



## Slovenia

### Highlights in 2008

With the Climate and Energy Package negotiations and preparations for the Biodiversity and Biosafety COPs in June 2008 as major environmental priorities, Slovenia was the first of the new Member States<sup>4</sup> to hold the EU Presidency during the first half of

2008. Slovenia also succeeded in reaching second reading

agreements on the Waste Framework Directive and inclusion of aviation in the EU emissions trading system.

At home, Slovenia has made significant efforts to frame environment policy initiatives related to EU cohesion policy. New operational programmes were developed and adopted in 2008: the Operational Programme for the Natura 2000 site management programme, the Operational Programme for waste elimination designed to reduce the amount of biodegradable waste, and the Operational Programme to use woody biomass for energy purposes. In the coming years, Slovenia needs to speed up efforts on climate change as the country is still far from achieving its commitments in this area. Most recent greenhouse gas emission data show a continued increase, well above its target of -8% for the period 2008-2012.

### Climate change and energy

|  | Slovenia |       |       |                        | EU-27 total   | rank in EU-27 |
|--|----------|-------|-------|------------------------|---------------|---------------|
|  | 2000     | 2005  | 2006  | target                 |               |               |
| Total Kyoto GHG emissions  |          |       |       |                        |               |               |
| – million tonnes (Mt) CO <sub>2</sub> eq.                                  | 18.9     | 20.5  | 20.6  | 18.7<br>(by 2008-2012) | 5142.8        |               |
| – from energy supply and use, including transport (Mt CO <sub>2</sub> eq.) | 15.1     | 16.5  | 16.6  |                        | 4098.7        |               |
| – from transport (Mt CO <sub>2</sub> eq.)                                  | 3.8      | 4.6   | 4.8   |                        | 992.3         |               |
|  |          |       |       |                        | EU-27 average | rank in EU-27 |
| – per capita (tonnes CO <sub>2</sub> eq.)                                  | 9.5      | 10.2  | 10.3  |                        | 10.4          | 13            |
| – per GDP (tonnes CO <sub>2</sub> eq. per 1000€ GDP)                       | 882.8    | 797.9 | 758.0 |                        | 495.7         | 17            |

<sup>4</sup> i.e. the Member States that have joined the EU since 2004.

|  | Slovenia     |                 |                 |                          | EU-27 average | rank in EU-27 |
|--|--------------|-----------------|-----------------|--------------------------|---------------|---------------|
|  | 2000         | 2005            | 2006            | target                   |               |               |
| – trend (% change compared to base year*)  | -7.0%        | +0.6%           | +1.2%           | -8.0%<br>(by 2008-12)    | -10.8%        | 16            |
| – Projected 2010 emissions trend compared to base year*                                    |              |                 |                 |                          |               |               |
| – with existing measures, Kyoto mechanisms and carbon sinks                                |              | -4.5%           |                 | -8.0%                    | -13.4%        |               |
| – with existing and additional measures, Kyoto mechanisms and carbon sinks                 |              | -13.2%          |                 | (by 2008-12)             | -16.3%        |               |
| Average CO <sub>2</sub> emissions from new passenger cars sold (grams CO <sub>2</sub> /km) | 151.6 (2004) | 154.2 (2006)    | 155.2 (2007)    | 130 by 2012-15 for EU-27 | 157.5         | 12            |
| Electricity produced from renewable energy sources (% gross electricity consumption)       | 31.7%        | (2006)<br>24.4% | (2007)<br>22.1% | 33.6%<br>(by 2010)       | 15.6%         | 8             |
| – from hydropower  | 31.1%        | 23.7%           | 21.4%           |                          | 9.2%          |               |
| – from biomass   | 0.6%         | 0.7%            | 0.7%            |                          | 3.0%          |               |
| Combined heat and power generation (% gross electricity generation)                        | n.a.         | 7.3%            | 7.4%            | 18% by 2010 for EU-15    | 10.9%         | 19            |
| Energy consumption per capita (kg oil eq.)   | 3 231        | 3 649           | 3 658           |                          | 3 694         | 15            |
| Energy intensity - Energy consumption per 1000€ GDP (kg oil eq.)                           | 331          | 314             | 299             |                          | 202           | 18            |

\* Base year for CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> is 1986 and for F-gases is 1995.

In 2006, Slovenia's greenhouse gas emissions were 1% higher than the base-year level, well above its Kyoto target of -8% for the period 2008-2012. Slovenia projects that it will only meet its Kyoto commitment if it also accounts for existing and planned additional policies and measures, the use of Kyoto mechanisms and carbon sinks. Slovenia is the only new Member State that intends to invest in Kyoto mechanisms.

Following adoption of the climate and energy package in December 2008, Slovenia agreed to a maximum increase in its greenhouse gas emissions of 4% by 2020 compared to 2005 levels in non-ETS sectors (e.g. buildings, road transport and farming). Furthermore, Slovenia has committed to achieving by 2020 a share of energy from renewable sources in gross final energy consumption of 25% (up from 16% in 2005).

While Slovenia has a relatively large share of renewable energy sources in its gross electricity consumption (22.1 % in 2007), this share is well below its 2010

target of 33.6%. Throughout 2008, an Eco-fund supported improving the energy efficiency of buildings and promoting the use of renewable energy sources through measures such as the building of new low-energy and passive apartments and the installation of solar collectors.

In June 2008, the government approved a strategy on the adaptation of Slovenian agriculture and forestry to climate change. This is the first strategy that aims to lay down climate change adaptation guidelines for agriculture and forestry.

In January 2008, the National Energy Efficiency Action Plan 2008–2016 was adopted to comply with the Directive on energy end-use efficiency and energy services. Based on targets established in the Action Plan, Slovenia aims to achieve cumulative savings of at least 9% in relation to the starting point for final energy consumption over the 2008–2016 period.

## Nature and biodiversity

|  | 2000  | 2006  | Slovenia |       | target           | EU-27 average      | rank in EU-27 |
|--|-------|-------|----------|-------|------------------|--------------------|---------------|
|  |       |       | 2007     | 2008  |                  |                    |               |
| Natura 2000 area (sites designated under Habitats and Birds Directives) as % of terrestrial area |       | 35.5% | 35.5%    | 35.5% |                  | 17.0%              |               |
| Sufficiency of site designation under the Habitats Directive                                     |       |       | 72.6%    | 72.6% | 100%             |                    |               |
| Area occupied by organic farming (% of Utilised Agricultural Area)                               | n.a.  | 5.5%  | 6.0%     |       | 20% *<br>by 2015 | 4.2%               | 11            |
| Freight transport (billion tkm)  | 9.2   | 15.5  | 17.3     |       |                  | EU total<br>2505.0 |               |
| – % road   | 70.0% | 78.2% | 79.2%    |       |                  | 76.9%              | 16 of 26      |
| – % rail   | 30.0% | 21.8% | 20.8%    |       |                  | 17.4%              | 13 of 26      |

\* Indicative target according to the Plan of Long-term Development of organic farming in Slovenia.

The Natura 2000 Operational Programme sets objectives for each Natura 2000 site in relation to agri-environmental measures, farmland species and habitat types. Measures to maintain biodiversity are included in the Rural Development Programme for 2007–2013. The rural development programme identifies comprehensive agri-environmental measures for endangered habitats along with six special Natura 2000 measures.

Activities such as illegal tree cutting and construction indicated that the Triglav National Park Act had become ineffective and was no longer capable of providing adequate tools to protect natural assets. In April 2008, the government approved amendments to the Act providing a legal framework for operation of

the only national park in Slovenia. The amendments were needed to harmonise the Act with current Slovenian and Natura 2000 legislation.

In June 2008, Slovenia organised the first meeting of Adriatic coastal states (Italy, Slovenia and Croatia) to prepare an Adriatic sub-regional strategy in accordance with the EU Marine Strategy Directive, and to implement Article 5 of the directive on managing coastal and marine environments so as to reach good quality status by 2020. The major outcome of the meeting was that a special sub-regional round table of Adriatic states needs to be formed. The goal of the round table would be to find coordinated solutions for protection of the Adriatic Sea, which are acceptable to all the countries involved.

## Environment and health

|  | Slovenia    |                              |       |           | EU-27 average | rank in EU-27 |
|--|-------------|------------------------------|-------|-----------|---------------|---------------|
|  | 2000        | 2005                         | 2006  | Ceiling   |               |               |
| Urban population exposure to air pollution by particles (annual mean concentration, $\mu\text{g}/\text{m}^3$ ) | 30.9 (2002) | 36.4                         | 33.3  | 30.0      | 30.0          | 14 out of 23  |
| Urban population exposure to air pollution by ozone (SOMO35 level, $\mu\text{g}/\text{m}^3 \cdot \text{day}$ ) | 6 806       | 6 017                        | 6 461 | 3 831     | 4 417         | 20 out of 23  |
| Air pollutant emissions (thousand tonnes)  |             |                              |       | (by 2010) | EU27 total    |               |
| – sulphur dioxides ( $\text{SO}_2$ )   | 99          | 41                           | 18    | 27        | 7946          |               |
| – nitrogen oxides ( $\text{NO}_x$ )  | 49          | 47                           | 47    | 45        | 11198         |               |
| – non-methane volatile organic compounds (NMVOCs)  | 51          | 42                           | 41    | 40        | 9391          |               |
| – ammonia ( $\text{NH}_3$ )  | 20          | 18                           | 19    | 20        | 4006          |               |
|  | 1990        | Latest available year (2002) |       |           |               |               |
| Water exploitation index   | 1.4%        |                              |       | 2.8%      | n.a.          | 7             |

Although there was a general improvement in  $\text{SO}_2$  concentrations in 2007,  $\text{PM}_{10}$  limit values were significantly exceeded in particular in urban areas but in other areas too. Air quality management plans have to be prepared or adopted at different levels.

The government designated two areas – Ljubljana and Rižana – as protected areas for drinking water supply, and water management in these areas is based on the Water Framework Directive standards. The provisional water management plans for the “Adriatic Sea” and “Danube” basins will be prepared in 2009.

In February 2008, an action plan was approved by the government to implement the Global Plan of Action of the Strategic Approach to International Chemicals Management (SAICM). SAICM is a policy framework that promotes chemical safety around the world. The aim is to minimise adverse effects from the production and use of chemicals on human health and the environment by 2020.

In the city of Velenje, starting in 2008, public transport was made free of charge for everyone. In another city, Nova Gorica a similar system has been operating since 2006. The major reason for introducing these systems was to reduce the high levels of urban pollution, especially air pollution.

## Natural resources and waste

|   | Slovenia |       |       |                      | EU-27 average | rank in EU-27 |
|---|----------|-------|-------|----------------------|---------------|---------------|
|   | 2000     | 2006  | 2007  | Target               |               |               |
| Municipal waste generated (kg per capita)                 | 513      | 432   | 441   |                      | 522           | 7             |
| – % landfilled  | 78.4%    | 83.8% | 77.6% |                      | 41.0%         | 19            |
| – % incinerated   | 0%       | 0.7%  | 0%    |                      | 19.9%         |               |
|   | 2004     | 2005  | 2006  |                      |               |               |
| Recycling of packaging waste (as % total packaging waste) | 34.3%    | 45.3% | 40.0% | 55%-80%<br>(by 2012) | 56.5 %        | 20            |

In March 2008, the Operational Programme on waste elimination was adopted with the aim of reducing the amount of biodegradable waste. The main goal of the Programme is to maximize the fraction of waste that is recycled, reused and collected separately at source, and ensure the efficient treatment of the remaining fractions (mechanical, biological and thermal).

In May 2008, the government approved two acts: the Act Amending the Fund for Financing the Decommissioning of the Krško Nuclear Power Plan, and the Disposal of Radioactive Waste from the Krško NPP Act. The amendment will improve the efficiency and monitoring work of the Slovenian Agency for Radioactive Waste Management, the public utility service provider.

In March 2008, an interministerial working group on green public procurement was established to prepare a national action plan on green public procurement.

## Better regulation and implementation

|   | Slovenia   |            |            | EU-27 total |
|---|------------|------------|------------|-------------|
|   | 31/12/2006 | 31/12/2007 | 31/12/2008 |             |
| Infringements of EU environmental legislation | 5          | 7          | 8          | 481         |

In the field of waste management and air pollution, the number of complaints and non-conformity cases has increased. Also, more effort needs to be made on effective compliance with and implementation of EC directives and decisions. Transposition is generally accomplished on time.

## Use of market-based instruments

|   | Slovenia |      |      | EU-27<br>average |
|---|----------|------|------|------------------|
|   | 2000     | 2005 | 2006 |                  |
| Share of environmental taxes in total tax revenue | 7.9%     | 8.3% | 7.8% | 6.4%             |

In October 2008, the government approved the Implementation Report on the Reform Programme for Achieving the Lisbon Strategy Goals in Slovenia in 2008. The new programme indicates that the taxation system will be amended based on the principles of green taxation and that the procurement system will be upgraded to use a simpler procedure and to include an improved procurement portal. At the same time, special attention will be paid to green procurement and to the encouragement of public-private partnerships.

## Outlook for 2009

In order to improve energy efficiency, energy-conscious investment will be promoted through an Environmental Fund, energy certificates will be issued for buildings, and green public procurement procedures will be continued for vehicles and buildings with low energy consumption.

The Operational Programmes, particularly the 2007–2013 Natura 2000 Operational Programme, will be implemented so as to achieve the targets set for areas covered by agri-environmental measures. It will improve sectoral management plans, so as to meet the targets set for nature protection and set up the planned monitoring system.

Measures under the Operational Programme on waste elimination aimed at reducing the amount of biodegradable waste will also be continued. It will maximize the fraction of waste that is recycled, reused and collected separately at source, and ensure efficient treatment of the remaining fractions (mechanical, biological and thermal).

Various environment policy initiatives and activities related to climate change are planned for 2009: transposition of the climate and energy package, amendments to the action programme to comply with Kyoto protocol obligations up to 2012, the establishment of a government office for climate change, and preparation of a climate change act and programme.

