



Greece

Highlights in 2008

In 2008, Greece made further efforts to complete key strategic programmes and plans and submitted several proposals for consultation or parliamentary vote. In January, Greece signed the Mediterranean Protocol on Integrated Management of coastal areas and launched preparations for a draft Joint Ministerial Decision for the integrated management of the coastal areas and the islands. The National Programme for the Management and Protection of Water Resources was finalised in March, and was sent for consultation to the

National Council of Water Resources. The Greek National Special Framework Spatial Plan for Sustainable Development was approved in July 2008 and will be the basic instrument for rational economic and housing development and environmental protection.. Moreover, several spatial plans have been prepared: the Special Spatial Plan for Renewable Energy Sources has been approved in December 2008 by the National Council. The Plan for Tourism has undergone public consultation and is currently at the final stage of approval. The Special Spatial Plan for Sustainable Development for Industry has been signed by the Ministerial Committee. The Plans for Coastal and Mountainous areas have been completed and the public consultation is to be launched.

Although Greece will meet its climate change targets under the Kyoto protocol, progress is slow in the areas of nature and biodiversity protection and in waste management. Greece will need to make further efforts to protect nature areas and to complete its planned programmes on sewage waste treatment and on closing and restoring illegal landfills.

Climate change and energy

	Greece				EU-27 total	rank in EU-27
	2000	2005	2006	target		
Total Kyoto GHG emissions						
– million tonnes (Mt) CO ₂ eq.	128.2	133.8	133.1	133.8 (by 2008-2012)	5142.8	
– from energy supply and use, including transport (Mt CO ₂ eq.)	98.8	105.4	104.7		4098.7	
– from transport (Mt CO ₂ eq.)	19.6	23.0	24.1		992.3	
					EU-27 average	rank in EU-27
– per capita (tonnes CO ₂ eq.)	11.7	12.1	12		10.4	17
– per GDP (tonnes CO ₂ eq. per 1000€ GDP)	929.7	789.8	751.8		495.7	16

	Greece				EU-27 average	rank in EU-27
	2000	2005	2006	target		
– trend (% change compared to base year*)	+19.9%	+25.1%	+24.4%	+25.0% (by 2008-12)	-10.8%	22
– Projected 2010 emissions trend compared to base year*						
– with existing measures, Kyoto mechanisms and carbon sinks		+22.8%		+25.0% (by 2008-12)	-13.4%	
– with existing and additional measures, Kyoto mechanisms and carbon sinks		+20.8%			-16.3%	
Average CO ₂ emissions from new passenger cars sold (grams CO ₂ /km)	179.0	165.3 (2006)	164.2 (2007)	130 by 2012-15 for EU-27	157.5	18
Electricity produced from renewable energy sources (% gross electricity consumption)	7.7%	12.1% (2006)	6.8% (2007)	20.1% (by 2010)	15.6%	17
– from hydropower		9.3%	3.8%		9.2%	
– from wind	6.9%	2.6%	2.7%		3.1%	
– from biomass	0.8%	0.2%	0.3%		3.0%	
Combined heat and power generation (% gross electricity generation)	2.1%	1.7%	1.7%	18% by 2010 For EU-15	10.9%	25
Energy consumption per capita (kg oil eq.)	2 585	2 823	2 826		3 694	9
Energy intensity - Energy consumption per 1000€ GDP (kg oil eq.)	236	212	205		202	11

* Base year for CO₂, N₂O and CH₄ is 1990 and for F-gases is 1995.

In 2006 Greece's greenhouse gas emissions were 24% higher than the base-year level, slightly below its Kyoto target of +25% for the period 2008-2012. The latest projections reveal that Greece will overachieve its Kyoto target applying existing measures, Kyoto mechanisms, carbon sinks and additional measures. In October 2008, the European Commission approved the 2nd National Allocation Plan. For sectors covered by the Emissions Trading System it provides for a 16.7% reduction of greenhouse gas emissions compared to Greece's projected emissions for the period 2008-2012.



Following adoption of the climate and energy package in December 2008, Greece agreed to reduce, by 2020, greenhouse gas emissions by 4% compared to 2005 levels for sectors like buildings, road transport and farming (i.e. sectors not covered by the Emissions Trading System). Furthermore, Greece has committed to achieving, by 2020, a share of energy from renewable sources in gross final energy consumption of 18% (up from 6.9% in 2005).

In April 2008 Greece was suspended from the Kyoto flexible mechanisms as the national system had to be investigated. In November 2008, following a positive review, the United Nations Compliance Committee reinstated Greece in the Emissions Trading System of the Kyoto Protocol. Greece is now in line with international standards and fulfils all the prerequisites for participating in the Kyoto flexible mechanisms.

The government has launched a nation-wide awareness raising campaign on renewable energy and cogeneration of heat and power. Among other actions, a mobile unit is visiting cities all around Greece, informing the public about relevant actions and answering questions.

Nature and biodiversity

	2000	2006	Greece		target	EU-27 average	rank in EU-27
			2007	2008			
Natura 2000 area (sites designated under Habitats and Birds Directives) as % of terrestrial area		19.0%	19.0%	20.9%		17.0%	
Sufficiency of site designation under the Habitats Directive	98.6%		99.1%	99.1%	100%		
Area occupied by organic farming (% of Utilised Agricultural Area)	n.a.	7.6%	7.3%			4.2%	7
Freight transport (billion tkm)	19.3 (2003)	34.7	28.6			EU total 2505.0	
– % road	97.7%	98.1%	97.1%			76.9%	24 of 26
– % rail	2.3%	1.9%	2.9%			17.4%	24 of 26

* The railway system is not much developed due to the geography of the country.

An internet portal is under construction for the dissemination of information on biodiversity so that the public has access to reliable data. An assessment of the conservation status of habitat types and species of Community Interest has been finalised in line with the Habitats Directive, and its findings will contribute to determine directions for further action and conservation measures. The Second National Report on Implementation Measures of the Habitats Directive for the period 2001-2006 was submitted in April 2008 in accordance with the reporting obligations. As stated by the government, Greece is still facing problems with the organisation of a national system for collecting data on the status and trends of the various components of biological diversity, engaging sufficient personnel with relevant expertise, producing time-series data for biodiversity and coordination of authorities with co-competencies. In October 2008, the European Commission took legal action against Greece for failing to implement the Birds Directive. Greece had

already been condemned on the matter in 2007 but is still failing to designate sufficient protected areas for migratory and vulnerable wild birds under the requirements of the Directive on the conservation of wild birds.

Three more National Parks have been designated: the “National Park of East Macedonia and Thrace” already published in the Government Gazette; the “National Park Kotihou-Strofilias Wetland” and the “National Park of Axios-Loudias-Aliakmonas Delta” which are awaiting approval by the relevant ministries. The State Council (Supreme Court) has annulled the decision for the designation of an eco-development area as the relevant national legislation grants superior legal protection to National Parks, in the form of Presidential Decrees (superior legal status, compared to joint ministerial decisions). In practice, this means that all Joint Ministerial Decisions granting protection status to Natura 2000 sites need to be revised and possibly replaced by new Presidential Decrees.

Environment and health

	Greece				EU-27 average	rank in EU-27
	2000	2005	2006	Ceiling		
Urban population exposure to air pollution by particles (annual mean concentration, $\mu\text{g}/\text{m}^3$)	40.9 (2001)	41.1	36.1	30.0	30.0	18 out of 23
Urban population exposure to air pollution by ozone (SOMO35 level, $\mu\text{g}/\text{m}^3 \cdot \text{day}$)	7 052	9 600	7 315	6 140	4 417	22 out of 23
Air pollutant emissions (thousand tonnes)				(by 2010)	EU27 total	
– sulphur dioxides (SO_2)	493	545	536	523	7946	
– nitrogen oxides (NO_x)	330	332	316	344	11198	
– non-methane volatile organic compounds (NMVOCs)	299	289	291	261	9391	
– ammonia (NH_3)	73	73	73	73	4006	
	1990	Latest available year (1997)				
Water exploitation index	10.9%			12.1%	n.a.	15

Since 2005, and especially after November 2007 when the Asopos River was found to be polluted with high levels of hexavalent chromium, the Environmental Inspectorate has imposed fines of €2.6 million on 43 industries. In March 2008 the General Inspectorate published an audit report on the legitimacy and completeness of wastewater disposal permits for 19 enterprises in the area of the Asopos River. The report suggests that the government issues a new circular clarifying any ambiguities or controversies regarding different legislative requirements for the disposal of hazardous wastewater. The Environmental Inspectorate has also audited industries in the vicinity of the Koronia Lake, imposing fines of €715 700. Recently the Ministry of Environment decided to increase the maximum fine to be imposed for non-compliance with environmental terms to €2 million per industry, this being four times higher than in the past.

Priority agglomerations located at coastal areas are almost fully equipped with waste water treatment plants (WWTPs). Five large cities of more than 150 000 people and 44 priority agglomerations, discharging in coastal areas, are equipped with WWTPs which operate in compliance with the Urban Waste Water Directive requirements. Five new WWTPs were planned to commence operation in 2008. Despite these efforts, in November 2008, the European Commission launched an infringement procedure against Greece for not putting in place the required infrastructure for collecting and treating waste water in 12 other towns and cities despite having already been condemned by the European Court of Justice for this failure.

Natural resources and waste

	Greece			Target	EU-27 average	rank in EU-27
	2000	2006	2007			
Municipal waste generated (kg per capita)	408	443	448		522	8
– % landfilled	91.2%	87.1%	84.2%		41.0%	23
– % incinerated	0%	0%	0%		19.9%	
	2000	2005	2006			
Recycling of packaging waste (as % total packaging waste)	33%	41.8%	42.8%	55%-80% (by 2011)	56.5 %	18

In January the government signed the Mediterranean Protocol on the Integrated Management of Coastal Areas, the first legal text on international cooperation for the management of coastal areas. The government has started preparing a Joint Ministerial Decision for the implementation of the commitments and regulations of this Protocol. The National Programme for the Management and the Protection of Water Resources was presented in March and has been forwarded for consultation to the National Council of Water Resources. The results of the consultation are not yet available.

Waste is the most problematic sector with regard to the implementation of European environmental legislation in Greece. The main problem is disposal of waste at illegal dumps. In November 2008, the European Commission sent Greece a final warning over problems with the operation of a new western Attiki landfill at Fyli which is considered to be a violation of EU waste legislation. Four inspections by the permitting authorities between October 2007 and July 2008 revealed several ongoing operational problems, which are not disputed. These include waste not being adequately covered in the landfill, the lack of security at the site which allows people and animals to gain access, the

absence of rainwater collection, and the risk of fires and of waste slippage in the landfill.

In May 2008, the government agreed more support to municipalities for implementing waste policy. Grants will be provided to municipalities on the basis of the annual quantity of waste collected per citizen.

Better regulation and implementation

	Greece			EU-27 total
	31/12/2006	31/12/2007	31/12/2008	
Infringements of EU environmental legislation	30	26	27	481

Progress has been made during the past few years, but delays in undertaking transposition measures for European environmental legislation are frequent.

To date, Greece has not yet notified national transposition measures for the Directive concerning mining waste.

In September 2008, the draft Presidential Decree which transposes the Directive on environmental liability was released for consultation and signature by the appropriate Ministers and subsequent examination by the State Council. For its proper implementation, a coordinating body will be created within the Ministry of Environment and will be supported by central and regional committees. Since October 2008 the legislative requirements are in place for the wider use of water from waste water treatment plants and the government will investigate the potential use of the reclaimed treated wastewaters. The draft Joint Ministerial Decision regarding bathing water (Directive 2006/7/EC) was also signed by the government.

Use of market-based instruments

	Greece			EU-27 average
	2000	2005	2006	
Share of environmental taxes in total tax revenue	6.8%	6.6%	6.3%	6.4%

Environmental technologies

Measures to increase and improve investment in RTD by both the private and the public sector constitute a major priority in the new planning period 2007-2013. The new Law 3653/2008 "Institutional framework of research and technology and other provisions" regulating the national programme of research and technology (N.P.R.T.), establishes a programme promoting research, technology and innovation.

As regards pollution prevention and control measures an important incentive for the dissemination of best practices is the process for authorising industrial installations. Competent authorities need to set permit conditions to operate installations in line with the Directive on Integrated Pollution Prevention and Control (IPPC) which requires that all industrial permits be issued by 30 October 2007. Greece reported that by April 2008, 293 authorisations had been issued or reconsidered and, where necessary, updated out of the total 482.

Outlook for 2009

2009 will be designated a "Year of Recycling". The government, alongside the responsible partners, decided to improve public information and awareness of recycling. It will also prepare educational material for distribution at schools. These efforts are part of the response to tackle waste management and to complete the planned projects for landfills and for sewage waste treatment.

Greece has prepared its National Biodiversity Strategy, for which a public consultation has been launched in early 2009. Furthermore, the Specific Spatial Plans for Tourism, Industry and Coastal and Mountainous areas will be promulgated in 2009, while spatial regulation plans for four major cities in Greece are to be completed in 2009. The second Phase of the land registry survey is under way and it includes a legal certainty of property rights and confirmation on the exact location of each land parcel. In this way, by 2011, 310 000 ha will be included in the National land registry corresponding to an area where almost 2/3 of the Greek population lives. The possibility of incorporating the remaining agricultural and forest areas in order to complete the registry is also being explored.

In the transport sector, the government is planning a series of measures to encourage eco-driving, such as including it in driving lessons and driving tests from January 2009 onwards. Eco-driving will also be taught to drivers of public transport vehicles.