Assessment and recommendations

Slovenia's Development Strategy (SDS) for 2005-13 has been the key mechanism for defining sustainable development goals and targets. Implementation of the SDS has been assessed on an annual basis. Further in-depth assessment of the costs and benefits of implementing the Strategy's measures should provide a good basis for a new Development Strategy for 2013-20, which would integrate a green growth perspective. In addition to the SDS, an abundance of sectoral strategic documents have been produced by different ministries. However, inter-ministerial co-operation required to exploit synergies and identify trade-offs is lacking. Environment formed part of the Exit Strategy 2010-13, the fiscal stimulus implemented in response to the global economic and financial crisis. The Exit Strategy included measures to: adjust the planning and permitting system for transport, energy and environmental infrastructure; modernise the railways; promote renewable energy; adapt to climate change; and increase the competitiveness of the agriculture and food processing industries while reducing environmental impacts, and optimising forest management.

In 2009, revenue from environmentally related taxes reached 9% of total tax receipts and 3.5% of GDP, well above OECD averages. As in most OECD countries, the bulk of this revenue was accounted for by taxes on energy carriers, motor fuels and vehicles. Even though excise duties on petrol and diesel increased in 2009, the tax on diesel was about 90% of that on petrol in 2009-10, and decreased to 80% in 2011, which is not justified from an environmental perspective. Important refunds apply in the case of commercial use of diesel. Taxes applied to other fuels (such as for heavy fuel oil and gas oil used for heating, or coal and coke products) could better reflect the environmental costs associated with greenhouse gas and traditional air pollutant emissions. Substantial changes to vehicle taxation in 2009-10 linked a new one-off tax on new motor vehicles and annual taxes on trucks and buses to CO_2 and Euro emission standards. The priority currently being given to strengthening the overall tax system provides an opportunity for an in-depth review of the effectiveness and efficiency of environmentally related taxation. This could pave the way for comprehensive green tax reform, which would contribute to fiscal consolidation while more effectively addressing environmental externalities. This review should include existing environmental taxes (*e.g.* the landfill tax, wastewater tax, CO_2 tax, and taxes linked to Extended Producer Responsibility for various waste streams), as well as other economic instruments (*e.g.* user charges for waste collection, water abstraction, and wastewater collection and treatment).

After remaining unchanged for several years at 1.6% of GDP, the share of general government subsidies increased to 1.9% of GDP in 2009, but this increase was the result of a decline in GDP and an increase in subsidies. Information about the positive and negative environmental impacts of subsidies is patchy and the economic, social and environmental costs of such schemes have not been systematically assessed. The establishment of an inter-ministerial working group in 2010 to study existing subsidies (including their

environmental impacts) and the development of a register of subsidies are steps in the right direction. However, more rapid progress is needed, especially in the context of the needed fiscal consolidation.

Total expenditure on environmental protection increased from 1.5% to 2.1% of GDP in the period 2000-09. Public environmental expenditure remained broadly constant, at a level close to the OECD average of 0.8%. It focused on environmental infrastructure. Slovenia's absorption of EU funds is improving: it has the highest contracting rate for committed funds (55%) among the ten new EU members, mainly due to simplification of financial management and control procedures. However, the absorption of funds for environment-related investment has been slow. At the halfway point in the 2007-13 implementation period, less than one-third of the available budget had been contracted, and only 14% had been disbursed to beneficiaries. Delays were particularly important in the waste and railway sectors. Private environmental expenditure increased, mostly in the area of waste management. The Eco Fund has proven an effective mechanism for channeling public finance of environmental projects. Opportunities to further promote public-private partnerships in the areas of waste and wastewater management should continue to be explored, building on the experience of the Slovenian Export and Development Bank. This should be accompanied by the implementation of measures to ensure that quality of service is maintained at a reasonable price, including through increased use of benchmarking and performance evaluation.

Responsibility for financing of environmental infrastructure has gradually decentralised to local government, particularly for wastewater collection and treatment infrastructure, and accounted for more than two-thirds of central government expenditure in 2009. However, while public needs may be better identified at the local level, greater decentralisation has resulted in fragmentation of efforts and in insufficient capacity and resources at the local

level. The absence of a regional tier of administration in Slovenia makes the issue of municipal fragmentation all the more challenging. The adoption of the Balanced Regional Development Act in 2000 encouraged good co-operation among Regional Development Agencies (RDAs), Councils of Regions and the associations of municipalities and towns of Slovenia. Greater co-operation among municipalities, and their co-operation with the Ministry of the Environment and Spatial Planning (MESP), is needed to strengthen the effectiveness and efficiency of environmental services and spatial planning policies.

Slovenia has increased its support for innovation. For example, gross expenditure on R&D for environmental purposes has more than tripled in real terms during the review period. Its share in total R&D has risen from 0.8% to 2.2%. Nevertheless, these shares are still smaller than those in many other OECD countries. Moreover, the outputs of Slovenia's environmental innovation system, measured in terms of number and growth of total patent applications, are weak compared to those in many other OECD countries. The public sector accounts for most of the research effort, and there is a need for greater promotion of innovative activity in the private sector. This will be a challenge given the predominance of small and medium-sized enterprises. The government could usefully draw on the OECD publication *Fostering Innovation for Green Growth* to identify ways to strengthen its performance in promoting and disseminating environment-related innovation.

Recommendations

- Include explicit environmental objectives in the 2013-20 Development Strategy and in other strategic documents, such as the regional development, transport and agriculture policies, taking account of their benefits and costs.
- Gradually equalise the tax rates for diesel and petrol; remove refunds for taxation of commercial uses of diesel fuel; and assess how a broader reform of environmentally related taxes and subsidies, and other economic instruments of environmental policies, could help meet the policy objectives of the 2013-20 Development Strategy and contribute to fiscal consolidation.
- Promote greater co-operation between municipalities through Regional Development Agencies, Councils of Regions, and the associations of municipalities and towns of Slovenia, in order to achieve economies of scale and scope for environmental infrastructure; promote greater participation by the private sector in environmental investment while maintaining the quality of service at a reasonable cost, including through transparent benchmarking and performance evaluation; further strengthen co-operation among institutional stakeholders in spatial planning.
- Assess how capacity for eco-innovation could be enhanced in light of the conclusions and recommendations of the OECD publication *Fostering Innovation for Green Growth*.

3. Integrating environmental and fiscal policies

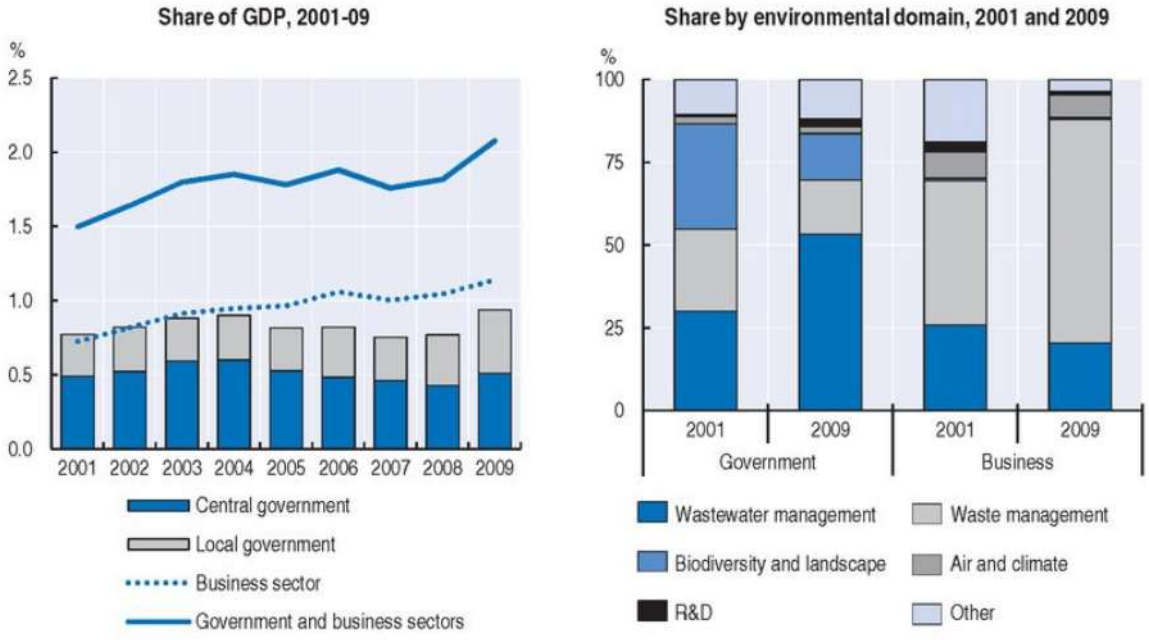
3.1. *Budget and expenditure for environmental protection*

Public and private environmental expenditure

Strengthening environmental requirements associated with Slovenia's accession to the EU stimulated an increase in total expenditure for environmental protection in the period 2001-09 (including operational costs and investment) from 1.5% to 2.1% of GDP. This expenditure also more than doubled in absolute terms, from EUR 322 million in 2001 to EUR 736 million in 2009. The trend was driven by the progressive growth of private expenditure, mostly in the area of waste management (Figure 1.2). Private and public environmental expenditure and investment have increased since 2001 and were resilient during the economic and financial crisis. This was due in part to investment and operational needs resulting from the tightening of environmental standards following transposition of the EU requirements, and in part to the leveraging effects of additional EU funding available before and after Slovenia's EU accession.

Public expenditure has increased steadily in real terms, but has remained at a rather stable level of 0.8% of GDP (around the OECD average). The increase in absolute terms has mostly been due to higher investment and operational costs related to water and wastewater infrastructure. Public environmental expenditure has been progressively implemented by local governments, particularly for the development of wastewater collection and treatment infrastructure. It accounted for more than two-thirds of central government expenditure

Figure 1.2. **Public[a] and private environmental expenditure**



a) Government expenditure according to the COFOG classification.
Source: SORS (2011), *SI-STAT Data Portal.*

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in 2009. However, decentralisation of infrastructure development has generated some policy bottlenecks: while public needs are better identified and addressed more rapidly at the local

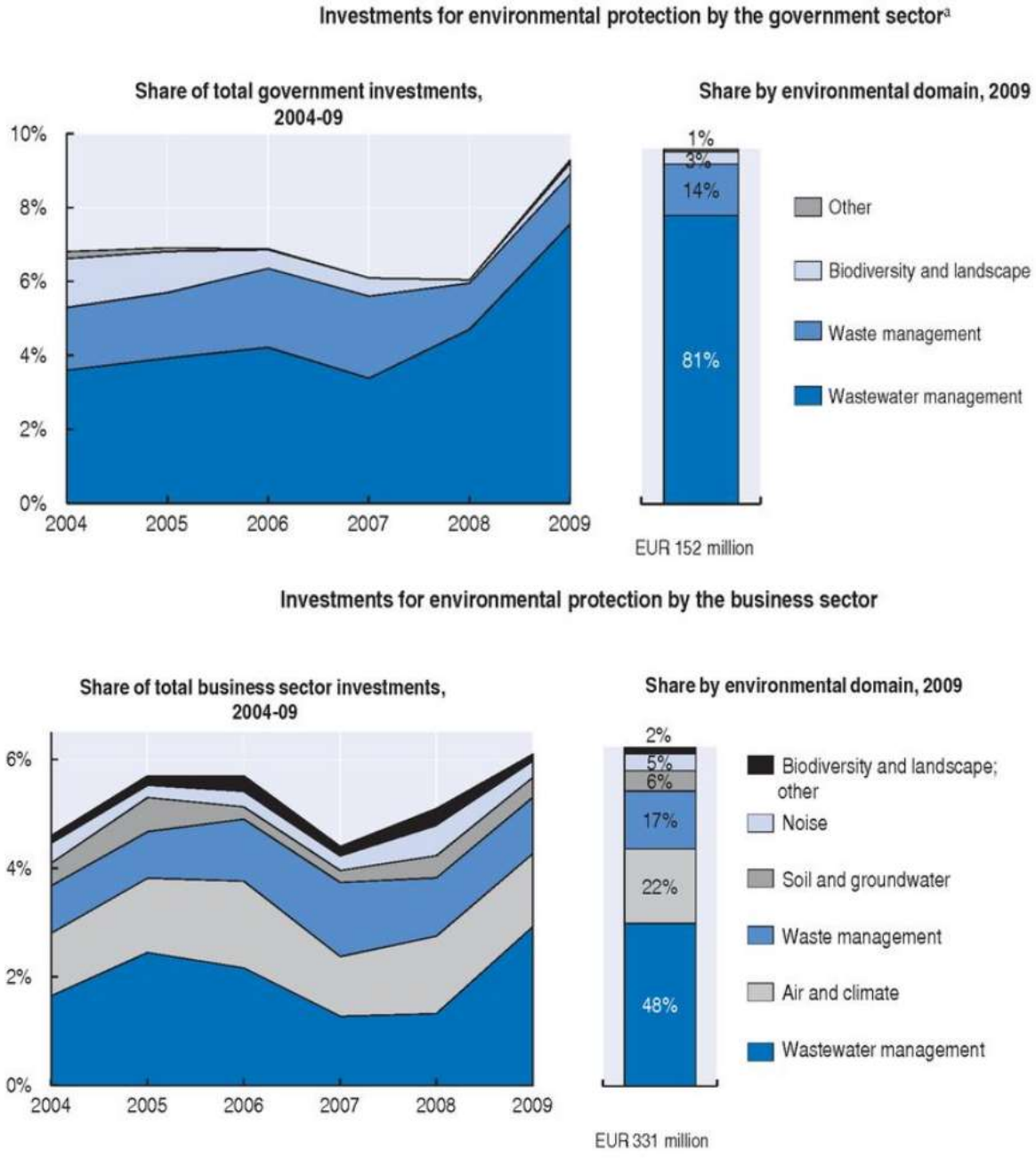
level, greater decentralisation poses problems with respect to addressing cross-regional externalities and hampers the achievement of overall objectives. Many municipalities are now too small to provide public services efficiently. Slovenia's municipalities range in size from 7 to 500 km^2 (around two-thirds are smaller than 100 km^2).[2] Experience with addressing the treatment of residual waste, wastewater collection and treatment, and the impacts of recent flooding indicates that further progress is needed to strengthen co-ordination between the central and local governments and consolidate efforts to fully utilise economies of scale and scope.

In 2009, waste and wastewater management accounted for 70% of public environmental expenditure. This partly reflects efforts to improve the ability of municipalities with poor sewerage and sewage treatment to meet the requirements of the EU Directive on urban wastewater treatment (91/271/EEC). More recently, higher priority has been given to flood prevention. Air pollution control (now including climate change mitigation) has traditionally accounted for a minor share (2%) of public environmental expenditure.

Private environmental expenditure has increased in real terms and relative to GDP, reaching 1.1% of GDP in 2009. Private environmental expenditure grew from the equivalent of two-thirds of public environmental expenditure in 2001 to surpassing it by one-half in 2008. Consistent with the Polluter Pays Principle, the private sector spends significantly more than the government on both operations and investment for waste management (68%) and air and climate protection (7%). The need to comply with EU standards has been a major driver of this investment effort.

Public and private investments in the environmental sector increased overall during most of the review period in real terms. They remained stable as a percentage of total government investment except in 2008-09 when their share increased, partly due to decreasing investment in other areas. Public investment remained stable as a percentage of total government investment (at 7%) for most of the review period, but increased to 9% in 2009. Similarly, private investment in environmental protection remained stable as a share of total investment in the period 2004-09, averaging around 5%. Private investment increased to 6.1% in 2009 despite the economic and financial crisis (Figure 1.3). In real terms, environmental investment fell by 4% in 2009 (to EUR 333 million) in the aftermath of the 2008 crisis. However, this decline was considerably less than the 18% decrease in total business investment during that period. Waste and wastewater management constituted most of the investment portfolio (65%).

Figure 1.3. **Public and private gross investment for environmental protection**



a) Gross capital formation according to the COFOG classification.
Source: SORS (2011), *SI-STAT Data Portal.*

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Since demand for waste management (which includes recovery and recycling) is relatively linked to business cycle movements, private environmental investment in this sector fluctuated. Across the manufacturing and the mining and quarrying industries, investment amounts were relatively equally distributed between end-of-pipe investments in environmental protection (58%) and investments in integrated technologies (42%).

Environmental finance and EU funds

EU funding has provided an important contribution to Slovenia's public environmental investment. Before EU accession, Slovenia benefited from various EU instruments, particularly through the PHARE and ISPA pre-adhesion programmes. Between 1999 and 2001, EUR 3.4 million was disbursed under the PHARE programme to support an environmental credit scheme managed by the Slovenian Environmental Public Fund (Eko Sklad, or Eco Fund) (Box 1.3) and EUR 2.5 million was disbursed to support investment in wastewater management. Slovenia also secured EUR 22 million in ISPA funding for environmental and transport projects in the period 2000-03, representing 38% of the country's total ISPA funding.

Box 1.3. **The Eko Sklad (Slovenian Eco Fund)**

The Eko Sklad was established in the early 1990s to support environmental investment. The main sources of financing originally included earmarked asset funds (of which 8.5% from privatisation process contributions from the state budget) and donations. Environmental taxes have not been part of Eko Sklad income. By the end of review period, the Eko Sklad had become more financially self-sustaining, with its own resources constituting nearly 64% of its total assets of EUR 181 million in 2010. The remaining assets were acquired through obligations, donations, and debt raised with national and international institutions, including

EU PHARE grants (EUR 5 million) and long-term loans from the European Investment Bank (EBI) and the Slovenian Export and Development Bank (EUR 46.6 million). Between 1995 and 2010, the Eko Sklad granted 14 800 loans worth EUR 375 million for environmental investment.

The fund strengthened the environmental evaluation of projects according to the recommendations of an OECD review carried out in 2000. Priority has been given to climate change and projects on energy efficiency and renewable energy; these represented EUR 19.6 million (90% of all commitments) in 2010. A relatively minor share of loans was devoted to waste management and efficient use of water. Beneficiaries include private companies, municipalities and utilities. Although the value of loans increased by 51% between 2001 and 2009, they fell by 22% to EUR 21.2 million in 2010. This was mostly due to a reduction of the credit worthiness of potential business clients during the economic and financial crisis.

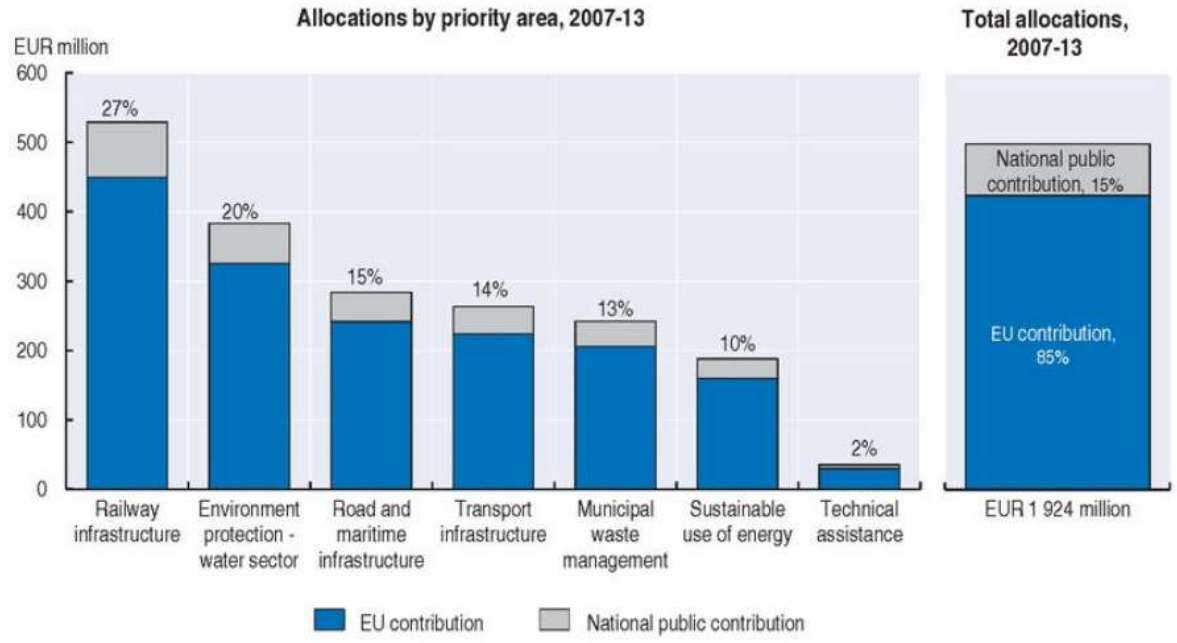
In 2008 the fund started a grant programme to support the National Action Plan for Energy Efficiency adopted for 2008-16. EUR 11.5 million was made available to promote the installation of solar heating systems, energy-efficient renovation of existing residential buildings, and construction of low-energy and passive houses. Part of these subsidies was allocated to road transport operators to purchase freight vehicles in compliance with stricter environmental standards. The programme continued in 2010 with three public calls for grant applications for an additional EUR 18 million. The Eko Sklad's projects are estimated to have helped avoid nearly 7 kt of CO_2 emissions, save 56 GWh of energy and generate 12 GWh of electricity from renewable sources per year, as well as creating around 500 jobs in 2008-09.

Source: Eko Sklad (2011).

During the first programming period following EU accession (2004-06) the Cohesion Fund, which incorporated ISPA projects, provided EUR 209 million for environment-related expenditure. This was nearly half the total amount allocated to Slovenia from the Structural and Cohesion Funds. A large part was allocated for improvement of wastewater management. However, the use of funding from the Structural and Cohesion Funds for environment was low, at around 20% in 2007. Other sources of finance included commercial lending from the European Bank for Reconstruction and Development (EBRD) and the EIB, which contributed to the development of wastewater treatment plants in large cities such as Maribor.

In the 2007-13 programming period, Slovenia was more effective in tapping EU resources for environmental investments, as the environment-related budget reached around 2 billion out of 4.1 billion allocated to Slovenia from the Structural and Cohesion Funds. Of the resources available for the environment and transport infrastructure, nearly 30% was available for the development of railway infrastructure, 20% for water-related infrastructure and 15% for road and maritime infrastructure (Figure 1.4). In 2008 EU funds equalled around 40% of Slovenia's total environmental investment expenditure.

Figure 1.4. **EU funds for environment-related investments**



Source: EC (2010).

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The overall absorption of EU funds by Slovenia started slowly, but has improved due to the simplification of financial management and control procedures. By December 2010, projects worth EUR 2.3 billion in grants were contracted by the beneficiaries of the Operational Programmes of the Slovenian National Development Plan. Based on a 55% contracted ratio, Slovenia was at an average level at the halfway point of the programming period. Of the contracted grants, EUR 1.3 billion has been disbursed, accounting for 56% of the total.

The absorption of funds under the OPDETI has progressed quite slowly compared to other areas. At the halfway point in the implementation period, less than one-third of the available budget had been contracted and only 14% had been disbursed to the beneficiaries. Delays were particularly important in the waste and railway sectors. In the waste sector, for example, EUR 205 million from the Cohesion Fund was foreseen for ten projects in the field of municipal waste management under the 2007-13 OPDETI, but only EUR 10.8 million had been approved by the end of 2010 for two regional waste management centres in Ljubljana and Koroška. In the transport sector, EUR 450 million was intended for railway infrastructure, but no project had been approved by the end of 2009 and only some progress was made in 2010 (when EUR 68 million was approved for modernising the existing Divača-Koper line). At the same time, out of the EUR 220.9 million foreseen for road and maritime infrastructure, projects amounting to EUR 156 million had been approved by the end of 2010.

A part of EU financial resources was channeled through the Eko Sklad. In addition to increasing its resources, this arrangement improved its credit worthiness, stability and timeframe, enabling it to attract funds from other sources (Box 1.3).

3.2. Taxation policy and the environment

The overall tax burden in Slovenia has been relatively high, at 38% of GDP compared to an OECD average of 35% in the period 2000-08. This was mainly due to high taxation of labour and consumption, which represented over 70% of total tax revenues. In terms of total tax revenues, taxes on goods and services, including energy and transport, are considerably higher (at 36%) than the OECD average of 32%. By contrast, property taxes (0.6% of GDP), including an immovable property tax (0.4% of GDP), are lower than the OECD

average. On average, other OECD countries collected about three times more revenues from related property taxation.

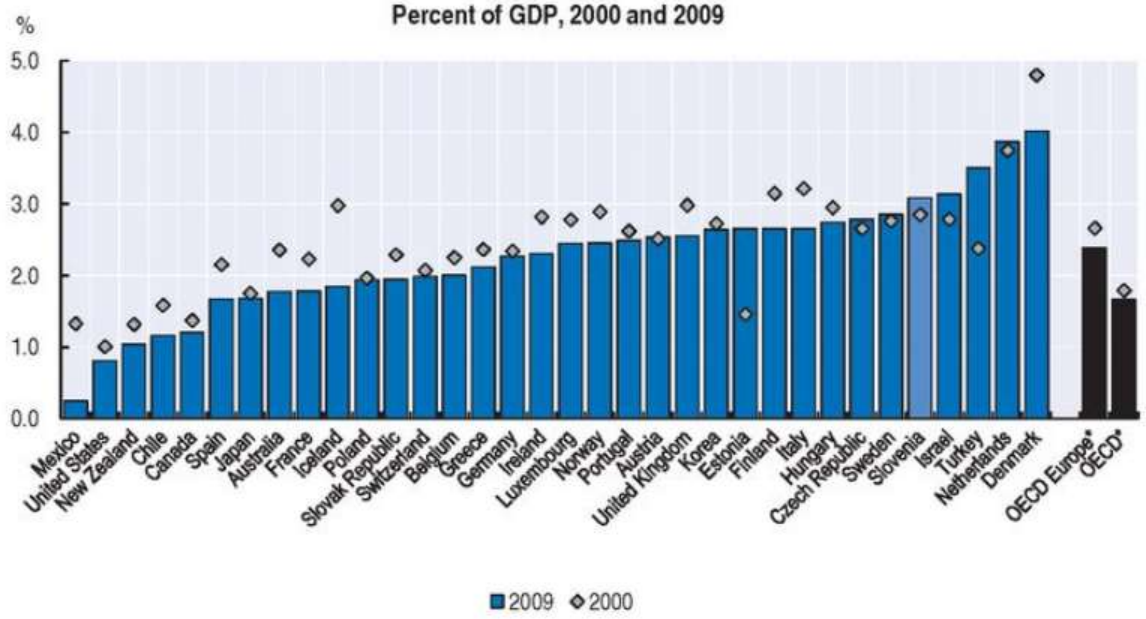
The share of environmentally related taxes in GDP and in total tax revenues was 3.1% and 8.3%, respectively, in 2009, which was high by OECD standards (Figure 1.5). It was higher only in Denmark, Israel, Korea, the Netherlands and Turkey. Over time, the share of environmental taxes in both GDP and total tax revenues declined in the period 2000-06 but then increased progressively.[3] This trend was driven mainly by hikes in excise duties.

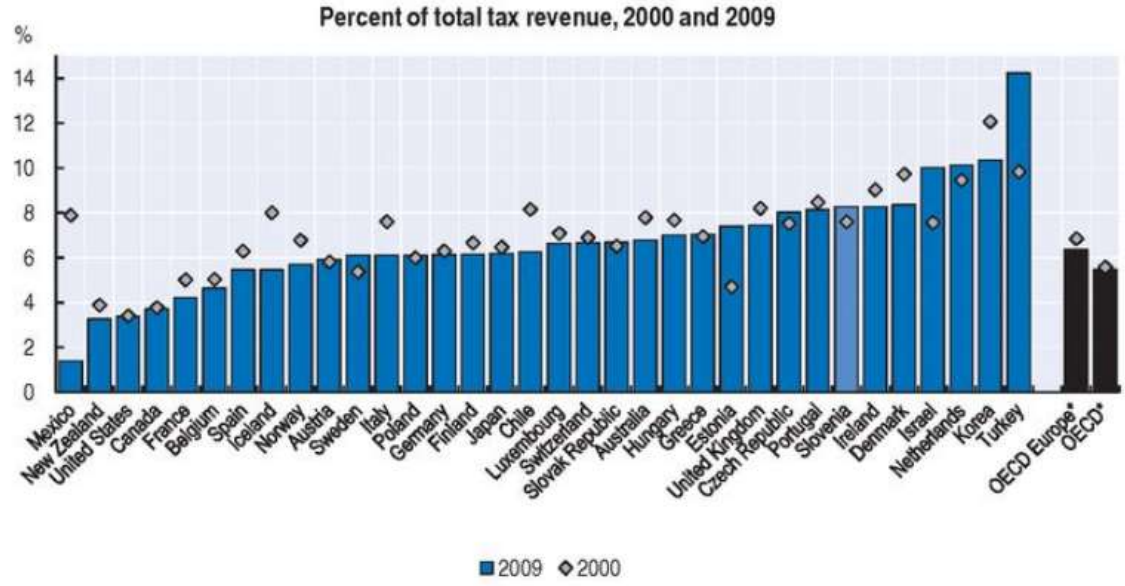
Taxes on energy products

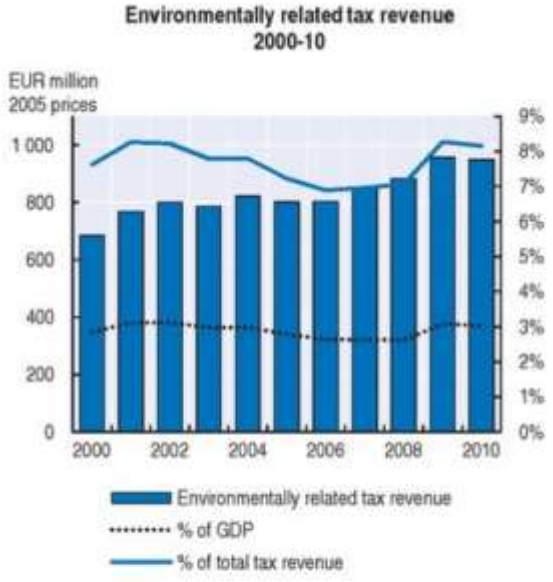
Taxes on energy products accounted for 92% of Slovenia's environmentally related tax revenue in 2010, significantly above the OECD average of 71% (Figure 1.5). Transport fuel taxation accounted for more than three-quarters of energy-related tax revenues.

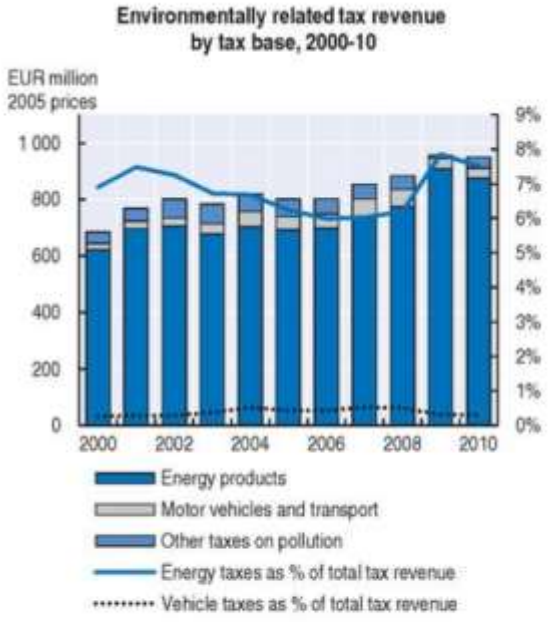
In contrast to many other European countries, excise duties on energy products have remained close to minimum levels during periods of economic growth (Table 1.2). This is not uncommon in the new EU member states, which were granted temporary exemptions or considerably reduced rates from the minimum excise duty for energy taxes and use this instrument to buffer the inflationary effect of oil price increases. Despite such relatively low duties being levied on transport fuels until the end of 2008, the related tax revenues increased. This was mainly due to strong growth in fuel consumption, partly associated with higher international transit freight transport but also with daily passenger car commuting in the absence of developed public transport. Excise duties increased substantially in 2009, in line with the situation in many other OECD countries, with the aim of securing fiscal revenues during a period of lower global oil prices. Excise duties on petrol

Figure 1.5. **Environmentally related tax revenues**









* Data refer to weighted averages.

Source: OECD/EEA (2011), *OECD/EEA Database on instruments used for environmental policy and natural resources management*; OECD (2010), *OECD Economic Outlook No.88*.

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Table 1.2. **Excise duties on energy products and electricity,[a] December 2010**

Energy product	Slovenia	EU minimum	% difference	Emission factor[b] (t CO_2/TJ)
Transport fuel				
Unleaded petrol, EUR/litre	0.478	0.359	33	69
Gas oil, EUR/litre	0.420	0.330	27	74
Kerosene, EUR/litre	0.330	0.330	–	72
LPG, EUR/kg	0.125	0.125	–	63
Natural gas, EUR/GJ	1.228	2.600	–53	56
Heating fuel				
Gas oil, EUR/litre	0.071	0.021	236	74
Kerosene, EUR/litre	0.021	–	. .	72
Heavy fuel oil, EUR/litre	0.015	0.015	–	77
LPG, EUR/kg	–	–	–	63
Natural gas, EUR/GJ	1.228	0.150	719	56
Coal and coke, EUR/GJ	0.290	0.150	93	95
Electricity				
Business use, EUR/MWh	3.050	0.500	510	. .
Non-business use, EUR/MWh	3.050	1.000	205	. .

a) As defined in the EU Council Directive 2003/96/EC.
b) Emission factor in accordance with the Commission Decision 2007/589/EC.
Source: MESP.

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and diesel jumped to 30% and 43% above the minimum level in that year, increasing the associated revenues by about 20%. In 2010, excise duties remained at around their 2009

levels (EUR 0.43 per litre of diesel and EUR 0.49 per litre of petrol), with a slight (1%) increase in associated revenues, but they decreased again in 2011 (to EUR 0.36 per litre of diesel and EUR 0.44 per litre of petrol). In August 2010, Slovenia also increased the electricity tax for household and commercial use, mainly to raise revenues. Even with this increase, the rate is still lower than in some other OECD countries. Overall, the 2009-10 increases led to higher implicit taxation of energy consumption, from EUR 121.7 per tonne of oil equivalent (toe) in 2008 (slightly below the EU average) to about EUR 163.2/toe in 2009.

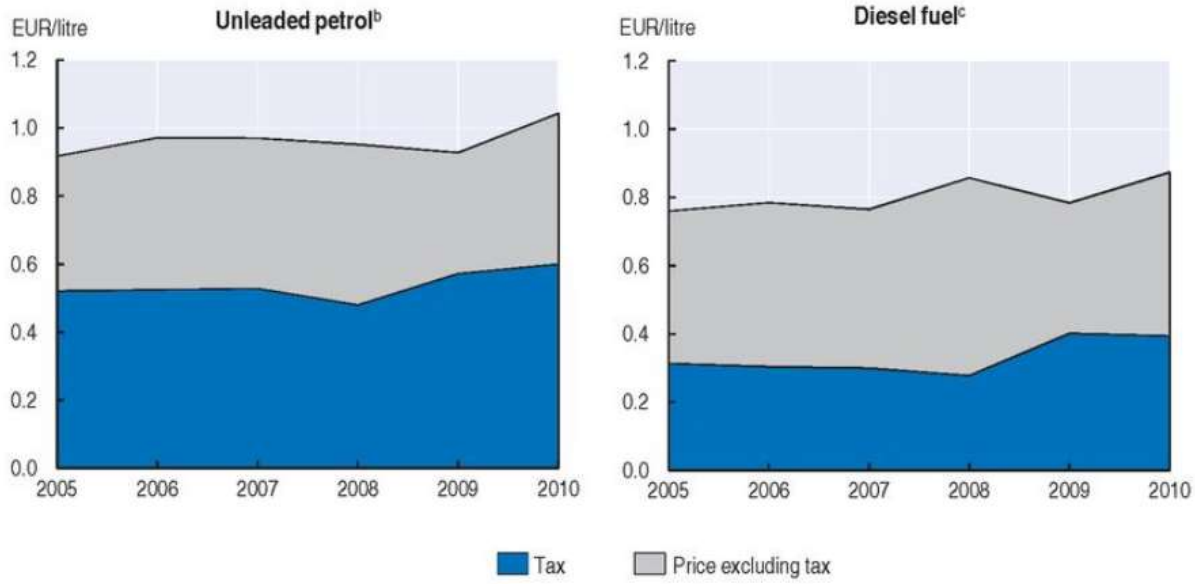
Tax rates have varied substantially with respect to the different purposes of energy use, but in general they have not been aligned with environmental impacts. Excise taxation rates for diesel fuel, including for commercial uses, were 60% of those for petrol in the period 2009-10, increasing to only 68% as part of excise duty hikes (Figure 1.6).[4] There is no environmental justification for a lower tax on diesel. Diesel consumption in transport generally has a greater environmental impact than consumption of unleaded petrol due to higher NO_x and PM emissions per kilometre driven. Tax rates are still very low on heavy fuel oil and gas used for heating. Coal and coke products are taxed at about one-quarter the rate of gas used for heating, although they contribute more GHG emissions per unit of energy.

Vehicle taxation

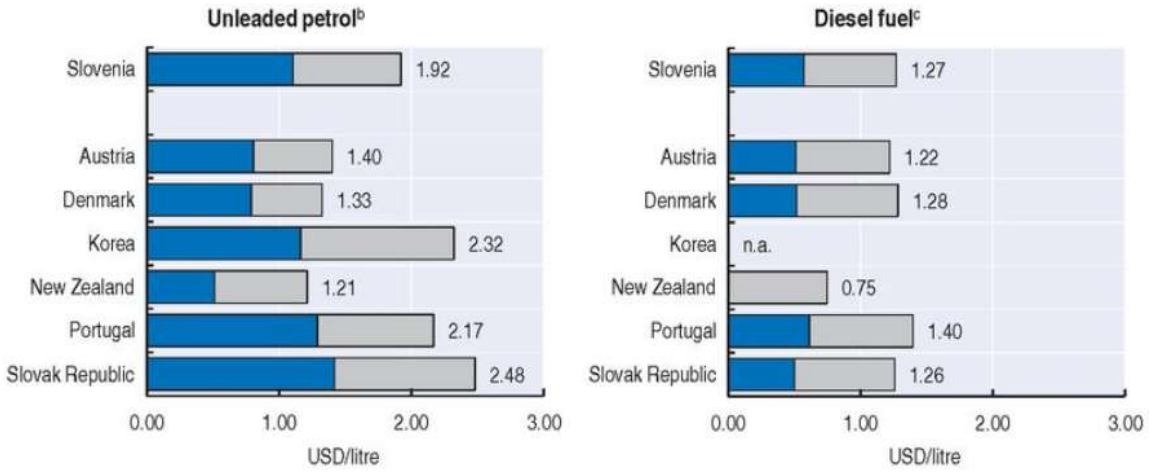
Motor vehicle- and (non-fuel) transport-related taxes are relatively low in Slovenia. They account for 0.85% of total tax revenues, below the OECD average (0.93%). While the revenues from motor vehicle- and transport-related taxes progressively increased from 3.4% to 7.5% of environmentally related taxes in the period 2000-07, their share declined

Figure 1.6. **Road fuel prices and taxes**

Trends in Slovenia,[a] 2005-10



State,[d] 2010



a) At constant 2005 prices.
b) Unleaded premium (RON 95).
c) Automotive diesel for commercial uses.
d) Unleaded petrol: at current prices and purchasing power parities. Diesel fuel: at current prices and exchange rates.
Source: OECD-IEA (2011), *Energy Prices and Taxes*, 3rd quarter 2011.

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sharply to 3.7% in 2010. This accounted for a much lower share than the 27% OECD average. About half of revenues from these taxes come from registration fees on vehicles paid by individuals, and slightly less from revenues from taxes on sales of new motor vehicles.

An annual vehicle circulation tax has long been differentiated across categories of vehicles based on engine size for passenger vehicles and motorcycles, and on maximum permissible weight for vehicles. In addition, since July 2008 an annual vignette has been required for all vehicles up to 3.5 tonnes that use Slovenian motorways and expressways. Heavier vehicles must use existing tollgates.

Substantial changes to the vehicle registration taxes were made in March 2010. Amendments of the Motor Vehicle Tax Act linked registration tax of motor vehicles to CO_2 and Euro emission standards and reduced the number of exemptions (Box 1.4). However, this tax is still not levied on commercial transport vehicles while a generous refund of excise duty guarantees minimum EU tax rates for commercial diesel.

Box 1.4. **Incentives to reduce environmental impacts of car ownership**

The motor vehicle tax (MVT) is a one-off payment, which is required at the time of registration of a new passenger vehicle in addition to the annual circulation tax. The sale of motor vehicles has been subject to the value added tax since 1999. The use of motorways by motor vehicles requires the purchase of a vignette.

In the period 2000-09, MVT rates were determined on a progressive scale at 1%-13%, differentiated according to the purchase price and fixed at 5% of the purchase price in the case of used vehicles. Until the end of 2009, vehicles emitting less than 110 grams of CO_2 per kilometre were exempted from the registration tax.

In March 2010, the system of one-off vehicle registration taxation was modernised, taking account of environmental criteria. The MVT is now differentiated on the basis of CO_2 and Euro emission standards, with a slightly wider range for diesel vehicles (1%-31%) than for petrol, hybrid and electric ones (0.5%-28%). PM emissions are also taken into account in taxing diesel vehicles. The amendments to corporate and personal income taxation included the possibility to deduct from corporate and personal income taxes the amounts invested in hybrid or electric cars, buses and trucks that meet the EURO V and EURO VI emission requirements, as well as in buses that meet the EURO IV requirements.

The changes in taxation also extended regulation to motorcycles and mopeds, prevented double taxation by eliminating taxation of used vehicles, and made possible a rebate when

the vehicle is exported.

Other environmentally related taxes, charges and fees

Slovenia has used environmental taxes and charges in sectors other than energy and transport. They include: taxes on water abstraction and wastewater discharges (Chapter 2) and on CO_2 and F-gas emissions (Chapter 4); an energy efficiency tax (Chapter 4); and a tax on waste landfilling and a number of taxes and charges on various waste streams, such as waste electronic and electrical equipment, end-of-life vehicles, end-of-life tyres, waste packaging and lubricating oils (Chapter 5).

The revenues from such taxes and charges accounted for only a small share of total revenues from environmentally related taxes during the review period, fluctuating between 5% and 10%. Revenues from the taxes on wastewater and on CO_2 emissions contributed the largest share to environmental taxation, accounting for about EUR 35 and EUR 30 million, respectively, in 2010, while the landfill tax generated EUR 7 million in that year. More significant revenues have been generated by the water abstraction charge (around EUR 22 million in 2010) and payments for water rights (around EUR 10 million in 2010). Revenues from waste- and emission-related charges (*e.g.* on F-gas emissions, end-of-life vehicles and end-of life tyres, lubricating oils and liquids, electric and electronic equipment, packaging waste) have been very small, not exceeding EUR 0.5 million per year for each stream.

Most of these taxes and charges are earmarked and contribute to financing the implementation measures identified in the National Environmental Action Programme (NEAP). For example, most funds collected from taxing water effluents and water abstraction have been used for the rehabilitation of water resources and mitigation of environmental pollution. The landfill tax has been an important source of funds to meet the objectives of safe waste disposal regulations; the revenues from taxes on the use of lubricating oils have been used for rehabilitation or clean-up projects, particularly in the case of tar pits; and revenues from taxes on end-of-life vehicles have been used to initiate a public service for dismantling such vehicles. Taxes on packaging waste, electrical and electronic equipment or F-gases have mainly been applied for statistical purposes to track the sources of pollution and calculate quantities.

Assessment

The overall tax burden in Slovenia has been relatively high by international standards and the potential for a tax increase seems limited. Similarly, the high share of environmentally related taxes in total tax revenues, and the recent sharp increases in excise duties on motor fuels and the tax on electricity, may create political obstacles for further increases. There is, however, scope for adjusting taxes to take better account of environmental impacts, for example in relation to low taxes on heavy fuel oil and gas used for heating, coal and coke products. Similarly, reimbursements of excise duties (up to their minimum EU levels) paid on diesel for commercial purposes should be removed. An attempt made in 2010 to replace a portion of the excise duty on motor fuels by a CO_2 tax (with no reimbursements for commercial diesel foreseen with respect to this tax) was a step in the right direction. Efforts to introduce such a change should continue.

Slovenia should consider shifting the composition of environmentally related taxes

further towards taxes on vehicle use in order to approach the OECD average of 22%. The increase in taxation on road transport could be reinforced by introducing other economic instruments related to the use of vehicles, such as congestion charges.

There is also scope for strengthening the incentive effects of environmental taxes in the areas of waste and water management. For example, increasing the landfill tax and simplifying the way it is calculated could provide a better incentive to divert waste from landfills. Taxes and charges associated with different waste streams could be increased to better reflect their environmental externalities.

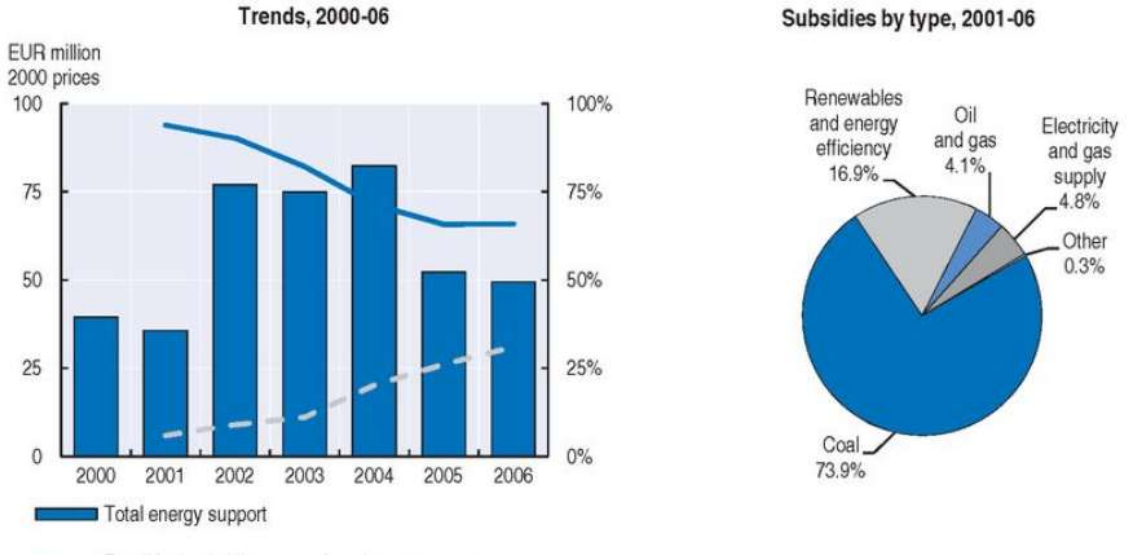
In view of the large number of environmental taxes, their environmental effectiveness and economic efficiency should be assessed, distinguishing those that serve a statistical or a revenue raising purpose from those intended to provide incentives to reduce pollution. This could pave the way for a comprehensive green tax reform, which would contribute to fiscal consolidation while more effectively addressing environmental externalities.

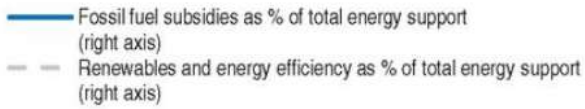
3.3. Environment-related subsidies

After remaining unchanged for several years at 1.6% of GDP, the share of general government subsidies increased to 1.9% of GDP in 2009. This increase may have been the result of a decline in GDP, with the subsidies remaining constant or increasing. According to the most recent internationally comparable data (for 2008), subsidies were much higher in Slovenia than the EU average (1.1% of GDP).

A more detailed analysis of subsidies is lacking. For example, the most recent data available on subsidies in Slovenia's energy sector were compiled in 2006. They suggest that subsidies exceeded EUR 400 million in the period 2000-06 (Figure 1.7). This analysis showed that in 2006 on-budget subsidies accounted for one-third and off-budget subsidies for the remainder of energy sector support,[5] and that the bulk of off-budget support (93%) was allocated to electricity production, especially to brown coal-powered thermal units. Tax exemptions and subsidised interest rates accounted for the rest, which included exempting all sectors from payment of the excise duty for electricity until 2007 (afterwards set at the EU minimum level).

Figure 1.7. **Energy sector support**





Source: MoF; MESP.

StatLink http://dx.doi.org/10.1787/888932595320

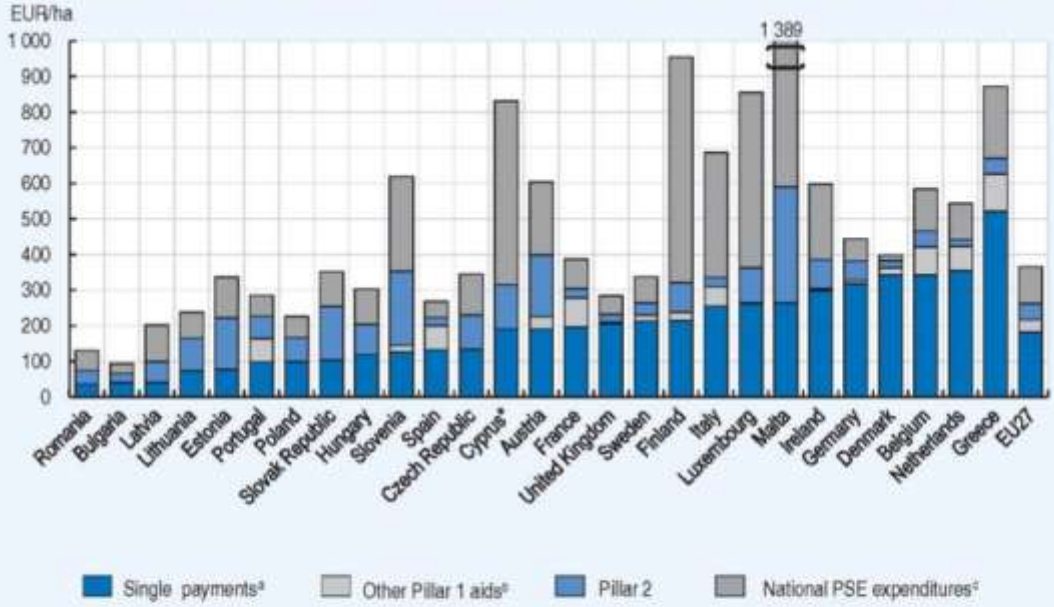
Information about the positive and negative environmental impacts of subsidies is patchy. Agriculture is one area where some information is available (Box 1.5). Little analysis is available on the environmental impacts of subsidies in Slovenia's energy or transport sectors, even in the case of the introduction of large subsidisation or tax exemption schemes. For example, a scheme to reimburse the difference between the excise duties paid on fuel for commercial purposes and the minimum EU level of excise duties was introduced in 2009, with the aim of compensating commercial freight haulers for increased costs incurred due to new tolls and inducing them to refuel in Slovenia. These refunds, amounting to about EUR 26 million in 2009, stimulated both internal transport and greater transit traffic through Slovenia. The scheme's environmental impacts have not been assessed. Neither have there been assessments of the environmental impacts of some other schemes, such as a 50% refund of the excise duty paid for fuel used in agriculture and forestry.

Box 1.5. **Slovenian agriculture and the EU Common Agricultural Policy**

Following Slovenia's accession to the EU in 2004, the agricultural sector adapted to the requirements and measures of the EU Common Agricultural Policy (CAP). Slovenia has been part of the Single Payment Scheme (SPS), which is also used in the EU15 and in Malta. Slovenia opted for the regional scheme, a uniform payment per hectare within a region which, in Slovenia's case, covers the whole country.

The overall level of support to agriculture in Slovenia can be assessed using percentage producer support equivalent (% PSE) only for the EU, where the CAP applies. This support fell from 30% in 2005 to 24% in 2009. The decrease was mostly due to a reduction of market price support, which is potentially the most production- and trade-distorting measure and one that contributes to environmental pressures. Slovenia's level of SPS is low compared to that in the "old" EU member states, but it is one of the highest among the new members (Figure 1.8). However, full granting of all EU direct payments is linked to adherence to environmental standards ("cross-compliance") as well as to standards for food safety, animal and plant health, and animal welfare.

Figure 1.8. **Payments per hectare in EU member states, 2009**



a) Single Payment Scheme and Single Area Payments Scheme.
b) Including market measures, commodity-specific payments and funds from modulation not applying to the first EUR 5 000 per farm.
c) National payments to producers including Complementary National Direct Payments (CNDPs) and national co-financing of RDP measures.
* *Note by Turkey:*
The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Commission:
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: OECD (2011), *Evaluation of Agricultural Policy Reforms in the European Union.*

EU co-financing instruments have facilitated the introduction of a more comprehensive agri-environmental policy package. Slovenia has chosen to devote half its Rural Development Programme to improving the environment and countryside (part of Pillar 2 of the CAP), a large share compared with other EU countries (Figure 1.8). This programme, which involves EUR 600 million during the period 2007-13, includes agri-environmental and animal welfare payments, payments to farmers in areas with "handicaps", payments for afforestation, payments for protecting biodiversity in specific sites, and support to non-productive investments.

Since 2005 the government has provided income tax exemptions for environmentally friendly agricultural programmes. This policy has resulted in an increase in the share of agricultural land with at least one agri-environmental measure in place (from 0.6% in 1999 to 50.2% in 2008). This share increased along with the number of measures in place. The largest increase concerned areas with measures (*e.g.* integrated production, greening of arable land, crop rotation) aimed at reducing negative impacts on soil and water quality and increasing the area under organic farming. The increase in the area with measures in place to preserve the landscape, habitats and biodiversity was rather modest, although this area still represents the largest share of the overall area subject to agri-environmental measures (50% in 2008).

Several environmentally motivated subsidies have been introduced in Slovenia, such as corporate and income tax breaks for both households and businesses that invest in energy efficiency and environmental effectiveness. They amounted to EUR 110 million in 2009. Again, the economic, social and environmental costs of such schemes have not been systematically assessed. The establishment of an inter-ministerial working group in 2010 to study existing subsidies (including their environmental impacts) and the development of a register of subsidies are steps in the right direction. However, more rapid progress is required, especially in the context of the needed fiscal consolidation. A better assessment of environmentally harmful subsidies should increase the positive impacts of the proposed comprehensive green tax reform.

4.2. *Corporate environmental responsibility and trade*

A commitment to corporate environmental responsibility by Slovenian companies has been expanding over the last 20 years. Large companies in the manufacturing, telecoms and energy sectors develop corporate environmental strategies and provide regular sustainability reports. The introduction of voluntary environmental standards has been growing, with more than 700 Slovenian companies certified for ISO 14001 (environmental management) as of 2010. However, the results of a 2010 survey of 153 Slovenian manufacturing companies show that the majority of companies seem to be environmentally responsible primarily because of the personal commitment of their top management, and that public concern and regulations play a limited role in developing companies' environmental strategies. The results of the study also confirm a general trend for large companies to develop and implement environmental strategies to a much greater extent than SMEs.

Environmental bodies (the MESP and the State Environmental Inspectorate) have been co-operating with the Chamber of Commerce and Industry, the Chamber of Crafts (representing SMEs) and industry branch associations to facilitate compliance with environmental requirements, mainly through clarifying requirements under new environmental legislation. The efficiency of these efforts should be strengthened through the provision of compliance guidance to the regulated community and through offering regulatory incentives to operators that have reliably demonstrated good environmental behaviour (*e.g.* by adopting an environmental management system or having a good compliance record). These efforts should also be associated with greater use of economic instruments, including environmental taxes, which would provide stronger incentives to internalise the costs of pollution.

In the transitional period, financial support can be provided (especially to SMEs) for environmental improvements. There are already several examples of such opportunities, including funding available from the Slovenian Environmental Fund. An important contribution has recently been made by the Slovenian Export and Development Bank (SID Bank), whose mission is to develop and provide long-term financial services designed to supplement financial markets for sustainable development in Slovenia.[9] In 2010 the

SID Bank provided loans worth EUR 160 million to support environment-related projects. More recently, it started a Promotional and Development Platform, in co-operation with government ministries, to support access to finance with favourable conditions for projects to support the transition to an environmentally friendly, knowledge-based society. This mechanism is expected to evolve from providing grants to non-grant support for enterprises (*e.g.* loans, guarantees, seed capital) with promotional elements (*e.g.* lower interest rates, longer terms), and deeper involvement of the bank in raising new capital in international markets.

Internal financing is complemented by support to environmental projects promoting Slovenian know-how abroad under bilateral ODA. This includes the Centre for International Co-operation and Development (CMSR), which operates within the SID Bank Group. In line with Slovenian development co-operation priorities, the CMSR pays special attention to projects in the field of energy and environmental protection in the Western Balkans. In the period 2007-10, the CMSR provided EUR 6.7 million, which included EUR 2.5 million in grants to ten projects in the field of environmental protection. In 2009, international support was provided for electric and electronic waste management in Bosnia and Herzegovina, The Former Yugoslav Republic of Macedonia, and Serbia; air quality measurement in Kosovo; and wastewater treatment in The Former Yugoslav Republic of Macedonia.

Increasing demand for environmental products and technologies should also stimulate the growth of the environmental goods and services (EGSs) industry. The size and extent of operations of the EGSs industry has not been well researched. Some studies carried out in the late 1990s suggested that this market was still relatively new,

as both regulations and enterprises had only been established after 1990. The total annual turnover of the surveyed enterprises was USD 87 million in 1998. The share of employment in selected "green" industries represented about 1.5% of total employment in 2007, a small increase from 1.4% in 2002. In 2004, the Institute of Economic Research, in co-operation with the Chamber of Commerce and Industry, developed a catalogue of EGSs companies that aimed to help companies looking for suppliers of such goods and services to obtain rapid access to the desired information. However, the catalogue is not complete or regularly updated. Progress has been hampered by lack of appropriate methodology, despite research carried out by the Statistical Office of Slovenia in 2005-07 to establish a proper classification that could serve to collect data on the EGSs industry. Due to unsatisfactory coverage by NACE classification, a different classification of environmental domains and lack of quality administrative data, results are expected only in 2012.

4.3. Green public procurement

The share of public procurement in national budget expenditures grew from 24% in 2001 to 47% in 2007 (reaching 13% of GDP in that year). Although green procurement was encouraged by the government in several top level strategic documents (*e.g.* the 2005 National Development Strategy, the 2005 National Environmental Action Protection Plan, the 2008 National Energy Efficiency Action Plan), no environmental criteria were introduced in the comprehensive Public Procurement Act of 2000 or its amendments of 2004. The preferred approach continued to be based on a traditional lowest-cost selection criterion.

Harmonisation of Slovenian legislation following EU accession resulted in the adoption of a new Public Procurement Act in 2006 supplemented by the Public Procurement in Water

Management, Energy, Transport and Postal Services Area Act, which, for the first time, explicitly referred to environmental criteria in public procurement. It was expected that both Acts would stimulate the inclusion of environmental factors within technical specifications and selection criteria in the tender documents, although they were not made obligatory but were referred to as factors which may be included in tendering procedures. The changes followed the development of a National Action Plan for Green Public Procurement (GPP) adopted in 2009, which set specific targets including the establishment of an operational system of green public procurement, according to which 50% of all public tenders would result in the purchase of greener products and services by 2012.[10] Subsequently, a Decree on Green Public Procurement was adopted at the end of 2011 in line with the EU requirements. The Decree includes mandatory environmental criteria and recommendations for 11 product groups (electricity, food and catering services, copying paper and paper tissue and towels, office IT equipment, audio-video equipment, refrigerators, freezers and their combinations, washing and drying machines, dishwashers, construction, furniture, cleaning products and cleaning and laundry services, road vehicles and transport services, and tyres).

Since the adoption of the Action Plan, the Ministry of Public Administration (MPA) has made several centralised purchases, including low CO_2 emission vehicles, Forest Stewardship Council (FSC) certified and recycled paper, and more energy-efficient IT equipment. In purchasing electricity, the MPA selected the offer of a supplier that would provide 60% from renewable energy sources. According to the Ministry of Finance, 138 tenders with a total value of EUR 70 million took into consideration at least one environmental element in 2008.[11] This represented 3.5% of all tenders. In 2009, the number of such tenders increased to 415, representing 8.9% of all tenders and a value of EUR 246 million.

Experience shows that there are no formal obstacles to the introduction of regular green procurement practices. National legislation (the amended Public Procurement Act) and accompanying legislative documents constitute the legal framework for "green" public procurement. The National Action Plan and the most recent Decree on GPP in 2011 contain detailed requirements, *i.e.* mandatory (core) and recommended (comprehensive) GPP criteria, as well as guidelines for practical implementation. An obstacle to more rapid adoption of GPP is lack of expertise and skills on the part of public procurers. There should be a focus in the next period on training programmes and systematic work with procurers and potential suppliers of environmentally less harmful products. This should be supported by the new Public Procurement Agency, which was established in 2010. One of this agency's responsibilities is the implementation of green public procurement. In the new 2011-20 Research and Innovation Strategy of Slovenia, GPP is expected to be one of the key elements stimulating eco-innovation. The strategy's practical success depends on practical application of mandatory green procurement requirements, extension of accompanying activities (especially promotion, qualification and training), and wide dissemination of good practices.

3.4. Non-regulatory instruments

Voluntary environmental standards have been widely adopted in Slovenia, primarily due to market pressure. More than 700 Slovenian companies have been certified for ISO 14001 (environmental management systems). This suggests that most large and many medium-sized companies actively carry out environmental management. At the same time, there have been far fewer certifications under the EU's Eco-Management and Audit Scheme (EMAS), with only four companies registered. This trend is similar to that in other EU countries, except Germany.

Eco-labelling in Slovenia is governed by Article 31 of the EPA. Product groups and product-specific conditions for obtaining an eco-label are described in EU regulations on the Community eco-label award scheme. To obtain an eco-label for a product, the producer or importer must submit to the MESP an application containing evidence that the product meets the prescribed conditions and pay a fee. The MESP may withdraw an eco-label if a product no longer meets the prescribed conditions. Only four companies currently hold eco-labels in Slovenia. Slovenian industry would like to see the government promote eco-labelling through information campaigns and public procurement.

A number of environmental awards have been established by the daily newspaper *Finance* (*www.finance.si*) in co-operation with the Chamber of Commerce and Industry of Slovenia. These awards recognise the energy efficiency and environmental performance of businesses or products.

Box 2.3. **Public-private partnership for preserving natural and cultural heritage**

Sečovlje Salina is a well-known natural and cultural heritage site that has been designated as a landscape park, Ramsar site, Natura 2000 area, and cultural monument of national importance. Covering about 650 ha along the Croatian border, in the extreme southwestern part of Slovenia, it is one of the two last remaining salt works on the Adriatic coast.

The special character of Sečovlje Salina's fauna and flora is due to conditions created by the salt industry active in the area from the 14th century until the 1960s. The main objectives of the protected area are conservation of its wetland ecological character and its economic and cultural values. These objectives are implemented by maintaining the saline ecosystem and its diverse habitats (*e.g.* mud flats, salt meadows, salt pools) and preserving cultural heritage (*e.g.* levees with stone walls, steps and sluice gates, as well as traditional salt-making techniques).

The Sečovlje Salina Landscape Park is the first state-designated protected area in Slovenia for which a private company (Soline) has been given management responsibility. Soline is owned by the country's largest mobile phone company, Mobitel. A government decree specifies the conditions under which Soline, which was created for the purpose, must operate the concession, including preparation of an annual management and financial plan requiring government approval. Ownership of the protected area remains with the government, including responsibility for all investments in the park's infrastructure made during the 20-year period of the concession. The government contributes about 20% of the protected area's annual operating cost. Soline and Mobitel also contribute, while income generated by the park itself in the form of entrance fees and the sale of salt and related products will be a further source of funds. Two of the park's conservation projects have received EU LIFE funding.

For the government, these arrangements have the advantage of low management costs for one of its protected areas. Moreover, the park has increased local employment opportunities: the number of employees in the company alone grew from fewer than 15 to 86 during 2002-11. This arrangement allows the company to project a positive image of environmental responsibility. Overall, public awareness of the significance of protecting the Sečovlje Salina Landscape Park has increased. Although problems exist (*e.g.* ownership issues), there is continuing dialogue between the government and the company in order to address them.

7.4. *Expenditure and financing*

Total public and private expenditure on biodiversity and landscape protection grew from about EUR 4.5 million in 2001 to about EUR 13.6 million (at current prices) per year in 2008. Investment in Natura 2000 sites and protected areas represented the largest part of total expenditure (Table 2.5). The share of the MESP budget allocated to protection of nature was about EUR 8 million in 2011. In addition, the SFS has a budget of about EUR 1 million per year for game species management. Comparisons with other countries are difficult, but as a rough guide the government's budget for biodiversity is relatively low per capita compared to other OECD countries. A study of the economic value of ecosystem services to Slovenia would help provide a better sense of an appropriate level of spending. It would be desirable for such a study to be based on ecosystem boundaries, and hence to be conducted in co-operation with neighbouring countries.

Table 2.5. **Public and private expenditure on biodiversity and landscape protection, 2001-08**[a]

	Total environmental investment and current expenditure EUR (000)	Expenditure on biodiversity and landscape protection			
		Investment EUR (000)	Current EUR (000)	Total EUR (000)	Share of total environmental expenditure (%)
2001	322 341	3 405	1 123	4 528	1.4
2002	401 402	3 188	956	4 144	1.0
2003	478 443	3 180	1 089	4 269	0.9
2004	448 406	4 185	3 192	7 377	1.6
2005	529 490	4 098	643	4 741	0.9
2006	620 777	8 221	1 210	9 431	1.5
2007	617 426	4 486	1 641	6 127	1.0
2008	736 190	12 033	1 587	13 620	1.9

a) In current prices.
Source: SORS.

StatLink http://dx.doi.org/10.1787/888932595966

Since Slovenia joined the European Union in 2004, through the LIFE programme it has leveraged biodiversity projects with a total cost of EUR 21.3 million (with an EU contribution of EUR 11.7 million). These projects have mostly entailed the conservation or restoration of endangered habitats (*e.g.* peatlands) and species (*e.g.* the brown bear and corncrake). The projects have involved a range of partners, including park managers, a university, a local authority, a development agency and an NGO. The average duration of projects has been 36 months.

Biodiversity-related expenditure through the Rural Development Programme (RDP) 2007-13 is of approximately the same order as this expenditure funded through the nature conservation budget. The RDP is administered by the MAFF and largely financed through the European Agricultural Fund for Rural Development (EAFRD). Funding for all agri-environmental measures amounts to about EUR 38-39 million per year and around EUR 10 million of this amount is spent on biodiversity conservation. About 30% of the latter figure (EUR 3 million) is directed to the implementation of half a dozen or so sub-measures on the roughly 160 000 ha of Natura 2000 sites located in agricultural areas.[14]

Slovenia has created a financial instrument to compensate farmers from damage[15] caused by wild animals, not only the brown bear and wolf but also the raven, ferret and lynx. The agricultural sectors most at risk include sheep and goat farming, fruit growing, forage production and beekeeping. Although the proportions vary from one year to the next, wolves were the reason for almost half of all payments in 2008 while bears accounted for 30%. The amount of compensation paid more than doubled in the second half of the last decade: it rose from about EUR 260 000 in 2005 to almost EUR 580 000 in 2008. A change in legislation that would amend the compensation scheme to make it more cost-effective was under consideration as of March 2011.

The role of the private sector in funding biodiversity objectives has been limited to date. In addition to the Sečovlje Salina project described above, a Slovenian energy company has sponsored a project to raise fishermen's awareness of the need to protect sea turtles.

Recommendations

- Further explore and facilitate ways in which local governments and civil society can participate in the implementation of regional and sub-regional international environmental co-operation agreements.
- Further pursue the idea of formal international co-operation agreement in the Dinaric Arc area.
- Implement outstanding international commitments, including establishing an operational emergency response system for the Adriatic Sea and designating further wetlands under the Ramsar Convention.
- Gradually increase official development assistance and its environmental components, in line with EU and international obligations; consider giving greater emphasis to projects promoting biodiversity conservation.
- Review the overall coherence and effectiveness of Slovenia's international environmental engagement.

1. Environmental dimension of foreign policy

Slovenia is a small country that occupies part of two great mountain ranges, each of which extends over several countries. It also straddles the watersheds of two large international water basins. Consequently, physiography and geography determine the priorities of Slovenia's international environmental relationships to a greater extent than in many other countries. The best way for Slovenia to pursue sustainable development is together with the other countries that share its ecosystems and river basins. It has designated the promotion of sustainable development regionally as the overarching theme of its international environmental activities, notably with respect to water management and biodiversity conservation.

Slovenia's commitment to regional and sub-regional sustainable development is mainly articulated through co-operation agreements covering the Alps, the Danube and its tributaries, and the Mediterranean (including the Adriatic). The Dinaric Arc area is emerging as a focus of international co-operation. In the past five years, Slovenia has served as president of the Barcelona Convention (2006-07), the European Union (first semester of 2008), the Alpine Convention (2009-11) and the International Commission for the Protection of the Danube River (ICPDR) (2010). In this role, it has taken initiatives on some issues and played a leading part with respect to others. Many informal relationships are maintained at a professional/technical level with the other countries of the western Balkans.

Since the 1990s, environmental co-operation with other countries has principally been the responsibility of the Ministry of the Environment and Spatial Planning (MESP). In recent years the Ministry of Foreign Affairs (MFA) has begun to play a more active role in integrating an environmental dimension into foreign policy. The MFA established a dedicated environmental unit, the Global Challenges Department, in 2009 and appointed

environmental attaches in five embassies (Argentina, China, Denmark, The Former Yugoslav Republic of Macedonia, and the United Kingdom) to promote environmental co-operation with Slovenia. The MFA has also assumed a greater role regarding official development assistance (ODA), half of which is now under its control.

In 2009, Slovenia initiated a Green Group of six small countries (with Cape Verde, Costa Rica, Iceland, Singapore, and the United Arab Emirates) which aim to raise the profile of environmental issues in international relations.[1] The Group focuses on climate change, water management, and renewable resources. Since 2009, foreign ministers of the Green Group have published joint articles prior to every UNFCCC COP. They have focused on climate change and security (2009), climate change and water (2010), and the green economy (2011). By joining with other small countries to address specific issues, Slovenia hopes to strengthen its influence and broaden the scope of its international activities. Since resources are scarce, however, it identifies synergies with its other international environmental activities to ensure that these resources are used cost-effectively.

2. Regional and bilateral co-operation

Co-operation in the Danube Basin

Although the Danube River does not flow through Slovenia, 81% of the country's territory lies in its catchment. Most of its rivers are tributaries of the Danube.[2] The Sava River has its source in the Slovenian part of the Julian Alps. It is Danube's largest tributary in terms of discharge and the second largest in terms of catchment area. All of Slovenia's main rivers are transboundary watercourses and define the country's borders in several places: the Kolpa

and Drava Rivers form part of the border with Croatia; the Mura River part of the borders with Austria and Croatia; and the Ledava River part of the border with Hungary.

Slovenia was one of the founding countries of the 1994 Convention on Co-operation for the Protection and Sustainable Use of the Danube River (Danube Convention). During its presidency of the ICPDR in 2010, Slovenia led a successful effort to make the Danube River Basin Management Plan (DRBMP) an environmental pillar of the development-oriented 2011 EU Strategy for the Danube Region.[3] Slovenia was asked to take up, and has accepted, the role of lead country in the implementation of the DRBMP with respect to sustainable use of hydropower, an area in which it has experience in the context of the Alpine Convention. In March 2011, Slovenia (with Austria, Croatia, Hungary and Serbia) agreed to establish the world's first five-country cross-border UNESCO Man and the Biosphere reserve along parts of the Drava, Mura and Danube Rivers in an area known as "Europe's Amazon" because of its high level of biodiversity.

The Sava River has been at the heart of Slovenian activities in the Danube Basin. In 2002, Slovenia was instrumental in securing a Framework Agreement on the Sava River Basin (FASRB) as part of the Stability Pact for South Eastern Europe; it is the depository country for this agreement. Joint management of the Sava River Basin by Slovenia, an EU member state, and by countries that do not belong to the EU (Croatia, Bosnia and Herzegovina, Serbia) follows the model established in the EU Water Framework Directive (2000/60/EC).[4] Slovenia considers the Sava agreement to represent the sub-regional, multi-purpose and bottom-up approach to transboundary co-operation it wishes to promote in other contexts. In addition to implementation of the Water Framework Directive, anticipated areas of co-operation include implementation of the EU Floods Directive,[5] rehabilitation and development of the Sava River waterway, development of nautical tourism, development of hydropower,

equitable use of water for productive purposes, and protection of ecosystems. The 2008 declaration to the ICPDR (by representatives of Austria, Croatia, Hungary, Italy and Slovenia) concerning common approaches to water management, flood protection, use of hydropower, and nature protection and biodiversity conservation in the Drava River Basin promises to become another model for international co-operation on integrated water resource management at the sub-regional/sub-basin level.

Bilateral co-operation in the Danube Basin includes a treaty with Croatia (1998) and an agreement with Hungary. Each established a joint commission for water management between the partner countries.[6] Slovenia has also signed an agreement with Austria on co-operation in the field of spatial planning. Two joint Slovene-Austrian commissions for the Drava and Mura Rivers are the current incarnation of a series of co-operation mechanisms dating back decades. An example of results-oriented co-operation is the Drava-Mura Crossborder Water Management Initiative, involving Slovenia and the Austrian *Länder* of Carinthia and Styria. The main goal is implementation of the EU Water Framework Directive and Floods Directive. Hydropower exploitation and conservation of biodiversity in river basins are also on the agenda. Work is being carried out to restore the rivers to a more natural state (*e.g.* riverbed widening, connection with side channels, improvement of sediment transport).

Co-operation in the Mediterranean Basin, including the Adriatic

Slovenia is a party to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean. It has ratified five of the Convention's seven protocols, most recently the 2008 protocol on integrated coastal zone

management.[7] Slovenia has signed, but not ratified, the 1994 offshore protocol (pollution from exploration and exploitation); it has not signed the 1996 hazardous wastes protocol.[8] Since some commitments under the Convention and its protocols are covered by EU legislation that is often more demanding, compliance with the latter will satisfy obligations under the Convention. For instance, implementation of Slovenia's National Action Plan under the land-based sources and activities protocol is carried out as part of implementation of EU water legislation. Specially protected areas provide another example of overlapping obligations.[9]

Environmental co-operation in the Adriatic began in 1974 with an agreement among Slovenia, Croatia and Italy on protection of the Adriatic.[10] Montenegro more recently joined what is now a quadrilateral Commission for the Protection of the Waters of the Adriatic Sea and Coastal Waters against Pollution. Slovenia proposed a pollution incident contingency plan for the northern Adriatic in 2005 (as required under the Barcelona Convention's 2002 prevention and emergency protocol). Croatia, Italy and Montenegro have accepted the plan, but the resources made available so far have been insufficient for full implementation (*e.g.* modern communication and navigation systems are still lacking). Emergency planning and an integrated coast guard system are also subject to discussions under the Adriatic-Ionian Initiative, but they are unlikely to be realised soon.

Other topics pursued by the Adriatic commission include Integrated Coastal Zone Management (ICZM) and ballast water management. ICZM has been discussed under the Adriatic agenda since 2000; under the UNEP Mediterranean Action Plan (MAP) for the Barcelona Convention, Slovenia carried out a pilot study of ICZM in its northern Adriatic coastal region during 2004-06, followed by a SHAPE project (Shaping an Holistic Approach to Protect the Adriatic Environment: between coast and sea) launched in 2011 by the

Notranjsko-kraška region together with the MESP. Some of the study's conclusions were incorporated into the Regional Development Programme for this coastal region for 2007-13. Slovenia and Italy, which are eager to pursue a Strategy for the Adriatic, are seeking the support of the other two members of the commission.

Co-operation in the Alps and Dinaric Arc area

Slovenia is a party to the Alpine Convention. Its National Assembly ratified all eight of this Convention's implementing protocols in 2003. Implementation at the local and regional levels, and stimulation of regional co-operation, were the main priorities during Slovenia's presidency of the Convention in 2009-11 (Box 3.1). To make the Convention better known to the public, Slovenia organised an Alpine Convention Day in 2010. The initiative was so successful that it will become an annual event. The Alpine Convention Secretariat is encouraging other countries to follow Slovenia's example. Slovenia is also one of three countries (along with Italy and Switzerland) that will lead the effort to declare a European macro-region in the Alps.

Slovenia considers the Alpine Convention to be a model for its efforts to increase international co-operation in the Dinaric Arc area, so as to promote economic development based on this area's natural and cultural wealth. These efforts seem likely to produce positive results in the near future. In 2008, Slovenia joined forces with Albania, Bosnia and Herzegovina, Croatia, Kosovo, The Former Yugoslav Republic of Macedonia and Montenegro to propose an effective network of protected areas. At the first Dinaric Alps Conference in March 2011, the same group called for sustainable development of the region through strengthening, *inter alia*, co-operation in nature conservation, agriculture

Box 3.1. **Implementation of the Alpine Convention at the local level**

Slovenia considers the application by municipalities of good practices in various areas covered by the Alpine Convention (*e.g.* mountain agriculture and forestry, transport, tourism) as a key to the Convention's implementation. Among recent initiatives are the Alliance in the Alps network of municipalities (to which three Slovenian municipalities belong) and the Alpine Protected Areas network, which includes Triglav National Park and the Škocjanske Jame Regional Park. Other projects involve Triglav National Park, the Slovene Mountaineering Association and the Slovenian Alpine Museum in Mojstrana, and others. Slovenia aims to make such engagements a lasting feature of the Convention's implementation, thus giving local activities a wider ecosystem perspective.

Climate change adaptation and mitigation was given high priority during Slovenia's presidency of the Alpine Convention in 2009-11. This included promoting the 2009 Action Plan on Climate Change in the Alps, *e.g.* by organising thematic seminars to demonstrate examples of good practice. In 2010, the Convention Secretariat published a relevant guide in Slovenian specifically adapted to the country's situation in order to assist local authorities. The Convention's Action Plan also provides concrete examples of how Slovenia can apply climate change adaptation measures at the local level. At the close of its presidency, Slovenia produced another publication on the same topic.

and rural development, mountain forestry, cultural identity, tourism, transport and energy. It also advocated signing an international agreement and creating a secretariat, possibly to be hosted by Slovenia. One of Slovenia's ambitions in the Dinaric Arc ecoregion is the creation of a UNESCO World Heritage site.

4. Trade and environment

Slovenia ratified the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal in 1993. It has submitted national reports to the Convention Secretariat every year. It also implements the 1995 "Basel ban" amendment, which bans exports to non-OECD countries of any hazardous waste intended for recovery, recycling or final disposal. As of March 2011, Slovenia was preparing to ratify the 1999 protocol providing for liability and prompt compensation for damage resulting from transboundary movements of hazardous waste and "other" waste and its disposal, including illegal traffic. As an EU member state, it implements the EC regulations on shipments of waste, thereby also implementing the Basel rules and the OECD Council Decision concerning the Control of Transboundary Movements of Wastes Destined for Recovery Operations [C(2001)107/Final]. Within the framework of the EU enforcement network IMPEL, the Inspectorate for the Environment and Spatial Planning co-operates with the inspectorates of nearby countries to prevent illegal transport of waste.

Hazardous waste imports have remained more or less stable since the mid-1990s, fluctuating between 20 000 and 27 000 tonnes per year (Chapter 4). The annual volume of imports represents the volume collected within the country by a single recovery enterprise. Most imports (lead accumulators and lead ash) come from Croatia, Bosnia and Herzegovina, and Hungary. Some also come from Germany, Italy and The Former Yugoslav Republic of Macedonia. There is no disposal of imported hazardous waste. Export volumes have risen sharply in recent years, climbing from about 25 000 tonnes in 2005 to 100 000 tonnes in 2008 (the latest year for which figures are available). In 2008, about 70% was exported for recovery and 30% for disposal. Sludge from urban wastewater treatment plants constituted about one-third, followed by one-quarter mixed waste in which at least one component was designated as hazardous; smaller fractions included solid waste from waste gas treatment and mother liquors. Austria, Germany and Hungary were the main destination countries. Slovenia aims to be self-sufficient in the recovery and disposal of waste, but it has not yet found a satisfactory solution to the increasing volumes of contaminated and uncontaminated sewage sludge produced by the growing number of wastewater treatment stations.

Trade in endangered species

Slovenia is mainly an importing country for species subject to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This trade does not present a serious threat to the country's native fauna and flora. However, Slovenia is one of the larger exporters of live reptiles bred in captivity, particularly tortoises, making it an importing and then re-exporting country for these animals; about 200 permits and

certificates for import and (re-)export are issued annually. When the CITES Convention entered into force in Slovenia in 2000, the country was not well prepared to implement it due to lack of qualified staff, adequate legislation, and a clear understanding of the responsibilities of the bodies involved (*e.g.* customs, scientific institutions). In 2004, Slovenia[14] initiated inclusion of the date mussel in Appendix II of the Convention. This Mediterranean bivalve species was already protected under the Bern and Barcelona Conventions and the EU Habitats Directive, but better control of illegal sales (notably to restaurants) under CITES was an additional way to encourage its survival. The date mussel is now a major focus of Slovenian CITES activities (Box 3.2).

Box 3.2. **Enforcement of CITES rules**

The date mussel (*Lithophaga lithophaga*) is a protected species that lives 100 years or more. It grows very slowly, requiring 20-25 years to reach 50 mm in length. It cannot be cultivated. The date mussel lives inside tunnels bored in rocks. It is harvested by breaking up the rocks, sometimes with the help of explosives. Harvesting not only destroys the mussel's habitat, but also that of other marine species.

In the latter half of 2010, a joint Slovenian-Croatian operation uncovered an international criminal group taking Croatian date mussels to Slovenia by boat. The mussels were then transported by car to final destinations in Slovenia and Italy. During a period of several months the group had smuggled about 2 300 kg of mussels with a street value of at least EUR 143 000. Several prosecutions were under way as of March 2011, and the Slovenian Veterinary Administration and Hunting and Fishing Inspectorate had already imposed fines ranging from EUR 2 000 to EUR 10 000. The date mussel is also the focus of an awareness raising campaign to reduce the public's demand for it.

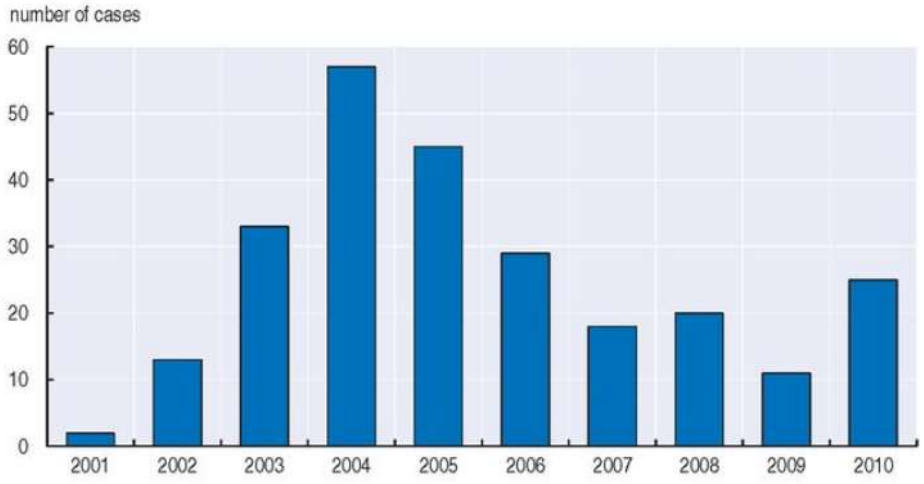
In 2010, Slovenia was one of 51 countries participating in an INTERPOL exercise (Operation RAMP) targeting illegal trade in reptiles and amphibians. Investigations were carried out at the borders (Ljubljana airport and the port of Koper), as well as in the country's interior (police inspected a tortoise breeding farm at Ljubljana). No illegal activities relating to trade or possession of endangered reptiles were detected in the Slovenian part of the operation.

A working CITES regime was established during the review period. Implementation is co-ordinated through a permanent intersectoral Committee for the Prevention of Illegal Wildlife Trade, consisting of the police (INTERPOL), customs agents, the Environmental Inspectorate and the Environment Agency. The committee meets at least once every six months. Slovenia enacted several decrees on protected wild animal species, including one that prohibits the possession or sale of any species of owls (Strigiformes) or raptors (Falconiformes) and is therefore more restrictive than the provisions of the EU Wildlife Trade Regulations. Moreover, the Wild Game and Hunting Act bans falconry. Fines were the most severe penalties for CITES-related offences until 2008, when the Penal Code was changed so that such offences may now result in a prison sentence of up to three and a half years.

Slovenia actively enforces the CITES Convention and co-operates with other countries as needed. The number of permits and certificates for import, export and re-export issued under the Convention rules each year increased significantly during 2001-10, but fluctuated between 150 and 200 in the period from 2006-10. The number of certificates issued for trade within the EU[15] increased significantly, from about 100 in 2004 to a little over 2 000 in 2009, but remained just below that figure in the following year. In Slovenia's report to the CITES

Secretariat covering the second half of 2010, the number of reported seizures (*i.e.* discovered attempts of illegal trade) reached a peak of about 55 in 2004 but has subsequently declined. About 24 discoveries were made in 2010, mostly involving live (*e.g.* seahorses, loggerhead sea turtles, European eels) or dead (*e.g.* date mussels) animals. Both warnings and prosecutions have resulted. In general, Slovenian authorities believe the decline in discoveries of violations of CITES rules since around 2005 can be attributed to greater public awareness and to actions by enforcement agencies (Figure 3.1).

Figure 3.1. **Number of breaches of CITES rules found by customs authorities and police, 2001-10**



Source: MESP (2011).

5. Official development assistance

In 2004, Slovenia's status changed from a recipient to a donor of official development assistance (ODA). It adopted the International Development Co-operation Act in 2006. The National Assembly defined the geographical and thematic priorities for development co-operation two years later. Slovenia is committed to providing international development assistance in accordance with the UN recommendations. Where appropriate, it carries out environmental assessments of development assistance projects and programmes. Slovenian foreign and ODA policies are targeted at the same parts of the world, notably Western Balkan countries and Eastern Europe. Thematic priorities include good governance, protecting the environment, and gender equality.

In 2009, Slovenia's ODA amounted to 0.15% of GNI, close to the 2010 EU target of 0.17%. Of the total of EUR 51.3 million, 64% (EUR 33.1 million) was allocated as international development co-operation and 28% (EUR 14.4 million) as bilateral aid.[16] A major share of the latter (EUR 11.3 million) was earmarked for Western Balkan countries.

The environmental component of Slovenian ODA amounted to almost 7% of the total in 2009. It focused on promoting good practices in waste management and activities related to sustainable production and consumption, including energy conservation and use of renewable energy sources.[17] From 2000, Slovenia contributed about SDR 1 million per year to the Global Environment Facility (GEF); it ceased being a recipient country in 2004.[18] During the period 2011-14, it pledged SDR 4.3 million, or 0.21% of total contributions – well above its basic contribution share of 0.03%. The MFA intends to increase the share of ODA to environmental projects, particularly projects concerned with water.

Environmental projects financed in 2009 under the bilateral ODA programme included: electric and electronic waste management in Bosnia and Herzegovina, the Former Yugoslav Republic of Macedonia, and Serbia; air quality measurement in Kosovo; and wastewater treatment in the Former Yugoslav Republic of Macedonia. In the case of a small aid programme, of course it is not advisable to dilute resources too much. However, given Slovenia's expertise and the priority given to biodiversity conservation in its international environmental policy (*e.g.* its initiative in the Dinaric Arc area and the international priority assigned to biodiversity), it may be well placed to contribute to broader international efforts in this area through its ODA programme.

The state is the main owner of the statutory Slovene Export and Development Bank (SID Bank), with smaller shares in the hands of banks, insurance companies and others. The bank began to apply the OECD's environmental common approaches for export credits in 2003. Since then, most approved projects have been in the construction sector and classified as Category C (*i.e.* minimal environmental impact). A few projects have been in Category B, with none in Category A (highest impact). The SID Bank has made its environmental policy and procedural guidelines available on its website.

In 2009, Slovenia established a National Contact Point for the OECD Guidelines for Multinational Enterprises in the Directorate for Foreign Economic Relations of the Ministry of Economy. The guidelines have been translated into Slovenian and a brochure promoting them has been published. As of mid-2011, the Contact Point had not received any inquiries concerning Slovenian enterprises.