Countries and regions

Bulgaria

Main themes and sectors addressed in the national State of Environment report

The national report on the state and protection of the environment is drafted annually in accordance with the Environmental Protection Act[1].

> The report consists of 16 units and contain information mainly about: Air quality, Climate change, Water quality and Water resources management, Land use and soil state, Forests, Waste, Radiation characteristics of the environment, Noise pollution, Energy production, Transport and etc.

The report is structured on the base of environmental indicators and methodologies, implemented in the assessment reports of the European Environment Agency (EEA). The indicators assessment is done at appropriate time periods and gives trends and conclusions, forming the "key messages" under each relevant environmental topic.

Key findings of the State of Environment report [2]

Industry's use of energy and natural resources has had a significantly harmful impact on the environment.

Despite the decrease in Bulgaria's energy intensity, it nevertheless remains high among European Union (EU) Member States. Based on Eurostat data in 2012 the share of renewable energy (RE) use in Bulgaria reached 16.34% as a part of the country's total energy consumption.

Table 1: Share of renewable energy use in Bulgaria

Year	2005	2006	2007	2008	2009	2010	2011	2012
RE ktoe (normalized)	1048	1118	1067	1183	1205	1429	1515	1680
RE share from total energy, %	9.54	9.74	9.43	10.72	12.44	14.40	16.64	16.34

Energy production remains the biggest source of sulfur dioxide emissions and one of the largest for nitrogen oxide emissions. The domination of road transport in the overall transport structure, together with its ongoing growth, is linked with an increase in fuel consumption and emissions of harmful substances in the ambient air, including greenhouse gas (GHG) emissions, ozone precursors, and particulate matter (PM). In the transport sector, road transport is responsible for 92.54% of the total energy use. An increase in the use of bio-fuels in transport was first noticed in 2012.

Pollutants such as PM, ozone, sulfur dioxide, nitrogen oxides, ammonia, and non-methane volatile organic substances create enormous problems for human health. Such pollutants are responsible for a deterioration in ecosystems with PM_{10} the worst offender. For the period 1990-2012 the PM_{10} precursor emissions decreased by 66%, from 885 kt to 303 kt.

Bulgaria is implementing the requirements of the United Nations Framework Convention on Climate Change

(UNFCCC) and the Kyoto Protocol to decrease GHG emissions by 8% for the period 2008-2012, compared to 1988.

> Compared to other EU Member States, Bulgaria is distinguished by its relatively large quantities of water resources both as an absolute volume and per capita. At the same time the country has one of the highest water abstraction per capita and relies mainly on surface water sources due to the big volumes of water used for cooling in the energy production.

99% of the population has access to drinking water. After 2005 the number of Watewater Treatment Plants increased. During the past decade a gradual improvement in the quality of surface and ground water has been seen. There are still water bodies at risk and measures are in place aiming to reach good ecological status by 2015.

The country's soils have good ecological status. Water erosion, both as a territorial spread and as an average annual soil loss, has been noticed. Wind erosion has been kept at a constant.

On biodiversity, complex indicators for population trends are used in order to assess the degree of any loss. There has been a decrease in the population status of birds. The protected zones have been assessed as sufficient in regard of the representativeness of the species and the habitats.

The state of forests does not dramatically differ from the average European level. 24.2% of trees in Europe are classified as damaged, while in Bulgaria it is at 21.6%. Insects and fungal pathogens are the most responsible.

The analysis of the data for the daily noise levels measured in cities for a five year period shows that the prevailing ones are in the range 63-67 dB(A), followed by the ones at 68-72 dB(A). The measurements made by the regional health inspectorates show that the regulated admissible noise levels are exceeded in 69% of the control points around the country.

Preventing waste generation affects and depends on a wide range of stakeholders. This objective is included into national targets and is supported by the engagement of the local authorities, but ultimately depends on changing attitudes and behavior of households and businesses and on the new models in the industrial processes and the product design. There was a significant increase in the proportion of waste delivered for recovery including recycling and the quantity of hazardous waste generated in the past five years decreased by an average of about 26%. The amount of generated waste in the country decreased mainly due to administrative, economic and financial instruments. The country has achieved national targets for material recycling and recovery of packaging waste.

> The cost of protecting and restoring the environment at the national level is estimated at EUR 866 million. This is equivalent to a share of 2.2% of gross domestic product (GDP). The cost has increased by 17.8% compared to 2011 and by about 32.9% compared to 2010.

Main policy responses to key environmental challenges and concerns

In Bulgaria emphasis is increasingly placed on national environmental protection and the prevention and adaptation to climate change. The main legislative initiatives intending to increase the efficiency of the governance of environmental policies and to improve the business environment are:

- Law on limiting climate change[3], which will provide the general legal framework to implement the climate policy and the main activities and processes by which the Republic of Bulgaria is fulfilling its obligations in the field of climate change at the international level and at the European Union level.
- draft amendments to the Protected Areas Act, Medical Plants Act and Biodiversity Act, to reduce the regulatory and administrative burden of regulatory regimes in relation to biodiversity conservation.
- proposal for amendments to the Water Act, which mainly aims at accelerating the process of determining the sanitary - protective zones around water intake facilities for drinking water, full harmonization of the

framework for Community action in the field of water policy and implementation of new higher environmental standards for water.

- Amendment to the Law on the responsibility to prevent and remedy environmental damage, which are included in the Draft Law amending the Law on Genetically Modified Organisms[4] in order to ensure effective control over the prevention and remedying of environmental damage.
- A new Waste Management Act[5], which updates the requirements for waste management and establishes national targets for recycling of household and construction waste.

Priority: Protection and improvement of water resources status

Providing further development and implementation of specific economic principles such as "polluter pays" and the principle of cost recovery in the water sector. Creating a strategic framework to reduce and prevent the adverse effects of flooding on human health, on the environment, on economy and on cultural heritage of the country and the development of Plans for Flood Management.

Priority: Sustainable waste management

Building a comprehensive infrastructure for waste treatment in the country and creating a strategic framework for waste management to determine future measures for waste generation prevention, promote recycling and reuse of waste and more efficient use of resources, the development of sustainable systems for management of specific waste streams and investment promotion activities associated with waste management.

Priority: Improve air quality

Implementation of the measures of the national programme to reduce total annual emissions of sulfur dioxide, nitrogen oxides, volatile organic compounds and ammonia in ambient air and methodological support to municipalities in developing programs to improve air quality and the implementation of already developed ones.

Priority: Limitation and halt the loss of biodiversity and the degradation of ecosystem services

Completion, maintenance and management of the national ecological network of protected areas and zones in order to ensure territorial protection, conservation, strengthening and restoration of ecosystems, habitats, species and genetic material, development and adoption of action plans for plant and animal species and management plans for protected areas and protected zones.

Country specific issues

The five headline targets of the "Europe 2020" strategy are adopted and transposed in national objectives and current situation and the targets for Bulgaria are following:

Table 2: National objectives in line with the "Europe 2020" strategy"[6]

"Europe 2020" strategy objectives	Present situation	Objectives of the National reforms program 2020[7]
3% of the GDP of EU goes for investment in scientific and research and development activities	0.6% (2012)	Increase up to 1.5%
20% decrease of GHG emissions compared to 1990 levels	minus 12% (prognosis for emissions in 2020[8] given 2005=100)	Increase with 20% max for sectors outside the ETS[9] (given 2005=100)
	plus 11% (emissions in 2010 given 2005=100)	
20% share of the RES in final energy consumption (incl.10% RES in the end consumption in transport)	16.4% (2012)	Increase the share to 16%
20% increase of the energy efficiency	17.4[10] Mtoe (2010)	Decrease with 3,2 Mtoe=15,8 Mtoe
75% employment of the population aged 20-64	63.5 (2013)	Increase the employment to 76%
Under 10% share of the early school leavers	12.4% (2013)	Decrease the share to 11%
At least 40% share of the aged 30-34 completed university	29.1% (2013)	Increase the share to 36%
Reducing the number of people living at risk of poverty or exclusion with 20 million	41.6% of the population	Decrease with 260,000

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