1.5 *Expenditure, financing and water charges*

Expenditure

Public expenditure on management of water quantity and quality is in the order of EUR 5.4 billion per year, or 1.3% of GDP. Central government expenditure is about EUR 1 billion, an amount that has remained broadly constant since 1996 and represents most of the expenditure on flood protection. Combined expenditure by water boards is in the order of EUR 1.6 billion for waste water treatment and water quality management (about 70%), water quantity management (25%) and flood control (less than 5%). Expenditure by municipalities is in the order of EUR 0.7 billion (mainly for storm and waste water sewerage networks). Provinces generally have a strategic planning role and are not responsible for significant expenditure.

Business expenditure in this area is in the order of EUR 0.4 billion per year, of which some 20% is new investment. There is considerable expenditure by the *water industry* (consisting of enterprises that provide water supply and sewage treatment services) on implementation of National Environmental Policy Plan (NEPP) targets; this expenditure increased from EUR 1.42 billion to EUR 1.76 billion in the period 1990-2000 (at constant 2001 prices) or almost one-quarter in real terms. Water industry expenditure represented 0.44% of GDP in 2000.

Country-wide expenditure on water management *rose significantly in the 1990s*, a trend likely to continue until at least 2005. Increases were particularly marked in the case of expenditure on sewerage networks. The main reasons for these increases were the need to address emergency overflows from combined sewers, connection of outlying dischargers to the sewerage system, and a maintenance backlog. Waste water

treatment costs also rose due to the shift towards tertiary treatment and incineration of sewage sludge. Further increases are expected until completion of the nitrogen removal programme in 2005. Other items (contaminated sediments, groundwater depletion) have also required additional expenditure. Expenditure by industry, which made the bulk of its waste water treatment investment in the first half of the 1990s, continued to grow in the second half of the decade as a result of existing emission reduction agreements. Further emission reductions are required to meet domestic objectives as well as international commitments. The government allows firms some latitude in scheduling expenditure to coincide with major investment cycles for process and product changes.

Financing

Growing *expenditure has increasingly been financed through user charges*. Revenue from these charges has increased considerably over the past decade. In 1994 municipalities recovered 79% of the cost of maintaining sewerage networks directly through user charges (the remainder was financed from other municipal funds); by 2005 this share is expected to reach 90%. Sewerage charges collected by municipalities increased from EUR 313 million to EUR 1 435 million in the period 1990-2001. Waste water treatment charges collected by water boards increased from EUR 386 million to EUR 987 million during the same period.

Much of the *burden of continuing increases in water management expenditure* is borne by households (e.g. about two-thirds of the cost of waste water treatment by water boards). On average, it is expected that individual households' annual water bill will increase by EUR 40 between 1998 and 2006. Some relief is available for citizens with little ability to pay; in most municipalities low-income families are exempt from sewerage charges. The water supply company of Groningen province does not require a volumetric charge to be paid for the first 30 cubic metres of water delivered to each dwelling.

Structure of household water charges

Households pay *fees and charges for three distinct water services*, each provided by a different agency. The tariff structure for *tap water* is set by each of the 16 water supply companies. In metered dwellings (where the great majority of the population lives), household water bills usually have a fixed component (EUR 15 to EUR 60) and a volumetric component (EUR 0.78 to EUR 1.40 per cubic metre, not including VAT and the tap water tax). The price of tap water has risen steadily over the past few decades. *Sewerage* fees are paid to the local body responsible for maintaining the sewerage infrastructure. Municipal sewerage charges for households are not based on the amount of waste water collected (unlike charges for industry, which are usually

based on a unit charge per p.e. One-person households count as one p.e., multiple-person households as three p.e. Households also pay a per capita charge ("head tax") to water boards, which finances a number of water quality and quantity measures (e.g. combating groundwater depletion). Revenue from this charge was some EUR 268 million in 1998.

Some regions have experimented with *basing the fee for all water-related services on drinking water usage*. However, legal technicalities (e.g. boundary issues and the need to amend the Pollution of Surface Waters Act) and hesitation by various authorities still stand in the way of country-wide adoption of such a pricing system. Results of current experiments will be taken into consideration in developing further policy.

Environmental taxes

In 1995 a *groundwater tax* was introduced to raise general revenue and to reduce groundwater depletion. This tax reduces the cost difference between drinking water produced from surface water (which is normally more expensive) and that produced from groundwater. The general rate is EUR 0.1631 per cubic metre; lower rates apply where extraction is accompanied by artificial recharge of the same aquifer. Revenue raised by the groundwater tax, estimated at EUR 163 million per year, is not earmarked. Exemptions apply to groundwater abstraction for land drainage, and for irrigation if less than 40 000 cubic metres per year is abstracted. Under the Groundwater Act, provinces may levy a separate charge to finance activities related to implementation of water resources policy. This charge is small, with revenue country-wide in the order of EUR 20 million.

As of 2001 a *water supply tax* of EUR 0.29 per cubic metre is being levied on water produced by water supply companies, which can pass this tax on to customers. The tax was introduced to raise revenue (currently about EUR 111 million per year) and is not earmarked. Exemptions apply to water supplied to meet emergencies (e.g. from fire hydrants) and to sprinkler installations.

Dischargers of effluents to surface waters (i.e. waste water treatment utilities and industry, but not agricultural dischargers) are subject to a *tax on surface water pollution*, measured in units of oxidisable matter (BOD, COD) or in pollution units. The rate per pollution unit is about EUR 43. Revenue is earmarked for financing of measures to prevent or remediate surface water pollution.

Integration of nature protection concerns in sectoral policies

Measures to address environmental and other pressures on nature have been taken in the agriculture, industry and transport sectors. Despite its small size, the

Netherlands is one of the world's three largest exporters of agricultural produce. With dairy farming and market gardening its main activities, *agriculture* employs around 3% of the workforce and accounts for about 3% of the country's GDP. Following a rapid increase in the 1970s and the 1980s, particularly in the number of pigs and poultry, livestock numbers decreased in the 1990s by 18% for cattle (4 million in 2001), 6% for pigs (13.1 million in 2001), though there has been a 29% increase for laying hens (42.7 million in 2001). The decrease reflected adjustment of the farm sector to market and policy conditions (notably milk quotas introduced in 1984), as well as the need to meet environmental requirements (in particular, manure quotas introduced in 1987 and tightened since). However, livestock density remains the highest in the OECD area (Figure 4.3).

Agri-environmental measures have focused on better control of use of farm inputs to minimise diffuse pollution and to reduce eutrophication and acidification by nitrates, phosphates and ammonia. Many such measures are recent; among them, a government programme was initiated in 2000 to purchase pig and poultry farms and take them out of production (the outgoers scheme). Measures have also included a mineral accounting system, involving a tax on farm mineral surpluses, and a compulsory manure delivery system to address farm manure surpluses (Chapter 3). It is unclear how successful these measures will be in reducing the current manure surplus and high intensity of fertiliser use. There are proposals to establish limits on the number of animals per hectare and to increase support for organic farming (in which farmers appear to be losing interest to some extent). In 2001 the government released a policy document, Vision for Healthy Crop Production, which establishes the goal of reducing pollution from plant protection products by 95% by 2010 compared with 1998. This is to be achieved through encouraging farmers to move towards integrated crop production. Policy instruments to be used include education, farm certification, tightening of regulations on the sale and use of farm pesticides, and a pesticide tax from 2003.

More generally, the total amount of farmland has been decreasing in the last two decades (some of it being replaced by woodland), partly as a result of the European Common Agricultural Policy in recent years. In 2001 the budget of the Ministry of Agriculture, Nature Management and Fisheries (LNV) was EUR 1.8 billion. The EU contributed 62%; the national contribution was 38%. Around EUR 0.4 billion of the LNV budget has been allocated to development and management of nature reserves. Over two years the total cost of the outgoers scheme has been almost EUR 0.9 billion. However, most *agricultural policy support* remains associated with agricultural production.

Measures taken by *industry* to control eutrophication and acidification have included the imposition of tighter standards and closer monitoring and control by firms of direct discharges of nitrogen and phosphorus to water, with good results

(Chapter 3). Progress has also been made on reducing air emissions of SO_2, particularly through environmental agreements (Chapter 2). The water industry is making efforts to reduce eutrophication due to nitrogen and phosphorus inputs by upgrading municipal waste water treatment infrastructure (Chapter 3). Water contamination by heavy metals remains a major threat to freshwater fish populations. In the *transport* sector measures have been taken to reduce NO_X emissions and to avoid habitat fragmentation by regulating the development of road infrastructure, but with limited success (Chapter 7).

Efforts have also been made to integrate nature protection concerns in *spatial and environmental policy* while creating new regional development opportunities. In 1989 VROM introduced regional development agencies (ROMs). Ten ROM areas have been designated at national level. Provincial authorities have designated areas with integrated objectives, as well as environmental protection areas such as groundwater protection areas (1 450 km^2), nature conservation areas and noise sanctuaries (1 780 km^2). In several cases groundwater protection areas have been integrated with nature conservation areas; many conservation areas are also designated as noise sanctuaries. Such environmental protection areas are often located wholly or partly within a ROM area or within a provincial area with integrated objectives. Spatial policy in the Netherlands plays an important role in facilitating the implementation of nature policy. Recent examples are limiting the extent of agricultural land lying within nature conservation areas ("reconstruction policy") and allowing more space for water for flood control ("space for water policy").

Land purchase, one of the most important instruments for protecting natural areas, is carried out primarily by the State (80% of all purchases) and private conservation organisations (20% of all purchases). These organisations include the Dutch Society for the Preservation of Nature (Nature Monuments). The land purchased by LNV is *managed* by the (recently privatised) National Forestry Service (50%), Nature Monuments (25%) and the provincial nature conservation agencies (25%), which together manage a considerable share of Dutch nature reserves (73% in 2000) and receive associated government *financial support*. LNV, the National Forestry Service and NGOs also jointly manage national parks, through a joint foundation, with the combined objectives of ecosystem conservation, education, tourism and research. Natural areas are also managed by the Ministry of Defence, the Directorate General for Public Works and Water Management, water companies, forest owners and some municipalities.

A government decision was taken in 2002 to focus less on land purchase and instead to encourage *third party management of nature reserves* (protection of nature values, within and outside the EHS). Financial support can be obtained either for management of nature reserves (SN) or for nature management in agricultural areas (SAN). Remuneration is based on the ecological outcome and on management costs (SN) or income loss (SAN). NGOs and individuals, including farmers, are eligible for both schemes. The schemes cover management of existing natural areas and development of new ones. Provincial plans determine the location of these areas and the type of areas to be developed.

The design of long-term investments

A key *public sector* development has been the creation of a group to assess the environmental costs and benefits of major policy and investment proposals (along with compliance costs). Across governmental layers there is still too much compartmentalisation of policies for land use planning, water and nature management, and environmental monitoring and enforcement.

In the *private sector* environmental considerations have assumed an increasingly important place in investment design. This process is not complete, nor did it begin overnight. It is the result of gradual transition over the last decade, partly led by the development of environmental agreements (covenants) such as the 19 multi-year agreements with medium-sized Dutch energy consuming manufacturers. Also significant is the development with industry of initiatives such as "sustainable entrepreneurship", sustainable industrial sites (a system for co-operation at sites to reduce energy use, waste and effluent purification costs), cleaner production and eco-design.

Government budgeting

The main opportunity for *environmental considerations to become part of the budget process* is at the beginning of each new government's four-year term, when revenue and expenditure are estimated and programmes are negotiated. Subsequent expenditure on environmental issues depends on whether a surplus exists on the expenditure side (e.g. arising from lower than expected expenditure on some programmes). In the past, some of this surplus was allocated to measures such as sustainable housing under the Green Fund System, sustainable energy investments and transport sector research. Major allocation decisions for the period 2003-06, including priorities for the large economic restructuring budget, have not been taken. Proposals made in NEPP4 were to remain provisional until the new government's decisions became known.

In 2000 the Ministry of Housing, Spatial Planning and the Environment (VROM) commissioned a study on the *environmentally harmful effects of subsidies* by the central government (excluding EU and local subsidies). The study addressed budgetary transfers ("direct subsidies") and fiscal deductions ("fiscal subsidies"). Case studies were carried out on nine of the 35 direct subsidies identified as potentially environmentally harmful, including those to local airports and subsidisation of rent for those with low incomes. Some of these subsidies had already been modified prior to or during the study, i.e. either lowered or based on new restrictions, including environmental ones. Moreover, as the social and economic effects of the subsidies were not considered in the study, it was difficult to draw final conclusions. However, it was concluded that the negative environmental effects of direct central government subsidies were limited.

The list of *fiscal subsidies* that could be environmentally harmful was handed over to the Environmental Integration Committee (EIC) for further examination. The EIC is made up of VROM, the Ministry of Finance and other ministries, and independent experts and representatives from industry, trade unions and NGOs. Its role is to review current and proposed fiscal measures, evaluate their effects, and issue an opinion regarding their introduction or revision. Two EICs have been set up, reporting in 1997 (EIC I) and 2001 (EIC II). EIC II recommended that some fiscal subsidies be amended.

In 2001-02 VROM developed a method for assessing the environmental effects of *indirect subsidies* (i.e. all subsidies that are not budgetary transfers). This method deals with fiscal as well as capital subsidies, price or quantity regulation, public provision of goods below cost (e.g. infrastructure) and trade measures.

Increasing use of economic instruments

Use of *price based instruments* has become familiar and is increasing (Table 5.2). The Netherlands has introduced water and other types of charges (e.g. charges intended to recover operating costs rather than to have incentive effects), manure trading and vehicle tax differentiation. Work is proceeding on trading of both NO_x and GHG emissions – the latter in the context of the draft EU Directive on GHG emission trading and the Kyoto Protocol. Pricing would still be difficult to introduce in some areas. A pricing system in which a charge for all water services (water use, sewage collection and treatment) would be based on drinking water usage has encountered legal problems as well as political opposition. More significantly, there is political resistance to the per-kilometre tax. Opposition to taxation of infrastructure development (housing, industry) on open spaces also exists.

Sustainable development efforts were considerably advanced by major fiscal reform initiatives in the 1990s. The Netherlands has a relatively high level of "*green taxes*" compared with most other European and OECD countries (Chapter 5,

Table 5.2 **Environmentally related economic and fiscal instruments,** 2001

Instrument	Rate	Remarks
ENERGY		
Fuel tax (since 1992)	EUR 0.01329/litre (diesel) EUR 0.01319/litre (light fuel oil) EUR 0.01204/litre (petrol) EUR 0.01586/kg (LPG) EUR 0.01551/kg (heavy fuel oil) EUR 0.01122/kg (coal) EUR 0.01034/m^3 (natural gas up to 10 million m^3/year) EUR 0.068/m^3 (natural gas above 10 million m^3/year)	Revenue (EUR 627 million) goes to general budget. Tax is levied on fuel producers and importers. The fuel tax replaces the fuel charge introduced in 1988. Between 1988 and 1992, revenue produced by the fuel charge was earmarked for financing environmental activities.
Excise duty on fuel	EUR 0.65880/litre (leaded petrol) EUR 0.59037/litre (unleaded petrol) EUR 0.3975/litre (diesel) EUR 0.04656/ litre (light fuel oil, gasoil for heating) EUR 0.01554/kg (heavy fuel oil) EUR 0.01037/kg (LPG)	Revenue (EUR 5.6 billion) goes to general budget. Fuel producers and importers are subject to this tax.
Regulatory energy tax (REB) (since 1996)	EUR 0.12756/litre (gasoil for heating) EUR 0.12649/litre (light fuel oil) EUR 0.15088/kg (LPG) EUR 0.1203/m^3 (natural gas up to 5 000 m^3/year EUR 0.0562/m^3 (natural gas between 5 000 and 170 000 m^3/year) EUR 0.0104/m^3 (natural gas between 170 000 and 1 million m^3/year) EUR 0.0583/kWh (electricity up to 10 000 kWh/year) EUR 0.0194/kWh (electricity between 10 000 and 50 000 kWh/year) EUR 0.0059/kWh (electricity between 50 000 and 10 million kWh/year)	Revenue (EUR 2 484 million) is returned to households and industry through reduction of labour taxes. REB is levied on energy distribution companies, and producers and wholesalers of mineral oils, and passed on to small energy consumers (households, small commercial establishments). Natural gas and electricity are taxed up to a maximum amount consumed (1 million m^3/year and 10 million kWh/year). Decreasing-block tariffs were introduced in September 2001 (replacing a single volumetric rate of EUR 0.1203/m^3 and EUR 0.0583/kWh, respectively). Consumers receive an annual rebate of EUR 142. They benefit from an additional premium if they invest in energy-saving equipment, renewable energy and insulation. Producers get refunds for green electricity (EUR 0.02/kWh), electricity produced by cogeneration delivered to the grid (EUR 0.0057/kWh), and electricity from waste incineration (EUR 0.016/kWh). Companies investing in energy conservation get a corporate tax concession. Large-scale energy consumers (some industries) and natural gas used to produce electricity are exempted.

TRANSPORT

Registration tax	45.2% plus EUR 328 (diesel passenger car) 45.2% minus EUR 1540.7735 (petrol and LPG passenger car) 20.7% minus EUR 224.2611 (motorcycle)	Tax on purchase of a new vehicle based on net market price (VAT excluded), levied on car producers and importers and passed on to consumers. Reduced rate for second-hand imported cars according to age (minimum of 10%). Imported cars over 25 years old are exempted.
Purchase bonus for clean vehicles (in 2001 and 2002 only)	EUR 325 (petrol and LPG passenger car and delivery van) EUR 550 (diesel passenger car) EUR 625 (diesel delivery van)	Refund on the registration tax after purchase of a vehicle that fulfils the 2005 requirements for exhaust gas emissions (EURO 4). The bonus rate was decreased in 2002 (by 15-20%). This measure was abolished in 2003.
Direct payment for purchase of fuel-efficient cars (in 2002 only)	EUR 1 000 (A-rated vehicle) EUR 500 (B-rated vehicle)	Applies to purchase of low carbon emitting (petrol and diesel) vehicles by individuals. Cars are rated from A to G according to their GHG emissions (in CO_2 equivalent). Premiums are granted only to cars rated A and B. This measure was abolished in 2003.
Motor vehicle tax	EUR 0.5970/kg + 0.7999/kg (LPG passenger car) EUR 0.5407/kg + 0.7427/kg (diesel passenger car) EUR 0.1961/kg + 0.4158/kg (petrol passenger car) EUR 0.1239/kg + 0.1792/kg (delivery van) EUR 0.1084/kg + 0.0203/kg (bus) EUR 0.0440/kg + 0.0454/kg (trailer) EUR 0.0297/kg + 0.0220/kg (lorry)	Annual tax on vehicle ownership (or use of roads in the case of buses) based on net weight. The first rate is for the first 1 000 kg (passenger car, delivery van, trailer), 2 700 kg (bus) or 11 000 kg (lorry). The second rate applies to extra weight calculated in blocks of 100 kg (passenger car, delivery van, bus, trailer) or 1 000 kg (lorry). For motorcycles, a single rate applies (EUR 81.8235/year). Rates vary according to provinces. This tax could be replaced by a per-kilometre tax.
Road tax on heavy vehicles (Eurovignette)		Tax levied (daily, weekly, monthly or annually) for the use of Dutch motorways. Applies to foreign lorries of over 12 000 kg gross weight. Rates based on number of axles (up to 3; 4 and more) and engine type (non-Euro, Euro I, Euro II and cleaner).
Per-kilometre tax (under discussion)		Would replace the motor vehicle tax. Based on number of kilometres driven as measured by in-car device. Tax would be levied first on lorries (in 2004) and progressively on other road users (by 2006). It would also apply to heavy foreign lorries. The tax is expected to vary according to type of road and time of day (variable road pricing system) to help shift traffic patterns. In 2003 it was decided not to proceed with this measure.

WATER		
User charge for public water supply (PWS), sewerage (S) and public waste water treatment (WWT)	From EUR 0.5/m^3 (Drenthe province) to EUR 1.5/m^3 (Duin, Zuid-Holland province) (PWS for industrial users) From EUR 30/pollution unit (De Aa, Noord-Brabant province) to EUR 60/pollution unit (Het Vrije van Sluis, Zeeland province) (WWT)	Water companies set PWS charges at different rates for households and industry. 90% of the Dutch population is subject to volumetric pricing plus a fixed element (5-10% of the bill), 7% pay a flat fee and 3% an increasing-block tariff. S charges are fixed per dwelling (by utility). Water boards set WWT charges based on full cost recovery. For households, charges based on family size (one pollution unit for bachelors, 3 units for families).
Abstraction tax for fresh groundwater (since 1995)	EUR 0.163/m^3	Revenue (EUR 170 million) goes to general budget. Tax is levied on major users (over 100 000 m^3/year) including water companies, farmers and industry. Rebates apply if surface water was injected into aquifers prior to abstraction. Use for irrigation is exempted. Groundwater accounts for 60% of public water supply.
Abstraction charge for groundwater	EUR 0.01-0.06/m^3	Revenue goes to provinces to finance groundwater research activities.
Tax drinking water supply (since 2000)	EUR 0.132/m^3	Revenue (EUR 100 million) goes to general budget. Tax is levied on water companies up to a maximum of 300 m^3/year.
Pollution charge	EUR 43.5811/p.e.	Revenue goes to central government (V&W) to finance water and waste water management activities. Applies to industrial and municipal discharges to state waters. Pollution load based on coefficients and converted into population equivalent (p.e.); measured for large polluters (more than 1 000 p.e.). Rate varies according to provinces (to reflect pollution abatement cost).
Charge on farm mineral surplus (since 2001)	EUR 4.54/kg/hectare (phosphorus) EUR 0.68/kg/hectare (nitrogen)	Revenue goes to central government (LNV) to finance agri-environmental activities. Applies to kgs of surplus (based on mineral accounts). For phosphorus, first 10 kg per hectare is exempted.
WASTE		
User charge for municipal waste collection and disposal		Municipalities set charges based on family size (single person or family) for households and on type and size of activity for industry. Rates set to allow full cost recovery. In some cities, poor households are exempted. Some municipalities finance waste paper collection by NGOs.

Landfill tax (since 1995)	EUR 12.61/t (landfill waste) EUR 65.46/t (incinerable waste)	Revenue (EUR 239 million) goes to general budget. Tax levied on landfill operators. The rate is set according to average incineration cost. Polluted dredging sludge and soil are exempted (provided they cannot be treated), as is asbestos (provided it is delivered separately).
Product charge on passenger vehicles (since 1994)	EUR 68.06/vehicle	Revenue goes to a national fund used to pay for demolition and recycling of old vehicles. Due to efficiency gains in dismantling of cars, the rate has been reduced twice since the charge was introduced.
Product charge on farm plastics (since 1996)	EUR 0.03/kg	Revenue goes to a national fund used to recycle old farm plastics.
Product charge on batteries (since 1996)	EUR 0.004-0.54/piece	Revenue goes to national fund used to recycle old batteries.
Product charge on waste paper (since 1997)	Variable	Revenue goes to national fund used to recycle waste paper. Paid by paper producers only in years when price for waste paper is too low to pay for collection and sorting.
Product charge on electrical appliances (since 1998)	Up to EUR 17/piece	Revenue goes to a national fund which transfers a portion to municipalities for separate collection and another portion to recycling companies.
Product charge on plastic blinds (since 2000)	EUR 0.08/kg	Revenue goes to national fund used to recycle old PVC window frames.
Deposit refund on bottles	EUR 0.45/plastic (PET) bottle EUR 0.07/glass (beer) bottle	Deposit refunded at time of refill at shops.
NATURE		
Entrance fee		Applies to entrance, transit and parking of motor vehicles in some protected areas.
Fishing licence		
Hunting licence		
NOISE		
Aviation noise charge		Revenue goes to central government (VROM) to compensate population living near airports. Airline companies pay charges for each landing and take-off. Rates vary according to type of aircraft.

Source: OECD.

Section 3.3). These taxes generate around 14% of total government revenue. An increase in the share of revenue from green taxes since 1996 is mainly the result of taxes on waste, groundwater use and fuels, as well as the regulatory energy tax (Table 5.3). Increasing the REB has made it possible to lower other taxes (particularly income and social security taxes) in such a way that each affected sector could be compensated. However, it seems unlikely that use of environmentally related taxes can be extended much further, especially if key proposals such as the per-kilometre tax fail to be adopted. Given the environmental significance of the per-kilometre tax, it would be particularly regrettable from a sustainable development standpoint if this measure were not implemented.

Table 5.3 **Revenue from environmentally related taxes,** 1985-2002

(EUR billion)

	1985	1990	1995	1998	1999	2000	2001	2002[a]
Energy (excise duty on mineral oil/derivates)	1.8	2.5	4.3	4.9	5.2	5.3	5.2	5.8
Transport (vehicle taxes)	2.1	2.9	3.9	4.2	4.8	5.1	5.1	5.0
Environmental taxes	0.0	0.0	0.9	1.7	2.2	2.8	3.4	3.4
Total ERT[b]	3.9	5.4	9.1	10.8	12.3	13.1	13.7	14.2
Total government taxation	44.6	61.9	69.7	81.5	87.8	94.3	101.2	108.2
GDP against market prices	193.1	234.5	333.7	354.2	373.9	400.6	433.9	454.5
ERT[b] as % government taxation	*8.7*	*8.6*	*13.0*	*13.3*	*14.0*	*13.9*	*13.5*	*13.1*
ERT[b] as % GDP	*2.0*	*2.3*	*2.7*	*3.1*	*3.3*	*3.3*	*3.2*	*3.1*

a) Forecast.
b) Environmentally related taxes.
Source: Ministry of Economic Affairs.

It can be argued that the potential for significant *behavioural change* is limited by the fact that environmental costs are not fully incorporated into prices. Potential extension of the REB to large energy users (exempted largely due to international competitiveness concerns) has also been constrained by perceived inconsistency with long-term energy agreements and with the agreement on energy efficiency benchmarking. Thus opportunities for price-driven energy efficiency reductions have been neglected to minimise perceived risks of "leakage" and maintain good co-operative relations with business and industry. Environmental agreements and free depreciation of environmentally efficient equipment may be more effective in influencing

consumer and producer behaviour than green price signals (e.g. fuel prices). However, careful consideration should be given to whether environmental targets are being met at the lowest possible economic costs.

A mix of policy instruments supporting market based measures to move towards sustainable development

The Netherlands has used an eclectic mix of measures to move towards more sustainable industry, transport and agriculture, as well as more sustainable investment in other areas such as housing. *Fiscal incentives* for sustainability investments by the

Table 5.4 **Examples of support for sustainability investments by the private sector**

Type of support	Means and extent of support
For eco-labelling – including car efficiency labelling	Foundation established in 1992 by VROM and Ministry of Economic Affairs (EZ) to set up a national environmental labelling system. Energy labels for new cars introduced in January 2001 indicate both absolute and relative fuel consumption (by size of car).
For eco-driving	Registration tax rebates for new cars equipped with devices to improve fuel efficiency (econometer, dashboard computer or cruise control). Subsidies for eco-driving training programmes.
For cleaner production	Energy efficiency and environmental advice for SMEs (< 250 employees): 50% subsidy. Support for government authorities/consultants undertaking joint environmental projects for SMEs: 67% subsidy.
For environmental management systems (ISO 14001 certification/EMAS registration)	Foundation (SCCM) established to co-ordinate certification of environmental management systems (provides interpretations of ISO and EMAS standards; sets requirements for certification organisations).
For eco-design and dematerialisation	Credit scheme for environmentally oriented product development. Support available through "Promise" and "Ecodesign" projects. Activities have included an environmental innovation survey of 600 SMEs.
For research and development of innovative environmental technology	Under Economy, Ecology, Technology programme, EUR 127 million in subsidies was provided in the period 1996-2000 to research institutes and small/medium research companies for projects to develop innovative environmental technology.
For innovative projects	The National Sustainable Development Initiative (NIDO) grants short-term (two-year) financial support to small-size innovative projects that bring sustainability benefits (such as the shift to low-energy use systems or a more environmentally friendly transport system). In 2001 NIDO awarded EUR 3.9 million in grants.

Source: VROM.

private sector were diversified and increased overall during the 1990s. "Green investment" by business has included the Scheme for Free Depreciation on Environmental Investments (VAMIL) and the Environmental Investment Allowance (MIA). VAMIL investment reached EUR 970 million in 2000; MIA investment in that year was EUR 520 million. Investment in energy conservation has included the Energy Investment Allowance Scheme (EIA), which is intended to stimulate business investments in energy conservation and renewable energy. The Green Investment Fund has been used to stimulate investment in projects concerning the environment, nature and energy. Moreover, part of the revenue from the regulatory energy tax (REB) is used to finance premiums for consumers who buy energy-saving appliances. The REB is refunded to green electricity producers, cogenerators and waste incinerators. *Other types of financial support* have also been put in place to promote sustainability investments by the private sector (Table 5.4).

1.7 Environmental expenditure and financing

Trends in pollution abatement and control expenditure

Dutch pollution abatement and control (PAC) expenditure is *high by European standards*, reflecting a high level of environmental pressure and preparedness to commit resources to mitigation. Cost data include direct government, company and household costs, including those of air, waste and waste water disposal, of dealing with

soil contamination, and of implementation and enforcement (Table 5.5). GDP growth has meant that PAC expenditure, despite cost increases, has not risen above 2.5% of GDP to date; it is projected to remain at about this level during the next three years.

PAC government expenditure gradually increased *in relation to GDP* during the last decade, but increased quite sharply compared with government expenditure (its share more than doubling). The fastest growing areas of expenditure in the last decade (by theme) have been climate change, soil pollution, eutrophication, and research and development. Waste disposal and waste water treatment remain by far the largest environmental cost areas.

Overall environmental expenditure

Figures on environmental expenditure by central government ministries illustrate the *cross-cutting nature of environmental policy* and its significance for a range of governmental bodies, especially the Ministry of Foreign Affairs and increasingly the Ministry of Economic Affairs. A drop in funding was projected for 2003 (Table 5.6). Environmental expenditure by other areas of government mainly consists of expenditure on waste and water management (Table 5.7).

Financing environmental expenditure

The main types of environmental revenue accruing to municipalities, provinces and central government from *environmental charges* (excluding taxes) are used to finance environmental measures. Sewage, solid waste, waste water and water charges predominate (Table 5.8).

Table 5.5 **Pollution abatement and control (PAC) expenditure**, 1990-2005

(EUR billion)

	1990	1995	2000	2001	2002	2003	2004	2005
PAC expenditure	6.0	8.8	10.8	10.4	11.1[a]	11.6[a]	11.9[a]	11.6[a]
Gross domestic product (GDP)	314.9	349.4	420.2	433.8	445.6[b]	454.7[b]	463.8[b]	473.3[b]
PAC expenditure/GDP (%)	*1.9*	*2.5*	*2.5*	*2.4*	*2.5*	*2.6*	*2.6*	*2.5*
PAC government expenditure/total government expenditure (%)	*0.8*	*1.0*	*1.7*	*1.6*	..	..	..	..

a) Planned expenditure based on existing and proposed environmental policy measures.
b) Medium-term forecast by Central Economic Planning Agency (CPB).
Source: RIVM.

Table 5.6 **Planned national government environmental expenditure,** per ministry

(EUR million)

	2002[a]	2003[a]	2004[a]	2005[a]
Foreign Affairs	427	448	463	504
Economic Affairs	257	289	299	314
Agriculture, Nature Management and Fisheries	164	133	115	105
Education, Science and Cultural Affairs	13	13	13	13
Transport, Public Works and Water Management	206	187	150	147
Housing, Spatial Planning and the Environment	609	533	543	602
Other[b]	107	108	108	106
Total	1 784	1 713	1 691	1 793
Fiscal facilities	610	606	610	619

a) Planned expenditure based on each ministry's estimate.
b) Includes expenditure related to landscape, desiccation and ozone depletion.
Source: RIVM.

Table 5.7 **Planned environmental expenditure by other governmental bodies[a]**

(EUR million)

	2002	2003	2004	2005
Public administration and social insurance	26.3	28.7	30.6	32.6
Municipalities	2 920.6	3 128.5	3 206.3	3 270.9
Provinces	150.5	150.6	150.6	150.8
Water boards[b]	1 223.8	1 323.0	1 348.3	1 371.7
Total	4 321.0	4 631.0	4 736.0	4 826.0

a) Estimated increase based on average growth in expenditure in 1996-2000.
b) Including expenditure on waste water treatment.
Source: RIVM.

Table 5.8 **Revenue from environmental charges**, 1985-2001

(EUR million)

	1985	1990	1995	1998	1999	2000[a]	2001[a]
Water[b]	490	608	842	914	946	980	1 001
of which:							
Government	47	44	44	31	34	34	34
Provincial authorities	71	85	86	31	31	..	..
Quantitative and qualitative water control authorities	386	478	707	870	897	964	987
Municipalities	49	31	34	..	..	..	..
Waste water	313	542	1 006	1 151	1 247	1 356	1 435
Noise nuisance from civil aviation	7	9	15	11	13	19	60
Waste collection	276	387	1 036	1 148	1 186	1 217	1 277
of which:							
Municipalities[c]	271	377	1 009	1 115	1 149	1 217	1 277
Intermunicipal regulations	5	10	27	33	37	..	..
Manure surplus	..	17	17	12	14	..	..
Provinces: groundwater levy	..	3	6	10	10	15	..
Levy/provincial charges for clean-up projects	5	1	1	2	1	..	..
Total	1 091	1 567	2 923	3 248	3 417	3 587	3 773

a) Budget figure.
b) After reciprocal transfers.
c) From 1999, exclusively income from household waste collection.
Source: CBS.

Environmental expenditure is largely financed by households and companies through waste collection, waste water and water *charges*. These charges were estimated at EUR 1.4, 0.8 and 1.0 billion, respectively, in 2002. They are expected to increase by 11, 24 and 8% in 2005 compared to 2002. Steady increases in local charges have met political resistance.

2.2 *Environmental agreements*

Co-operation between the government and industry is very common. The Netherlands is often described as a "consultation or consensus based economy" in which important social and economic decisions such as wage levels are taken based on talks between the government, industry and trade unions with a view to best serving the Netherlands' general interests. Building on this kind of approach, often referred to as the "Polder model", NEPP1 and NEPP2 emphasised the importance of *self-regulation* in tackling environmental problems at source. Regulatory approaches rely on prescribed technical solutions (e.g. best available technology). They are often designed for each firm and for a single medium or single substance. Such approaches provide little incentive to search for cost-effective overall solutions to environmental problems. In contrast, environmental agreements (EAs) make industry accountable for achieving pre-established targets. Strictly speaking, these are not voluntary agreements. Only the decision to enter into an agreement is voluntary; the agreed targets are binding. As industry has volunteered to work towards optimal environmental goals, the government agrees in turn not to introduce new laws before companies have had an "appropriate length of time" to demonstrate "reasonable" progress.

There are *various types of EAs*, often referred to as "covenants". Target Group Environmental Agreements (TGEAs) are declarations of intent designed to reduce pollutant emissions. Since 1992 TGEAs have been concluded in all major branches of industry. Participation by firms is high (e.g. 91% in the chemical industry). Energy Efficiency Agreements (EEAs) are declarations of intent or long-term agreements designed to implement the 1990 Energy Efficiency Policy Document. The purpose of the Energy Efficiency Benchmarking Agreement is to implement the 1997 Environment and Economy Policy Document as well as the Kyoto Protocol (Chapter 2, Section 2.3). Some 40 EEAs have been concluded since 1992. Environmental Agreements on Waste Disposal seek to promote recycling of waste streams; three have been concluded since 1994 on old vehicles, farm plastics and plastic blinds. There are various other types of EAs that differ widely in nature, form and content. Some EAs have been superseded by regulations. Over 100 EAs have been concluded since 1985.

TGEAs may include an Integrated Environmental Target Plan (IETP) or a Company Environmental Plan (CEP). The IETP is a declaration of intent signed by the government and each branch of industry. CEPs are four-year agreements between the government and individual firms willing to take part in the agreement. To translate national environmental objectives into long-term emission reduction targets (IETP tar-

gets), discussions are carried out between VROM and each branch of industry through the Target Group Policy for Industry and Environment. The IETP targets must be consistent with general NEPP targets. Company branches (in the case of branches with highly diverse production technologies) can decide how to contribute to the IETP in the most cost-efficient way and by what date. This system can be managed effectively in the Netherlands since few companies do not belong to trade associations.

Results of the third cycle of company environmental plans in 2001 show that *many but not all targets for 2000 were met* in the various industry branches. For example, in the primary metals branch the 2000 targets for releases of priority substances to air and water and for eutrophication were met but targets for acidification (SO_2 and NO_x) were not. This situation might reflect the nature of innovation processes in the steel and aluminium industries, as well as the time needed to introduce new technology. However, there is no evidence that TGEAs have stimulated development of energy-efficient technologies. For example, investments in energy conservation in the paper and glass manufacturing industries are likely to have been made in any case. Moreover, TGEAs have demonstrated their limitations: almost no cost-effective measures to reduce NO_x emissions remain to be taken.

2.3 Economic instruments

Fiscal measures and economic incentives

Good progress has been made regarding the 1995 OECD recommendation to further expand use of economic instruments. "Greening" the tax system has become a major policy focus in recent years. *Revenue from environmental taxes* (on fuel, groundwater, water supply, waste and uranium) and from the regulatory energy tax increased from EUR 0.9 billion in 1995 to EUR 3.4 billion in 2001 (1.3% and 3.4%, respectively, of total tax receipts). When revenue from excise duty on fuel (EUR 5.2 billion) and from taxes on transport (EUR 5.1 billion from registration and motor vehicle taxes) are included, total revenue from "green taxes" amounted to EUR 13.7 billion or 13.5% of total tax revenue in 2001 (Table 5.3). There has been a shift from taxes on labour and income to environmental and regulatory energy taxes, without an increase in the overall tax burden. Environmental taxes are relatively easy to administer and relatively difficult for taxpayers to avoid compared with taxes on income, profits and wealth.

In 2002 Parliament indicated that it would support plans for a variable road pricing system and for a *per-kilometre tax* beginning in 2004. The per-kilometre tax would replace the current fixed vehicle tax scheme with a scheme based on road use. Variable road pricing and the per-kilometre tax attracted broad support from deputies, as this scheme is expected to *help meet Kyoto targets while providing funds for road*

maintenance and reducing traffic congestion. The tax would first be applied to trucks (on 1 January 2004) and would gradually be applied to other road users by 2006. It would also be applicable to foreign trucks over 12 tonnes. Based on an in-car device that calculates the amount owed based on kilometres driven, this tax is expected to be differentiated according to road type and time of day to help shift traffic patterns. However, there has always been opposition to the introduction of a per-kilometre tax and recently Parliament decided to abandon it.

There has been a move towards *relying more extensively on incentives designed to stimulate the market for more environmentally friendly products* while further greening the tax system. The energy premium scheme introduced in 2002 to encourage production and purchase of clean cars is such an incentive. Under this scheme the Dutch government rewards consumers with up to EUR 1 000 if they purchase a low CO_2 emitting car. Cars are rated from A to G according to their GHG emissions and are eligible for incentives on a sliding scale according to their rating. Purchasers of B-rated cars receive EUR 500, while those who purchase the cleanest (A-rated) cars receive the full EUR 1 000. Under a 1999 EU Directive, member States are required to label cars according to fuel efficiency and CO_2 emissions. Other schemes introduced in the 1990s to reward environmentally friendly behaviour include discretionary depreciation of environmental investments, as well as tax concessions for green investments and for certain energy investments. In the national budget proposal for 2003 such financial incentives are cut drastically. The energy premium scheme for consumers of certain low energy-consuming products and tax exemption for "green" electricity (replaced by a direct subsidy) are both reduced.

Tax concessions and economic incentives should only be considered a temporary means of developing new technologies or production methods, as they also act as incentives to buy cars and (to some extent) they increase industrial production and thus are not consistent with the polluter pays principle. Similarly, direct payments to farmers under the EU agri-environmental scheme should be targeted at *conservation of natural habitats* and not linked to agricultural production. The Netherlands created a Fauna Fund in 1999 to finance measures to prevent damage caused by certain protected endemic animal species. This fund is also intended to provide compensation to injured parties when significant damage has been caused by such species.

Hunting licence fees are partly used to finance the Fauna Fund.

Environmental charges

Most households in the Netherlands have water meters. *User charges* for drinking water are based on the quantity of water consumed (plus a fixed component), but not sewerage or waste water treatment. Major cities intend to move towards a single volumetric charge based on drinking water consumption. A combined bill would replace separate bills for drinking water (water supply companies), sewerage (municipalities) and sewage treatment (water boards). Half the municipalities are directly responsible for municipal waste management, while the other half subcontract this service to (private or public) waste companies. User charges for solid waste collection and treatment are mostly based on family size (a flat rate is sometimes applied). Some municipalities charge households per kilogram of waste (based on bin size), but this approach is still experimental.

Measures have been taken to follow the 1995 OECD recommendation to proceed with full implementation of the 1994 national strategy on products and the environment. From 1994, producers and importers of an increasingly wide range of goods have been required to take back their products for recycling. They must recover the cost of collecting end-of-life equipment from civic amenity sites, other regional collection centres or retailers, together with the cost of recycling the equipment. Retailers are required to take back certain products when they sell new ones. This (extended) *producer responsibility scheme* applies to passenger vehicles, farm plastics, batteries, waste paper, electrical appliances and PVC windows. It covers products already on the market before the legislation came into force. Product charges have been introduced for a range of waste streams. Some are part of environmental agreements but are generally binding, as they fall under the EMA. There is a long standing tradition of deposit-refund for beer and soft drink bottles.

There are no air emission charges. Air quality objectives are implemented entirely through regulatory approaches or EAs. Introduction of the "bubble" concept is being considered. An overall emission limit could be imposed on large plants, a cluster of firms or an industry sector; within that "bubble" firms could determine how to meet the overall target, including through emission trading. *Tradable permits* are envisaged, particularly for CO_2 and NO_x emissions. Such a system is being developed to curb NO_x emissions in the most cost-effective way. The cost of reducing NO_x emissions can vary considerably depending on the company. Companies with lower abatement costs can sell NO_x emission rights to those with higher ones.

In 2000 *total revenue from charges* levied by provincial and local governments was about EUR 3 billion. The central government uses earmarked charges only for aircraft noise, manure surplus and pollution of State waters. Total revenue from these charges was EUR 84 million in 2000.

3.3 Environmentally related fiscal measures

Several specific levies were introduced in the 1980s to finance certain aspects of environmental policy. In 1988 they were replaced by one "fuel charge" earmarked to finance about half of government expenditure on implementing environmental policy. Fuel was chosen as the tax base, as it was felt this would provide a general link with the polluter pays principle (PPP). As environmental policy intensified, the charge rate was increased to raise revenues (EUR 400 million in 1991, compared with EUR 140 million in 1988). This revived discussions on the relationship between the fuel charge and the PPP (i.e. why should energy users pay for abatement of unrelated pollution, such as soil clean-up or waste management?). In 1992 it was determined that revenues collected would no longer be earmarked for environmental expenditure but would accrue to the general budget. Consequently, the fuel charge became a *fuel tax*. Most environmental expenditure by the central government is now to be financed from the general budget (there are few earmarked charges). Obviously a change of name and status did not alter the effect of this tax on energy prices and, consequently, on environmental behaviour.

The substantial increase in the fuel tax for budgetary reasons in 1992 (to EUR 630 million) met with fierce resistance from the largest energy-intensive companies. Parliament subsequently asked the government to look for *other taxes with an environmental base* to avoid further fuel tax increases. Taxes on groundwater extraction, waste disposal and use of uranium to produce electricity were introduced in 1995 (Table 5.2). The latter was abolished in 2001. Revenue from these taxes (EUR 170 million in 1995), like that from the fuel tax, goes to the general budget. New environmental taxes were introduced on water supply (in 2000) and others are under discussion, e.g. on surface mining (sand and gravel), pesticides and land use changes resulting in biodiversity loss.

In 1996 the *regulatory energy tax* (REB) was introduced to create price incentives and encourage energy conservation and reduction of CO_2 emissions. This decision was taken once it became clear that implementation of a European CO_2/energy tax – a tax measure the Dutch government had always strongly supported – could not be expected in the short run. The REB's introduction was gradual, with revenue of EUR 1 billion produced in 1998. This tax focuses on small energy users (households and other users such as restaurants, shops, office buildings and schools). These target groups are difficult or impossible to reach using instruments such as long-term agreements or environmental permits. Further to taxation of energy use, the REB also contains

provisions promoting sustainable energy use. Large industrial energy users are exempted for international competitiveness reasons. Low-income households are compensated for the impact of the REB on electricity prices.

To protect *competitiveness*, Dutch environmental policy tends to exempt from environmental taxes (notably energy taxes), or apply very reduced rates to, those sectors most exposed to competition. For example, households pay the major part of the REB; large consumers of natural gas (above 1 million cubic metres a year) and electricity (above 10 million kWh a year) are exempted. This goes against economic efficiency. In theory, the marginal cost of abatement is no longer equalised across the relevant tax base, with the result that the overall social cost of reaching a given environmental target is increased. Green taxes should be targeted at pollutants and should not vary (as is currently the case) according to types of fuels or categories of users.

1.3 Environmental employment

The Dutch labour market balance improved significantly during the 1990s. The *unemployment rate* is currently among the lowest in the OECD (Chapter 6, Section 2.1). Between 1995 and 2001, it fell from 7.0 to 2.2%. The largest contributions to gross added value and to employment creation come from trade, services and the public sector.

Directly *environmentally related employment* in the Netherlands stands at about 100 000, representing 1.3% of total employment, in line with most other OECD countries (i.e. between 1 and 1.5%). About 30% of these jobs are part-time; 58% are in the private sector, 38% in the public sector and 4% in non-profit and other sectors. Employment created indirectly by the implementation of cleaner technologies is not included in this estimate. In the private sector environmental jobs are 93% in pollution abatement (production of equipment, provision of services, construction and installation); they also exist in resource management (water supply, sustainable agriculture, renewable energy). In the public sector environmental jobs are concerned with provision of environmental services (waste management, waste water treatment, water supply) as well as environmental management (environmental legislation, permitting, enforcement). Non-profit and other sectors include NGOs and research institutions whose activities include advocacy, environmental monitoring, analysis and assessment, as well as social enterprises involved in environmentally related training of the unemployed.

In the late 1990s employment in the environmental services industry (solid

waste, waste water, soil remediation) grew at an average annual rate of 13.4%. The private sector's share of the waste disposal market has continued to increase in importance, with significant investments in new processing equipment. The potential for the Dutch environmental industry to export its environmental management know-how, technology and services to other countries should create *new business opportunities in the environment sector.*

A number of *regional "bottom-up" environmental initiatives* have been designed with multiple objectives in view, including benefits to the local economy and employment. Examples include networks for direct marketing of organic products, and partnerships among local government agencies, universities and companies for research and development on environmental technologies involving staff exchanges and training.

There is growing interest in the *employment effects of climate change policies.* The Netherlands has reformed energy taxation in recent years, taking into account both environmental and employment aspects (Chapter 5). This reform has been part of the general modernisation of the fiscal system. Taxes on income and labour were reduced at the same time new or higher energy taxes were imposed, possibly contributing to lower unemployment rates. Plans to continue to broaden and increase energy taxes and introduce some form of emission trading are expected to have short-term negative impacts on employment in energy-intensive sectors (e.g. the fertiliser and aluminium industries). The extent of these impacts will depend on the manner in which domestic climate change policies are implemented, and on opportunities to outsource emission reductions in eastern Europe and Russia. Long-term effects on total employment are projected to be negligible or even slightly positive, as the revenue from energy taxes and permit auctions could be used to reduce taxes on low-skilled labour.

1.2 Official development assistance

The Netherlands is one of the few OECD countries which has consistently met the UN Declaration target of providing 0.7% of gross national income (GNI) in *official development assistance* (ODA) (Figure 8.1). Dutch ODA was EUR 3.5 billion in 2001 (*0.82% of GNI*). *Total environmental aid* (91% of which was ODA) was over EUR 428 million in 2000 (meeting the domestic target of 0.1% of GNI) and was projected to increase to EUR 645 million in 2002 (Table 8.1).

The Netherlands provides most of its *environmental ODA* (60% in 2000) through bilateral arrangements (Table 8.1). About 15% of environmental ODA (EUR 66 million in 2001) passes through multilateral funding mechanisms such as the Global Environment Facility (EUR 13 million in 2001) and other international environmental funds. Dutch contributions to the UN Development Programme (UNDP) and the UN Environment Programme (UNEP) were EUR 15 million and EUR 2 million, respectively, in 2001 (Table 8.1) The Netherlands provides over 20% of its environmental ODA through non-governmental channels (EUR 96 million in 2001), working in partnership with NGOs, businesses and charities which screen, develop or carry out in-country projects. The government implicitly expects development assistance projects to comply with host country requirements concerning environmental impact assessment (EIA). Where these are weak or non-existent, however, no other EIA requirement is imposed. Expenditure on non-ODA environmental aid increased four-fold between 2000 and 2002, reflecting, inter alia, increasing expenditure on Kyoto mechanism projects.

Table 8.1 **Summary of Dutch international environmental aid**

(EUR 1 000)

	2000	2001[a]	2002[a]
Total environmental aid[b] (EA)	428 244	568 781	644 832
Environmental ODA	390 486	425 620	435 847
% of total EA	*91*	*75*	*68*
Bilateral	232 591	263 878	270 746
Multilateral	66 007	66 230	62 803
GEF and Montreal Fund	10 641	13 015	14 684
UNEP	2 106	2 106	2 106
UNDP	14 521	14 975	14 975
Other[c]	38 739	36 134	31 038
Non-governmental	91 888	95 512	102 298
ORET/MILIEV[d]	32 188	36 302	36 302
Other[e]	59 700	59 210	65 996
Non-ODA environmental aid	37 758	143 161	208 985
% of total EA	*9*	*25*	*32*
Clean Development Mechanism	..	90 756	136 134
Joint Implementation	997	8 904	22 048
Eastern Europe Co-operative Programme[f]	9 529	9 076	15 882
Other[g]	27 232	34 425	34 918

a) 2001 data are estimated; 2002 data are projected.
b) Total environmental aid equals the sum of environmental ODA and environmental aid provided through non-ODA channels.
c) Includes contributions to international financial institutions, the European Development Fund, the International Fund for Agricultural Development and the Desertification Treaty.
d) Programme for development-related export transactions.
e) Includes co-financing programmes with NGOs and education and research programmes.
f) Includes some expenditure on Joint Implementation projects.
g) Includes contributions to VROM International Environmental Policy Programme.
Source: Ministry of Foreign Affairs.

1.7 International trade and the environment

With its high international trade volumes, the Netherlands has been very active in international negotiations on trade and environment. It has promoted consistency among multilateral environmental and trade agreements. It has also supported the principle of removing trade barriers and facilitating developing countries' *access to markets* as a way to accelerate development.

The Netherlands' performance in ensuring that its international trade reflects its environmental commitments has been good overall, but there are still some areas where improvements should be prioritised (e.g. ozone depleting substances, tropical timber) (Figure 8.3). The government applies the principle of *prior informed consent (PIC)* effectively to regulate exports that are potentially harmful to the environment. A PIC system is used to regulate *export of dangerous chemicals* to developing countries. In compliance with EU procedures, the Netherlands requires: i) notification of the intent to export chemicals that have been banned or severely restricted within the EU; ii) conformance with the UNEP/FAO voluntary PIC procedure; and iii) packaging and labelling of chemicals in compliance with EU legislation. The Netherlands has also contributed to the spread of such practices. It had a leading role in developing the 1995 Rotterdam PIC Convention, which introduces obligatory PIC procedures. It also applies the PIC principle to *export of hazardous waste* as required under the Basel Convention. In response to recent difficulties controlling international trade in ozone depleting substances, the Netherlands supports the development of licensing procedures similar to those required under PIC systems as one way to improve enforcement.

The Netherlands actively participates in the OECD Working Party on *Export Credits and Credit Guarantees*. Having previously introduced environmental requirements for projects eligible for credit, the Dutch government recently changed its underwriting procedures to include an assessment of corporate social responsibility (CSR). To promote coherence with the host country's wider sustainable development objectives, companies that request export credit or other support from the Dutch government to undertake business abroad are now assessed against the OECD Guidelines for Multinational Enterprises. Environmental implications, corruption and social elements (e.g. the ILO labour principles) are taken into account. It is too early to assess progress with respect to implementation of these changed evaluation procedures.

Tropical timber

The Netherlands remains one of the world's *largest importers of tropical timber* (logs, sawn wood, veneer sheets and plywood). Net imports declined by nearly 40% between 1990 and 1998 but shot up abruptly in 1999, almost returning to 1990 levels

(Figure 8.3). In 1999 the Netherlands purchased about 1.1 million cubic metres of tropical wood on the world market; most (53%) was sawn wood and multiplex (38%), with only a small share (9%) of roundwood. Progress towards *Objective 2000* of the International Tropical Timber Organisation (ITTO) (i.e. all internationally traded timber to come from certified sustainably managed forests by 2000) has been very limited. Most tropical woods imported by the Netherlands originate in Asia (66% in 1999), Africa (22%) and Latin America (12%). The great majority of wood and wood products does not come from certified forests, though the Netherlands has actively supported ITTO programmes aimed at improving forest management in producer countries and has funded numerous bilateral projects to this end.

Endangered species

The purpose of the Netherlands' *Endangered Exotic Animal and Plant Species Act (1995)* and *Flora and Fauna Act (2002)* is to consolidate pre-existing legislation and harmonise it with EU and CITES requirements. Enforcing CITES provisions is the joint responsibility of the General Inspection Service, Customs Service and police, including the Environmental Crime Unit of the Central Police Office in Zoetermeer. In 1999 and again in 2000 there were about 2 150 seizures of illegal wildlife products in the Netherlands. Violators were subject to maximum imprisonment of six years and a maximum fine of EUR 44 700 (private individuals) or EUR 447 000 (companies). As many seizures involve Chinese health-related products, the Environmental Crime Unit has developed a database on traditional Chinese medicine. According to the Netherlands' 1999-2000 report to the CITES Secretariat, Dutch inspectors participate in CITES enforcement training offered by the EU, as well as the training each enforcement agency (e.g. customs, police) gives its own staff. Under a co-operative agreement in effect since 1994, agencies share information and resources needed to enforce CITES.