



## Bulgaria

### Highlights in 2008

As a new member of the EU, Bulgaria is busy establishing the foundation for its environment policies. Environment policy instruments are largely being

implemented as part of the measures within the Operational Programmes, adopted in 2007, and financed by the EU Cohesion policy and Structural funds.

In order to harmonize national legislation with European Community requirements on the management of waste from extractive industries, the Law on Natural Resources was amended and supplemented in 2008. The Council of Ministers approved the Ordinance on the protection of waters against pollution caused by nitrates from agricultural sources. This will facilitate the reduction of nitrate levels in subsurface waters.

### Climate change and energy

	Bulgaria				EU-27 total	rank in EU-27
	2000	2005	2006	target		
Total Kyoto GHG emissions						
– million tonnes (Mt) CO <sub>2</sub> eq.	68.7	70.5	71.3	122.0	5142.8	
				(by 2008-2012)		
– from energy supply and use, including transport (Mt CO <sub>2</sub> eq.)	48.2	51.2	52.2		4098.7	
– from transport (Mt CO <sub>2</sub> eq.)	6.0	8.2	8.7		992.3	
					EU-27 average	rank in EU-27
– per capita (tonnes CO <sub>2</sub> eq.)	8.4	9.1	9.2		10.4	10
– per GDP (tonnes CO <sub>2</sub> eq. per 1000€ GDP)	5012.7	3975.9	3784.3		495.7	27
– trend (% change compared to base year*)	-48.2%	-46.8%	-46.2%	-8.0%	-10.8%	4
				(by 2008-12)		
– Projected 2010 emissions trend compared to base year *						
– with existing measures, Kyoto mechanisms and carbon sinks		-29.8%		-8.0%	-13.4%	
– with existing and additional measures, Kyoto mechanisms and carbon sinks		-34.9%		(by 2008-12)	-16.3%	

\* Base year for CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> is 1988 and for F-gases is 1995.

	Bulgaria					
	2000	2005	2006	target	EU-27 average	rank in EU-27
Average CO <sub>2</sub> emissions from new passenger cars sold (grams CO <sub>2</sub> /km)	n.a.	n.a.	n.a.	130 by 2012-15 for EU-27	157.5 (2007)	
Electricity produced from renewable energy sources (% gross electricity consumption)	7.4%	(2006) 11.2%	(2007) 7.5%	11.0% (by 2010)	(2007) 15.6%	16
– from hydropower	7.4%	11.1%	7.4%		9.2%	
– from wind		0.1%	0.1%		3.1%	
Combined heat and power generation (% gross electricity generation)	n.a.	6.1%	6%	18% by 2010 for EU-15	10.9%	22
Energy consumption per capita (kg oil eq.)	2 282	2 582	2 669		3 694	7
Energy intensity - Energy consumption per 1000€ GDP (kg oil eq.)	1 940	1 607	1 554		202	27

Projections show that Bulgaria will meet its Kyoto Protocol commitments. Greenhouse gas emissions are projected to decrease in 2008-2012 by 30% or more compared to base year levels, achieving more than the targeted reduction of 8%. The share of electricity production from renewables of gross electricity consumption stood at 11.2% in 2006 (surpassing the 2010 target) but fell down to 7.5% in 2007 due to a drop in electricity produced from hydropower. Although a continuously decreasing trend was observed from 1994 to 2006, Bulgaria still has the highest energy intensity in the EU.

Following the adoption of the climate and energy package in December 2008, the country agreed to increase greenhouse gas emissions by maximum 20% compared to 2005 levels in non-ETS sectors (e.g. buildings, road transport, and farming). Furthermore, Bulgaria has committed to achieving by 2020 a share of energy from renewable sources in gross final energy consumption of 16% (up from 9% in 2005).

Measures on energy efficiency and on the development of renewable energy infrastructure are being financed through Cohesion Policy funds. They include introducing innovative, energy-saving technologies and equipment; upgrading energy management and improving heat and energy properties of buildings; and using energy-saving materials and products. Renewable energy sources will be promoted by building, renewing or refurbishing equipment for the use of renewables, and introducing production technologies using equipment for energy generation from renewables, including combined power and heat generation.

## Nature and biodiversity

	Bulgaria			target	EU-27 average	rank in EU-27
	2000	2006	2007			
Natura 2000 area (sites designated under Habitats and Birds Directives) as % of terrestrial area			28.8%	34%	17.0%	
Sufficiency of site designation under the Habitats Directive				94.3%	100%	
Area occupied by organic farming (% of Utilised Agricultural Area)	n.a.	0.2%	0.4%	8% * by 2013	4.2%	26
Freight transport (billion tkm)	12.2	19.9	20.9		EU total 2505.0	
– % road	52.3%	69.0%	70.0%		76.9%	8 of 26
– % rail	45.2%	27.1%	25.1%		17.4%	10 of 26

\* Indicative target according to the National Plan for Development of Organic farming in Bulgaria 2007-2013.

Although Bulgaria in 2008 designated a very substantial proportion of its territory as part of the Natura 2000 network, some gaps still remain. The Bulgarian authorities are struggling to enforce the nature protection legislation in these sites. The Natura 2000 network currently includes 114 Special Protection Areas (SPAs) and 228 Sites of Community Importance, although six of the SPAs are considerably smaller in size than the corresponding Important Bird Areas. Thus, Bulgaria failed to meet the requirements for designating the most suitable areas in its territory and for this reason, the European Commission opened an infringement case against Bulgaria.

The most important measures in Operational Programme Environment include elaboration of management plans to support the management of Natura 2000 sites, increasing awareness of Natura 2000 networks, establishment of management bodies for Natura 2000 sites, restoration of damage caused by human activities, afforestation with native species, and assisting the natural ability of species to adapt to climate change and variations in other environmental circumstances.

## Environment and health

	Bulgaria				EU-27 average	rank in EU-27
	2000	2005	2006	Ceiling		
Urban population exposure to air pollution by particles (annual mean concentration, $\mu\text{g}/\text{m}^3$ )	20.4	55.6	55.4	30.0	30.0	23 out of 23
Urban population exposure to air pollution by ozone (SOMO35 level, $\mu\text{g}/\text{m}^3 \cdot \text{day}$ )	200 (2001)	2 154	2 124	n.a.	4 417	3 out of 23
Air pollutant emissions (thousand tonnes)				(by 2010)	EU27 total	
– sulphur dioxides ( $\text{SO}_2$ )	1045	900	877	836	7946	
– nitrogen oxides ( $\text{NO}_x$ )	128	233	246	247	11198	
– non-methane volatile organic compounds (NMVOCs)	79	147	159	175	9391	
– ammonia ( $\text{NH}_3$ )	58	57	55	108	4006	
	1990	Latest available year (2005)				
Water exploitation index	64.9%		38.2%		n.a.	26

The Operational Programme Environment was approved by the European Commission at the end of 2007. Two of its Priority Axes focus on construction of the necessary infrastructure for water supply and wastewater collection, discharge and treatment, and on the improvement of infrastructure for waste treatment. The total amount of funds available for the implementation of the two Priority Axes in the period 2007-2013 amounts to more than €1 650 million.

## Natural resources and waste

	Bulgaria			Target	EU-27 average	rank in EU-27
	2000	2006	2007			
Municipal waste generated (kg per capita)	516	446	468		522	10
– % landfilled	77.3%	79.8%	82.9%		41.0%	22
– % incinerated	0%	0%	0%		19.9%	
	2004	2005	2006			
Recycling of packaging waste (as % total packaging waste)	n.a.	30.8%	30%	55-80% (by 2014)	56.5 %	24

The Bulgarian government has adopted various environmental laws transposing European Directives. The Soil Protection Act was adopted at the end of 2007 and aims to prevent soil degradation and damage to soil functions, and to restore damaged soil functions. Also the Ordinance on transposing the Directive on the management of bathing water quality and the protection of waters against pollution caused by nitrates from agricultural sources was adopted. Further, the Law on Natural Resources was amended and supplemented to harmonize legislation on the management of waste from extractive industries.

The Operational Programme Environment contains measures relating to waste such as reducing the quantity and/or hazard of dangerous substances in accumulated waste, launching regional facilities for municipal waste treatment and pre-treatment (composting, separation), setting up waste recycling centres, building regional installations for construction and demolition waste recycling, and preparing and updating regional and municipal waste management plans.

## Better regulation and implementation

	Bulgaria			EU-27 total
	31/12/2006	31/12/2007	31/12/2008	
Infringements of EU environmental legislation	0	6	7	481

Bearing in mind that Bulgaria joined the EU in 2007, the number of complaints filed by the Commission is rather large, especially in the nature sector. In November 2008, the European Commission sent warning letters to Bulgaria in two separate cases over its failure to properly implement EC environmental laws. The first case concerns the Waste Framework Directive, and Bulgaria's failure to establish an adequate household waste management system in Sofia. In the second case Bulgaria is being sent a first written warning about the environmental impact assessments required under the Birds Directive.

## Use of market-based instruments

	Bulgaria			EU-27 average
	2000	2005	2006	
Share of environmental taxes in total tax revenue	7.6%	9.9%	9.1%	6.4%

## Environmental technologies

As regards pollution prevention and control, an important incentive for the dissemination of best practices is the process for authorising industrial installations. Competent authorities have to set conditions for issuing operating permits for installations in line with the Directive on Integrated Pollution Prevention and Control (IPPC). This requires that all industrial permits be issued by 30 October 2007. Bulgaria reported that by April 2008, only 297 authorisations had been issued or reconsidered and, where necessary, updated out of a total of 415.

## Outlook for 2009

The Agency for International Business and Cooperation is providing its expertise for the “Development of a National Waste Management Programme” for 2009–2013. The first draft of the new Programme is expected to be ready by the end of 2009. The National Waste Management Programme sets out a long-term strategy for sustainable waste management and a framework for decision-making in compliance with the legislation and policy of the European Union.

The draft National Sustainable Development Strategy was approved by the National Advisory Council on Sustainable Development and published for public consultation in May 2007. The strategy is expected to be approved by the Bulgarian government in 2009.

