure**, 1999-2000

		Total	Public			Industry		
			Total	Investment	Current expenditure	Total	Investment	Current expenditure[c]
Env. Expenditure[a]	(GBP million)	8 742	4 643	572	4 071	4 099	1 301	2 798
Share[b]	(%)	*100*	*53*	*7*	*47*	*47*	*15*	*32*
Per unit of GDP	(%)	*1.0*						
PAC expenditure	(GBP million)	7 436	3 546	466	3 080	3 890	1 275	2 615
Share[b]	(%)	*100*	*48*	*6*	*41*	*52*	*17*	*35*
Air and climate	(%)	*16*	*7*	*18*	*5*	*25*	*53*	*11*
Waste water	(%)	*23*	*6*	*8*	*5*	*39*	*20*	*48*
Waste	(%)	*49*	*78*	*13*	*88*	*22*	*8*	*29*
Soil and groundwater	(%)	*5*	*5*	*30*	*1*	*6*	*4*	*7*
Other env. expenditure	(GBP million)	1 305	1 096	105	991	209	26	183
Share	(%)	*100*	*84*	*8*	*76*	*16*	*2*	*14*

a) Covers PAC plus research and development, environmental education, nature and biodiversity conservation; excludes flood defence and water supply.
b) Parts may not add up to total, due to rounding.
c) Breakdown by media are OECD Secretariat estimates.
Source: DEFRA; OECD.

to 35% in both years. For capital expenditure, the SME share increased from 26% to 34% while the share of larger companies declined correspondingly, indicating that SMEs are gradually catching up.

In addition to PAC expenditure, *other environment-related costs* (e.g. R&D and education) total about GBP 1.3 billion for the public and private sectors. Some GBP 500 million of this is spent for conservation and management of nature and biodiversity; three-quarters of this expenditure takes the form of public sector current expenditure.

1.2 Distributive effects of environmental policy

Environment-related taxation

While the UK is committed to using economic instruments for achieving efficient resource use and integration of environmental externalities, there is scope for significant further steps to be taken. To some extent, this gap reflects a concern that strict internalisation of external environmental costs and benefits might conflict with social considerations on fairness and poverty. One example often cited is the decision in 2000 not to apply the *fuel duty escalator* automatically but to decide on duties annually. This action, however, was motivated only in part by social concerns, and no detailed assessment of the actual distributive effects was ever made. In fact, the higher fuel prices that led to the halt had more to do with international oil price rises than with the fuel duty. Opposition to further increases in the duty also stemmed from its being perceived as a revenue raising mechanism rather than as a tool for providing environmental guidance. In particular, critics noted that the revenue was not even partly earmarked for purposes such as promoting environmental management or public transport. This misunderstanding shows that the rationale for environment-related taxes needs to be properly communicated, based on sound analyses of the taxes' actual impact with respect to environmental effectiveness, economic efficiency and competitiveness, as well as to their social implications.

Tax relief and exemptions, often argued for on social grounds, can seriously undermine achievement of environmental objectives. Energy efficiency in the housing sector is an example (Chapter 8). In many other OECD countries, households tend to bear the main burden of adjustments required to combat climate change, but UK households are exempt from the *climate change levy*. Furthermore, instead of the standard *VAT rate* of 17.5%, the UK applies a reduced VAT of 5% to household heating fuel. The UK is the only EU country that applies no VAT to water supply, waste water and waste treatment services.

This suggests that any initiative to increase *economic incentives* for environmental management needs to be accompanied by convincing evidence and, if necessary, targeted measures assuring a double environmental-social dividend. The

present policy response to the social concern about *fuel poverty* can be considered a step in the right direction. Rather than subsidising fuel use, the New Home Energy Efficiency Scheme (2000) provides targeted incentives to improve home energy efficiency, thus reducing heating costs, energy use and related emissions while improving comfort and health for the poor (Chapter 6).

Affordability, prices and charges

With the privatisation of water companies and reductions in water-related social assistance, *pricing of water and waste water* services became a key issue in the debate on social implications of environmental management. Between 1989 and 1992, disconnections of households from the water supply as a result of unpaid bills increased from about 8 000 a year to over 20 000. After several measures to assure affordability of water charges, however, such service cuts were reduced to about 1 000 by 1998. The installation of some 15 000 prepaid water meters, leading to automatic disconnection if not paid, was judged illegal by the High Court in 1998. Now, under the 1999 Water Industry Act, water supply cuts to households are forbidden.

In England and Wales, the Office of Water Services (OFWAT) regulates the level of water prices. Between 1994 and 1998, the share of households spending more than 3% of their income on water charges fell from 22% to 18%. Since 1993, the ten private water companies in England and Wales have set up *water charity trusts* that offer assistance to people having difficulty paying their bills. The activities of these trusts often go even further, involving broader anti-poverty actions. In Scotland, the water industry has not been privatised, but water and sewerage charges have increased to fund necessary investments. The Scottish Executive has launched detailed analyses and consultations, with the aim of establishing a system of water and sewerage charges that is economically efficient, affordable and socially fair.

The Water Industry Act allows people who would benefit from a measured charge to opt for *metering*. OFWAT formally opposes universal domestic metering on cost-benefit grounds, but supports selective metering. It would be used where new resources are scarce (and hence expensive), where households consume significant amounts of discretionary water (especially for garden watering) and where the initial installation costs are relatively low (most notably for new homes). Two water companies, Anglian and Yorkshire, have had to cancel plans for compulsory metering in recent years because of determined public opposition.

1.3 Environment-related employment

Despite extensive economic analysis of environmental management and policy matters, the related *labour market implications* have not generally been studied in

great detail in the UK. Both employer associations and trade unions assert that environmental improvement has not led to a net loss of jobs, but such assessments are based only on partial empirical evidence. So far research into the relationship between environment and employment in the UK has been promoted primarily by environmental NGOs and the European Commission.

A recent EU-wide study modelling the employment effects of pollution control and resource management concluded that in the UK some 465 000 jobs were directly or indirectly related to eco-industries, equivalent to 1.7% of total employment (Figure 7.1). Over 80% of the *environment-related jobs* were directly linked to pollution control (58%) and resource management (24%). While 70% of the direct employment stems from waste and waste water management, 30% is related to investment, particularly for water supply infrastructure. Regional development agencies in the UK have begun to pay greater attention to environment-related activities and employment in the private sector, estimating such employment to total 196 000 jobs. With respect to employment trends, the number of jobs in the water industry has declined steadily in the past decade, while in waste management and material recycling employment has increased and further growth is expected.

Several surveys have shown that *nature conservation* can have locally significant positive effects on employment, in particular if conservation strategies take economic and social concerns explicitly on board. A 1997 study calculated that nature conservation in Great Britain provides the equivalent of more than 10 000 full-time jobs. However, those who gain and those who bear the costs of nature conservation often do not coincide. In addressing such market failures, management agreements based on broad partnership approaches (e.g. involving local businesses, farmers, hunters, conservation NGOs, etc.) have generated promising results.

Other case studies, examining the potential employment effects of transition to more *sustainable production or transport*, concluded that, on balance, job losses tended to be more than offset by job gains, particularly where innovation leads to economic advantage. For example, one study analysed the employment implications of meeting the 2010 government target for road traffic reduction (–10% from the 1990 level), plus those of efficiency gains and shifts in transport modes. It calculated that the net direct employment impact would be up to 120 000 added jobs. In car-based industries more than 40 000 jobs would likely be lost, but with the introduction of new car technologies and higher leasing rates, the net loss could probably be limited to less than 10 000. The job gains would come primarily from rail investment and operation.

The New Deal programme to combat youth unemployment includes environmental activities: the *Environment Task Force* allows young people to get involved in a wide range of environmental projects and to acquire skills and experiences that can

improve their employability. Although first evaluations show that only about half the participants found sustained employment immediately after taking part in the New Deal, the overall assessment is clearly positive, especially if compared to traditional unemployment assistance. Not only did recruits gain work experience, self-esteem and skills, but the environmental projects set up by local partnerships have improved environmental conditions both locally and beyond.

Private enterprise environmental reporting

To complement its own reporting, the government strongly encourages the business community to improve its environment-related reporting. In 2000, in a keynote speech to the Confederation of British Industry, the prime minister challenged the *top 350 companies* to be publishing annual environmental reports by the end of 2001. The impact of the challenge was marginal: by the deadline, 79 of the companies had actually produced such reports (of which 60 were already doing so) and only 24 of the others had indicated their intention to follow suit. Nevertheless, business reporting is likely to improve significantly in coming years since large *managers of large UK funds* have announced that they will make their investments dependent on environmental reporting.

The pressure on big firms to provide substantive environmental reports was further heightened by an amendment to the Pensions Act in 2000. *Pension trustees* now must state "the extent (if at all) to which social, environmental or ethical considerations are taken into account in the selection, retention and realisation of investments". Increasingly, funds are defining their investment policies and demanding proper reporting on performance with respect to environmental and social goals from companies in their portfolio. Concern for companies' reputations is likely to be a major impetus for providing sound environmental reporting rather than mere "greenwash" reports. The UK branch of the Association of Chartered Certified Accountants gives annual Environmental Reporting Awards to companies issuing high-quality reports.

1.6 Development assistance and the environment

Expressed as a share of gross national income (GNI), the UK's *official development assistance* was 0.32% in 2000, surpassing the OECD Development Assistance Committee (DAC) average of 0.22%. In 2000, the UK was the fourth largest donor among DAC countries (Figure 9.3). Yet, it is still far from reaching the *United Nations' ODA/GNI target* of 0.7%. At the present rate of growth of the ODA/GNI ratio (0.01% per year), it would take the UK four decades to reach 0.7%.

With the overall aim of bringing about lasting reductions in poverty, the UK development assistance programme seeks to promote *sustainable use and effective management of environmental resources* in developing countries. In a 2000 strategy paper ("Achieving Sustainability: Poverty Elimination and the Environment"), the Department for International Development (DFID) outlined this approach, committing itself to structure aid programmes to promote economic growth that is both equitable and environmentally sustainable. Particular emphasis is put on promoting more effective management of natural resources as a means of improving the health and livelihoods of the poor and reducing their insecurity and vulnerability. In the 1990s, DFID devoted an increasing proportion of its budget to forestry projects, most of them including participatory and capacity-building provisions.

As early as 1989, DFID adopted a *Manual of Environmental Appraisal*, which has since been updated and expanded to help project staff take full account of environmental issues. Environmental appraisal is carried out for projects, programmes and policies in order to identify environmental constraints and opportunities. The process is progressive, with the level of detail being determined by the outcome of the initial stages. If initial screening indicates an activity could have a significant impact on the environment, then further investigation such as environmental analysis or a detailed environmental impact assessment (EIA) is required.

Thus, instead of being conducted as discrete, stand-alone studies, environmental investigations such as EIAs are now integrated into all project stages, first through screening and then through iterative assessment. For all projects subjected to EIA, an environmental management plan is prepared, indicating how environmental effects will be mitigated, managed and monitored during project implementation.

Despite the priority attached to environmental issues, *shortcomings* in DFID's programmes are apparent. A 2000 DFID review ("Environmental Evaluation Synthesis Study – Environment: Mainstreamed or Sidelined?") concluded that environment as a potential development opportunity (rather than as a risk to be minimised or mitigated) had not been systematically incorporated ("mainstreamed") into its bilateral programmes. Fully integrating environmental objectives in bilateral aid, designing measurable performance targets, and effectively promoting and monitoring environmental performance were identified as key challenges. Recent efforts to promote mainstreaming of environmental concerns into ODA included training programmes and guidance provided to project officers. DFID believes there is now a high level of awareness of the importance of environmental mainstreaming, although still considerable uncertainty as to how to do it in practice.

The UK channels much of its funding for international environmental issues through the *Global Environment Facility (GEF)*. For example, its contribution to the climate change and biodiversity conventions is distributed through the GEF. UK commitments totalled GBP 89.5 million under GEF 1 and GBP 85.25 million under GEF 2. Special funds, such as the Darwin Initiative (Chapter 5, Section 2.3), have also been set up by the UK to finance bilateral environmental initiatives.

Trade and the environment

The UK seeks to promote consistency between *trade liberalisation and environmental protection policies*, and to avoid conflicts between the multilateral trading system and environmental law. Within the EU, the UK actively seeks

clarification concerning the legal interface between the rules of the World Trade Organization (WTO) and trade measures taken pursuant to multilateral environmental agreements (e.g. the status of eco-labelling measures vis-à-vis WTO rules, and the role of the precautionary principle within the multilateral trading system). Attaching priority to the *integration of environmental considerations into trade negotiations*, the UK sent its environment minister as part of its official delegation to the WTO's Seattle and Doha ministerial meetings.

The UK's Health and Safety Executive administers a national system of *prior informed consent (PIC)* to address concerns about the export of dangerous chemicals to developing countries. In compliance with the EU regulation on PIC, the government requires: i) notification of the intent to export chemicals that have been banned or severely restricted within the EU; ii) conformity with the *UNEP/FAO voluntary PIC procedure*; and iii) packaging and labelling of the chemicals in compliance with EU legislation, at a minimum, and in a suitable format for the importer. Since 1992, the UK has processed more than 300 export notifications. It has signed the *Rotterdam Convention*, which will eventually supersede the voluntary procedure.

A major review of the *Export Credits Guarantee Department* in 2000 revealed a need to more systematically assure the coherence of its activities with the UK's wider objectives (e.g. in the area of sustainable development). The review led to the adoption in December 2000 of business principles that determine how applications for export credit are assessed, addressing concerns of sustainable development (including environmental impacts), human rights, etc. Use of the business principles is compulsory on all applications for support; the challenge will be to ensure their implementation. In 2001, the department put in place a screening process to ensure that all applications take account of projects' environmental and social impacts. The environmental assessment process fully meets the requirements of the agreement on "Common Approaches on the Environment and Officially Supported Export Credit", which was accepted by the majority of OECD Export Credit Group members in November 2001.