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**2007 Environment Policy Review**

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## TABLE OF CONTENTS

Introduction .....	4
Part 1: Achievements, new findings and outlook in the 6 <sup>th</sup> Environment Action Programme priority areas.....	5
Climate change.....	5
Nature and biodiversity .....	8
Environment and health .....	11
Natural resources and waste.....	13
Better regulation in environment policy.....	15
Part 2 - Statistical data.....	17
Climate change and energy .....	18
Nature and biodiversity .....	28
Environment and health .....	34
Natural resources and waste.....	37
Environment and the economy.....	40
Implementation.....	41
Indicators "Beyond GDP" .....	43
Part 3: Commission summary of environment policy actions in the Member States .....	47
AUSTRIA.....	47
BELGIUM.....	50
BULGARIA .....	53
CYPRUS .....	55
CZECH REPUBLIC .....	57
DENMARK.....	59
ESTONIA.....	62
FINLAND .....	64
FRANCE .....	67
GERMANY.....	70
GREECE .....	73
HUNGARY.....	76

IRELAND .....	79
ITALY.....	82
LATVIA.....	86
LITHUANIA.....	89
LUXEMBOURG.....	91
MALTA.....	93
THE NETHERLANDS .....	96
POLAND.....	99
PORTUGAL.....	102
ROMANIA.....	104
SLOVAKIA .....	107
SLOVENIA.....	109
SPAIN... ..	111
SWEDEN .....	113
UNITED KINGDOM.....	116

## INTRODUCTION

This Commission Staff Working Paper is an annex to the 2007 Environment Policy Review,<sup>1</sup> and presents evidence on selected EU environment policy issues during 2007.

It has been prepared in three parts. Part 1 describes EU environment policy during 2007. It describes in more detail the main policy developments for the four priorities of the 6<sup>th</sup> Environment Action Programme (6<sup>th</sup> EAP). It highlights recent findings and indicates the main issues that will be important in 2008. It then also examines Better Regulation initiatives, which make it simpler for business to comply and easier for Member States to implement environment policy measures, while enhancing environmental standards.

Part 2 draws on statistical data relevant to the four priority areas of the 6<sup>th</sup> EAP, commenting on significant issues and providing background for the Commission's policy work during 2007 and future initiatives. It also provides evidence relevant to discussion of the links between the environment and the economy and progress on implementation. Finally it includes an overview of some selected composite indicators, which were discussed during the international conference "Beyond GDP" on 19-20 November 2007.

Part 3 contains the Commission's review of environment policy actions in the Member States. The actions listed are by no means exhaustive, but rather present a snapshot of actions that took place around 2007 and which are part of the implementation of the 6<sup>th</sup> EAP and the Member States' National Lisbon Reform Programmes, notably with respect to Integrated Guideline 11 on environment policy measures to ensure the sustainable use of resources. The information comes from various sources, including Country pilot studies from December 2007 on environment policy developments in Member States, commissioned by DG Environment.

More comprehensive information on the environment in Europe can be found in the European Environment Agency's webpage<sup>2</sup> and in the report "*Europe's environment. The fourth assessment.*"<sup>3</sup> Further information can be retrieved from Eurostat's report "*Measuring progress towards a more sustainable Europe - 2007 monitoring report of the EU sustainable development strategy*", which presents environmental issues alongside social and economic indicators.<sup>4</sup>

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<sup>1</sup> COM(2008) 409 final

<sup>2</sup> [www.eea.europa.eu](http://www.eea.europa.eu)

<sup>3</sup> [http://reports.eea.europa.eu/state\\_of\\_environment\\_report\\_2007\\_1/en](http://reports.eea.europa.eu/state_of_environment_report_2007_1/en)

<sup>4</sup> [www.ec.europa.eu/eurostat/sustainabledevelopment](http://www.ec.europa.eu/eurostat/sustainabledevelopment)

# PART 1: ACHIEVEMENTS, NEW FINDINGS AND OUTLOOK IN THE 6<sup>TH</sup> ENVIRONMENT ACTION PROGRAMME PRIORITY AREAS

## Climate change

### *Highlights in 2007*

Climate change is one of the greatest threats facing the planet. The 4<sup>th</sup> assessment report of the Intergovernmental Panel on Climate Change (IPCC) confirmed that the warming of the climate system is unequivocal. To address the threat, EU Member States agreed at the March 2007 European Council on an **energy and climate change package** for a new **Energy Policy for Europe**. It commits the EU to a 30% reduction if there is an international agreement in which other industrial countries commit to comparable mitigation efforts as in the EU and - even if there is no agreement - to a unilateral reduction in greenhouse gas emissions of at least 20% by 2020, a target of 20% share of energy consumption from renewable sources and a target of 10% for biofuels in transport. This package prepared the ground for a major breakthrough in the international climate negotiations. The EU achieved its main objective for the 13<sup>th</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP13) in December in Bali: it reached agreement on launching intensive negotiations on a global and comprehensive agreement for effective global action on climate change after 2012, and concluding these negotiations in 2009. The Commission translated the package into concrete action by adopting a **Climate Action and Renewable Energy implementation package** on 23 January 2008 (see below), aiming to set Europe firmly on the path to a low-carbon economy.

In 2007, the Commission fixed strict emission caps when assessing the **Member States national plans** for allocating CO<sub>2</sub> emission allowances for the 2008-2012 trading period of the **EU Emission Trading Scheme (ETS)**. Allowances will be 12.5% below allocations for the first round of the scheme (2005-2007) and 6.8% below the measured emissions for 2005. In December, Environment Ministers reached political agreement on including aviation in the scheme, starting in 2012. From 2008, also firms from Norway, Iceland, and Liechtenstein will be able to participate in the EU ETS.

CO<sub>2</sub> emissions from road transport have risen by 26% since 1990, accounting for almost a fifth of total emissions in the EU. The February **review of the CO<sub>2</sub> and cars strategy** showed that the voluntary commitments of the car industry had brought only limited progress towards achieving the 2012 target of 120 g/km CO<sub>2</sub> emissions for new cars. Thus the Commission proposed a legislative framework in December, providing manufacturers with the necessary incentives, like an excess emissions premium if the limit value was not met. The proposed revision of the **Fuel Quality Directive** also includes an obligation for fuel suppliers to reduce the greenhouse gas emissions that their fuels cause over their life-cycle. To enable greater use of biofuels, a new petrol blend will be established. At the same time, sulphur levels in diesel and gasoil will be cut to reduce dust particles. EC funded research activities under the 7<sup>th</sup> Research Framework Programme also focus on both short and long term solutions to reduce transport impact on climate change, considering the whole transport system and its life cycle assessment.

In 2007, the conference "**Towards a post carbon society**" identified some major social and economic issues related to climate change and energy transition, including the long-term

behavioural patterns (e.g. in terms of mobility) and the relations between energy consumption and land-use.

The Commission adopted a new **Strategic Energy Technology Plan**, to help drive down the cost of existing low carbon and high efficiency technologies and to accelerate their market take-up. It proposed, inter alia, the launch of 6 **European Industrial Initiatives**, bringing together the appropriate resources and actors to focus on technology development for wind, solar, bio-energy, carbon capture and storage, electricity grid and nuclear fission and to initiate a **European Energy Research Alliance** to enable greater co-operation across Europe.

Despite all these measures, a certain degree of climate change can no longer be avoided. Thus, the Green Paper on **Adaptation to Climate Change** considered various policy actions to adapt to the impacts early in order to minimize economic, social and environmental disruptions. In that context, the Commission also adopted a Communication on **water scarcity and droughts** that identified a set of policy options to address water scarcity and droughts and mitigate their impacts. At the heart of the policy options is the need to put the right price on water. The "user pays" principle needs to become the rule regardless of where the water is taken from. Water savings and water efficiency need to be promoted, given that there is tremendous potential for water saving in the European Union. The Environment Council in October supported this and the need to put the right price on water. In November, the new **Floods Directive** entered into force: Member States have to draw up flood maps and flood management plans for the areas at risk.

These domestic initiatives underpinned the EU's ambition to play a continuing leading role in the **international climate change negotiations on a comprehensive post-2012 agreement**, launched in Bali in December. The EU's objective is to reach an agreement on binding absolute greenhouse gas emission reduction targets for developed countries and on enhanced contributions by developing countries, especially newly industrialising countries, leading to an emission pathway compatible with the EU's objective to limit the global temperature increase to 2°C above pre-industrial levels.

#### *New Findings:*

- In its Fourth Assessment Report, the IPCC states that during the last 100 years the earth has warmed by 0.76°C on average with an increasing trend. The 11 warmest years on record have all occurred in the last 12 years. Based on scenarios assuming no further action, the best estimates of the projected further rise in the global average temperature by 2100 range from 1.8 to 4.0°C.<sup>5</sup> The Panel Report confirmed knowledge of future climate impacts and called at the same time for the need to adapt to impacts of climate change and to strengthen efforts to minimise greenhouse gas emissions. Thus enhanced research activities will have to address remaining uncertainties in quantifying future climate change impacts and the need to enhance and accelerate the transition to low carbon technologies.
- In 2005, EU-15 emissions decreased by 0.8% compared to 2004, while EU-15 GDP grew by 1.6%. Compared to base year levels, an overall reduction of 2.0% was achieved. EU-27 emissions saw a similar decrease compared to 2004, and were 11% below the base year in 2005. Projections show that the EU is moving closer to achieving its Kyoto target but

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<sup>5</sup> The European Union's objective is to limit global warming to no more than 2°C above pre-industrial levels because the risks of irreversible and possibly catastrophic changes greatly increase beyond this threshold.

additional initiatives need to be adopted and implemented swiftly to ensure success.<sup>6</sup> Provisional data show that greenhouse gas emissions continued their downward trend in 2006.

### *Outlook for 2008*

- In the January **package**, the Commission put forward proposals for:
  - an improved **Emissions Trading Scheme (ETS)** for the third commitment period from 2013 onwards, covering more emissions and allowing firms in one Member State to buy allowances in any other;
  - the **effort sharing of emission reductions** for sectors not covered by the ETS like road transport, buildings, services and agriculture;
  - a Directive with legally enforceable targets for **increasing the share of renewables in the energy mix** – the targets reflect each country's individual needs and its potential;
  - a regulatory framework for **Carbon Capture and Geological Storage** technologies which addresses the environmental integrity of the technique and other issues relating to safe deployment.
- The package also includes revised Guidelines on **State aid for environmental protection** which, inter alia, modernise rules on climate change and energy.
- A White Paper on Adaptation will identify ways to adapt to climate change and examine ways to integrate adaptation principles into common policies, such as agriculture, fisheries, transport, energy, regional development, research and health, also taking into account the international dimension.
- By the end of 2008, a follow-up report on **water scarcity and droughts** will introduce deadlines for the implementation of the measures identified in the 2007 Communication and include water management measures that are the deemed necessary and considered cost-effective in the Commission's assessment.
- To promote energy efficiency and renewable energy in developing countries and economies in transition, the Commission will launch the **Global Energy Efficiency and Renewable Energy Fund (GEEREF)**. This public-private investment fund will provide risk capital to regional funds that specialize in investing in small and medium scale projects.
- In December 2008, the **UN Climate conference in Poznan** will assess the progress made on the Bali Roadmap and provide additional political guidance to the post-2012 negotiations, taking into account the results of other high level climate change meetings especially the G8 and the Major Economies Meeting.

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<sup>6</sup> COM/2007/0757



## Nature and biodiversity

### *Highlights in 2007*

In 2007, the Commission continued tackling biodiversity loss at home, by pressing ahead with the urgent implementation of the Biodiversity Action Plan, extension of the Natura 2000 network of protected areas, and internationally, by integrating sustainability concerns into its international agreements.

The first report on the implementation of Biodiversity Action Plan showed some progress, especially in relation to existing legal commitments. It was difficult to demonstrate significant progress in the integration of biodiversity into other sectoral policies, as new programmes were in the process of establishment. A major step in 2007 was the extension of the Natura 2000 network to the new Member States by adopting an initial list of Sites of Community Importance in the Pannonian biogeographical region<sup>7</sup> and updating existing lists for other regions. A future key challenge will be the extension of the network to the marine environment. Here the Commission issued Guidelines for establishing Natura 2000 marine areas.

The Commission also presented an **Integrated Maritime Policy for the European Union**, including an Action Plan. The Council and the European Parliament agreed on a **Marine Strategy Framework Directive** which establishes a framework obliging Member States to take the necessary measures for achieving or maintaining good environmental status in the marine environment by 2020.

In December, despite the efforts of the Presidency and strong support from a majority of Member States, the Council did not reach a political agreement on the **Soil Framework Directive** on grounds of subsidiarity and possible costs. The proposal is a key element of the 6<sup>th</sup> EAP.

The Commission and the Portuguese Presidency jointly launched an EU initiative on **business and biodiversity**, aiming to introduce biodiversity considerations into corporate governance through voluntary agreements. In response to the request of G8+5 Environment Ministers in Potsdam, the Commission and Germany launched an international review of the **economic value of biodiversity**.

At international level, a consensus agreement on ivory was reached at the 14<sup>th</sup> COP to the Convention on International Trade in Endangered Species (**CITES**). It provides for a nine-year moratorium on ivory sales after an agreed one-off sale of government-owned stocks of raw ivory. Furthermore the EU proposal to regulate trade in European eels was adopted, while the Parties acknowledged that trade in timber and marine species needs further attention. In line with the EU commitments, the Commission adopted an **action plan on CITES enforcement**.

Under the **Convention on Biological Diversity** (CBD), negotiations continued on international rules on access to genetic resources and benefit-sharing. With a view to

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<sup>7</sup> Pannonian is one of the 9 biogeographical regions of Europe, covering most of Hungary, plus parts of the Czech Republic, Slovakia and Romania. [http://ec.europa.eu/environment/nature/natura2000/sites\\_hab/biogeog\\_regions/maps/biogeo\\_map\\_eur27.pdf](http://ec.europa.eu/environment/nature/natura2000/sites_hab/biogeog_regions/maps/biogeo_map_eur27.pdf)

implementing decisions of the CBD and Resolutions of the General Assembly on marine biodiversity, the Commission presented proposals on combating illegal fishing practices and on preventing the destruction of biodiverse deep sea habitats in marine areas beyond national jurisdiction.

The Commission also started formal **negotiations** towards voluntary partnership agreements on **Forest Law Enforcement Governance and Trade (FLEGT)** with Indonesia, Ghana and Cameroon, and continued negotiations with Malaysia. The aim is to gain assurance that forest products imported into the EU from signatory countries are verified to be legal. Furthermore, the Commission continued its work with the Member States to develop FLEGT's implementing rules.

### *New Findings*

- The EEA's fourth pan-European Assessment<sup>8</sup> showed that the EU target of halting biodiversity loss by 2010 will not be achieved without additional efforts. More than 700 European species are currently under threat, 43% of European bird species have an unfavourable conservation status, while the number of invasive alien species in the pan-European region continues to increase.
- The first global-scale census of deep ocean ecosystems found some first evidence that the health of the deep sea and its ability to function increases with the diversity of species living there.<sup>9</sup>

### *Outlook for 2008*

- The **COP-9 to the CBD in Bonn** assessed progress towards achieving the global target to significantly reduce the rate of biodiversity loss by 2010. With only two years left to 2010, COP-9 adopted decisions strengthening implementation of the CBD. Most importantly, it adopted criteria for the identification of marine protected areas, including in the high seas, and agreed that the production and consumption of biofuels must be sustainable in relation to biodiversity. COP-9 also developed a roadmap for the finalisation of negotiations on an international regime on access to genetic resources and the fair and equitable sharing of benefits arising from their use.
- First results of the review on the **economics of biodiversity** will be presented to COP-9.
- As part of a Biodiversity package, the Commission plans to present a **mid-term report on the implementation of the Biodiversity Action Plan** on progress towards the 2010 target at both Community and Member State level and a Communication on policy actions to **tackle Invasive Alien Species**.
- The Commission will **update the Community lists of Natura 2000 sites** for the Alpine, Macaronesian<sup>10</sup> and Mediterranean biogeographical regions in 2008.
- The Commission will present a several proposals concerning **forests**, including a Communication on deforestation, a a Regulation setting out implementing rules for the

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<sup>8</sup> <http://www.eea.europa.eu/pan-european/fourth-assessment/nature-and-biodiversity>

<sup>9</sup> HERMES project <http://www.eu-hermes.net>

<sup>10</sup> The Canaries, Madeira and the Azores.

FLEGT Regulation and a proposal aimed to prevent the placing of illegally harvested timber on the EU market. It is hoped that the first FLEGT agreements will be concluded in 2008.

- The adoption of the Marine Strategy Directive will be followed by work **establishing European Marine Regions** based on geographical and environmental criteria, and developing **Marine Strategies** for each Member States' marine waters, containing assessments and clear targets.
- In May, the **16<sup>th</sup> Meeting of the United Nations Commission on Sustainable Development (CSD 16)** addressed agriculture, rural development, land, drought, desertification and Africa, and served as a follow-up on water. When looking at the interlinkages of these topics, it also looked at biodiversity loss, water and natural resource use in agriculture, the food life-cycle and the importance of sustainable consumption and production.
- In line with its Communication on an **Integrated Maritime Policy** for the EU, the Commission will produce **an assessment of EU interests in the Arctic**, as the basis for a possible EU Arctic strategy. Environmental issues will be central to a future strategy.
- In line with its Communication on a European Ports Policy, the Commission will develop further guidance on the implementation of the EU nature legislation and the Water Framework Directive in estuaries and coastal zones, with particular attention to port-related activities and dredging.

## Environment and health

### *Highlights in 2007*

A clean and healthy environment is essential for human well-being. To limit environmental threats to human health, the Commission continued in 2007 to take action in various fields, including on chemicals, water and air quality.

The **mid-term review of the 2004-2010 Environment & Health Action Plan** concluded that the strengthened cooperation between environment policy, health policy and the corresponding research fields is one of the major achievements over the last three years. In the coming years, the Commission will maintain the focus on integration of environment and health concerns into other policies. In response to the review, Environment ministers adopted **a resolution urging further progress on health-related aspects of environmental issues**.

In June, the new European chemicals legislation **REACH** (Registration, Evaluation and Authorisation and restriction of Chemicals) entered into force. REACH requires the registration of some 30 000 chemical substances in use today, in order to identify risk management measures to ensure their safe use. The new EU Chemicals Agency in Helsinki will manage the databases to operate the system, co-ordinate the evaluation and make information on chemicals publicly accessible. To complement REACH, the Commission proposed **legislation to align classification, labelling and packaging of chemical substances to UN standards**.

The European Community Implementation Plan for the Stockholm Convention on **Persistent Organic Pollutants** (POP) was adopted in March 2007. It takes stock of measures to control POPs, assesses their efficiency and sufficiency in meeting the obligations of the Convention and identifies needs for possible additional measures.

Since 2005, consensus has emerged on the urgent need for knowledge of the safety aspects of nanomaterials, which were addressed by the 2005-2009 **Nanotechnologies Action Plan**. In 2007, the first **implementation report** showed the commitment from all stakeholders to this approach.

In December the Commission adopted the **proposal for new legislation on industrial emissions**, which tightens emission limits in certain industrial sectors, introduces standards for environmental inspections and extends the scope to medium sized combustion plants. The proposal merges a revised Integrated Pollution Prevention and Control Directive and six other sectoral directives (the Large Combustion Plants, Waste Incineration and Solvents Emissions Directives and three directives on the production of Titanium Dioxide). Also in December, the Council and Parliament reached agreement on the **Directive on ambient air quality and cleaner air for Europe**. The new directive also merges different directives and gives Member States more flexibility in meeting standards. Member States will be required to reduce exposure levels to small particles (PM<sub>2.5</sub>) in urban areas by an average of 20% by 2020 compared to 2010.

Earlier in the year, **new vehicle emission standards (Euro 5 and 6)** were formally adopted by Council and Parliament, setting tighter limits on emissions of particles from 2009 and of nitrogen oxides from 2014. Euro 5 will lead to the introduction of particle filters for diesel cars. The Commission also proposed new **emission norms for heavy duty vehicles** (Euro VI) which - once adopted by Council and Parliament - will lead to cleaner trucks and buses. The Commission adopted a **Green Paper on urban mobility** in September 2007 and launched a

public consultation on follow-up actions, which will be presented in an Action Plan on urban mobility in autumn 2008. The Commission also submitted for public consultation guidance documents on sustainable urban transport plans. On public procurement, a Directive was proposed that introduces environmental aspects into **procurement of vehicles for public transport services**.

On the water policy side, the **Water Information System for Europe (WISE)** was launched in March; it gathers a wide range of data from across the EU. The first implementation report of the **Water Framework Directive** showed that Member States have made significant progress but must do more to achieve the objective of good water quality in all water bodies by 2015. Two related implementation reports, on the **Urban Waste Water Treatment Directive** and on the **Nitrates Directive**, identified important shortcomings and incomplete implementation: only 51% of all treatment plants in the European Union met the standards; an increase in nitrate pollution was observed in 36% of groundwater monitoring sites and 14% of surface water monitoring sites. The Commission started legal action against several Member States for not properly transposing or implementing key water directives. The 2007 **bathing water** report however revealed that the large majority of bathing sites across the European Union met EU hygiene standards in 2006.

### *New Findings*

- Emissions of certain industrial pollutants, such as nitrogen to water bodies, and phosphorus and dioxins to the atmosphere, have fallen significantly but others continue to rise. From 2009 onwards, a European Pollutant Release and Transfer Register will replace EPER - European Pollutant Emission Register - and cover a wider range of substances and fields of activity.<sup>11</sup>
- Living close to high-voltage power lines for a long period may increase the risk of developing certain cancers. In particular, people who lived less than 300 metres from a high-voltage power line during early childhood are up to five times more likely to develop cancers such as leukaemia and lymphoma.<sup>12</sup>
- The potential for outbreaks of certain diseases, in particular infectious diseases transmitted through insects, could increase with climate change. Substantial changes in the distribution of some of these disease-transmitting insects (vectors) have already occurred over the last decade, as demonstrated by the recent outbreak of Chikungunya (a disease previously only occurring in Africa and South and South East Asia) in Northern Italy or the spread of bluetongue disease in cattle to Northern Europe.<sup>13</sup>

### *Outlook for 2008*

- The Commission will present a proposal to revise the **National Emissions Ceilings Directive**.
- Many **ozone depleting substances** have been reduced or phased out, but some provisions of the regulation on **ozone depleting substances** need to be updated or repealed for clarification and simplification.

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<sup>11</sup> EPER Review report : <http://www.eper.ccc.eu.int>

<sup>12</sup> Lowenthal et al. (2007) Internal Medicine Journal

<sup>13</sup> Patz et al., (2005) Nature, Chretien and Linthicum (2007), The Lancet.

- The revision of the **Drinking Water Directive** is planned for 2008. Currently, a total of 48 microbiological and chemical parameters must be monitored and tested regularly.
- The **REACH Regulation** enters into operation. Registration is effective as of June 2008 and pre-registration of phase-in substances will run from June 2008 until December 2008.

## Natural resources and waste

### *Highlights in 2007*

Current patterns of consumption and production are leading to the rapid depletion of some natural resources while also causing serious environmental pressures through e.g. waste. The Commission in 2007 developed a set of strategies to promote, at home and internationally, resource efficiency and eco-innovation. It also further refined its waste policies.

In response to the request in the renewed EU Sustainable Development Strategy, the Commission is developing an **Action Plan on Sustainable Consumption & Production (SCP)**. As a first step, various consultation rounds were held in 2007. The need to take action was overwhelmingly acknowledged, with consumption deemed the most important area of action.

The Commission's second report on the implementation of the **Environmental Technologies Action Plan (ETAP)** assesses the progress and sets priorities for the future. 21 Member States have submitted national roadmaps which show measures with potential for replication in other Member States. The first out of three instruments envisaged under the **Competitiveness and Innovation Framework Programme** for support for eco-innovative small and medium-sized enterprises (SMEs) was launched in 2007. The High Growth and Innovative SME Facility, managed by the European Investment Fund, will facilitate access to finance. € 228 million is earmarked for eco-innovation in 2007-13. In December, the Commission launched a public consultation on the different options for an EU-wide system for the verification of the performance and potential impacts of new technologies on the environment.

Together with the United Nations Environment Programme (UNEP), the Commission installed in November the **International Panel for Sustainable Resource Management** to provide authoritative scientific advice to policy makers globally.

Most disused ships are currently being broken up in Southern Asia under dangerous conditions and with serious risks of pollution. Because of rising concerns the Commission launched a **Green Paper on better ship dismantling**. The paper presented a range of options, both at EU and international level, such as better enforcement in ports (of waste shipment legislation), technical assistance and exemplary action on warships. The new **EU Waste Shipment legislation** applies since July and aims to ensure that waste is properly handled from the time it is shipped to the time it reaches its destination. The regulation reinforces and clarifies the existing legal framework for waste shipment within the EU and with non-EU countries. It also bans the export of hazardous waste or waste for disposal to certain countries.

Following the first reading by the European Parliament, the Council unanimously adopted in December a common position on the Commission proposal for the **Waste Framework Directive** that aims to clarify and streamline existing provisions to facilitate the creation of a European recycling society.

Because of the implementation gaps and potentially severe environmental impacts of the Waste Shipment Regulation and the Landfill Directive, a number of **awareness raising events** were organised in 2007. The Commission also started legal action against several Member States for not properly implementing or transposing key waste directives like the Landfill, WEEE (Waste Electrical and Electronic Equipment), ROHS (Restriction of the use of certain Hazardous Substances) and ELV (End-of-Life Vehicles) Directives.

#### *New Findings*

- Recent studies have identified the most cost-effective methods of environmental improvement of transport, food and buildings, the three products groups identified in 2006 as most polluting in a life cycle approach. For passenger cars, the environmental benefits are particularly high for engine improvements, weight reduction and a shift to hybrid cars. For meat and dairy products, the biggest potentials lie within agricultural production (e.g. pig diets) but also in better household management to avoid food losses. For buildings, thermal insulation measures are shown to be a major source of environmental improvements.<sup>14</sup>
- The process of bringing landfills into line with the requirements of the Landfill Directive is not equally advanced in the 10 new Member States. Legal responsibility for dealing with illegal dumping and dumpsites is mostly at the municipal level and it is rarely enforced because of lack of administrative capacity.<sup>15</sup>

#### *Outlook for 2008*

- The Commission will:
  - present Action Plans on Sustainable Consumption & Production and on Sustainable Industrial Policy. It will build further on and strengthen existing instruments, including a revision of the Eco-label and EMAS schemes, initiatives towards greener public procurement, eco-design, and work with retailers to impact on the supply chain.
  - revise the **WEEE** and **RoHS directives** in order to increase their efficiency and effectiveness as well as facilitating implementation and enforcement.
  - present a legislative proposal for an EU Environmental Technology Verification System.
  - present an EU strategy on ship dismantling.
  - strengthen the **enforcement of the new waste shipment regulation**, in particular regarding inspections and spot checks.
  - organise a **Regional Conference under the Marrakech Process** on Sustainable Consumption and Production in June.

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<sup>14</sup> Source: IPTS - IMPRO studies 2007 (environmental IMProvement of PROducts) as follow up of EIPRO studies 2006 (Environmental Impact of PROducts).

<sup>15</sup> Follow-up study on the implementation of Directive 1999/31/EC on the landfill of waste – commissioned by DG Environment, June 2007.

- continue efforts and where necessary **initiate legal action to combat uncontrolled dumping of waste** and to bring uncontrolled landfills, in particular in the EU-12, up to the EU standards.
- The European Parliament and the Council will start second reading of the **Waste Framework Directive** in early 2008. The co-decision procedure is planned to be finished in 2008.

## **Better regulation in environment policy**

### *Highlights in 2007*

Improving the outcomes of legislation - including the environmental outcomes - was a focus of the Commission's Better Regulation work in 2007. Scope exists for greater environmental results, achieved more efficiently, through better implementation or redesign of policy and selection of the best new policy instruments.

The Commission report on **implementation of Community law** highlighted the need to pay closer attention to this issue and presented new tools and procedures. To adapt them to the specificities of environment policy, a Communication on the implementation and enforcement of EU environment law will be adopted in 2008. In October, the Commission proposed an **Environmental Compliance Assistance Programme** in order to help SMEs minimise the environmental impact of their activities and to facilitate compliance.

As environmental crimes can have devastating effects, a proposal for a directive was presented which will ensure that serious **environmental offences are subject to criminal sanctions** across the Member States. Furthermore, **EU legislation laying down liability rules** for damage to the environment came into force. The new directive is specifically based on the "polluter pays principle" and aims to ensure that environmental damage is prevented or remedied, and that those who cause it are held responsible. The **Green Paper on market-based instruments** (MBI) launched a public consultation in March, and seeks to stimulate a discussion on ways to further promote the use of MBI both at Community and national level. The **Beyond GDP conference** in November - organised by the Commission, European Parliament, Club of Rome, WWF and OECD - launched the process to complement GDP with more comprehensive measures of wealth and well-being, incorporating social and environmental issues. The Commission will present a road map for action in 2008.

Streamlining legislation brings environmental and economic benefits. In the context of the simplification rolling programme of the Commission, the above-mentioned Commission proposal for a new **Industrial Emissions Directive** offers a clear, coherent and simplified legal framework and should lead to reduced administrative costs. Another Commission Decision adopted in 2007 will streamline monitoring and reporting and resolve some interpretation problems in the **Emission Trading Scheme**. It includes reduced requirements for low-emitting installations. In addition, the Commission started a project to streamline inter-linked monitoring and reporting requirements of EU legislation on air pollution and climate change.

To further strengthen Better Regulation principles in environment policy making, ensuring that all new policy initiatives are assessed according to their economic, social and environmental impact, the **Commission strengthened its impact assessment system**. In



2007 around 100 impact assessments accompanying significant policy proposals were scrutinised by the Impact Assessment Board; 15 were on the environment.

#### *Outlook for 2008*

The Commission will present:

- a review of the 2001 Recommendation on **minimum criteria for environmental inspections** which will widen its scope, develop planning criteria for environmental inspections and establish a reporting system to provide comparable information;
- a Communication on the **Development of an Integrated Strategy on Disaster Prevention**;
- an implementation plan for a **European Shared Environment Information System** and a legal proposal to modernise the information requirements of environmental legislation;
- the results of an exercise identifying any **unnecessary administrative burdens** across the EU from five pieces of environmental legislation chosen as most significant;

In the context of the Better Regulation's agenda, the Commission's efforts will also be intensified for simplifying the regulatory environment. Examples of forthcoming simplification initiatives in environmental legislation include the revision of the legislation on the placing of biocidal products on the market as well as the revision of the WEEE and RoHS directive.

## PART 2 - STATISTICAL DATA

This part highlights selected key indicators on the environment and environment policy, including the four priority areas of the 6<sup>th</sup> EAP. The indicators have mainly been chosen from the EU Sustainable Development Indicators to monitor the EU Sustainable Development Strategy,<sup>16</sup> the EU Structural Indicators used for reporting for the Lisbon process,<sup>17</sup> and the EEA's Core Set of Indicators,<sup>18</sup> which provide a comprehensive basis for assessment of progress against environment policy priorities.

Wherever possible the information provided describes the full circumstance of the environmental issue – covering all links in the causal chain:

- showing the *state* of the environment, illustrating what to preserve or regain,
- highlighting aspects of the *pressures* exerted by society and the economy on the state of the environment,
- informing about underlying social and economic *driving forces* behind the pressures,
- reporting what action has been taken as a *response* to mitigate these pressures or driving forces,
- other indicators show the current or projected *performance* of Member States or the *eco-efficiency* of their economies.

At the end of this section, a number of indices are presented that are discussed as complementary ways to measure progress, wealth, and the well-being of nations. Such indices formed part of the debate at the international conference "Beyond GDP" that is mentioned in the Environment Policy Review Communication.

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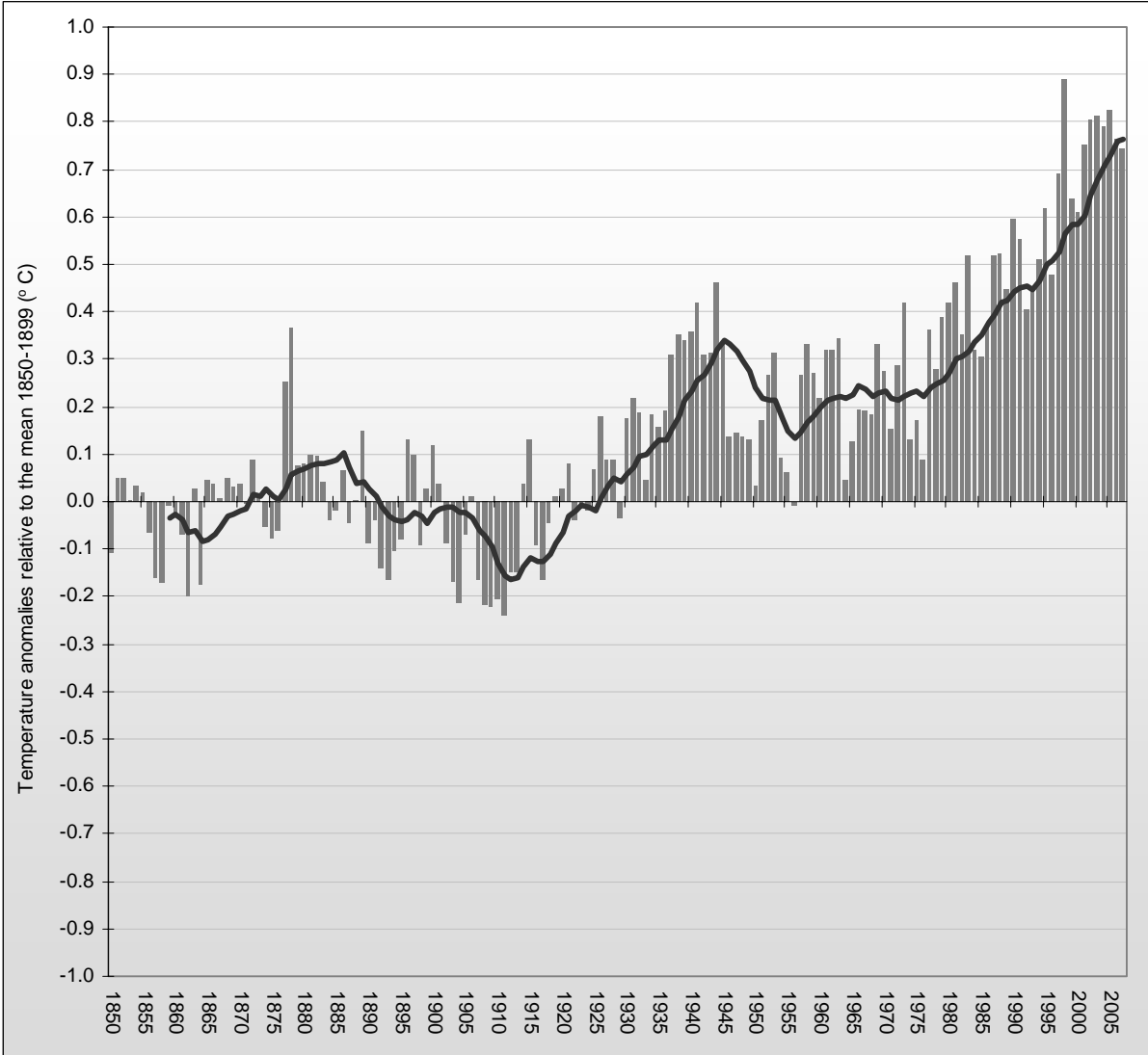
<sup>16</sup> <http://ec.europa.eu/eurostat/sustainabledevelopment>  
[http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1073,46587259&\\_dad=portal&\\_schema=PORTAL&p\\_product\\_code=KS-77-07-115](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1073,46587259&_dad=portal&_schema=PORTAL&p_product_code=KS-77-07-115)

<sup>17</sup> <http://ec.europa.eu/eurostat/structuralindicators>

<sup>18</sup> <http://themes.eea.europa.eu/IMS/CSI>

# Climate change and energy

**State indicator: Global air temperature change<sup>19</sup>(°C, as a temperature change compared to the mean 1850-1899)**



Data source: European Environment Agency, based on HadCRU3 dataset from Climate Research Unit, University of East Anglia.

"Warming of the climate system is unequivocal, as is evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level".<sup>20</sup>

<sup>19</sup> Global annual mean temperature deviations, 1850-2007. The source of the original data is the Climatic Research Unit of the University of East Anglia. The global mean annual temperature deviations are in the source in relation to the base period 1961-1990. The annual deviations shown in the chart have been adjusted to be relative to the period 1850-1899 to better monitor the EU objective not to exceed 2°C above pre-industrial values. Over Europe average annual temperatures during the real pre-industrial period (1750-1799) were very similar to those during 1850-99

<sup>20</sup> Intergovernmental Panel on Climate Change's Fourth Assessment (Synthesis)

2007 is the eighth warmest year on record since 1850, exceeded only by 1998, 2005, 2003, 2002, 2004, 2006 and 2001<sup>21</sup>. Moreover, for the northern hemisphere alone, 2007 is the second warmest recorded, while for the southern hemisphere it ranks ninth warmest.<sup>22</sup>

The EU has set an objective not to exceed 2°C above pre-industrial levels.

The graph, which indicates the combined global land and marine surface temperatures recorded from 1850 to 2007, shows an accelerating increase in temperature during the 20<sup>th</sup> century. The global (land and ocean) temperature increase from 1850-1899 to 2007 is 0.74°C for the world, and Europe<sup>23</sup> has warmed more than the global average. The increase for the European land area has been 1.22°C, while for the European land and ocean area it has been 0.98°C.

Twelve of the thirteen warmest years in the series have occurred in the last thirteen years (1995-2007), in particular the period 2001-2007 is 0.21 °C warmer than the 1991-2000 decade (the 1990s being the warmest complete decade in the series). Scientific analysis, which confirms that the second half of the 20<sup>th</sup> century was the warmest phase during at least the last 1300 years in the Northern hemisphere, attributes the warming of the climate system to the accumulation of carbon dioxide and other greenhouse gases in the atmosphere.

The global average temperature is expected to further increase between 1.1°C and 6.4°C during the 21<sup>st</sup> century, depending on the scenario, with a best estimate range from 1.8°C to 4°C for the world and from 1°C to 5.5°C for Europe. The forecasts indicate the greatest warming will happen over Eastern Europe and Scandinavia in winter, and over south-western and Mediterranean Europe in summer. Moreover, it is very likely that hot extremes, heat waves, and heavy precipitation events will continue to become more frequent and cold events less frequent overall in Europe.

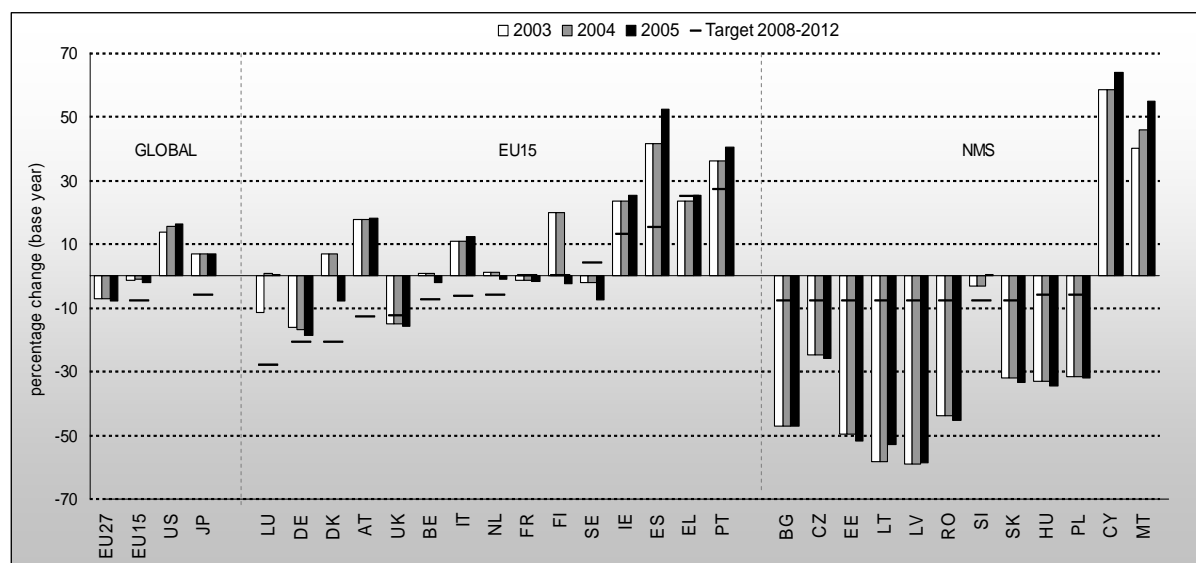
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<sup>21</sup> Years are put in descending order of temperature

<sup>22</sup> Met Office Hadley Centre and UEA Climatic Research Unit

<sup>23</sup> Europe is defined as the area between 35° to 70° Northern latitude, -25° to 30° Eastern longitude, plus Turkey (=35° to 40° North, 30° to 45° East)

**Pressure indicator: Total Kyoto greenhouse gas emissions (CO<sub>2</sub> equivalents) as a percentage change of Kyoto base year emissions, with Kyoto Protocol / Burden-sharing agreement targets**



Data source: European Environment Agency, European Topic Centre on Air and Climate Change

The EU-15 Kyoto target is an 8% reduction in greenhouse gas emissions compared to base year levels (mostly 1990) by 2008-2012; all EU-15 Member States have individual targets under the burden-sharing agreement, while most new Member States (besides Cyprus and Malta) have individual targets under the Kyoto protocol. The graph shows greenhouse gas emissions relative to the base years and includes the MS target to show the distance to target.

In 2005 emission levels for both EU-15 and EU-27 were lower compared to 2004, when they had increased compared to the previous year. Moreover in 2005, EU-15 emissions decreased by 2% against the base year, showing that major efforts are still needed to meet the Kyoto target of 8% reduction compared to base year levels. During the reported period 2003-2005 greenhouse gas emissions decreased for the EU-15 and EU-27, in particular by more than 13% in Denmark and Finland, showing a large improvement on previous years. However, in the same period emissions increased in many Member States, in particular by more than 10% in Luxembourg, Lithuania and Malta. Provisional data show that greenhouse gas emissions continued their downward trend in 2006 in EU-27.

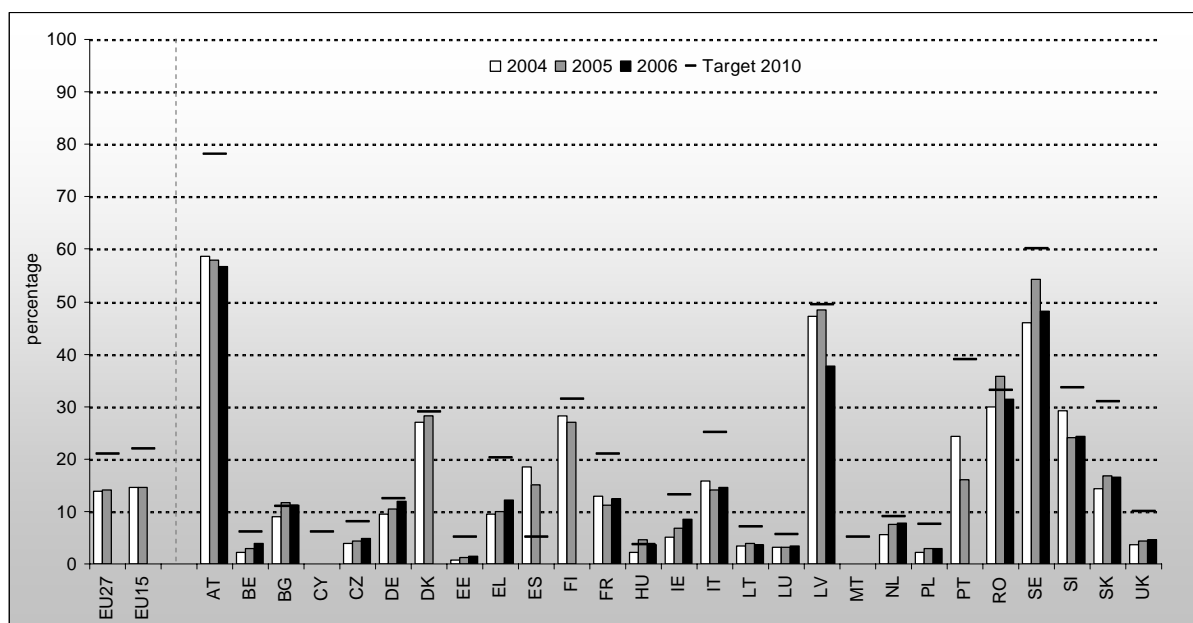
Currently, three Member States out of the EU-15 (Germany, Sweden and the United Kingdom) are projected to be on track to achieve their targets by 2010 using only existing domestic policies and measures.<sup>24</sup> In addition, 8 Member States are projected to reach their targets once the effect of the Kyoto mechanisms, carbon sinks and additional domestic policies and measures, that are already being discussed, are accounted for. According to this analysis, Denmark, Italy, and Spain appear not to be able to achieve their Kyoto target.<sup>25</sup> All

<sup>24</sup> Communication from the Commission on Progress towards achieving the Kyoto objectives, COM(2007) 757 final

<sup>25</sup> However, it should be noted that this analysis does not yet fully include the potential effect of the recent Commission decisions on the National Allocation Plans on 2008-2012 emissions. Furthermore, it does not include the effect of supplementary actions that most of these Member States have recently identified or are in the process of identifying in order to reach their Kyoto target. Such measures, however, must be introduced swiftly to be effective.

new Member States, except Slovenia, are projected to meet or even over-comply with their Kyoto targets using only existing domestic policies and measures. Slovenia projects that it will meet its Kyoto target with planned additional policies and measures, the use of Kyoto mechanisms and carbon sinks.

**Response indicator: Electricity produced from renewable energy sources (percentage of all electricity produced)**



Data source: Eurostat. 2006 data are provisional

The EU has an agreed target to produce 21% of all electricity from renewable energy sources by 2010. In 2005, 14% of electricity in the EU-27 was produced from renewable energy sources. In 2006, Austria reached a share of more than 56%, followed by Sweden with 48%, while 12 Member States still produce less than 10% of their electricity from renewable sources.

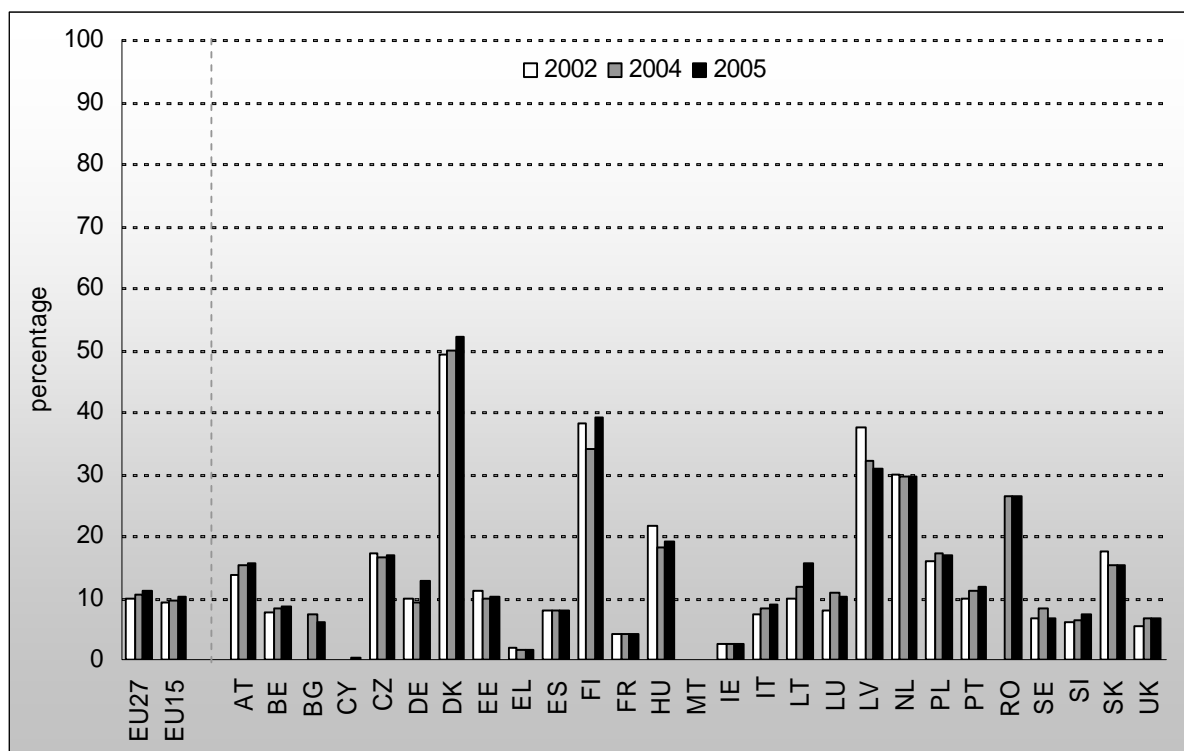
In 2005, there was no significant increase to the previous year for EU-27. Provisional data for 2006 indicate that Greece and Ireland showed the most remarkable growth, compared to 2005, while for Latvia, Sweden and Romania a significant drop was reported.

Most of the renewable electricity in 2005 is generated from hydropower (almost 66%), while the rest comes mainly from biomass (about 17%) and wind (about 15%).

On the basis of 2005 data and national policy initiatives, Denmark, Germany and Hungary are on track to meet the 2010 target, while six other countries (Finland, Ireland, Luxembourg, Spain, Sweden and the Netherlands) will probably reach their 2010 targets. However, for Belgium, Greece and Portugal strong additional efforts are needed in order to reach their 2010 targets, while eight other countries are far from their commitments: Austria, Cyprus, Estonia, France, Italy, Latvia, Malta and Slovak Republic.<sup>26</sup>

<sup>26</sup> Green Paper follow-up action. Report on progress in renewable electricity, COM(2006) 849 final of 10.1.2007

**Response indicator: Combined heat and power generation (percentage of gross electricity generation)**



Data source: Eurostat. EU27 data in 2002 refers to EU25. Data for Cyprus is 0.3%, while for Malta is 0.

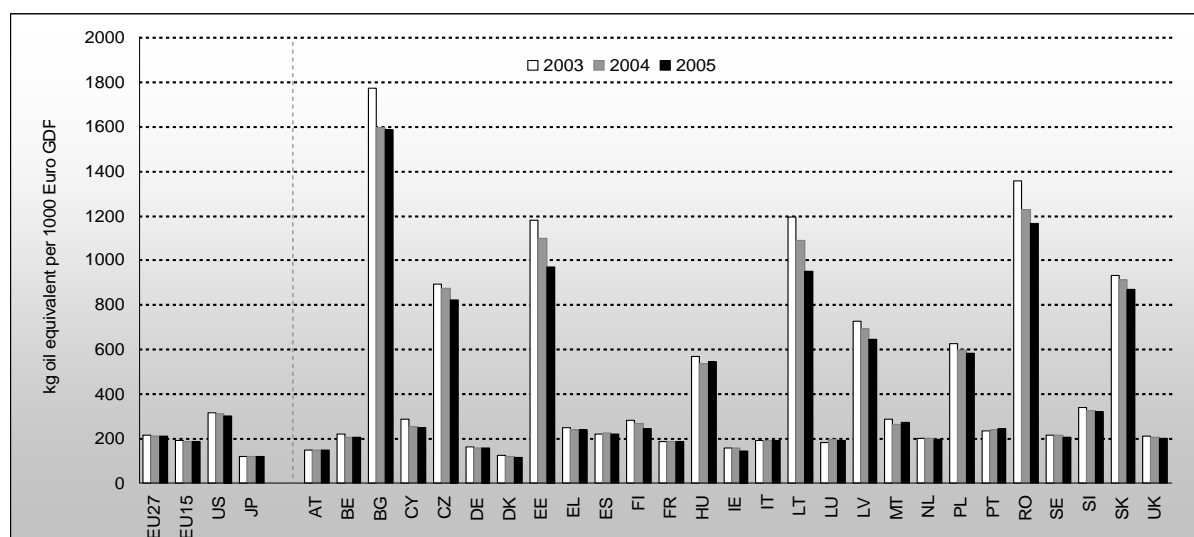
Combined heat and power is on the rise in the EU. The share of electricity stemming from power plants that produce electricity and usable heat at the same time increased from 10.5% in 2004 to 11.1% in 2005, i.e. an increase of nearly 6%. The highest increases were reported for Germany and Lithuania (35% and 33% respectively). Furthermore, Finland, Italy and Slovenia showed a growth rate of more than 10%. On the other hand, in Ireland, Luxembourg and Sweden the share decreased at a rate of more than 5%.

The level of usage of Combined Heat and Power (CHP) differs noticeably amongst Member States. While Denmark produces more than 50% of its electricity this way, Cyprus, Greece, France, Malta and Ireland use this technology for only 5% or less of its production.

Combined heat and power improves the efficiency of the energy production by recovering the excess heat that is lost in normal electricity production. When electricity is produced without heat recovery, some two thirds of the primary energy contained in the fuel (e.g. coal, natural gas, biomass and nuclear fuel) is lost. The waste heat can be considered as pollution, e.g. as it increases the temperature of rivers, which is a threat to biodiversity in warm periods.



**Efficiency indicator: Energy intensity (kilogram oil equivalent used per €1000 GDP)**



Data source: Eurostat

Energy intensity is a measure of the energy efficiency of the economy as a whole. The figures show the amount of energy used to produce €1000 of GDP. Decreasing energy intensity is one of the indispensable responses to climate change, especially as many options are profitable in business terms.

Most countries with very high energy intensity showed a continuous improvement during the three-year report period (Bulgaria, Czech Republic, Estonia, Lithuania, Latvia, Poland, Romania and Slovakia). After a decrease from 2003 to 2004, only Hungary showed an increase from 2004 to 2005. Also the whole EU-27 showed an improvement in terms of energy intensity from 2004 to 2005. During the period 2003-2005 energy intensity decreased by 2.6% per year in the EU-27. Among the EU-15, Finland and Ireland showed the most significant improvement, while Portugal and Italy slightly increased their energy intensity, so losing ground on the way to higher energy efficiency.

Worldwide and within the EU, energy intensity varies enormously. The EU as a whole uses roughly 30% less energy per euro of GDP than the US, but still 75% more than Japan. Denmark is the country that is performing the best, even overtaking Japan in 2005. Austria, Ireland and Germany have an energy intensity about 30% lower than the EU average.

In 2007, 17 Member States fixed energy saving targets:<sup>27</sup> 12 Members States (Austria, Bulgaria, Czech Republic, Denmark, Estonia, Finland, Germany, Ireland, Malta, Netherlands, Poland and United Kingdom) adopted a saving target in line with the minimum requirement of the Directive: "an overall national indicative savings target of 9%, to be achieved by the end of 2016" (the period 2008-2016), while 5 Member States have adopted a target that goes

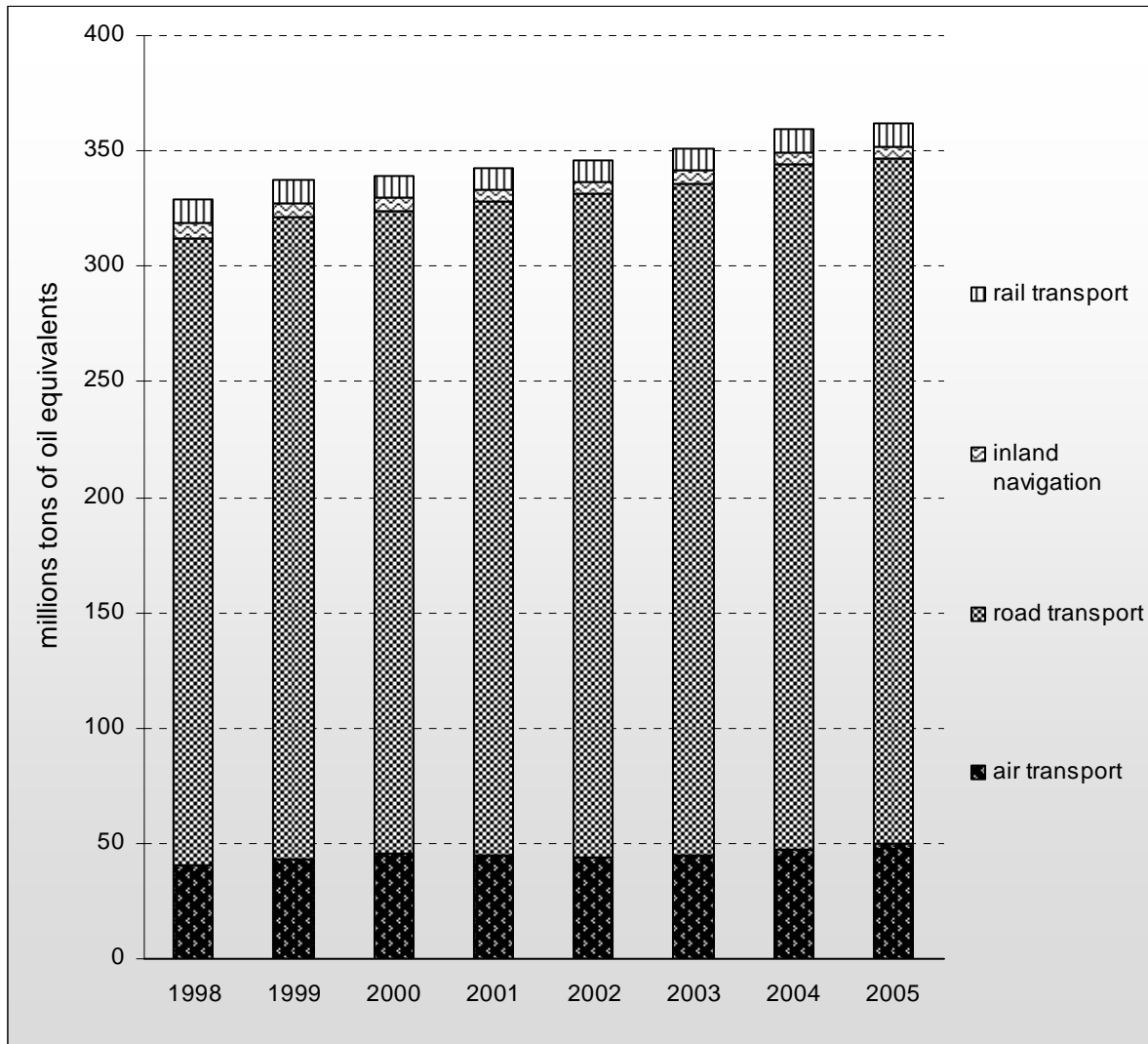
<sup>27</sup> Requirements of the Directive 2006/32/EC on energy end-use efficiency and energy services

beyond the minimum indicative target (Cyprus: 10%; Lithuania: 11%; Italy: 9.6%; Romania: 13,5% and Spain: 11%).<sup>28</sup>

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<sup>28</sup> Communication on a First Assessment of National Energy Efficiency Action Plans as required by Directive 2006/32/EC on Energy End-use Efficiency and Energy Services, Moving forward together on energy efficiency, COM(2008) 11 final

**Driving force indicator: Final energy consumption by transport**

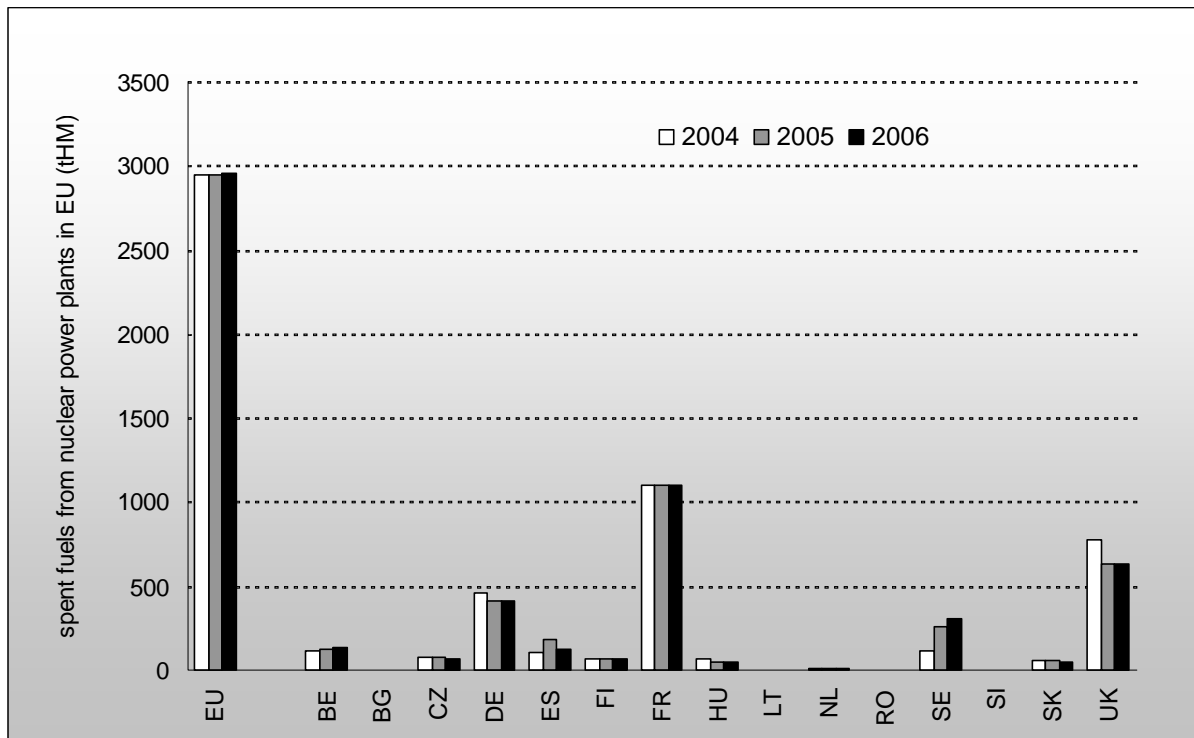


Data source: Eurostat

In 2005, greenhouse gas emissions from transport accounted for 21% of total EU-15 emissions, as energy for transport comes mainly from fossil fuels. Final energy consumption for transport in the EU-25 reached a new peak in 2005, amounting to 362 million tonnes oil equivalents. It increased by 10% between 1998 and 2005, and there is no sign of reduction as transport growth offsets efficiency gains due to technological vehicle development.

Road transport is the biggest energy consumer, followed by aviation, which increased at the end of the report period to reach 14% of all energy used for transport.

### Driving force indicator: Spent fuel from nuclear power plants



Data source: OECD Nuclear Energy Data, Nuclear Energy Agency. Data for BG, LT, RO and SI are not available; 2006 data for BE, FI, FR and UK are provisional.

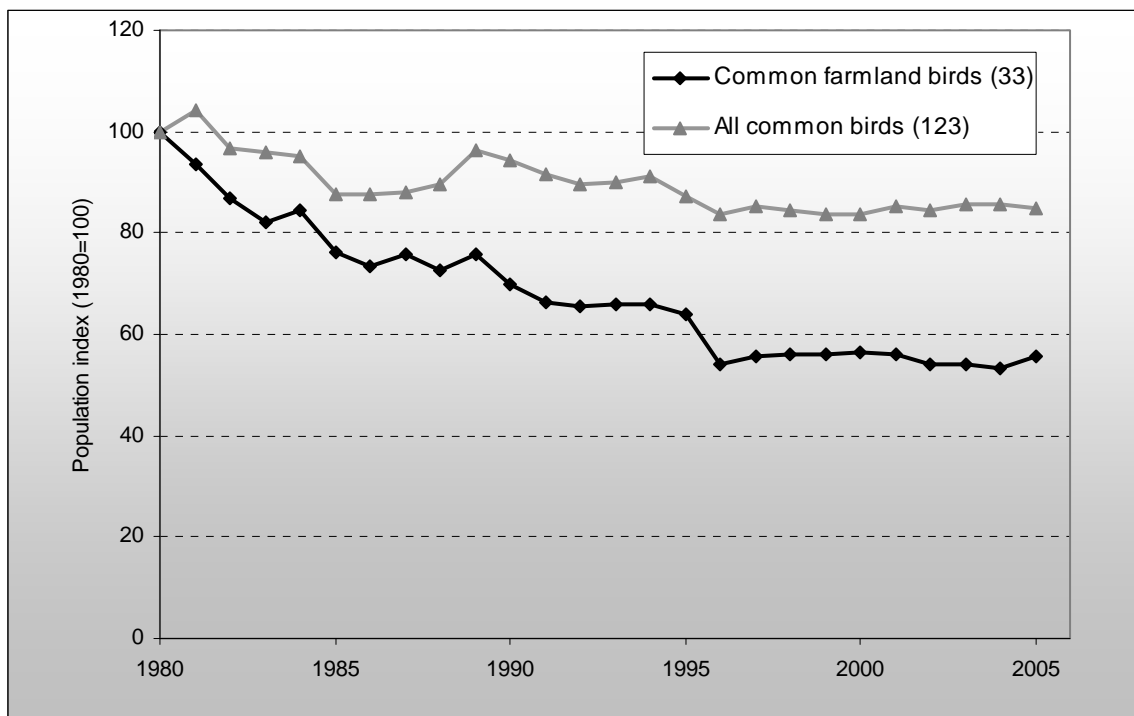
Nuclear energy represents roughly thirty per cent of the EU's present electricity production. Nuclear energy is one of the biggest low-carbon energy sources in EU and its contribution to global warming and air pollution is less than those of the fossil fuels. However, the use of nuclear fuels entails environmental impacts and risks related to radioactive substances (mostly heavy metals) along the fuel production chain.

The amount of nuclear waste produced annually remains fairly stable over the years reported, although there are exceptions. While in Belgium and Sweden the amount increased over the years 2004 to 2006, it decreased in Germany, Hungary and the United Kingdom.<sup>29</sup>

<sup>29</sup> The vast majority of highly radioactive waste consists of spent fuel and spent fuel reprocessing wastes.

## Nature and biodiversity

### State indicator: Common birds



Data source: EBCC/RSPB/BirdLife/Statistics Netherlands

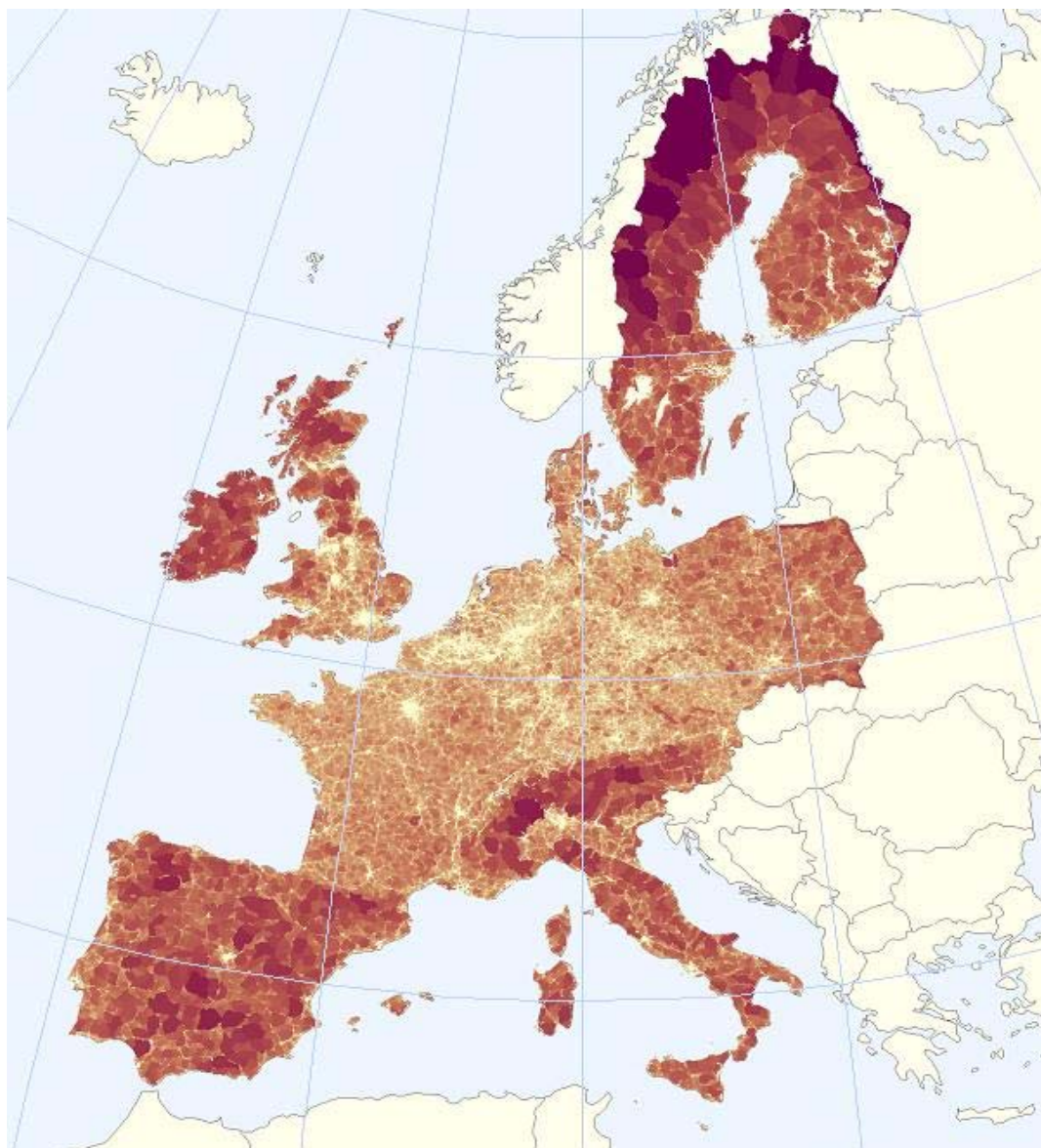
Bird populations are well known, widespread, mobile, they tend to be at (or near) the top of the food chain, have large ranges and are responsive to environmental change. For these reasons they are considered good proxies for biodiversity and the integrity of ecosystems.

The EU aims to halt the loss of biological diversity by 2010. During the last 25 years reported, the common birds index<sup>30</sup> shows a negative trend, indicating a reduction by 15% overall in 2005 compared to 1980.

Common farmland birds showed the most severe decline of all the broad categories monitored: on average, a decline by 44% over the last 25 years, mainly due to current agricultural practices and in particular intensive agriculture.

<sup>30</sup> The Common birds index is based on data from the European Bird Census Council (EBCC, <http://www.ebcc.info>), the Pan-European Common Bird Monitoring scheme (PECBM), BirdLife International and Statistics Netherlands. The methodology has recently improved and the index covers 123 species of common birds, among which 33 species of common farmland birds and 27 species of common forest birds, from 18 countries (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, the Netherlands, Poland, Portugal, Spain, Sweden, United Kingdom). The list of species is available at: <http://www.ebcc.info/index.php?ID=340>.

***Pressure indicator: Landscape fragmentation in 2006<sup>31</sup>***



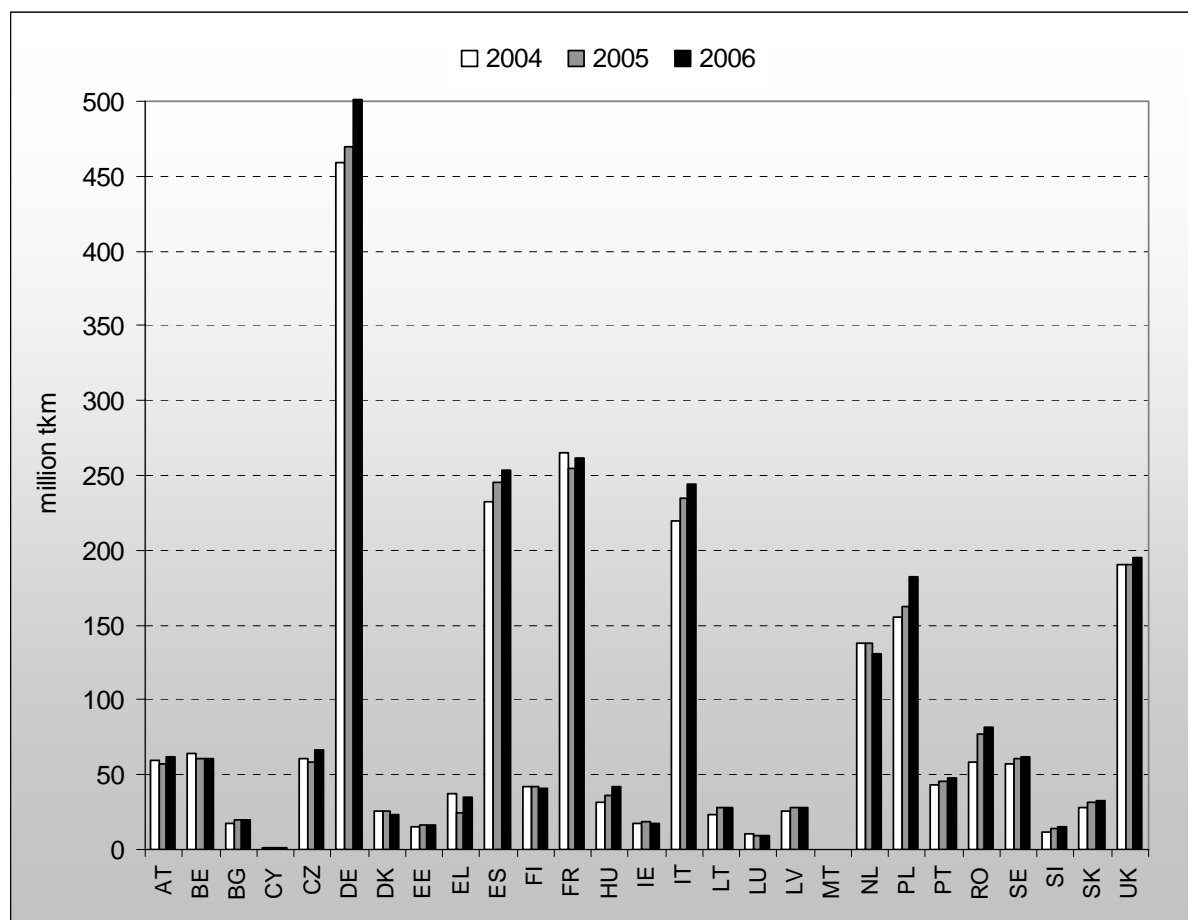
Source: European Environment Agency, based on Teleatlas 2006 - (areas of high fragmentation are bright; areas of high connectivity are dark). Data are not available for all Member States.

The map shows the fragmentation of ecosystems and habitats by transport infrastructure and settlements for the year 2006. Regions with a low level of fragmentation are marked by a darker colour, while a high level of fragmentation is indicated by light colour. The highest level of fragmentation is reported for large agglomerations. Biodiversity conservation depends *inter alia* on the integrity of habitats and ecosystems, and is therefore negatively affected by the fragmentation of territory, mainly due to the expansion of transport infrastructure.

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<sup>31</sup> The map shows the Effective Meshsize (MEFF), a geo-statistical measure, which converts the probability that randomly selected points in an area are connected into the size of an unfragmented patch, measured in km<sup>2</sup>. The smaller the meshsize, the higher the landscape fragmentation and vice versa. MEFF actually measures landscape "connectivity" that is the inverse of fragmentation.

## Driving force indicator: Freight transport (tkm)



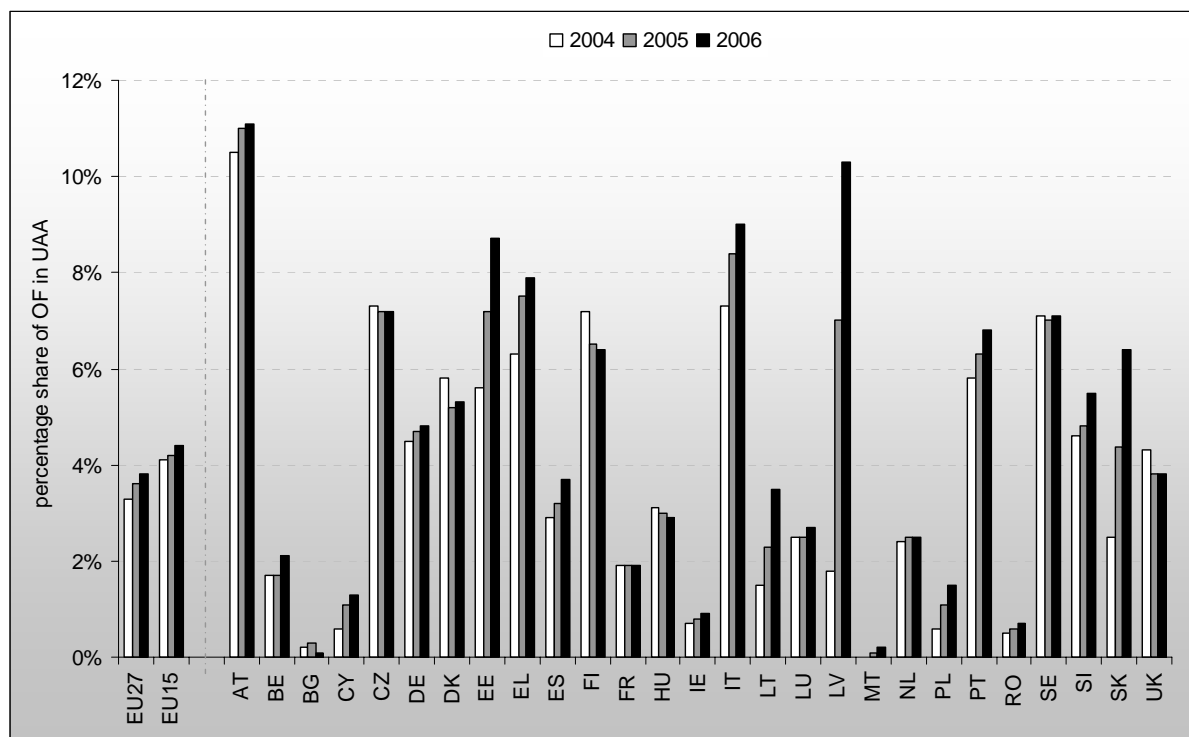
Data source: Eurostat. Data include transport by road, rail and inland waterways. Data for Malta were not available; 2006 figures are preliminary.

Freight transport in the EU has continuously increased in the recent years. From 2004 to 2006 it increased in EU-27 by 7.3%, mainly due to road transport (plus 8%) and rail (plus 6.2%), while the amount of goods transported by inland waterways increased by only 1.4%. This increasing amount of transported goods is one important driving force behind the need to extend transport infrastructure, which is in most cases detrimental for nature and biodiversity.

Germany, Italy and Spain are the countries with the highest levels of freight transport and at the same time increased it constantly during the period reported.

From 2004 to 2006 the most significant increase in freight transport was recorded in the territory of Hungary and Romania (more than 30%), followed by Lithuania and Slovenia: about 27-29 %. On the contrary, Denmark and Luxembourg showed a decrease of more than 8%.

**Response indicator: Area occupied by organic farming (percentage of organic farming in Utilised Agricultural Area)<sup>32</sup>**



Data source: Eurostat and Institute of Rural Sciences, University of Wales, Aberystwyth. In 2004 Malta had 1 ha of area occupied by organic farming. Eurostat estimates for Lithuania (2004), Latvia (2006) and Slovakia (2004, 2005, 2006).

Organic farming provides important environmental benefits compared to conventional agriculture. These benefits include a reduction of nutrient and pesticide leaching, lower energy inputs and conservation of soil resources and biodiversity. The area under organic farming is therefore inter alia an indicator of farmland biodiversity protection.

The area under organic farming in 2006 covered about 6.8 million ha in the EU-27, i.e. around 3.8% of total utilised agricultural area (UAA). The share of organic farming in utilised agricultural area varies considerably between and within Member States. In 2006 Austria had the highest share of organic area - around 11% of total UAA, followed by Latvia with 10.3%. Italy, with 9%, accounts for nearly 17% of the total organic area in the EU-27.

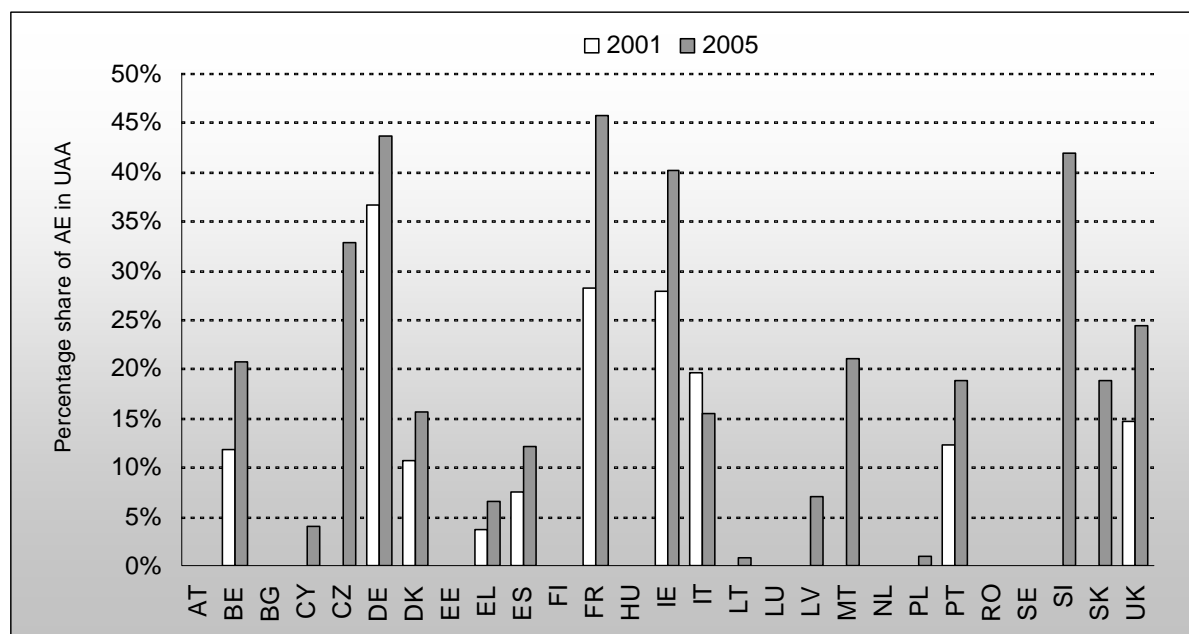
In the period 2004-2006, the share of organic farming in EU-25 increased by only 0.5 percentage points (pp) (from 3.3% to 3.8%), which is lower than the increases in previous years. Some countries showed a large increase, e.g. Latvia increased the share of organic farming by 8.5 pp (from 1.8% to 10.3%) and Slovakia by 3.9 pp, while others show losses, e.g. Finland with -0.8 pp, followed by Denmark and United Kingdom (-0.5 pp).

Organic farming represents only a minority of EU agriculture, which is mainly based on conventional practices, so there is room for extensive future development.

<sup>32</sup> Farming is only considered to be organic at EU-level if it complies with Council Regulation (EEC) No 2092/91.



**Response indicator: Area under agri-environmental commitment (percentage of Utilised Agricultural Area)**



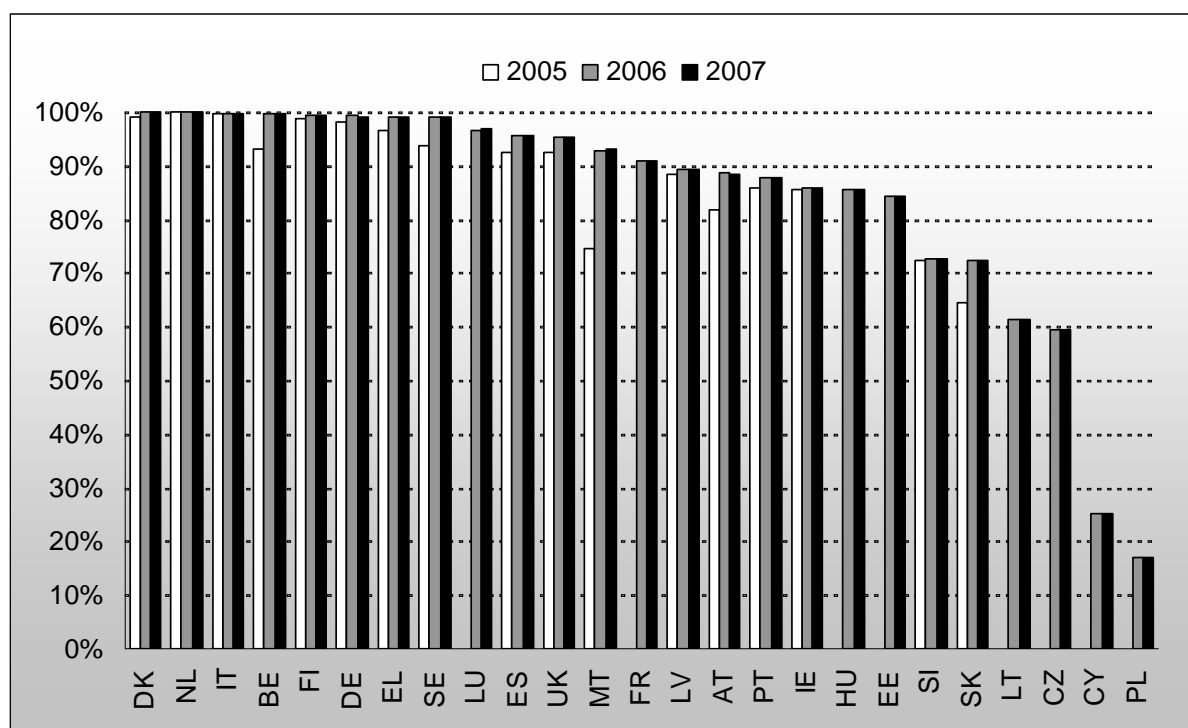
Data source: European Commission, DG for Agriculture and Rural Development. Data not available for AT, BG, EE, FI, HU, LU, NL, RO, SE. 2005 figure for FR refers to 2004.

Agri-environment support is currently the only compulsory scheme for the integration of environmental goals into the Common Agricultural Policy: they are a key tool for achieving environmental objectives, such as those set out in the EU biodiversity action plan for agriculture, in the nitrates directive and under the Kyoto Protocol. Member States must include agri-environmental measures in their rural development programme, anyway participation by farmers or other land managers to these is voluntary: support is granted to farmers if they commit themselves for a period of at least five years to use agricultural production methods designed to protect the environment or maintain landscape features which go beyond conventional good farming practise.

In 2005 the share of utilised agricultural area for that agri-environmental support is paid was very different across Member States. France, Germany, Slovenia and Ireland have more than 40% of agricultural area under agri-environmental commitment, while Lithuania, Poland and Cyprus have less than 5%. One reason might be that the scheme started for the new Member States only recently.

There is a concern that the distribution of area under agri-environmental commitment across EU-15 Member States does not target sufficiently area of potential environmental concerns.

**Response indicator: Sufficiency of protected areas<sup>33</sup>**



Data source: European Environment Agency, European Topic Centre on Biological Diversity. Some Member States did not provide a formal proposal for designated areas in 2005. 2007 data refers to the situation on December 2007.

This indicator shows the state and quality of implementation of the Habitats Directive,<sup>34</sup> in particular the fulfilment of the minimum standards required by the Directive.

Denmark and the Netherlands were the first to fully comply with the minimum standards of the Habitats Directive. In total 13 Member States have complied or are close to complying with these standards by the end of 2007. Among the new Member States, Malta and Latvia have reached about 90% of the minimum standards. However, Poland and Cyprus are far from complying with the Habitats Directive, having achieved less than 25% of minimum standards.

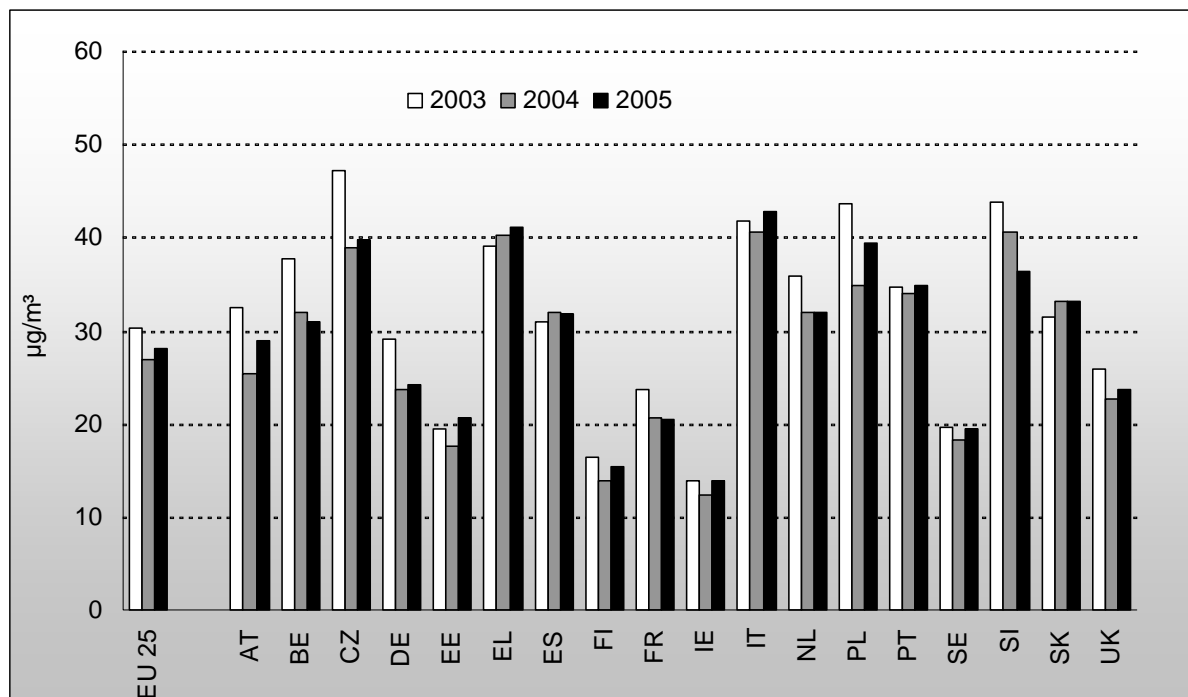
Main changes between 2005 and 2006 were due to proposals made by the 10 new Member States and to new proposals made by the EU-15. As in 2007 there were no important new proposals, the indicator was stable compared to 2006. In 2008 new proposals are expected from the 12 new Member States with first proposals from Romania and Bulgaria.

<sup>33</sup> State of progress by Member State in reaching sufficiency for the Habitats Directive Annex I habitats and Annex II species (percentage)

<sup>34</sup> The aim of the Habitats Directive (Directive 92/43/EEC) is the conservation of natural habitats and of wild fauna and flora, through the creation of a Europe-wide network of special conservation areas, Natura 2000.

## Environment and health

**State indicator: Urban population exposure to air pollution by particles ( $\mu\text{g PM}_{10}/\text{m}^3$ )<sup>35</sup>**



Data source: European Commission, DG Environment, Mandatory reporting by Member States under Exchange of Information Decision 1997/101/EC and Directive 2002/3/EC.

Exposure to particulate matter causes serious health risks. To portray these risks the indicator shows the annual mean urban background concentration of  $\text{PM}_{10}$  weighted by the population exposed to this kind of pollution. There are significant differences between EU Member States. Ireland and Finland show figures less than  $15 \mu\text{g}/\text{m}^3$ , while 10 Member States record pollution levels above  $30 \mu\text{g}/\text{m}^3$ : Belgium, Czech Republic, Greece, Spain, Italy, Netherlands, Poland, Portugal, Slovenia and Slovakia.

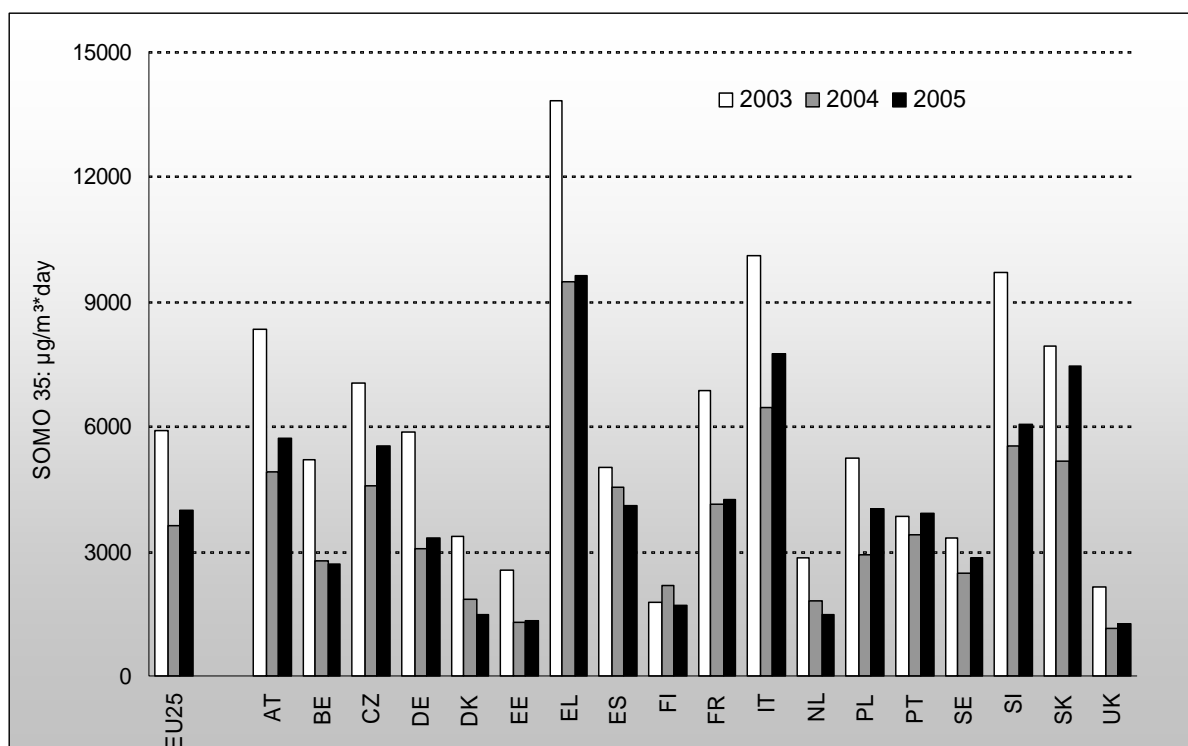
2005 data for EU-25 showed a light improvement compared with 2003. However, comparison with 2004 indicates a worsening situation in EU and most Member States. In particular there is a clear deterioration of air quality in Greece, Italy and Slovakia, while Belgium, Germany, the Netherlands, Slovenia and Spain show sign of improvement.

Traffic is considered to bear most responsibility for worsening air quality in 2005: over half of the  $\text{PM}_{10}$  exceedances (and at least of a fifth of ozone exceedances) are caused by local traffic.<sup>36</sup>

<sup>35</sup> Population weighted annual mean concentration of particulate matter ( $\text{PM}_{10}$ : particulate matter with a diameter smaller than  $10 \mu\text{m}$ ) at urban background locations in agglomerations. To ensure comparability only data from measurement stations operating in all three years is used. This requirement limits the coverage to 18 Member States.

<sup>36</sup> 2005 Annual Member States reporting on ambient air quality assessment, EEA January 2008

**State indicator: Urban population exposure to air pollution by ozone<sup>37</sup>**



Source: European Commission, DG Environment, Mandatory reporting by Member States under Exchange of Information Decision 1997/101/EC and Directive 2002/3/EC

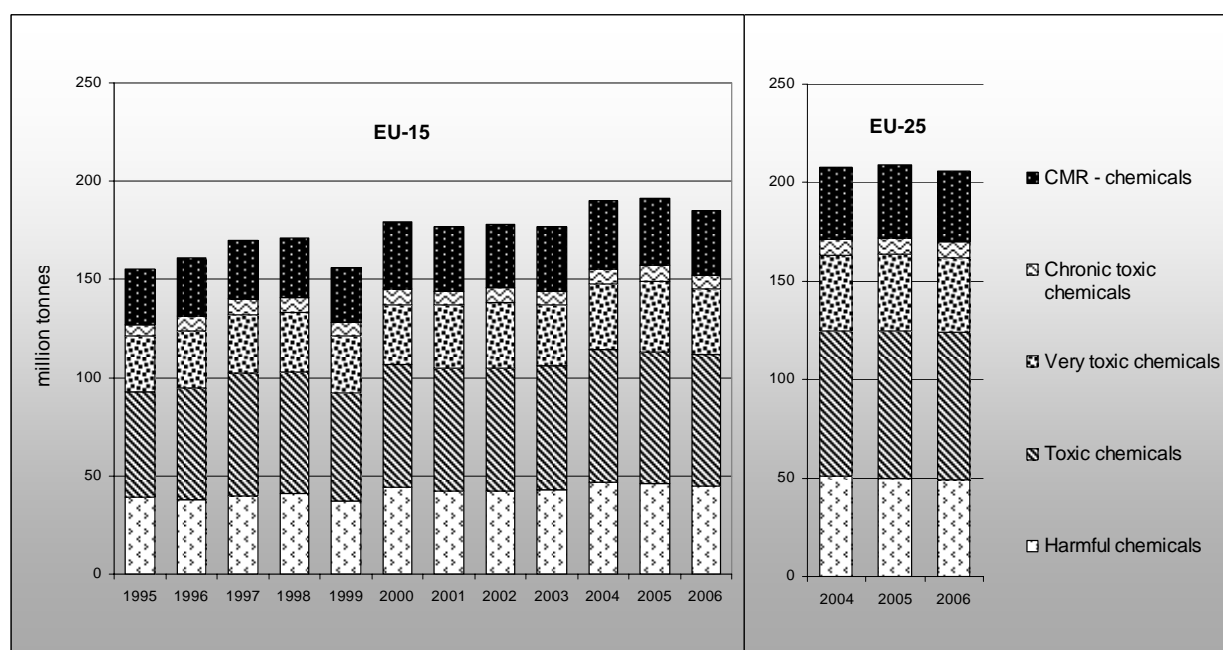
High concentrations of ground-level ozone cause important risks to human health: not only peak concentrations during the summer, but also the continuous exposure to lower level concentration has a significant detrimental impact on our health. The ozone indicator measures combined risks, including from low concentrations, with any figure above zero indicating a risk to health.

Ozone concentrations differ a lot among Member States, as they depend on geographic and climatic conditions, local air emissions and transboundary contributions. Greece, Italy and Slovakia had the highest values in 2005.

While the heat wave in 2003 boosted ozone concentrations in most Member States, they fell in 2004. Recent data, however, show again a worsening trend in EU. In particular, in 2005, they have increased in Slovakia, Poland and Italy by more than 20% compared to 2004 levels.

<sup>37</sup> Population weighted annual mean concentration of ozone (SOMO35: Sum of Means Over 35 ppb ozone) at urban background locations in agglomerations. To ensure comparability only data from measurement stations operating in all three years is used. This requirement limits the coverage to 17 Member States.

**Pressure indicator: Production of toxic chemicals (million tonnes), by toxicity class<sup>38</sup>**



Source: Eurostat

In 2006 the EU-25 produced 207 million tonnes of toxic industrial chemicals, which represents about 60% of total chemicals production. The toxic chemicals covered by this indicator are divided into five toxicity classes. The most dangerous ones are the CMR chemicals (carcinogenic, mutagenic and reprotoxic), followed by chronic toxic chemicals, very toxic chemicals, toxic chemicals and harmful chemicals. The three most toxic classes of chemicals represent 40% of total production of toxic chemicals.

This data set, covering the EU-15 and, from 2004 also the EU-25, shows that between 1995 and 2006 the production of toxic chemicals in the EU-15 increased by 19% (i.e. around 1.7% annual increase on average), and in particular it does not show any reduction of the most toxic chemicals. It also shows that in the EU-15 the production of toxic chemicals increased by 4.5% during the last five years reported (2002-2006), while it has declined slightly in 2006.

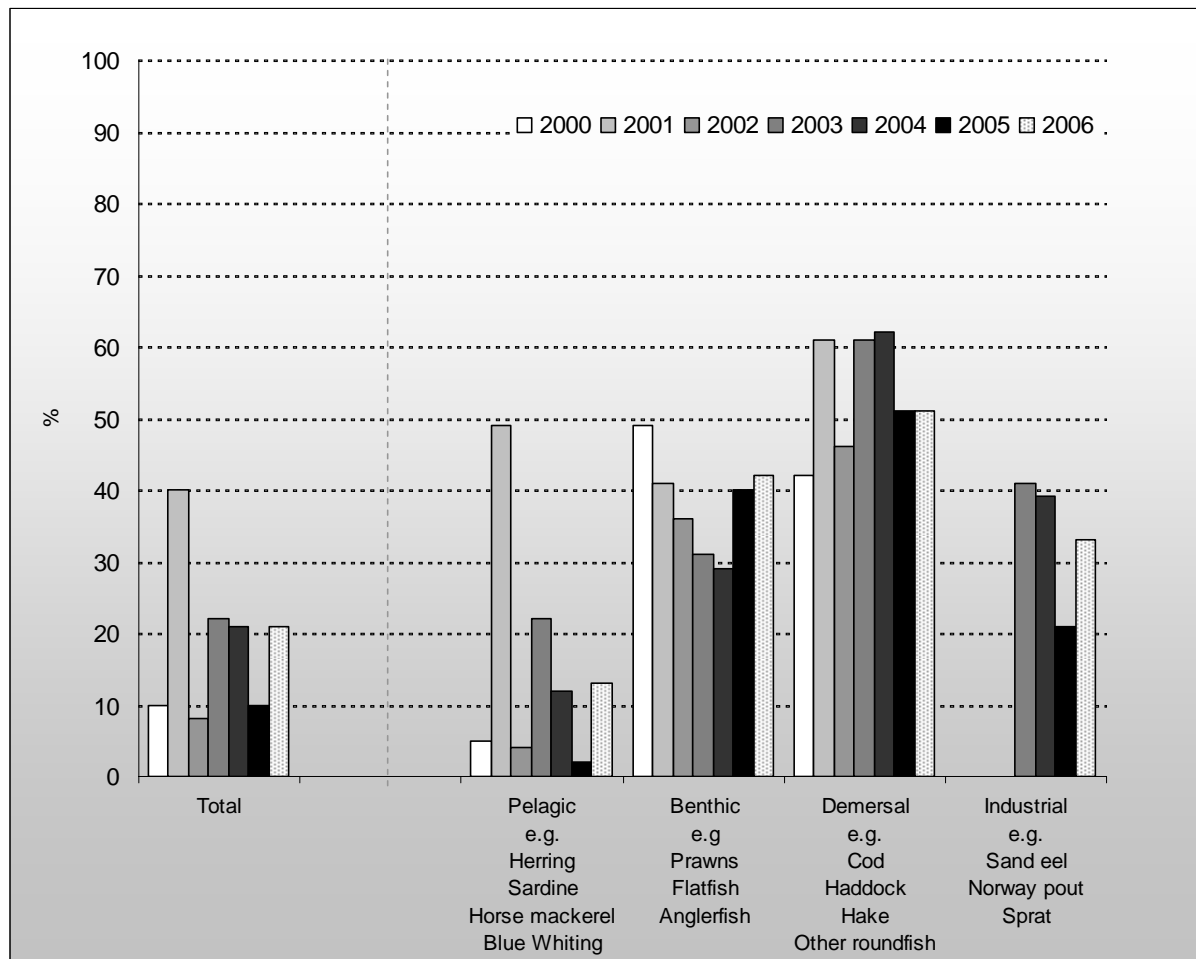
The relatively high growth of CMR chemicals (+18% during 1995-2006, i.e. +1.6% annual change on average) within the group of toxic chemicals represents a worrying trend if continued. REACH, which is based on a life cycle approach, will aim at maximum reduction of the production of toxic chemicals.

<sup>38</sup>

The classes are derived from the Risk Phrases assigned to the individual substances in Annex 6 of the Dangerous Substance Directive (Directive 67/548/EEC as last amended in 2001). The substances making part of this index comprise a wide range of uses: from intermediates - used for the production of also non-toxic chemicals, products and articles (with a potential human exposure limited to workers during their production and subsequent synthesis, and to the environment through potential releases during processing or transportation) - to household chemicals intended for consumer use.

## Natural resources and waste

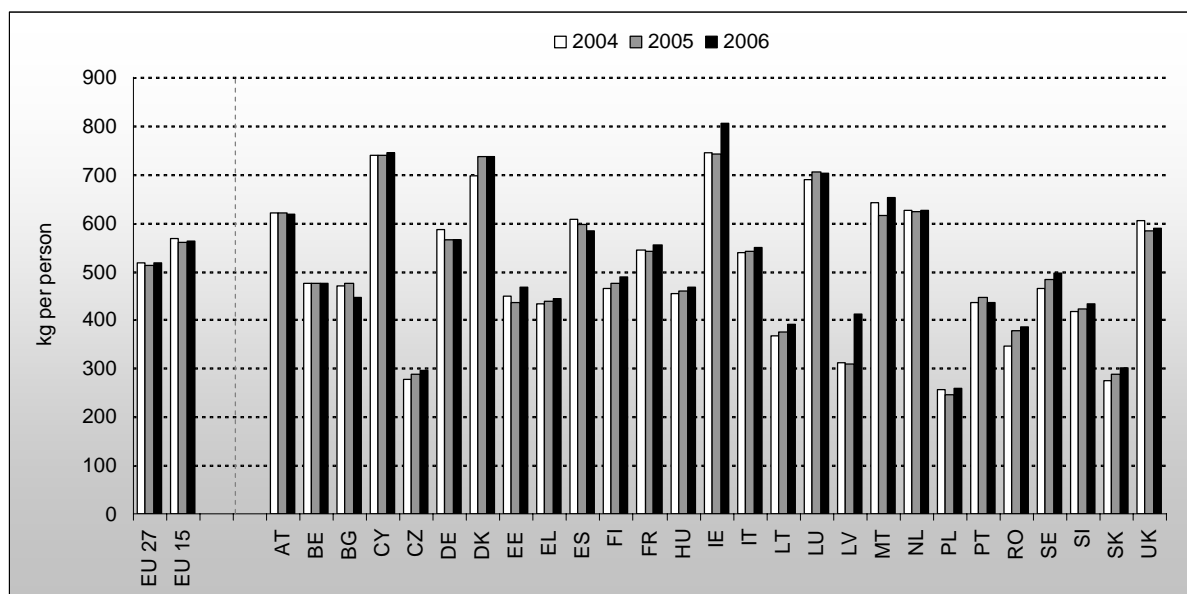
### State indicator: Fish catches from stocks outside safe biological limits



Data source: European Commission, DG Fish, International Council for the Exploration of the Sea, Eurostat

This indicator links the issues of nature and biodiversity with the sustainable use of natural resources. It shows the percentage of fish landings which originate from fish stocks managed under EU responsibility considered to be over-exploited. In 2006, 21% of fish catches came from unsustainably managed sources. The figure had doubled from the previous year and again reached the levels of 2003 and 2004. Especially for fish that live in or close to the seabed (benthic and demersal stocks) the critical situation - 42 % and 50% of catches from over-exploited stocks - has not significantly improved over the years reported. While before 2003 no stock of industrial fish had been outside safe biological limits, since then the rate oscillates between 20 and over 40 %.

**Pressure indicator: Municipal waste generated (kg per person)**



Data source: Eurostat

Waste generation and management are strongly linked to the way we use natural resources. While excessive waste generation can be seen as a symptom of inefficient use of resources, recovering materials and energy embedded in waste can help to use resources in a better way.

The EU aims at reducing the overall environmental impacts associated with the use of resources, by decreasing the amount of waste generated and by increasing the share of waste which is recycled and recovered, i.e. re-entering the economic productive cycle. The EU target to reduce municipal waste generation to 300 kg/capita by the year 2000 was not achieved. No new quantitative targets have been set.

EU-wide statistics on waste treatment are available only for municipal waste<sup>39</sup>, which represents about 14% of total waste produced. In 2006 EU-27 produced 517 kg of municipal waste per person, while EU-15 produced on average 563 kg of municipal waste per person. In total in 2006, 255 millions tonnes of municipal waste were generated in EU-27, 41% of which were land-filled and 19% were incinerated.

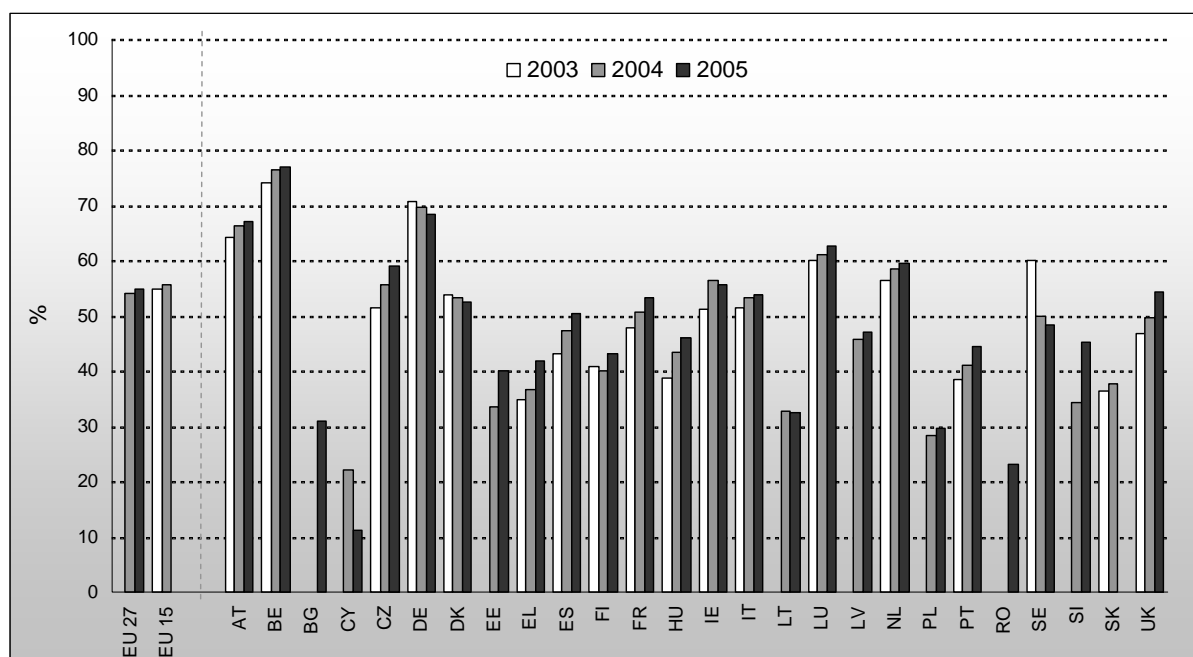
There are big differences among Member States, Ireland producing 804 kg/capita of municipal waste, followed by Cyprus and Denmark with more than 730 kg/capita. Poland produced only 259 kg/capita of municipal waste (50% of the EU-27 average), and Slovakia and Czech Republic about 300 kg/capita.

The generation of municipal waste per capita in Western European countries has stabilized, even if at very high levels. Some countries showed a constant increase of about 10% from 2004 to 2006, i.e. Romania and Slovakia, while other countries decreased the amount of

<sup>39</sup> Municipal waste consists of waste collected by or on behalf of municipal authorities. The bulk of this waste stream is from households, though similar wastes from sources such as commerce, offices and public institutions are included.

municipal waste/capita by 4% or more during 2004-2006, i.e. Bulgaria and Spain. The big increase for Latvia in 2006 is due to an improved reporting system.

**Response indicator: Recycling of packaging waste (percentage)**



Source: European Commission, DG Environment, Mandatory reporting by Member States under Commission Decisions 97/138/EC and 2005/270/EC; EU data for 2004 refers to EU25; Slovakia has not sent data for 2005; Malta has not reported any data.

Recycling helps to manage natural resources more responsibly: on the one hand it saves material from being put in landfills or incinerators, on the other hand, by replacing virgin materials, recycling can reduce environmental impacts. Packaging waste is roughly 5% of total waste generation.

In 2005, 55% of packaging waste was recycled in the EU-27, thus already reaching the 2008 target. In particular 73.5% of packaging waste in paper and board was recycled, while only 24.8% of plastic packaging waste was recycled. Different performances of individual Member States suggest further potential for improvements: Belgium and Germany continue to be the countries which perform best with more than 68% of recycling, while a few countries (Cyprus, Romania and Poland) still recycle less than 30% of their packaging waste.

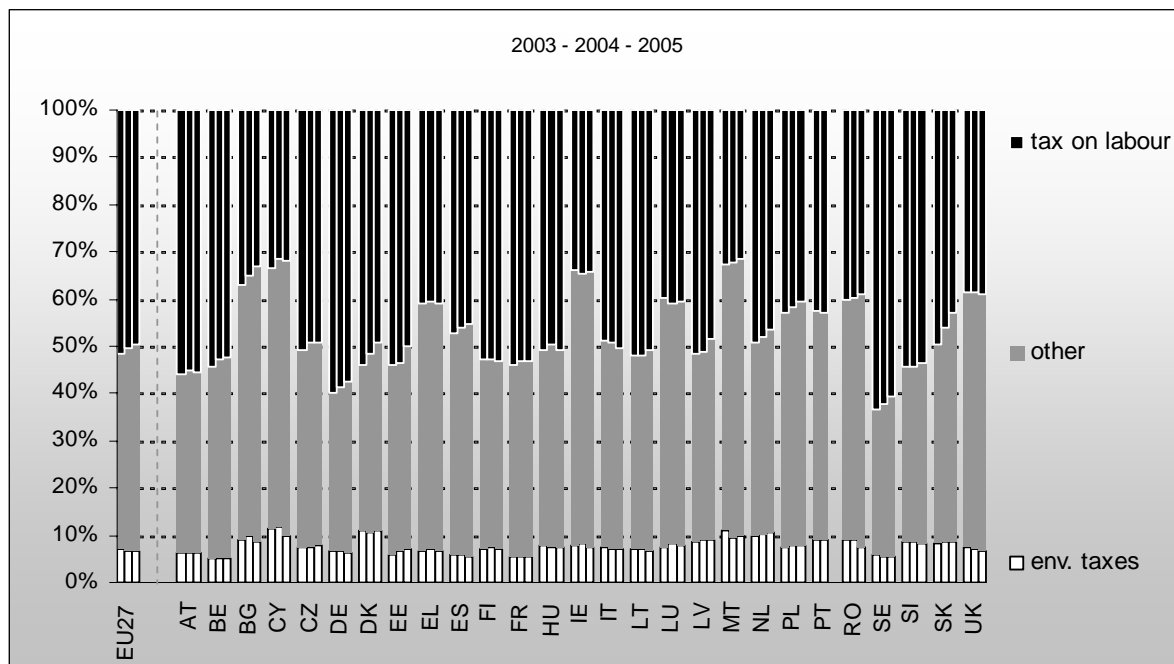
Not only levels but also trends are different for the 2003-2005 period: most Member States increasing their recycling rate, in particular Slovenia by 11 percentage points (pp) (from 34% to 45%) while others show a decline, in particular Cyprus by 11 pp and Sweden by 12 pp.

There is a general increase per capita in quantities of packaging being put on the market, which is not in line with the objective of the Directive on Packaging and Packaging Waste, which aims at preventing the production of packaging waste.



## Environment and the economy

### Response indicator: share of environmental taxes in total tax revenue



Data source: European Commission, Eurostat and DG Taxation and Customs Union<sup>40</sup>

Environmental taxes are an efficient market-based instrument to achieve environment policy objectives. In 2005, the EU-27 share of environmental taxes in total tax revenue was 6.6%. There are big differences in the use of environmental taxes among Member States: the share of environmental taxes in total tax revenue varies from less than 6% in Belgium, France, Spain and Sweden, to over 10% in Denmark and the Netherlands. Compared with revenues from taxes on labour the share of environmental taxes is low.

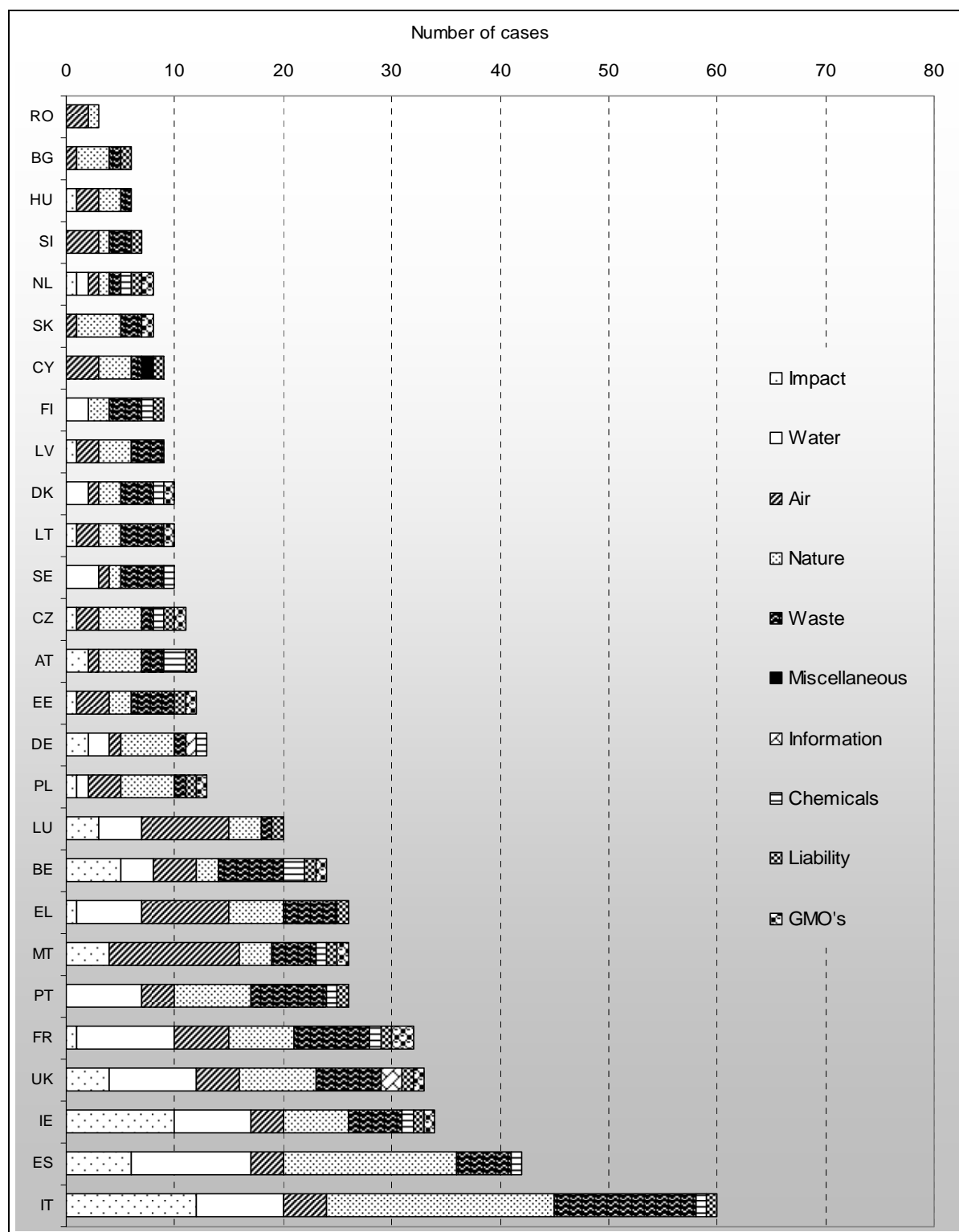
During the period 2003-2005, the total for the EU-27 shows a decrease in the share of environmental taxes, from 6.9% to 6.6%. First data for 2006 show that the downward trend continues. Between Member States, the trends are very different: Estonia has increased the share by 1 percentage point (pp) (from 6.1% to 7.1%), Denmark by 0.9 pp and Luxembourg and the Netherlands by 0.6 pp, while Cyprus and Romania have decreased their share by 1.5 pp and Malta by 1 pp.

<sup>40</sup>

Taxation trends in the European Union. Data for the EU Member States and Norway. 2007

## Implementation

**Performance indicator: Infringements of EU environmental legislation** (as of 31 December 2007)



Source: European Commission, DG Environment (Impact = Environmental Impact Assessment and Strategic Impact Assessment)

At the end of 2007 (31 December), there were 479 open infringement cases<sup>41</sup> concerning EU environmental legislation as against 420 at the end of 2006. In total, around 22% of all infringements cases of EU legislation relate to the environment.

There is a wide variety of reasons for this. A majority of cases concern bad application of EU environmental law, but there are also cases concerning the lack of transposition and improper transposition of environmental directives. In this respect there is now more proactive and systematic checking of the content of national transposition measures by the European Commission. This is one of the reasons for the increase in the number of infringements in 2007.

At the end of 2007, 77 cases concerned possible non-implementation of European Court of Justice judgements (at the end of 2006 they were 66).

Of all Member States, Italy is the country with the highest number of ongoing infringement cases (60), and has by far the highest number of ongoing infringement cases related to waste legislation (13). Spain follows with 42 open infringements. Among EU-15, the Netherlands is the country with the lowest number of open infringements. The number of infringements in the Member States that joined the EU in 2004 experienced a significant increase in 2007 (+82% compared to 2006). Malta has the highest number of infringements (26) within this group. Bulgaria and Romania are currently the Member States with the lowest number of infringement cases, possibly due to their recent admission (in 2007).

A quarter of the infringements open at the end of 2007 concern nature protection legislation (i.e. 121), other important sectors being waste (93), air (83), water (74), and environmental impact assessment (57).

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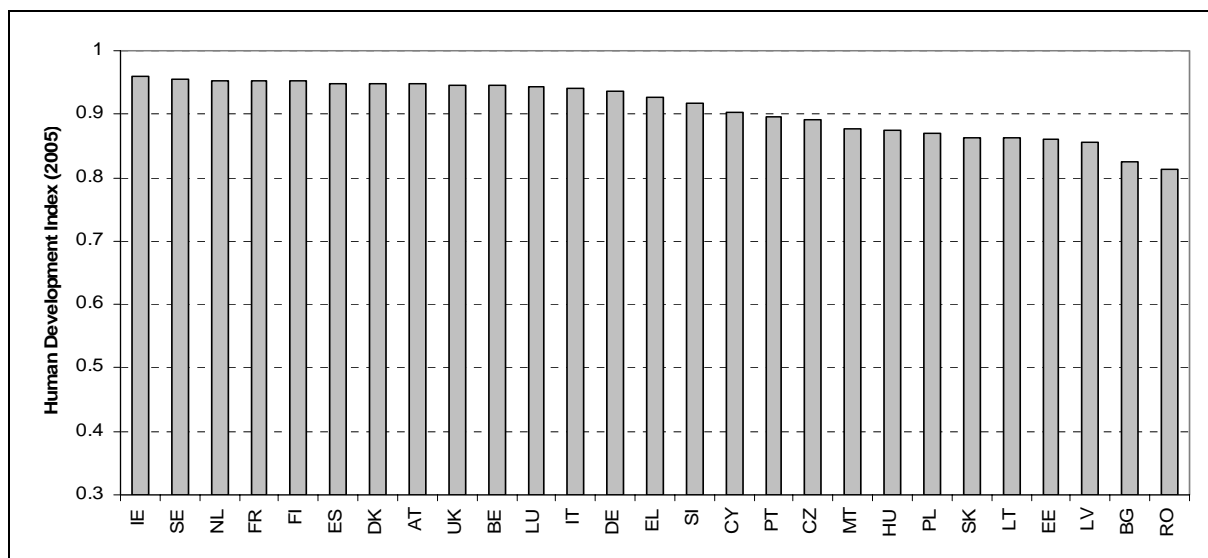
<sup>41</sup> This means that the Commission sent an official letter of formal notice to the Member State.

## Indicators "Beyond GDP"

"Measuring progress, true wealth, and the well-being of nations" was the subtitle of the international conference "Beyond GDP" in November 2007.<sup>42</sup> Its objectives included clarifying which indices are most appropriate to measure progress, and how these can best be integrated into the decision-making process and taken up by public debate. The starting point was the assumption that these indices should be as clear and appealing as GDP but more inclusive than GDP - to incorporate social and environmental issues. This sub-section presents a few selected indices – developed by international organisations, research or civil society organisations – that illustrate the wide range of statistical tools that were discussed at the conference.

### Human Development Index

The Human Development Index (HDI) was developed to measure progress in developing countries beyond purely economic figures, such as GDP. Since 1993, it has been used in the UNDP's Human Development Reports to compare the development of nations world-wide. A long and healthy life, knowledge, and a decent standard of living are considered key elements of progress or development. Therefore, the index combines data on life expectancy, adult literacy, school enrolment, and GDP. A value of more than 0.8 is considered "high human development". All EU Member States pass this benchmark.



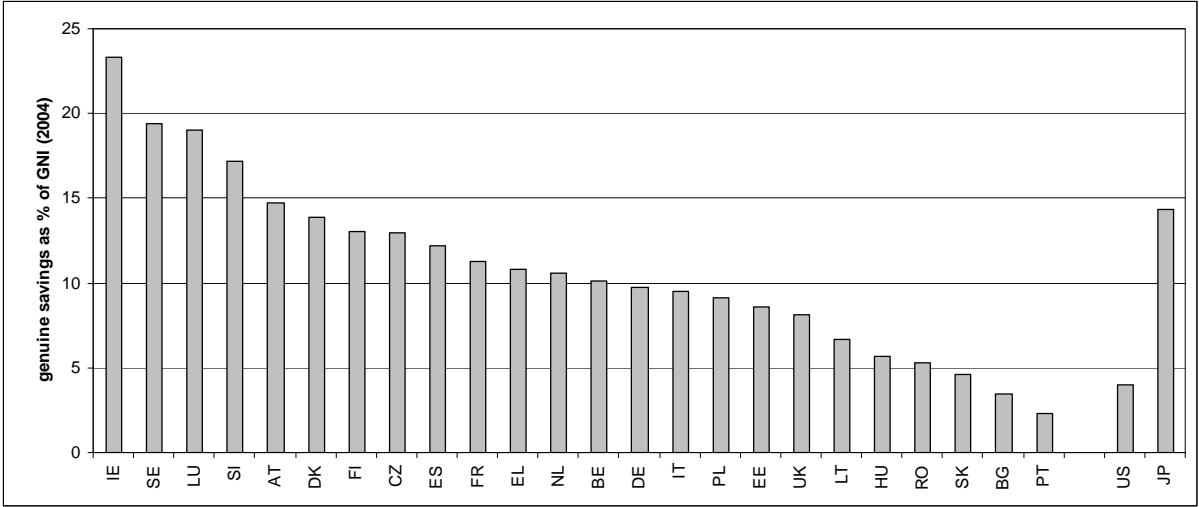
Data source: UNDP

Globally, in 2005 Iceland scored highest (0.968). At the other end of the scale, there are a few developing countries with a HDI near 0.3. At EU level, Ireland comes first, followed by Sweden and the Netherlands, while Bulgaria and Romania have the lowest HDI amongst EU countries. The majority of Member States have a HDI of more than 0.9.

<sup>42</sup> Full information on the conference, including speeches and video archive, is available via [www.beyond-gdp.eu](http://www.beyond-gdp.eu).

**Genuine savings / adjusted net saving**

This indicator focuses on the wealth of nations, which can only be increased by savings. While the standard savings from the System of National Accounts show only changes in "physical capital", (i.e. man-made assets like machinery and infrastructure), "genuine savings" strive also to include changes in the natural, environmental and human capital. So far, only a few component variables, besides the standard net savings, can be factored in. Expenditure on education is added, while depletion of sub-soil assets (like iron ore and coal) and forests, and the damage caused by some pollutants, is subtracted. The World Bank publishes these figures for most countries, in percentage of GNI (Gross National Income). One main finding is that some countries (outside the EU) have actually become poorer while at the same time increasing their GDP. This is caused by a failure to compensate for the depletion of natural resources by either reconstituting their natural capital or investing in human capital.

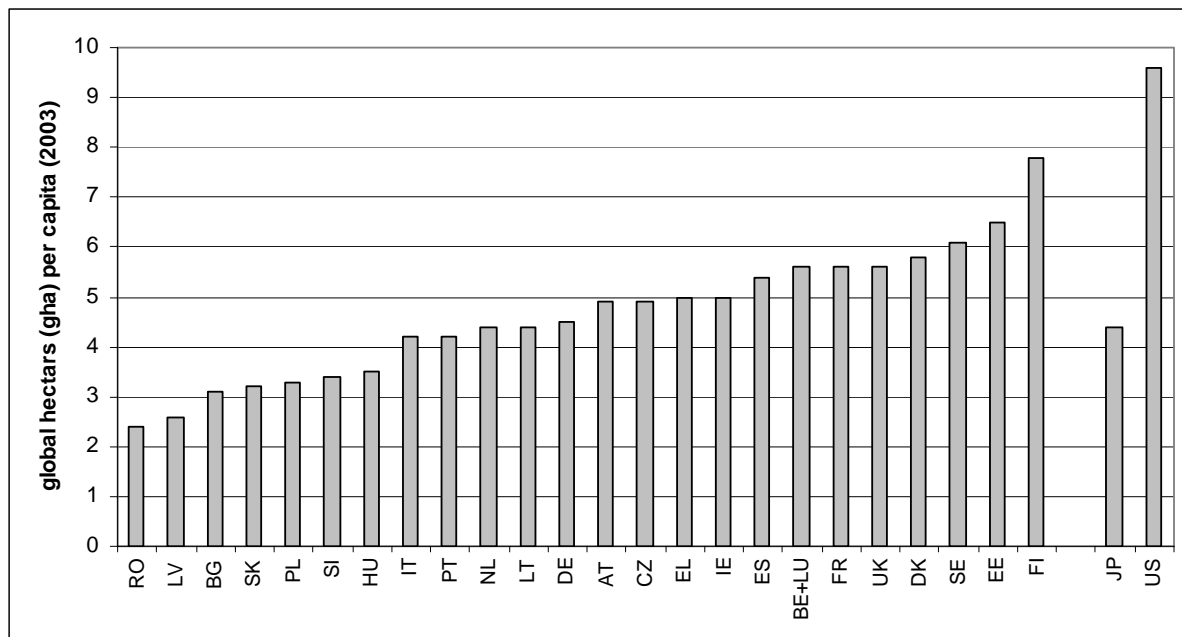


Data source: World Bank

Genuine savings rates in the EU range from 23% of GNI in Ireland to 2.3% in Portugal. Also main competitors, such as Japan or the USA, have quite different genuine savings rates. A look at the underlying data shows e.g. that the countries with a high level of genuine savings have normally also high net standard savings; however, Denmark compensates for low net standard savings with very high investments in education, while Portugal's above average investment in education do not outweigh the low net standard savings; depletion of natural resources is most significant in Romania and Estonia; and damage to the environment is most significant in Bulgaria, Poland, Estonia and Greece.

## Ecological footprint

This approach tries to capture one critical aspect of environmental sustainability: the use and potential over-exploitation of biological resources, such as forests and fishing grounds, grassland and cropland. The ecological footprint adds up the hectares of land and sea area needed to produce the goods consumed in a country. Also the area needed to cope with waste and pollution is added. In this way, the footprint estimates societies' demand on nature. To make the various land and sea areas comparable the unit of measurement is a standardised "global hectare" (gha).



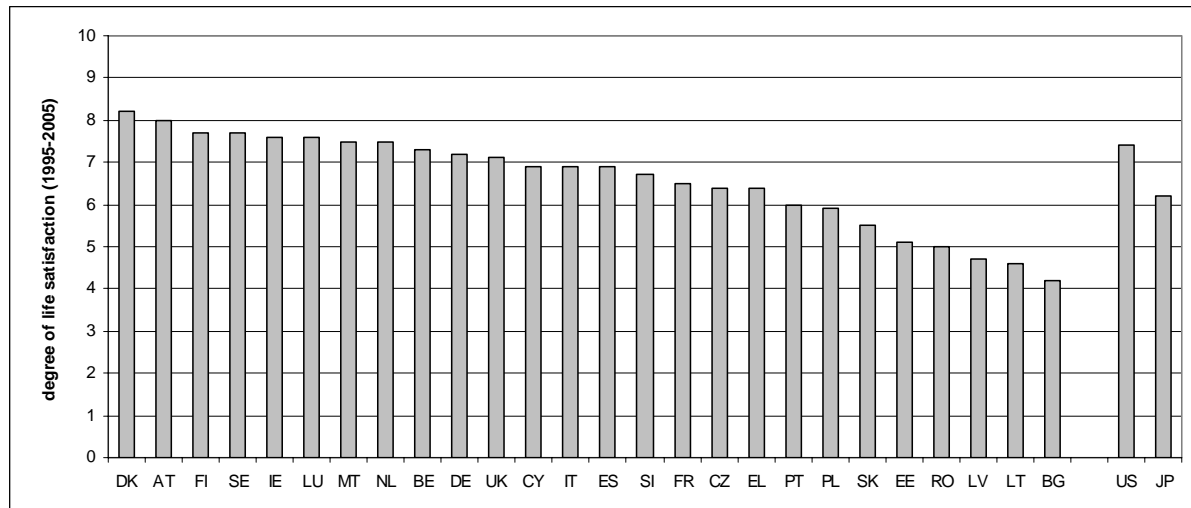
Data source: Global Footprint Network/WWF

For EU Member States, the data vary widely: from under 3 gha/capita for Romania and Latvia to over 6 gha/capita for Finland, Estonia and Sweden. Also the figures for Japan and the USA differ by a factor of 2. Different *levels* of production and consumption, but also different *structures* of production and consumption cause these significant differences.

In addition to the comparison between countries, the ecological footprint can be compared with the available land and sea area, the so called bio-capacity. For the EU-27 the footprint is 4.7 gha/capita, while the available bio-capacity within the EU-27 is 2.2 gha/capita. Globally there are 1.8 gha/capita available, while the overall global footprint is 2.2 gha/capita. The usual interpretation of this data is that humanity's demand on nature is now larger than the planet's carrying capacity.

## Life satisfaction

This indicator shows the degree to which the citizens of a country are satisfied with their life. It is based on surveys asking people about their individual perception of well-being. The graph below shows the average for each country.



Data source: World database of happiness, Erasmus University Rotterdam

In the EU-27, the Danes, Austrians, Finns, and Swedes are most satisfied with their life, while people living in the Baltic states, Romania and Bulgaria are the least happy. Research is looking further into different aspects of life satisfaction and the determinants of perceived well-being.

## **PART 3: COMMISSION SUMMARY OF ENVIRONMENT POLICY ACTIONS IN THE MEMBER STATES**

### **AUSTRIA**

#### **HIGHLIGHTS 2007**

Meeting the Kyoto commitments and, more broadly, fighting climate change have become key priorities of the newly installed government. Austria faces a big gap between its Kyoto target and projections and needs to apply additional policies to meet the target. The National Climate Strategy updated in March could be seen as a first important step in this area. In summer 2007, two research and innovation centred initiatives followed: the Climate and Energy Fund and the Energy of the Future research programme. Another important legislative project, the reform of the Eco-electricity act started in autumn 2007.

#### **Climate change**

Austria's target is to reduce greenhouse gas emissions by 13% compared to the base year, but in 2005 emissions were 18,1% higher than the base year level. According to projections<sup>43</sup> for 2010, with existing policy measures, use of Kyoto mechanisms and carbon sinks Austria would fall short of its Kyoto target by 17.9%. However, Austria is expected to reach the Kyoto target if all planned policy measures are applied strictly. Therefore, the country will have to step up its efforts in order to get back within reach of its Kyoto target.

- In March the federal government adopted the revised National Climate Strategy, which seeks to put Austria back on track to reach its Kyoto 2008-2012 commitments. The focus of the renewed strategy is on measures designed to encourage more sustainable energy production and use as well as more sustainable transport modes. Scientific innovation and quick adaptation of new technologies are moved to the centre of the strategy.
- The Austrian eco-electricity law "Ökostromgesetz" was amended in April 2007; another revision is being prepared. The goal is the continued expansion of the market share of renewable electricity by improving the framework conditions for producers. At the same time, tariffs for feeding eco-electricity into the main grid will be revised. In Austria about 56.6% (2006 provisional data) of all electricity is produced from renewable energy sources, which is the highest share in the EU. Nevertheless it is far from reaching its 2010 target of 78.1%.
- In the area of transport a new plan called "Bahnpaket Umwelt" (railways environmental package) aims at increasing rail usage by 15% (passenger) and 10% (freight) in the next five years thanks to the introduction of new rail traffic control technologies together with the new infrastructure.

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<sup>43</sup> 2010 projections for greenhouse gas emission come from the Communication from the Commission on Progress towards achieving the Kyoto objectives, COM (2007) 757.



## **Nature and biodiversity**

Austria is integrating nature concerns into agricultural production, by increasing organic farming. It has by far the highest proportion of area occupied by organic farming (as a share of total agricultural area), i.e. 11.1% in 2006 (10.5% in 2004) against an EU average of 3.8%.

- In 2007, the European Court of Justice ruled that Austria had failed to transpose the EU Habitats Directive and the Birds Directive adequately. Furthermore the list of Natura 2000 sites in Austria is still incomplete under both Directives.
- Austria continued its efforts to integrate nature conservation into other policies, for example into civil and flood protection, and to implement the Water Framework Directive. Its long experience of river environmental management was used to prepare the TEN (Trans-European Network) project for the maintenance of the Danube east of Vienna.

## **Environment and health**

- In order to reduce the level of airborne particulate matter, a system of financial incentives and disincentives to encourage the uptake of particle filters in diesel passenger cars was extended by the Austrian parliament for another year.
- In June, the "Austrian Children Environment Health Action Plan" was presented to the public. The aim is a health-promoting environment and the stronger consideration of children's needs in all sectors and policies. The first steps to implement the plan in Austria have already been made, for instance the programme "Mobility management for schools" aimed at promoting environmentally friendly and physically active way of going to and from school.
- The first European Commission report on the implementation of the Water Framework Directive showed that Austria has made good progress in implementing the Directive. Austria presented a good analysis of the pressures and impacts affecting the environment and a comprehensive development of national methods for the assessment of ecological status.

## **Natural resources and waste**

In 2006, Austria on average produced 617 kg of municipal waste per person against an EU average of 517 kg/per person. Only 59 kg/person (9.6%) was landfilled and 181 kg/capita (30%) was incinerated, which results in 377 kg/capita (61%) being treated by other means including recycling and composting.

- In July, Austria adopted an amended version of waste management law, which transposes recent Community legislation and introduces stricter conditions for companies operating in the waste management sector.
- A newly published White Paper on waste avoidance and recycling in Austria defines key principles and policy goals and assesses how the current limitations can be overcome. In Austria over 60% of packaging waste is recycled, which is well above the EU average.
- A national action plan for green public procurement is being drafted. It will put forward procurement quotas for eco-friendly products.

### **Use of market-based instruments**

- In July, Austria increased fuel tax rates (by 3 cents/l for petrol and 5 cents/l for diesel). The additional revenue, expected to be € 370 million per year, will be spent on climate change mitigation measures. Austria is also considering a further rise in its distance-based road charges.

### **Environmental technologies**

- The Climate and Energy Fund was set up in 2007 and the Energy of the Future research programme will support eco-innovation and the development of new technologies. Financial support provided by both funds is expected to increase the share of renewables in total energy consumption to 45% and to boost energy efficiency by 20% by 2020.

### **OUTLOOK FOR 2008**

- As constantly growing transit lorry traffic features high on the public agenda, there is current discussion on drastically increasing the existing road charges for lorries to provide stronger incentives for a shift of freight transport to rail. In order to achieve ambient air quality standards in the Inn valley a sectoral ban for lorries is to be gradually imposed as from 1 May 2008, with an alternative rail option provided.
- An amendment of the law regulating passenger car registration tax is to enter into force on 1 July 2008. The tax for cars with CO<sub>2</sub> emissions below 120 g/km and for alternatively fuelled cars will be significantly reduced. For cars with high CO<sub>2</sub> emissions the tax will increase.

## **BELGIUM**

### **HIGHLIGHTS IN 2007**

Following the parliamentary elections in June an interim government was installed only in December. This resulted in a period of low legislative activity at the federal level. The agenda was dominated by the transposition of recent EU Directives. Environment policy was less affected by the federal situation, as most environmental competencies are the responsibility of the three regions.

During the past year a strong policy focus has been on climate change, transport, energy and environment and health. These topics received significant public attention. The issues ranged from the saturation of the Belgian road network and the implications on air pollution (fine particles, smog alerts, etc.) to the threat of an emerging energy shortage.

#### **Climate change**

Belgium, where greenhouse gas emissions in 2005 were 2% less compared to base year levels, is currently performing relatively well considering the distance between the projections for 2010 and the Kyoto target: projected over-delivery of 0.9% for 2010 with existing policy measures, use of Kyoto mechanisms and carbon sinks. However, in 2006, only 3.9% of gross electricity consumption in Belgium came from renewable sources as compared to an EU average of 14% (in 2005). At 205.7 kg oil equivalent/€1000 GDP, Belgium had an energy intensity ratio in 2005 comparable to the EU average.

- A new federal law came into force to promote environmentally friendly cars. A rebate is granted when purchasing a car emitting less than 115 gram of CO<sub>2</sub> per kilometre. Another federal law introduced tax reductions for building, buying or renovating a low energy house. Also in 2007, the first petrol stations supplying bio fuels became operational.
- The Walloon government adopted an Air Climate Plan, which includes indicative targets for renewable energy and reduction of energy consumption. Instruments include green certificates and rebates for installing solar panels, which are expected to contribute significantly to the increase of renewable electricity.

#### **Nature and biodiversity**

- Belgium has undertaken many initiatives to meet the 2010 biodiversity target, including the designation of Natura 2000 sites and the current establishment of marine protected areas, which will cover 7% of the Belgian North Sea area. Objectives regarding the protection of ecosystems have been integrated into the Flemish Environment and Nature Policy Plans as well as into legislation based on Natura 2000. In 2007 the Natura 2000 network in Belgium consists of 234 Special Protection Areas (9.7% of the total land area) under the Birds Directive and is largely complete, and 280 Sites of Community Importance (10% of the total land area) under the Habitats Directive which is still incomplete.

## **Environment and health**

- The urban population in Belgium is highly exposed to air pollution by particles, though 2005 data show a slight improvement compared to the previous year.
- In December, several Belgian authorities took measures to limit fine dust and particle pollution when emission levels peaked beyond thresholds. In Flanders speed limits of 90 km were imposed and actively enforced, while the Walloon government limited car use for several days in the Charleroi area. The Brussels region combined its integrated air abatement/climate change plan with a short term action plan addressing high air pollution events occurring mainly during the winter months. When concentrations of fine particles exceed a certain threshold the plan is activated. Speed limits are reduced in the city and on the surrounding motorways, while a driving ban can be imposed in the Brussels region in exceptional cases.
- Since January 2007 all restaurants in Belgium are smoke free, and the implementation of this ban has been actively enforced. This is not the case for bars that sell drinks and snacks.

## **Natural resources and waste**

- Pressures on surface water by households and industry are decreasing, but water quality in Belgium remains substandard and much needs to be done to achieve the objectives of the Water Framework Directive in 2015. Belgium is also facing a problem of polluted sediment in its waterways.
- Belgium ranks among the top EU Member States in terms of separate collection and recycling of waste. In 2005 the share of recycling of packaging waste was almost 77%, far above the EU average of 55%. In 2006 on average every person produced 475 kg of municipal waste (EU average being 517 kg/per person), of which only 24 kg were landfilled and 155 kg incinerated, thus most went to recycling collection systems.
- The Flemish government approved in December a new Waste Implementation plan for the period 2008-2012 concerning prevention, selection, recycling and disposal of waste from households. Further efforts will be made to optimise the selective collection and recycling and to expand the capacity of final treatment infrastructure; the plan includes specific attention for a life-cycle approach of products and materials.

## **Better regulation**

- In December, the Flemish parliament adopted a decree that will lead to more efficient enforcement and sanctioning of environmental violations. Important elements are the development of a municipal system for administrative fines, better coordination between the different authoritative levels, and more financial support for enforcement at the local level.

## **Use of market-based instruments**

Belgium is making little use of environmental taxes compared to other EU countries: in 2005 the share of environmental tax (in total tax revenue) was 5.2% against an EU average of 6.6%.

## **OUTLOOK FOR 2008**

- In 2008 overall debates on constitutional reform will continue in Belgium. Environment policy is expected to be included in the debates, and the 're-federalisation' of certain aspects can not be excluded. Particular focus is on noise reduction in the light of the fragmented competences regarding the enforcement of noise abatement policies around Brussels Airport.
- More measures to reduce greenhouse gas emissions are expected at all government levels, with increasing attention being paid to the promotion of wind and solar energy.
- The Flemish Environment Policy Plan has been updated for the period 2008-2010. It was adjusted to the new international developments and to the conclusions of recent environmental reports. Progress on the new Environment Policy Plan should be made in 2008.
- The Flemish government has plans to introduce a 'smart' kilometre levy for trucks that could be related to distance travelled, place, time and environmental characteristics of the vehicle. In 2008 the Benelux governments will discuss the different ways of doing this in a Benelux context.

## **BULGARIA**

### **HIGHLIGHTS IN 2007**

Bulgaria joined the EU in January 2007. Transposing the Community legislation and preparing the institutional framework for the implementation of a broad range of new tasks dominated the environment policy agenda. Operational Programmes for 2007–2013 have been elaborated for implementation of the EU Structural and Cohesion Funds. They will provide financial support for investment projects, inter alia, in energy efficiency, renewable energy production, waste management, urban waste water treatment, biodiversity, and transport infrastructure.

#### **Climate change**

Bulgaria has agreed to reduce its greenhouse gas emissions during the 2008-2012 period by 8% below the 1988 level. It will meet the target even with accelerating economic activity – greenhouse gas emissions in 2005 were 69.8 million tonnes CO<sub>2</sub> eq. or 47.2% lower than 1988. Bulgaria had the highest energy intensity in the EU in 2005 (1582 kg oil equivalent/€1000 GDP), although with a continuously decreasing tendency from 1994 to 2005 (minus 28%). The main reason for the high energy intensity is that its industry is very energy intensive.

With 11.2% of gross electricity consumption from renewable energy sources in 2006, Bulgaria has already surpassed its 11% target for 2010. Since 1994 there has been a continuous increase in generation mainly from biomass and hydropower.

- About €205 million of EU Structural funds have been earmarked for promoting energy-saving technologies and renewable energy sources, mostly for industrial companies.
- The European Commission in 2007 assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and substantially cut the proposed number of emission permits to be allocated by 37% to 42.3 million tonnes CO<sub>2</sub> eq. per year. Bulgaria filed a lawsuit on the Commission Decision to the European Court of Justice. This does not affect the obligation to implement the National Allocation Plan in conformity with the Commission Decision.
- A feed-in renewables support law was introduced, according to which the national power grid operator and regional power distribution companies will be obliged to connect into their networks new hydro, wind, or biomass-fired power stations.

#### **Nature and biodiversity**

Due to its diverse climatic and geological conditions Bulgaria has a rich variety of flora and fauna. The Natura 2000 network includes 114 Special Protection Areas (13.4% of the land area) and 228 Sites of Community Importance (26.5% of the land area).

- However, most protected areas are in the higher mountain areas, whereas protection of forest and river ecosystems in the plain regions and coastal areas needs to be improved. By area, half of the proposed Natura 2000 sites were submitted for reassessment by the European Commission with a significant delay due to substantial economic interest. In

July the European Commission warned Bulgaria about breaching the Habitats and Birds Directives.

- When considering organic farming as a tool for integrating nature protection concerns into the agricultural sector, Bulgaria is not performing well. In 2006 only 0.1% of its total agricultural area was occupied by organic farming, against an EU average of 3.8%.

### **Natural resources and waste**

Waste management is one of the most serious environmental problems in Bulgaria. Landfills are the prevailing method for waste handling. The amount of municipal waste has decreased significantly: 446 kg per capita of municipal waste was collected in 2006 compared to 693 kg per capita in 1995. 80% of municipal waste was landfilled in 2006 (twice the EU average). In 2005 31% of packaging waste was recycled, against an EU average of 55%.

- In October, the European Commission opened an infringement case regarding inadequate waste infrastructure in Sofia. The lack of a system for the recovery and disposal of municipal waste, the lack or inadequacy of temporary storage sites, and pre-treatment of the waste are the most serious problems.
- €1 284 million have been earmarked for the construction of regional waste management systems, pre-treatment, recycling centres, landfill gas recovery installations, landfill reconstructions, and urban waste water treatment plants for the period 2007-2013.

### **Use of market-based instruments**

Environmental tax revenues as a share of total tax revenues amounted to 8.7% in 2005, significantly above the EU average (6.6%).

- The Act on Limitation of the Harmful Impact of Waste introduces charges on products that generate large amounts of waste or hazardous waste.

### **OUTLOOK FOR 2008**

- The first draft of the new National Waste Management Programme is expected to be ready by the middle of 2008. It will set out a long-term strategy for sustainable waste management.
- The National Sustainable Development Strategy will be finalised by the Council for Sustainable Development.

## **CYPRUS**

### **HIGHLIGHTS IN 2007**

Cyprus has drafted its first national Sustainable Development Strategy, in line with the EU Sustainable Development Strategy. It plans measures in areas where existing practices are unsustainable, such as energy, transport, tourism, agriculture, natural resources management and waste management. A National Energy Policy Strategy has been adopted and several actions are under way to combat the air pollution caused mainly by transport in large towns, noise and quality of water.

#### **Climate change**

Over the period 1990-2005, greenhouse gas emissions in Cyprus increased by 63.7%, reaching 9.9 Mt CO<sub>2</sub> eq in 2005. Cyprus has no legally binding emission limitation commitments under the Kyoto protocol, but as a Member State, it is bound by the obligations set in the Emissions Trading Directive. The European Commission in 2007 assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and substantially cut the proposed number of emission permits to be allocated: the annual allocation is 5.5 Mt of CO<sub>2</sub> allowances, which is 23% less than Cyprus had proposed.

- In terms of electricity generation, Cyprus makes no use of renewable energy sources, and in 2005 made very little use of combined heat and power generation.
- In 2007, the National Energy Policy was adopted. Its overall aim is to promote renewable energy sources (particularly wind and solar), promote energy efficiency schemes and introduce natural gas into the energy mix. Cyprus was also implementing the Energy Saving Plan, adopted in 2006. Measures include subsidies for hybrid cars, a zero excise duty on biofuels and the promotion of energy savings through investment in public buildings.

#### **Nature and biodiversity**

In 2006 the share of organic farming (as a share of total agricultural area) was only 1.3%, compared to the 3.8% EU average.

- Under the Birds and the Habitats Directives, Cyprus has classified 7 Special Protection Areas (SPA) and designated 36 sites of Community Importance (SCI), 5 of which are marine areas. However, Cyprus is far from complying with the Habitats Directive, having reached only 25% of the minimum standards. In June, the European Commission opened infringement procedures against Cyprus for insufficient classification of SPAs under the Birds Directive. The country also breached Community law by allowing spring hunting of Turtle Doves; however, it has rectified the situation and the legal case has been resolved.
- The government is currently preparing management plans for 26 sites included in the Natura 2000 network, co-funded from EU Funds (from the LIFE-Nature and from the Transition Facility Programme).



## **Environment and health**

- A National Action Plan on Environment and Children's Health 2007-2010 was approved. The plan, based on the EU action plan and other international commitments, is based on the principles of precaution, prevention and integration.
- The government started to develop a system for monitoring ambient air quality all over Cyprus.

## **Natural resources and waste**

- The quantity of municipal waste generated has been constantly growing: between 2000 and 2006 it increased by 9.5%. In 2006 Cyprus produced 745 kg of municipal waste per capita against an EU average of 517 kg/per capita, most of which (652 kg, i.e. 87% of total) was landfilled. Despite the fact that recycling has also been steadily increasing, in 2005 only 11.5% of municipal waste was collected for recycling. Moreover, for recycling of packaging waste, Cyprus also has the lowest share in the EU: 11% (EU average being 55%). Full implementation of the Landfill Directive is planned for 2010.
- Water supply in Cyprus is a major issue. Water abstraction has increased continuously with agriculture and tourism accounting for almost three quarters of the total. Inadequate rainfall in the past few years has further reduced available water resources. The government's plans to permit the construction of 14 more golf courses on the island are expected to generate the need for more water for irrigation, which will inevitably lead to more desalination plants.
- On the positive side, the first European Commission report on the implementation of the Water Framework Directive (to achieve good water quality in all water bodies by 2015) showed that overall there is a real commitment to implement the Directive in time. Efforts are being made to develop river basin management.

## **Use of market-based instruments**

Environmental tax revenues as a share of total tax revenues was 10% in 2005, significantly above the EU average (6.6%).

## **OUTLOOK FOR 2008**

- The implementation of the Rural Development Plan for 2007-2013 will introduce further environmental support schemes, such as conversion to organic farming, the conservation of rare livestock breeds and crop varieties, and farming practices adapted to the management of natural species and land.
- The National Biomass Action Plan of Cyprus is expected to be finalised by early 2008. The National Action Plan for Combating Desertification is due to be ready by that time.
- As the Environmental Noise Evaluation and Mapping has been completed, specific actions plans to combat noise are expected to be submitted.

## **CZECH REPUBLIC**

### **HIGHLIGHTS IN 2007**

The new government submitted several important legislative proposals on the environment. They include a draft act on Prevention of Ecological Damages (transposing the relevant directive) and a draft amendment of the Act on Environmental Impact Assessment (to solve the EU law infringement case).

Since November, Regulatory Impact Assessments - including the environmental dimension - are mandatory for all new legislation. The amended legislation now provides for public access and the right to comment on legislative proposals, which had been almost impossible in the past.

At the end of 2006, an agreement was concluded between the company Hyundai, the central and regional authorities, CzechInvest agency and NGOs, concerning remediation of and compensation for environmental damage caused by the new Hyundai factory in Nošovice.

A number of Operational Programmes co-funded from the EU Structural and Cohesion Funds for 2007-2013 were approved in 2007. Environmental priorities include improvement of water management and reduction of flood risks, reduction of emissions, energy savings and increasing the use of renewable energy sources and waste management.

#### **Climate change**

The Czech Republic is currently well on track to meet the Kyoto target for greenhouse gas emissions (the target is 8% reduction). Emissions in 2005 were 25.8% lower than in 1990 and they are expected to be some 21% below the Kyoto target in 2010. The Czech Republic completed in 2007 its national programme to abate climate change impacts.

- The European Commission in 2007 assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and substantially cut the proposed number of emission permits to be allocated by 15% to 86.8 million tonnes CO<sub>2</sub> eq. per year. In June, the Czech Republic filed a lawsuit on the Commission Decision to the European Court of Justice. This does not affect the obligation to implement the National Allocation Plan in conformity with the Commission Decision.
- The Czech Republic adopted legislation introducing a minimal share of bio-fuels into gasoline and natural gas (amendment to the Air Protection Act). In June, the National Emissions Reduction Programme was also approved by the government.
- A group of members of parliament submitted a draft act on production of heat energy from renewable sources of energy, but it was rejected by the parliament.

#### **Nature and biodiversity**

In 2006, 7.2% of total agricultural area was used for organic farming which is well above the 4% EU-10 and 3.8% EU-27 averages.

- The European Commission in 2007 initiated an infringement procedure on non-sufficient designation of Special Protection Areas for birdlife (SPA) as two important bird areas have not been designated. The Czech Republic is far from reaching full implementation of the Habitats Directive, having reached less than 60% of the minimum standards.
- The national inventory of Sites of Community Interest (SCI) was submitted to the European Commission. In autumn, the Commission adopted EU lists of SCIs for the two bio-geographical regions in the Czech territory, the Continental and Pannonian regions. However, the designation of SCIs for the Czech Republic is still insufficient.
- The government prepared a draft amendment of the Nature and Landscape Protection Act. The Act aims to harmonize the existing legislation with the Birds and Habitats Directives establishing the Natura 2000 network.

### **Natural resources and waste**

- The Czech Republic is the EU country which produces one of the lowest amounts of municipal waste per capita: 296 kg/per capita in 2006 against an EU average of 517. However, most of this (234 kg, i.e. 80%) is landfilled.
- In the spring, the government announced its intention to establish a deposit system on PET bottles.
- After months of discussions between experts, NGOs and ministries, August saw the conclusion of the negotiations for the proposal of National Forestry Plan for 2007-2013 laying down principles for sustainable forest management and protection of biodiversity.

### **Use of market-based instruments**

- The government in January adopted the principles and timetable of an ecological tax reform. Its implementation will be in three phases. The first phase has introduced minimum taxation for coal, electricity and natural gas to transpose the Energy Taxation Directive. More detailed proposals for the remaining two phases are to be adopted by the government.

### **OUTLOOK FOR 2008**

- Legislative plans for 2008 include an amendment to the Spatial Planning and Building Act, establishing a deposit system of PET bottles, and a law related to Environmental Impact Assessment.
- The revised National Sustainable Development Strategy is expected to be adopted by the government following the consultation procedure which has already taken place, including in regions.

## **DENMARK**

### **HIGHLIGHTS IN 2007**

Early in 2007, the reform of the municipalities came into effect. The reform has transformed 14 counties and 275 municipalities into 98 larger municipalities and five regions. The reform has brought administrative changes, giving the new regions responsibilities for planning, soil pollution and raw materials, while municipalities will be responsible for most other issues subject to guidelines from the state level. River basin management and nature protection are important areas which have become the responsibility of municipalities.

A draft new national strategy for sustainable development was published in June by the government. Important priority areas are climate change and the need to decouple economic growth from growth in environmental pressure. In March 2007, the government's offer to host the Conference for parties to the UN Framework Convention on Climate Change in 2009 was confirmed.

After the November elections, the existing coalition remained in power, but with a narrow margin. Climate change was one of the topics debated during the election campaigns. After the elections the Ministry of Environment was split into the Ministry of Climate and Energy and the Ministry of Environment.

#### **Climate change**

Under the EU burden sharing agreement, Denmark has committed itself to a greenhouse gas emission reduction target of 21 % for the period 2008-12. Even though emissions have been reduced substantially (-7.8% in 2005 compared to the base year), Denmark is currently showing a gap of 2 % between 2010 projections and the Kyoto target.

In 2005 the consumption of renewable energy accounted for 17% of gross energy consumption. In terms of electricity production, in 2005, 28% came from renewables (on track to reach the 2010 target of 29%), while 52% came from combined heat and power generation (by far the highest share in EU). In terms of energy efficiency, Denmark had the lowest energy intensity ratio in the EU at 114 kg oil equivalent/€1000 GDP in 2005.

- The government in January proposed the Energy Strategy 2025 with plans to reduce the use of fossil fuels by at least 15% in 2025 (compared to 2007) and to prevent increases in energy consumption. Also in this package, renewable energy must account for at least 30% of the energy consumption by 2025.
- In September the government launched the national strategy for adapting to climate change. It analyses the vulnerability to climate change in the next 10 years, and also suggests means of tackling the effects in different sectors. The Strategy was approved in early 2008.

#### **Nature and biodiversity**

- The law on national parks was passed in May, and in June the Thy district was launched as the first national park in Denmark. The areas of Skjern Å, Mols Bjerger, Kongernes Nordsjælland and Waden Sea are candidates for future national parks.

- Under the Natura 2000 network, Denmark has largely completed the designation of Special Protection Areas under the Birds Directive, covering 5.9% of the total land area. In spite of the establishment of 254 Sites of Community Interest under the Habitats Directive (7.4% of the land area), implementation was still incomplete in 2007.

### **Environment and health**

- The government passed a law in January opening the possibility of introducing so-called environmental zones in larger towns where restrictions can be introduced to limit emissions of particles, especially from heavy duty diesel trucks and busses.
- To tackle the problems caused by pollution from fire-wood burning stoves, the government started an information campaign in 2007 targeting households.
- The first European Commission report on implementation of the Water Framework Directive showed that Denmark is significantly behind in implementing the Directive. More efforts are needed in the near future.

### **Natural resources and waste**

In 2006, Denmark on average produced 737 kg of municipal waste per person against an EU average of 517 kg/per person, most of which was incinerated (405 kg/per capita or 55%) and a minority landfilled (37 kg/per capita or 5%).

- In order to tackle the overexploitation of fish stocks in Denmark, the Danish Ministry for Fisheries put a ban on the landing of Norway pout in 2007. However, the ban will be lifted again in 2008.
- In June, the parliament agreed on a reorganisation of the waste management sector. The key elements are stronger competition and flexibility in the recycling area, more efficient incineration and disposal sector, simpler administration and innovation.

### **Use of market-based instruments**

Denmark has the highest share of environmental tax revenues as a share of total tax revenues, namely 11.6% in 2005, significantly above the EU average (6.6%).

- In June, the government changed the taxes on cars in order to give more incentive for car owners to buy fuel efficient cars. According to estimates the change of taxes would reduce emissions by approximately 175 000 tonnes of CO<sub>2</sub> annually.
- The government also set aside €40.3 million for tax reductions for new diesel cars using particle filters in 2006 - 2009.

### **Environmental technologies**

- The 2007 budget included a package aimed at the development and use of environmental technologies. It relates to the Action Plan for the Promotion of Environmentally Efficient Technology which was published in July. The plan contains measures within innovation partnerships, research, export promotion, information and a thematic focus on climate and energy technology, agriculture, water, and health.

## **OUTLOOK FOR 2008**

- The government will propose a law requiring 5.75 % biofuels in transport fuels in 2010. This law responds to the Biofuels Directive.
- The Action Plan for the Aquatic Environment III will be evaluated in 2008, and the government will decide whether the reduction of nitrogen and phosphorous discharge from agriculture is sufficient. The evaluation will also include the environmental consequences of the EU agricultural reform.
- Based on the agreement in 2007, the government intends to submit a bill for re-organisation of the waste sector.
- The new Sustainable Development Strategy is to be published in early 2008.
- A national agreement on renewed targets and support schemes for renewable energy and energy efficiency is expected in 2008.

## **ESTONIA**

### **HIGHLIGHTS 2007**

In 2007 several important policy developments took shape. In February, the parliament passed the resolution on the Estonian Environmental Strategy until 2030 and the government approved the Environmental Action Plan for 2007-2013. The estimated implementation costs of the Action Plan amount to about €6.7 billion until 2013. In January, the parliament approved the Transport Development Plan for 2007-2013 which focuses on the traffic management and coordination system, enhancing the competitiveness of public transport, and promoting light traffic.

#### **Climate change**

In 2005 greenhouse gas emissions were 20.7 million tonnes CO<sub>2</sub> eq. or 52% less than in the base year. According to the projections for 2010 Estonia would easily meet its Kyoto target of 8% reduction. The use of renewable energy is still modest. Renewable energy sources accounted for 1.4% of gross electricity consumption in 2006, still a long way from the 5.1% target in 2010. Estonia has a fairly high energy intensity at 967 kg oil equivalent per €1000 GDP in 2005, even though it has been halved over the past ten years.

- The government approved a Development Plan on the Use of Biomass and Bio-energy for 2007-2013 to reduce Estonia's dependence on fossil fuels and decrease pressure on the environment. Financing for investment in bio-energy production will be provided through the Rural Development Plan 2007-2013.
- The national energy technology programme promotes technologies related to local renewable energy sources and the development of oil shale technologies. The programme will support product development, applied studies and fundamental studies.
- The European Commission in 2007 assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and substantially cut the proposed number of emission permits to be allocated by 48% to 12.7 million tonnes CO<sub>2</sub> eq. per year. Estonia filed a lawsuit on the Commission Decision to the European Court of Justice. This does not affect the obligation to implement the National Allocation Plan in conformity with the Commission Decision.

#### **Nature and biodiversity**

In 2007 the Natura 2000 network in Estonia consisted of 67 Special Protection Areas (13.1% of the total land area) related to the Birds Directive and is still incomplete, and 497 Sites of Community Importance (16.5% of the total land area) under the Habitats Directive currently being evaluated.

- The government is preparing a Nature Conservation Development Plan which comprises the period until 2035.
- In 2006 organic farming represented 8.7% of agricultural area, more than double the EU average. Estonia has increased its share of organic farming considerably since 2004.

## **Natural resources and waste**

The volume of municipal waste has increased from 368 kg per capita in 1995 to 466 kg per capita in 2006, but remains below the EU average. Between 2000 and 2006 the proportion of landfilled municipal waste was reduced from 100% to 60% of the total volume, but a considerable amount is still disposed of unsorted.

- The Environment Action Plan 2007–2013 includes measures to reduce waste generation by implementing the best available waste handling technology, improving the state of surface and ground water, improving resource efficiency and balancing the use of forests.
- The revision of the National Waste Management Plan has started. The closure of non-conforming landfills and the further development of regional waste handling facilities and a waste handling system for biodegradable waste will be supported.

## **Use of market-based instruments**

In 2005 the share of environmental taxation (compared to total tax revenue) was 7%, slightly more than the EU average, and is steadily increasing (it was 6% in 2003).

- The excise duty rates on motor fuels will be increased at the beginning of 2008. Excise duty on petrol will increase 25% and on diesel 34.5%. From January 2008 excise duty will be introduced on electricity. Even though for natural gas the EU minimum rate of excise duty is obligatory only from 2014, the rates on natural gas used for commercial purposes will be increased from 2008 already to match the minimum rate. Also from 2008 the exemption from excise duty on shale derived fuel oil will be abolished.

## **Environmental technologies**

- Approximately €15 million have been allocated to promote the development of innovative environmental technologies as part of the operational programme co-financed by the EU Structural and Cohesion Funds 2007-2013.

## **OUTLOOK FOR 2008**

- The government plans to update the Fuel and Energy Sector Development Plan to promote the production of renewable energy and support the transition towards distributed production.
- Preparations will start on a new Forestry Development Plan for 2020 in order to improve sustainable forest management.



## **FINLAND**

### **HIGHLIGHTS IN 2007**

The general election resulted in a change of government in 2007. A new coalition consisting of the Centre Party, the Conservatives and two smaller parties - the Greens and the Swedish People's Party won the elections. In 2007 the most significant environment policy initiatives dealt with climate change and biodiversity. New plans and strategies were approved for the transport and energy sectors to reduce greenhouse gas emissions. A comprehensive new waste plan was also launched this year that includes actions to prevent waste generation. A new comprehensive biodiversity action plan was published specifying more than a hundred various measures across sectors.

#### **Climate change**

In 2005 greenhouse gas emissions were 69.3 million tonnes CO<sub>2</sub> eq. or 2.6% less than in the base year. According to projections for 2010, Finland would meet its Kyoto target to stabilise the greenhouse gas emissions at the base year level with a 2% over-delivery only if additional measures are put in place. With existing policy measures, use of Kyoto mechanisms and carbon sinks there would be a significant shortfall of about 15.4%.

Finland continues to refine its energy policies, enhancing the competitiveness of renewable energy sources. With 26.9% of gross electricity consumption from renewable energy sources in 2005, it is nearing its 31.5% renewable electricity target for 2010. In 2005 combined heat and power generation accounted for 39% of gross electricity production (about 3 times the EU average). The energy intensity per capita is 241.5 kg oil equivalent/€1000 GDP, which is slightly above the EU average. Some of the factors behind the higher energy intensity are the cold climate, long distances for transport and an energy-intensive industry.

- A new transport strategy, Transport 2030, was launched in March. It includes a comprehensive policy to reduce the greenhouse gas emissions and improve daily travel conditions and to boost the competitiveness of business logistics.
- The National Energy Efficiency Action Plan was submitted to the EU in June, and sets strategy to achieve the 9% savings target for 2008-2017.
- Finland is progressing with the implementation of its 2005 National Strategy for adaptation to climate change.
- Subsidies and energy tax exemptions support investment in renewable energy sources. Additional support in the form of feed-in tariffs based on purchase obligations or green certificates is being considered for onshore wind power.

#### **Nature and biodiversity**

Newly approved proposals for the Natura 2000 network include 1 715 Sites of Community Importance covering 12.7% of the land area and 467 Special Protection Areas covering 7.5% of the land area. The network is incomplete but with recent significant progress.

In 2006 the share of organic farming was 6.4% of agricultural area, above the EU average. But it has registered a significant decrease since 2004.

- A new national action plan for the conservation and sustainable use of biodiversity until 2016 has been published after a wide-ranging evaluation of the previous plan that covered 1997-2005. More than hundred actions have been defined across all government sectors. In the environmental sphere special attention has been given to safeguarding national habitats and species in the forests of Southern Finland, which are widely used for commercial forestry. Natural wetland habitats will be restored in areas used for forestry and peat extraction, and artificial wetlands will be created in farmland to boost biodiversity and reduce nutrient runoff.
- Finland's first national landscape conservation area under the Nature Conservation Act was established in June. Its goal is to preserve Skärlandet's natural and cultural landscapes in the inner archipelago area of the Gulf of Finland.
- New methods of safeguarding biodiversity have been developed in connection with the Southern Finland Forest Biodiversity Programme. The first phase of the programme, which is built on forest conservation methods based on voluntary participation by landowners, includes natural values trading, competitive bidding and co-operation networks.

### **Environment and health**

- The first European Commission report on the implementation of the Water Framework Directive showed that Finland is significantly behind in implementing the Directive. More efforts are needed in the near future.

### **Natural resources and waste**

The amount of municipal waste generated in Finland in 2006 was 488 kg per capita, against an EU average of 517. However, most of this (286 kg, 58,6%) was landfilled, 42 kg per person (8,6%) was incinerated, and 33% of municipal waste was treated by other means including composting and recycling.

- The proposal for a new national waste plan was launched in January. It describes waste management policy and goals until 2016. The plan contains a separate action plan for preventing the generation of waste. According to estimates, implementation of the action plan will reduce the amount of municipal waste by 1% each year.
- At the Helsinki Commission's annual meeting in March, Finland's initiative to forbid vessels from discharging sewage into the Baltic Sea did not succeed. Finland proposed a new initiative to take the issue further. According to the proposal the discharge of sewage into the Baltic Sea should be included in the action plan for protecting the Baltic Sea.

### **Use of market-based instruments**

Environmental taxes represented 6.9% of total revenues from taxes and social contributions in 2005. Due to the relatively heavy vehicle taxation, the share of transport taxes is higher than the EU average; that of energy taxes is lower.

- Planned tax cuts on industrial electricity use will reduce the level of energy taxation further. Oil waste duty, which is collected on lubricants and lubrication products, was raised in early 2007 by 5.75 cents/kg (previously 4.2 cents/kg). Electricity tax for household consumers and taxation on coal will also be increased. A possible increase in waste tax is being investigated, as well as the introduction of pricing models for transport based on actual use and the testing of smart toll systems.

## **OUTLOOK FOR 2008**

- A new energy conservation programme for goods transport and logistics for the period 2008–2016 is being prepared by the government. The programme will link energy conservation in goods transport with purchase contracts in transport services, training in economic driving, and implementation of R&D knowledge.
- The government will prepare a new strategy on Energy and Climate change, and have a political debate in the parliament in the spring of 2008 for approval.
- Green public procurement procedures will be implemented in all ministries in 2008 to ensure that suppliers are complying with a set of environmental standards.
- A new wide-ranging action plan designed to promote biodiversity in the forests of Southern Finland will be launched with the aim of halting the ongoing decline in forest species and habitats. The measures are designed to improve the network of protected forests and to enhance the forestry practices applied in commercially managed forests to the benefit of biodiversity.
- The government plans to increase proceeds from environmental taxes by €300 million during the four-year term. For this purpose, waste tax, light fuel oil, petrol, diesel oil, electricity tax for domestic consumers, and coal tax would be investigated.

## FRANCE

### HIGHLIGHTS 2007

In order to show its commitment to incorporate sustainable development into all relevant policies, the newly elected government created the Ministry of Ecology, Sustainable Development and Town and Country Planning (MEDAD). MEDAD addresses policy issues related to housing, transport, energy and ecology, thus acknowledging the cross-sectoral nature of environmental policies, and giving the new ministry a wider policy scope.

A major consultation process – *Grenelle de l'environnement* – was launched in the summer of 2007 and was aimed at creating a broad consensus on environmental policies in France. It assembled representatives of civil society, major stakeholders and representatives of the government, with the goal of elaborating a plan for sustainable development in France. The *Grenelle de l'environnement* culminated in December with over 30 initiatives being launched.

#### Climate change

Even though 2005 emissions were 1.9% below 1990, France, according to recent projections, will only meet its Kyoto target of stabilising emissions at the 1990 level if additional measures are put in place.

In 2006 12.4% of gross electricity consumption came from renewable sources. However, progress towards the 21% target for 2010 has been slow. In terms of energy efficiency, France had an energy intensity ratio at 185 kg oil equivalent/€1000 GDP in 2005, close to the EU average.

- A new initiative called "Domestic Projects" was introduced to allow economic actors previously not covered by the Emissions Trading System (ETS) - only 30% of actors are covered - to claim financial rewards for initiatives that reduce greenhouse gas emissions. It will do this by making a broader range of the economy part of a market mechanism geared towards reducing greenhouse gas emissions.
- In order to strengthen and update the Climate Plan adopted in 2004, new measures were implemented in 2007. Specifically construction and transport sectors were given increased regulatory attention since they are two of the main CO<sub>2</sub> emitters. More stringent energy efficiency requirements for new and existing buildings are an important new impetus in energy and climate change policy developments. In the transport sector, policies on biofuel incentives, energy labelling for cars, alternative transport development, and public funding for private sector transportation initiatives all form part of the core strategy to address climate change in the transport sector.
- Since January, the Savings Account for Industrial Development was replaced by a new Savings Account for Sustainable Development. Banks will have to use the collected amounts on these accounts partially (2% in 2008; 5% in 2009; 10% in 2010) for financing energy saving works in buildings. To attract investors, interest on this account is exempt from taxes.
- France also prepared in 2007 its National Strategy for adaptation to Climate Change, following a consultation with a wide range of affected sectors and stakeholders.

## **Nature and biodiversity**

Although the Natura 2000 network is still incomplete, there has been significant progress in benchmarks for designating Special Protected Areas (SPA) and Sites of Community Importance (SCI). 371 SPAs (representing 7.8% of France's land area) and 1 334 SCIs (8.5% of national land area) were established by the end of 2007. Natura 2000 does not include the overseas territories.

- France has overseas regions located on four continents and in three oceans, which are home to an exceptional biodiversity. They have as a whole more species than metropolitan France in every group. Overseas regions host 3 450 endemic plant species and 380 endemic vertebrate species. New national reserves have increased the percentage of land under protection. Among them are the National Amazonian Reserve of Guyana, the National Reserve of the Reunion Island and the Austral Lands Reserve, the largest in France.
- A new measure allows owners of remarkable natural spaces to deduct the maintenance costs from the calculation of land tax.

## **Environment and health**

- After years of debate, the Law on Water and the Aquatic Environment was adopted in December 2006. It aims to improve water management and introduces measures to achieve good surface water status by 2015 as required by the Water Framework Directive. The law introduces measures such as tax credits for rainwater collection systems and allows local government to levy a tax to improve water quality.

## **Natural Resources and waste**

553 kg per capita of municipal waste was generated in France in 2006. 192 kg per capita or almost 35% of the waste was sent to landfills and 183 kg per capita (33%) was incinerated, the rest of 178 kg per capita (32%) was treated by other means including recycling and composting.

- In the spring of 2007, France was condemned by the European Court of Justice for breaching EU rules on waste and waste landfills, more specifically concerning the presence of illegal landfills.
- The French government has adopted a national green public procurement action plan for the period 2007-2009. Among the objectives is a plan to reduce carbon dioxide emissions from administrative buildings and vehicles by 10% by 2008. The aim is to make France one of Europe's best performing states in green procurement.

## **Use of market-based instruments**

- For expenses related to the implementation of rainwater recovery systems, a credit on income taxes of 25% of total expenses can be claimed by private individuals from January 2007 to December 2009.
- A tax on coal consumption has been put in place and concerns different industries. The revenue will be used for implementation of the Climate Plan.

- Municipalities are allowed to fully or partially exempt buildings from land tax for 5 years if the latter fulfil energy efficient benchmarks.

## **OUTLOOK FOR 2008**

- Four policy thrusts will guide environment and sustainable development policy in 2008. Environmental protection is the first priority on the agenda for 2008. Secondly, investment in research and development in the aviation industry will contribute to reducing emissions and pollution in general. Thirdly, promotion of alternative transport modes, especially railways for both freight and passengers, will contribute to reaching stated environmental goals. Finally road and rail infrastructure maintenance are the fourth policy thrust that will define MEDAD's priorities for 2008.
- Some ideas proposed in *Grenelle de l'environnement*, including a new tax on motor vehicles linked with environmental performance or the development of a new environmental indicator (such as a "Green GDP"), have not been included in the calendar for legislative scrutiny in 2008, meaning they will not go before parliament before 2009.

## **GERMANY**

### **HIGHLIGHTS IN 2007**

Due to its Presidency of the EU Council and the G8, Germany's policy agenda was at the centre of international attention during the first half of 2007. In both fora, Germany promoted more ambitious climate change policies. The country is currently well placed to do so since it is on track to meet its commitment under the Kyoto Protocol, growth of renewables has been rapid and ambitious energy efficiency targets have been set.

The government presented domestic policy initiatives to underpin its claim to leadership in these areas. The Integrated Energy and Climate Programme is the key element. Fourteen legislative acts have been implemented as part of a comprehensive programme.

A ruling of the Federal Administrative Court established a right to effective protection from excessive levels of particulates, putting additional pressure to tackle the problem of air quality on municipalities.

#### **Climate change**

In 2005 greenhouse gas emissions were one billion tonnes CO<sub>2</sub> eq. which is 18.7% lower than in the base year. According to recent analysis, Germany – together with Sweden and the United Kingdom – is currently projected to be on track to achieve their targets using only existing domestic policies and measures.

In 2006 12% of gross electricity consumption came from renewable sources, and Germany is well on track to reach the target of 12.5% in 2010. The energy intensity ratio is 157 kg oil equivalent/€1000 GDP in 2005, below the EU average.

- The Allocation Act 2012 creates the framework for the launch of auctioning and regulates the allocation of emission allowances. The allocation to energy installations will be switched to a benchmarking system that rewards efficient installations. Around one-tenth of total allowances, i.e. 40 million allowances per year, will be sold.
- In August the federal government adopted the Integrated Energy and Climate Programme. It contains 29 measures designed to reduce greenhouse gas emissions by 40% in 2020 compared to 1990. A comprehensive implementation package was adopted in December. 14 legislative acts were implemented by end 2007. The key elements are: increasing energy efficiency, expansion of renewable energies, and more climate protection in transport sector.
- As part of the action package Germany aims to double the share of combined heat and power plants by 2020. Energy saving in buildings would deliver 30% reduction in energy consumption by 2009 and an additional 30% by 2012 with financing for the modernisation of energy systems of more than €1.4 billion a year. More ambitious standards will be introduced for nitrogen oxide emissions from new power plants.
- Existing instruments such as the Renewable Energy Sources Act or the incentive programme for renewables remain in place, subject to review to reinforce their economic efficiency. Offshore wind energy use will be expanded. The Renewable Energies Heat Act

would increase the share of renewable energies in the heat sector from the current 6% to 14% in 2020. Homeowners will be obliged to use renewables in new buildings. €350 million have been committed in 2008 and €500 million from 2009 for support programmes.

### **Nature and biodiversity**

The Natura 2000 network includes 4 617 Sites of Community Importance (9.9% of the land area) under the Habitats Directive and 568 Special Protection Areas (8.9% of the land area) under the Birds Directive. Although the Natura 2000 network is still incomplete, there has been recent significant progress in implementing the Directives.

- The National Strategy for Biological Diversity adopted in November seeks to better integrate biodiversity protection into environmental law.

### **Environment and health**

Germany has by far the highest level of freight transport (including road, rail and inland waterways) in the EU: in 2006 this represented 20% of all freight transport in the EU-27. In 2006 freight transport increased by 6.7% compared to 2005.

- A labelling system was established putting light vehicles and lorries into four different groups according to their emission levels with the aim of lowering particulate matter concentrations in urban areas. It entered into force in March and provides the basis for low emission zones that can only be accessed by vehicles meeting a certain emission standard. The first low emission zones in Berlin, Hannover and Cologne will take effect from January 2008.
- In a lawsuit brought against the City of Munich, the Federal Administrative Court ruled in September that a resident of an area with excessive concentrations of airborne particulates had an immediate claim to protection. The verdict will force German municipalities to take action to bring particulate matter levels below the EU limits.

### **Natural resources and waste**

The recycling rate of packaging waste was 68% in 2005, which is one of the highest rates of the EU. However, it is one of the few countries which show a negative trend in the recent years reported.

In 2006 Germany on average produced 566 kg of municipal waste per capita, of these 32% was incinerated (179 kg/per capita) and a minority landfilled (4 kg/per capita, or less than 1%), thus most went to the recycling collection system.

- The Packaging Waste Ordinance was amended in September by the federal government. It seeks to secure the availability and functioning of residential collection of sales packaging for recycling and fostering competition between the providers of services.

### **Environmental technologies**

- Total financing for research into sustainable development in the current legislative term is approximately €1.2 billion. In 2007, €255 million were allocated to the Climate Action Programme and around €150 million to a programme for energy research.



### **Use of market-based instruments**

- As part of the action package for implementing the Integrated Energy and Climate Programme, a revised motor vehicle tax and motorway toll rates apply to heavy vehicles since September. They take into account the impact of the vehicles on the environment. The federal government introduced financial incentives for buying new low-emission heavy lorries.

### **OUTLOOK FOR 2008**

- The reform of Germany's federal system of 2006 provided the opportunity to consolidate key areas of environmental regulation into a single statute book "Umweltgesetzbuch." It should contribute to a more coherent approach in environmental protection and simplify the adoption of new EU legislation. It will enter into force by the end of 2008.
- For the budget year 2008 a total of €2.6 billion (including up to €400 million from auctioning emissions allowances) will be available from the federal budget for climate protection – more than double the 2007 budget.

## **GREECE**

### **HIGHLIGHTS IN 2007**

The natural environment and biodiversity in Greece have been severely hit by fires, those of July and August 2007 being of dramatic proportions. Fires in Peloponnese, Attica and Euboea burnt a total of around 275 000 hectares, of which more than 30 000 ha Natura 2000 sites. Species, such as *Abies cephalonica* the Greek fir, and important habitat types and protected species populations were heavily affected.

Greece continues efforts to meet its commitments with regard to greenhouse gas emissions. The country is preparing additional measures which would allow Greece to reach the Kyoto target. It made progress on waste legislation by transposing the Packaging Waste Directive and the adoption of the national plan for the management of hazardous waste. Nevertheless, high number of illegal dumps is still an issue.

The government has concentrated its efforts on transposition of EU Directives. However, monitoring and enforcement is still weak, in spite of the efforts to establish a competent Environment Inspectorate, which is still experiencing staffing and financing problems.

### **Climate change**

Under the Kyoto Protocol and EU burden sharing agreement, Greece is committed to restricting the growth of greenhouse gas emissions to 25% for the period 2008-2012 compared to the base year. In 2005, emissions were 25.4% above base year levels. According to projections, Greece will achieve the Kyoto target only if additional measures are implemented. These include further penetration of natural gas, energy savings in industry and buildings, structural changes in agriculture and chemical industry and emissions reduction in transport and waste management.

Renewable energy contributed to about 12% of electricity consumption in 2006, slightly below the EU average. In 2005 the contribution of combined heat and power generation is limited to only 1.7%, far short of the EU average of 11%.

- The Greek authorities submitted to the European Commission the 2nd National Allocation Plan for emissions trading for the period 2008-2012. The European Commission asked for further reductions of emissions by 8.5%.

### **Nature and biodiversity**

- A National Strategy for Biodiversity is being drawn up to support an integrated approach to biodiversity conservation. An assessment of the conservation status of the habitat types and species of Community Interest took place in the context of the Habitats Directive.
- The Natura 2000 network includes 151 Special Protection Areas (SPA) for implementation of the Birds Directive (10% of the land area) and 239 Sites of Community Importance for the Habitats Directive (16.4% of the land area). The network is however still incomplete. The October 2007 ruling of the European Court of Justice pointed to the insufficient designation of SPAs in Greece, specifically because 45 areas of importance for the

conservation of birds, representing 60% of the overall area of importance, have not been classified as SPAs.

## **Environment and health**

- The disastrous fires during the summer had significant effects on the quality of the underground water which supplies many villages with drinking water. The fires have exacerbated already existing problem of high air pollution by causing further increase of particulates in the atmosphere resulting in numerous admissions to hospitals due to respiratory problems. In the long term, the loss of a large part of Attica forest is creating more difficult conditions regarding the quality of the atmosphere and raises concerns for the impacts on human health.
- Some of Greece's most important water resources are suffering from pollution. In 2007, it became clear that the Asopos River in central Greece, which supplies 10 000 local residents with drinking water, has alarmingly high levels of chromium, lead and nitrate – all potentially carcinogenic. Legal proceedings have been launched by the government against 13 manufacturers for dumping unprocessed wastewater into the river.
- Transposition of the Water Framework Directive is complete. However, implementation steps like the environmental analysis, due in 2004, or the setting up of the monitoring networks, due in 2007, have not been achieved. Greece is seriously lagging behind and the European Commission demanded more effort to this area.
- Air quality in urban areas is a major problem: in 2005 Greece had the highest ozone concentrations and the second highest concentrations of particulates, and data show a deterioration compared to 2004.

## **Natural resources and waste**

- In March, the national plan for the management of hazardous waste was adopted, which means completion of the institutional framework for hazardous waste management. However, the European Commission decided to take legal action against Greece, as the management plan adopted for hazardous waste is not sufficiently precise and the inventory of hazardous waste is not yet definitive for all categories. The transposition of the Directive on packaging and packaging waste has led to stricter targets for recycling and reuse. The recycling rate of packaging waste was 41.8% in 2005 (below the EU average of 55%). The European Commission's 2007 Assessments of National Reform Programmes for Growth and Jobs asked Greece to focus on protecting the environment by prioritising effective solid and water waste management and curbing greenhouse gas emissions.
- The European Commission in 2007 approved the Environment and Sustainable Development Programme under the EU Structural and Cohesion Funds for 2007-2013. Priorities include investment in solid waste management, rational use of water resources, modern waste water facilities, protection of natural resources and the efficient tackling of environmental risks. The total budget for this programme is € 2.25 billion.
- Municipal waste generated was 443 kg per person in 2006, this is 74 kg below the EU average. Most of this, 87%, was landfilled (above the EU average of 41%) and the rest was recycled - the ratio which should be reversed. Furthermore, Greece has committed to eliminating all illegal waste dumping sites by the end of 2008.

### **Use of market-based instruments**

- New measures to internalise external environmental costs include exemptions from circulation taxes for hybrid cars, and financial incentives for the development of photovoltaics and wind energy.

### **Environmental technologies**

- The government launched two funding schemes to promote environmental management systems in enterprises, especially SMEs.
- 180 organisations from the fields of research, technology and industry received funds from the Greek government in 2007 amounting to € 9.8 million for the adoption of environmental technologies by industry.

### **OUTLOOK FOR 2008**

- The Greek government is preparing a National Zoning Plan, which aims to promote a rational economic and housing development in the country, and to protect the environment.
- The government plans to set up Thematic Strategies for coastal and rural areas and launch a Biodiversity Action Plan to set up a national framework for biodiversity monitoring, as well as to carry out specific actions for threatened species and habitats and the restoration of the affected by the wild fires areas. These actions will be partially funded by the EU Structural and Cohesion Funds.

## **HUNGARY**

### **HIGHLIGHTS IN 2007**

The parliament adopted the National Sustainable Development Strategy, which also includes the establishment of a Sustainable Development Council. The new law on electrical energy adopted in June provides a supportive legal framework for electricity generation from renewable energy sources, including the revision of a feed-in tariff support scheme. Also a climate change law was adopted in June, and the government started preparations for a National Climate Change Strategy for 2008-2025.

The European Commission approved a number of Operational Programmes co-funded from the EU Structural and Cohesion Funds for 2007-2013. Environmental priorities include sustainable urban development, water management and increased use of renewable energy sources.

#### **Climate change**

Hungary reduced greenhouse gas emissions by 34.5% between the base year and 2005. According to projections, the Kyoto target will be overachieved by 22.5% in 2010.

In 2006 3.7% of electricity was produced from renewable resources, thus reaching the 2010 target of 3.6%, but it had decreased compared to the previous year.

- Hungary adopted a climate change law in June. On the basis of its provisions, Hungary is preparing a National Climate Change Strategy for the period 2008-2025.
- The government prepared the strategy Energy Policy for Hungary 2007-2020. Sustainability of energy production and energy efficiency are key objectives of the strategy, together with security of supply and improving the competitiveness of the sector.
- The new electricity law adopted by the parliament provides a supportive legal framework for electricity generation from renewable energy sources. It maintains and develops the feed-in tariff support scheme, and initiates an analysis of the possible future introduction of the green certificate system. In addition, the Strategy for increasing the use of renewable energies in Hungary 2007-2020 has been prepared.
- The European Commission in 2007 assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and cut the proposed number of emission permits to be allocated by 12% to 26.9 million tonnes CO<sub>2</sub> eq. per year. Hungary filed a lawsuit on the Commission Decision to the European Court of Justice. This does not affect the obligation to implement the National Allocation Plan in conformity with the Commission Decision.

#### **Nature and biodiversity**

- Nature protection in 2007 focused on management of Natura 2000 sites, design of nature and landscape protection, elaboration and execution of species conservation plan, and habitat rehabilitation. The Natura 2000 network in Hungary comprises 467 Sites of Community Interest (SCI) covering 15% of the territory and 55 Special Protection Areas

(SPA) for birds, which cover 14.5% of the territory. However, the network of SPAs is considered incomplete, and the SCI are being evaluated.

### **Environment and health**

- Strategic noise maps of Budapest and major roads and railways have been completed. A government decree has been put in place on protection from noise and mechanical vibrations outside the working environment.
- The European Regional Development Fund supported the development of an air quality monitoring system and data communications system. Since August, daily values Air Quality Index are accessible via the website.
- The government in 2007 launched the Programme "Hungary on Bicycles" which aims at promoting bicycle use and the development of bicycle infrastructure.

### **Natural resources and waste**

- The Development Strategy for Municipal Solid Waste Management 2007-2016 has been prepared, including a system for economic instruments on waste management to reduce waste quantity. In order to eliminate illegal dumping, the government has started a series of steps called "Green Commando", carried out by the environment authorities, the police, the civic guard, local governments and traffic authorities.
- In 2006 Hungary produced on average 468 kg per person of municipal waste, slightly below the EU average. Most of this, 80%, was landfilled (above the EU average of 41%), 8% was incinerated and the rest was recycled or composted.
- The European Commission in 2007 approved a number of Operational Programmes for Hungary under the Structural and Cohesion Funds for 2007-2013. Priorities of the Energy and Environment Operational Programme include: sustainable urban development (waste management, waste water treatment, drinking water), management of waters (flood protection, complex river catchment development, river basin management plans) and increased use of renewable energy sources. The total budget for this programme is €4.18 billion.

### **Use of market-based instruments**

Hungary's environmental tax revenues account for 7.4% of total tax revenues, slightly above the EU average. Most of this comes from energy taxes, the rest are taxes on transport.

### **Implementation**

Among the 10 Member States that joined the EU in 2004, Hungary has the lowest number (6) of infringements of EU environmental legislation as of 31 December 2007.

## **OUTLOOK FOR 2008**

- The National Environmental Programme for the period starting from 2009 will be prepared.
- A National Climate Change Strategy will be launched in 2008 after approval by the government and the parliament.
- The Green Investment Scheme supporting renewable energy and energy efficiency projects is to be introduced.

## **IRELAND**

### **HIGHLIGHTS IN 2007**

A general election in May resulted in a coalition government involving the Green Party. The coalition agreement includes an environmentally focused set of priorities.

The government published an energy white paper in March outlining a sustainable future for energy. Later in the year, a framework for biofuels was published along with an energy efficiency strategy. The €3 billion Rural Environmental Protection Scheme has been launched.

#### **Climate change**

In 2005 greenhouse gas emissions were 69.9 million tonnes CO<sub>2</sub> eq., an increase of 25.4% compared to the base year. According to projections for 2010 Ireland should have a slight over-delivery on its Kyoto target of stabilizing emissions at 13% over the base year level taking into account the effect of existing measures, Kyoto mechanisms and carbon sinks. Ireland's energy intensity has been falling since 1990. Ireland energy intensity is among the lowest in the EU, being 144 kg oil equivalent/€1000 GDP in 2005.

In 2006 8.5% of gross electricity consumption came from renewable sources, and Ireland is well placed to reach the target of 13.2% in 2010. In 2005 its share of combined heat and power (as a share of total electricity generation) is very low, 2.4%, while the EU average is 11%.

- The National Climate Change Strategy was revised in 2007 to impose further measures to ensure that the Kyoto targets will be met. The Carbon Fund Act was passed to pave the way for the use of Kyoto Protocol flexible mechanisms.
- In March the government published an energy white paper, which set several new targets, including an ambition of at least 500MW of installed ocean energy capacity by 2020 along with further investment into solar energy. Renewables must account for 15% of electricity by 2010.
- The Building Energy Rating System was introduced. It will cover all new non-residential buildings as well as all housing offered for rent or sale. New national building standards will require new housing to have 40% lower heat energy demand.
- In October, a draft National Energy Efficiency Action Plan was published with details on further progress towards reducing energy demand. Significant energy efficiency targets have been set with 30% savings in energy across the electricity, transport and heating sectors by 2020 and 33% for the public sector.

#### **Nature and biodiversity**

- The Natura 2000 network includes 413 Sites of Community Importance (10.2% of the land area) and 131 Special Protection Areas (2.9% of the land area) but it is still incomplete. In December, the European Court of Justice ruled that Ireland's network of Special Protection



Areas (among the smallest in the EU) needed to be enlarged and the measures to protect it improved.

- In August the €3 billion Rural Environmental Protection Scheme was launched to protect rural landscape, increase biodiversity and improve water quality. The scheme sets out initiatives until 2013 and encourages farmers to reduce the use of fertilisers and to lower greenhouse gas emissions.

### **Environment and health**

- New regulations regarding emissions of volatile organic compounds covering paints, varnishes and vehicle refinishing products were adopted. All products covered by the Regulations must be labelled to indicate volatile organic compound content.
- The first European Commission report on implementation of the Water Framework Directive (WFD) showed that Ireland is setting up a well organised process towards the development of the first river basin management plans in 2009, which is the most important milestone in WFD implementation.
- In the first half of 2007, one of Ireland's largest public water supplies, serving the city of Galway, was contaminated with *Cryptosporidium*, a human pathogen found in drinking water sources contaminated with human and animal wastes. This further confirmed the existence of drinking water problems in Ireland resulting from a combination of source pollution and inadequate treatment.

### **Natural resources and waste**

Between 1995 and 2006 municipal waste generation increased significantly to 804 kg per capita in 2006, the highest in the EU. Almost 60% from municipal waste is landfilled.

- Ireland's new government committed itself to the establishment of new waste management targets like the objective that 10% of waste (or less) be consigned to landfill. At the present time, no date has been set for this target.

### **Use of market-based instruments**

As a percentage of total taxation Ireland's environmental tax revenues are 7.4% of total revenues, somewhat above the EU average. About half of revenue comes from transport tax and the rest is levied on energy.

### **OUTLOOK FOR 2008**

- As part of the National Climate Change Strategy, the government will publish a Comprehensive Demand Side Management Plan, which will propose that greater priority should be given to sustained cost-effective demand reduction initiatives for residential and business sectors.
- Financial incentives will be offered to households from 2008 to upgrade the energy efficiency of older housing stock.

- Building facilities managers will have an additional tool to assess energy consumption with the introduction of the Building Energy Rating for new non-residential buildings for sale or rent from July 2008 and for existing buildings from January 2009.
- Sustainable Travel and Transport Action Plan will be published in 2008. It will set out detailed plans for enhancing the energy efficiency and wider sustainability of the transport sector.

## ITALY

### HIGHLIGHTS 2007

The Italian Sustainable Development Strategy and efforts to promote renewable energy and energy efficiency show the interest of the government in environment policy. However, difficulties related to the transfer of competencies between national and regional level continue to complicate and delay the application of legislation.

One of the most important events of the year has been the National Climate Change Conference in September, which has put forward different priorities including the strengthening energy saving incentives and the development of an early warning system for natural disasters.

The waste crisis in Naples and the surrounding region of Campania demonstrated the urgent need to adopt measures and a more strategic planning approach to waste management.

#### Climate change

With greenhouse gas emissions of 582.2 million tonnes CO<sub>2</sub> eq. in 2005 or 12.1% more than in 1990, Italy currently is a long way short of its Kyoto target. Italy has committed itself to a decrease of 6.5% in emissions in 2008-2012 compared to 1990. The recent projections indicate that it will fall short of the target by 12.7% if additional policies are not implemented. Particular concerns relate to the growth of electricity consumption and the large gap between the share of electricity from renewable sources (14.5% of gross electricity consumption for 2006) and the 2010 target of 25%. In terms of energy efficiency Italy was close to the EU average, with energy intensity at 190.7 kg oil equivalent/€1000 GDP in 2005.

- Energy efficiency has been given an increased attention with energy saving targets set for the period 2005-2009. A new mechanism called Energy Efficiency Securities or "white certificates" is being introduced.
- The Finance Act gave particular attention to the building sector introducing fiscal incentives up to 55% of the cost of reducing energy loss in buildings, promoting wider use of renewable energy such as installation of solar panels for hot water production and photovoltaic technologies.
- €200 million per year have been channelled into measures promoting co-generation, use of renewable energy source for electricity or heat, substitution of industrial electric motors with high efficiency motors, phasing out nitrogen dioxide from industrial processes and R&D pilot projects on new low emissions energy sources.

#### Nature and biodiversity

Most recent data show that in 2006, organic farming represented 9% of agricultural area in Italy which is the third highest from all Member States, and around 17% of the total organic area in the EU.

- Soil erosion continues to be an important issue (30% of coastal areas affected). Illegal construction continues to grow. According to some estimates, 140 000 illegal buildings were built in 2001–2005 and legalised through special ad hoc legislation.
- As part of the Natura 2000 network there were 589 Special Protection Areas (13.6% of the land area) and 2 283 Sites of Community Importance (14.2% of the land area) at the end of 2007 - both evaluated by the European Commission as incomplete but with recent significant progress.

### **Environment and health**

- Italy is still facing an important water pollution threat, especially in certain river basins due to inadequate waste water treatment. Transposition and implementation of the Water Framework Directive is still incomplete. The European Commission has sent a final warning that Italy will face renewed court action and possible fines if the country does not fully transpose EU environmental laws in line with the judgement of the European Court of Justice of 2006.
- Italy has serious air pollution in urban areas: in 2005 it had the highest concentrations of particulates and the second highest concentrations of ozone, in the EU. In 2007, there were several Italian cities whose pollution levels were particularly high, e.g. in Turin concentrations exceeded maximum levels during 190 days.
- With regard to environmental damage regulation, a joint plan by the Ministry of Environment and the Ministry of Economics was formulated in January. The plan aims to reassign the sums paid by companies to the state in compensation for damages inflicted on the environment to a general budget supporting environmental priorities.

### **Natural resources and waste**

140 million tonnes of waste were produced in 2005, of which 22.5% were municipal waste, 40% industrial waste (9% hazardous waste) and the remaining 37% construction waste. Municipal waste had increased in 2006 reaching 548 kg per capita a year, 52% was landfilled and 12% incinerated. Water consumption per capita is still higher than the EU average (730 m<sup>3</sup> against the EU average of 530 m<sup>3</sup>) due to the inefficient distribution network.

- The waste crisis in Naples and the surrounding region of Campania resulted in more than 100 000 tonnes of refuse accumulating in the streets. It demonstrated the urgent need to adopt measures and a more strategic planning approach to waste management. The European Commission launched new infringement proceedings in June when the scale of the problem in Campania became clear.
- Italy has been repeatedly censured by the European Court of Justice for failing to implement EU waste rules, most recently in December. Earlier in the year, Italy was condemned by the Court for the presence of thousands of illegal landfills in its territory.
- In 2007 the tax on municipal waste was replaced with a fee based on the polluter pays principle.

### **Implementation**

Italy has the highest number of ongoing infringements of EU environmental legislation: 60 as of 31 December 2007. Most of these relate to nature protection and waste legislation.

## **Better regulation**

- In November, the government approved a draft law on environmental accountability; if this becomes law, it will oblige local, regional and national governments to set up and adopt an accountability system to be presented in parallel to the public budgets.

## **OUTLOOK FOR 2008**

- Following the recent political crisis that led to the resignation of the Prodi government in January 2008, it is difficult to ascertain what the environment policy priorities will be in 2008 and which of the measures planned by the outgoing government will be actually implemented. However, it can be expected that many of the priorities and plans, described below, will still be on the political agenda.
- The plans for 2008 introduce further incentive measures to support renewable energy sources and energy efficiency of buildings and household appliances.
- The severe shortcomings of Italy's waste management system are a political priority to be addressed in 2008. This also means stepping up the fight against the so called "ecomafia." In 2007, a specific division was created within the Carabinieri police corps, tasked with identification and persecution of environmental crimes. It is planned to continue and extend these operations in 2008.
- Full implementation of the EU Energy Performance of Buildings Directive, with its obligations in terms of use of renewables in new and existing building, is planned for 2008.

## LATVIA

### HIGHLIGHTS 2007

The National Strategic Reference Framework 2007-2013 and Operational Programmes co-financed by the EU Structural and Cohesion Funds were approved in 2007. They will provide funding for investment in water, waste water and waste management infrastructure, conservation of biodiversity, rehabilitation of contaminated sites, energy efficiency and promotion of renewable energy. €920 million or 20% of the EU Structural and Cohesion Funds have been allocated to these measures.

#### Climate change

According to the most recent data, greenhouse gas emissions were 10.9 million tonnes CO<sub>2</sub> eq. in 2005, a decrease of 58% compared to the base year. Energy intensity was 644.8 kg oil equivalent/€1000 GDP in 2005 (above the EU average).

The share of renewables in gross electricity consumption was 37.7 % in 2006, down 10.7% from the previous year. The target for 2010 is 49.3%. Among the new Member States, Latvia had the highest share of electricity generation from combined heat and power in 2005, with more than 30%. The EU average is about 11%.

- The European Commission assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and substantially cut the proposed number of emission permits to be allocated by 55% to 3.43 million tonnes CO<sub>2</sub> eq. per year. Latvia filed a lawsuit on the Commission Decision to the European Court of Justice. This does not affect the obligation to implement the National Allocation Plan in conformity with the Commission Decision.
- The Regulation on Electricity Production from Renewable Energy Resources was approved in July to facilitate electricity production from renewables. It sets criteria for producers of renewable electricity, procedures for tenders on renewable electricity and the share for each of the renewable electricity source to be achieved by 2010. It also describes the measures to facilitate electricity production from biomass: financial support for the production of biomass and for investment in biomass co-generation plants.
- The Law on Energy Certification for Buildings was approved by the government, and submitted to the parliament. The aim is to implement energy certification for the existing and new buildings.
- The government relies on EU Structural and Cohesion Funds as the main financial sources for supporting the use of renewable energy resources, cogeneration plants and energy efficiency. Approximately €157 million of these Funds will be allocated to the energy sector and increasing energy efficiency in the 2007-2013 period.
- The government adopted a programme on biogas production and use. The programme includes measures such as developing an information system on biogas resources, R&D on biogas technologies and pilot projects in biogas production. Currently biogas co-generation stations have a capacity of 7.8 MW and produce approximately one percent of the total electricity produced from renewable sources. Under the programme, biogas production would increase four times by 2011.

## **Nature and biodiversity**

98 Special Protection Areas (9.7% of the total land area) and 331 Sites of Community Importance (11% of the total land area) are part of Natura 2000 network. State financing for nature conservation was €5.8 million in 2007. The network of Special Protection Areas is not yet complete, and of Sites of Community Interest is being evaluated.

Organic farming in 2006 represented 10.3% of agricultural area in Latvia, which is the second highest from all Member States. It also showed the most important increase compared to 2004, among Member States.

## **Environment and Health**

- In July, the government adopted amendments to the Law on Chemical Substances and Chemical Products in order to comply with the European Chemicals legislation (REACH). It will prevent duplication of specific norms concerning the management of chemicals.

## **Natural resources and waste**

Municipal waste generation has grown rapidly from 270 to 411 kg per capita between 2000 and 2006 (mainly due to an improved reporting system since 2006). The share of the municipal waste landfilled decreased from 93% to 71% in the same period, with less than 1% going to incineration.

- Regional waste management plans have been approved by the government. They foresee the introduction of separated waste management systems, investment in waste management technologies, closure and re-generation of landfills.

## **Better regulation**

- Amendments have been made to the permitting procedure under the Integrated Pollution Prevention and Control Directive to clarify permit requirements (reduce the amount of information requested) therefore reducing the administrative burden and improving environmental effectiveness.
- A new regulation on environmental liability was passed to hold polluters responsible for their actions thus transposing the Environmental Liability Directive. It should ensure that in the future environmental damage is prevented or remedied, and that those who cause it are held responsible.

## **Use of market-based instruments**

In 2005 environmental taxes represented 9.2% of total tax revenues (EU average was 6.6%), energy related taxes being 7.7% of total tax revenue, the highest share in the EU.

- The government submitted a proposal for a new extra tax on plastic bags, in order to reduce consumption.



## **OUTLOOK FOR 2008**

- The government will prepare the new Environment Policy Strategy 2009–2015. The Strategy will include targets and measures to tackle environmental problems during the next seven years.
- The government plans to prepare and adopt the Strategy for Environmental Monitoring in the first half of 2008.

## **LITHUANIA**

### **HIGHLIGHTS 2007**

One of the most significant developments has been the adoption of a new Strategic Action Plan for the Environment 2007-2009. The planned measures would facilitate the reduction of water, soil and air pollution.

A new comprehensive National Energy Strategy defining the main targets and measures until 2025 was approved in January.

Environment and sustainable development is one of the five priorities for EU Structural and Cohesion Funds assistance during the period 2007-2013. Main activities include developing water supply and waste water treatment systems, creating modern waste management systems, improving air quality, increasing the efficiency of energy generation and consumption and the use of renewable energy resources.

### **Climate change**

In 2005 greenhouse gas emissions were 22.6 million tonnes CO<sub>2</sub> eq. or 53.1% less than in the base year. According to the projections for 2010 Lithuania would easily meet its Kyoto target of 8% reduction in greenhouse gas emissions despite the growth in emissions over the recent years.

Energy intensity is high at 949 kg oil equivalent/€1000 GDP. Renewable energy sources accounted for 3.9% of gross electricity consumption in 2005 and the target is 7% for 2010.

- A new programme for apartment buildings will increase energy efficiency significantly and reduce expenditure on heating by approximately 30 % on average. 390 projects have been prepared for an amount of approximately €70 million, and 150 projects have been already completed.
- The new National Energy Strategy includes developing storage capacities of petroleum products, oil and gas, connection of electricity networks with the Scandinavian countries and Poland, increasing the share of renewable energy resources and improving energy efficiency. Lithuania is facing challenges with the planned decommissioning of the Ignalina power plant in 2009 that has been generating 75-88% of its electricity since 1993 and intends to replace it before 2015.
- With the installation of the planned wind and biomass power plants, renewable sources are expected to reach the target by 2010.
- The European Commission in 2007 assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and substantially cut the proposed number of emission permits to be allocated by 47% to 8.8 million tonnes CO<sub>2</sub> eq. per year. Lithuania filed a lawsuit on the Commission Decision to the European Court of Justice. This does not affect the obligation to implement the National Allocation Plan in conformity with the Commission Decision.

## **Nature and biodiversity**

As part of the Natura 2000 network there were 77 Special Protection Areas and 267 Sites of Community Importance covering respectively 8.1% and 9.9% of the land area by the end of 2007. Progress in establishing the Special Protection Areas is not yet complete while requirements under the Habitats Directive have only been met by 60%.

- The Biodiversity Conservation and Protected Areas Planning and Management Programme for 2007-2013 was adopted by the government to promote conservation measures for species and habitats, including protection of endangered species and habitats, control of invasive species, inventory of habitats and creation of a habitats monitoring system.

## **Environment and health**

- The launch of newly built and reconstructed waste water cleaning plants, waste water collection and drinking water supply networks in the main cities is expected to result in cleaner water bodies and improved quality of drinking water for many households.

## **Natural resources and waste**

- In 2006 an average of 390 kg of municipal waste per capita was produced, below the EU average, but showing a steady increase compared to previous years. The share of landfilled waste was more than 90% ; the EU average is about 40%. In 2005 32,5% of packaging waste was recycled (EU average is 55%). Significant efforts need to be undertaken in order to change the situation and allow the country to comply with the targets of the Packaging Directive, the Landfill Directive and the requirements of the revised Waste Framework Directive.
- A National Strategic Waste Management Plan prepared by the government in September contains priorities and measures for 2007-2013. An important issue is the development of a household waste management system, where landfills posing an environmental risk will be replaced by modern regional waste management centres.

## **OUTLOOK FOR 2008**

- Further implementation of the National Strategic Waste Management plan will be important in 2008. Main activities are waste prevention and recycling, control and monitoring of compliance with waste management requirements, improving legal framework, and strengthening the administrative competencies of waste managers and control institutions.
- The Baltic Energy Strategy will be approved at the next meeting of the heads of governments of Latvia, Estonia and Lithuania in spring 2008. The main focuses will be the integration of the supply systems of electricity and natural gas into the EU energy market and increasing production of renewable and local energy.

## **LUXEMBOURG**

### **HIGHLIGHTS 2007**

Climate change and energy have been at the heart of the public debate during 2007, mainly because of implementation of the 2006 Plan on the reduction of CO<sub>2</sub> emissions. Two initiatives targeted the transport sector: a progressive rise in excise taxes on road fuels and increased taxes on vehicles emitting higher levels of CO<sub>2</sub>. The 2007 National Plan for Protection of Nature also drew attention to biodiversity issues.

#### **Climate change**

Under the Community burden-sharing agreement Luxembourg has an ambitious goal for greenhouse gas emissions: a reduction of 28% for the period 2008–2012 compared to 1990. In 2005, emissions were 12.7 million tonnes CO<sub>2</sub> eq. or 0.4% more than 1990. Projections for 2010 indicate that the gap to achieving the Kyoto target will be 2.7% unless additional policies are implemented.

In 2006 3.5% of gross electricity consumption in Luxembourg came from renewable sources and Luxembourg is well placed to achieve the target of producing 5.7% of electricity consumption from renewable sources in 2010. Energy intensity was 189.9 kg oil equivalent/€1000 GDP in 2005, slightly below the EU average.

- Besides the above mentioned transport measures, the government also announced other initiatives in the Action Plan on Reduction of CO<sub>2</sub> emissions, including awareness raising on how to save energy and the reinforcement of existing subsidies for renewable energy and energy saving measures in the housing sector, Legislation on thermal insulation has come into force introducing more ambitious energy performance standards for new buildings.

#### **Nature and biodiversity**

As part of Natura 2000 network there were 12 Special Protection Areas (5.4% of total land area) and 48 Sites of Community Importance (15.4% of total land area) by the end of 2007. Progress in establishing the Special Protection Areas is largely complete, but the network of Sites of Community Importance is still incomplete.

- In May the first National Plan for the Protection of Nature was adopted for 2007–2011. The plan establishes two goals: halting biodiversity loss by 2010 and protecting landscapes and eco-system processes. It also sets seven specific targets and 41 measures related to the targets, of which 15 are considered high priority. The specific targets are, for example, designation and appropriate management of protected zones, updating legal instruments on planning, scientific monitoring of the efficiency of nature protection policies, and promoting scientific research on biodiversity and nature conservation.

#### **Environment and health**

- The number of water courses considered extremely polluted fell significantly from 7.2% in 2003 to 1.9% in 2005. Nevertheless, there are still 15.6% of watercourses which present a high level of pollution and 40.3% which present a moderate level of pollution. In order to

achieve the 2015 goal of the Water Framework Directive, the government approved the framework law on water that created an integrated approach to environmental protection of water.

### **Natural resources and waste**

Between 1995 and 2006, the amount of municipal waste rose from 592 kg per capita to 702 kg, one of the highest in the EU. Of this, 38% was incinerated, 19% are landfilled and the rest (more than 40%) treated by other means such as recycling or composting. 63% of packaging waste was recycled in 2005, which is above the EU average.

### **Implementation**

At the end of 2007, 40% of infringements of EU environmental legislation (i.e. 8 out of 20) related to air legislation.

### **OUTLOOK FOR 2008**

- According to the Draft Budget the priority in environmental policies will be the further implementation of the National Plan for reducing CO<sub>2</sub> emissions, including a database on low energy products, efforts on energy labelling, monitoring and evaluation on greenhouse gas emissions.
- A Climate Forum will take place in May. It will evaluate the measures taken to reduce greenhouse gas emissions.
- A new National Plan for Sustainable Development will be prepared in 2008 by a cross-departmental committee on sustainable development.
- There will be implementation of the National Plan of Protection of Nature, adopted in May 2007.

## **MALTA**

### **HIGHLIGHTS 2007**

Malta's economic growth is driven by energy-dependent sectors such as air transport and tourism. Economic growth remains tightly coupled to energy consumption. Environment policy in Malta is largely focused on the measures that also create benefits for tourism sector such as marine environmental protection schemes and initiatives to improve waste management.

In 2007 a park and ride scheme and a controlled vehicle access scheme was introduced in Valletta to reduce urban congestion and cut air and noise pollution. The government has continued to work on regenerating old landfills and improving the waste management infrastructure.

#### **Climate change**

Greenhouse gas emissions have continued to rise in recent years and reached 3.4 million tonnes CO<sub>2</sub> eq. in 2005, an increase of 6.1% compared to 2004. Under its existing policies, emissions are projected to more than double between the base year and 2010. Malta does not have a greenhouse gas emissions reduction target under the Kyoto Protocol at present. The market penetration of renewable energies is minor. Energy intensity at 269.9 kg oil equivalent/€1000 GDP in 2005 is higher than the EU average and following decreases in the late 1990s it has begun to rise again.

- Most climate related action in 2007 addressed energy consumption with subsidies for more efficient household appliances and renewables (e.g. adoption of photovoltaic technologies). The possibility of an offshore wind farm and a connection to the European energy networks to buy renewable-sourced electricity is currently being investigated. It would also serve to diversify the energy mix.

#### **Nature and biodiversity**

- Malta remains the only Member State to permit the hunting of birds during their spring migration. In 2006, the European Commission started legal proceedings against Malta on the basis that this was in breach of its obligations of the Birds Directive. The case is expected to be heard by the Court in 2008, with the European Commission requesting an injunction from the Court should Malta once again adopt legislation permitting spring hunting.
- At present Malta seems unlikely to meet its target of halting the decline in biodiversity by 2010. As part of Natura 2000 network by the end of 2007 Malta has proposed 12 Special Protection Areas (SPA) and 27 Sites of Community Importance (SCI) covering respectively 4.5% and 12.6% of its area. The present coverage of SPAs in particular is insufficient and the European Commission has launched legal proceedings to require further sites to be designated.
- St. Georges Bay has become the first beach in Malta to obtain the Blue Flag status for meeting international standards for environmental management. The Maltese government

has embarked on a policy of creating new beaches to reduce tourism pressure during peak months and improving management practices.

### **Natural resources and waste**

- Demand on Malta's supply of water is particularly high in the summer months when freshwater reserves are at their scarcest. The country's deteriorating groundwater leads to increased use of desalination, eight times more energy-intensive than extraction from groundwater. Efforts to better regulate groundwater extraction remain hampered by a large proportion of the groundwater being privately owned.
- Malta has continued to develop its waste management infrastructure and two out of three planned waste water treatment plants should be operational by the end of 2007. Several waste treatment plants have been undergoing renovation in 2007, and one will incorporate a digestion facility to process biodegradable waste.
- In 2006 on average 652 kg of municipal waste per capita were produced, way above the EU average. Malta performs badly in terms of municipal waste recycling: 86% were landfilled (more than double of EU average) with only 13% recycled or composted. Significant efforts need to be undertaken in order to change the situation and allow the country to comply with the targets of the Packaging Directive, the Landfill Directive and the requirements of the revised Waste Framework Directive.
- Malta has never reported data on the recycling rate of packaging waste, and the European Commission has launched an infringement procedure for not respecting this mandatory reporting.

### **Better regulation**

- Malta has established a Better Regulation Unit to monitor and address administrative burdens on businesses. Measures to improve efficiency may eventually translate into lower resource demand and reduced environmental impact.

### **Use of market-based instruments**

In 2005 environmental taxes represented 10% of total tax revenues. Environmental taxes on transport were 5.5% of total tax revenues, the highest share in EU countries (EU average 1.5%).

- A 1% excise duty discrimination in favour of biofuels has led to a fourfold increase in sales, even though it still accounts for less than one percent of transport fuel.
- A fixed feed-in tariff has been introduced on low power photovoltaic installations and VAT on solar systems has been reduced from 15% to 5%.

### **Implementation**

At the end of 2007, Malta had the highest number of infringements within the New Member States (who joined the EU in 2004) and almost 50% of infringements of EU environmental legislation (12 out of 26) related to air legislation.

## **OUTLOOK FOR 2008**

The budget for 2008 places an increasing emphasis on the environment with almost €200 million being allocated towards renewable energy and energy efficient buildings as well as plans for incentive schemes to encourage industry to adopt environmentally-friendly technologies.

The Green Public Procurement Plan is awaiting approval from the government.



## **THE NETHERLANDS**

### **HIGHLIGHTS 2007**

As in many other Member States, environment policy in the Netherlands in 2007 focused especially on energy and climate change. Activities in this area included a new National Climate Strategy for Adaptation, a national plan "Clean and Efficient" for steering the economy towards greater energy sustainability and lower emissions and spatial planning programmes such as "Space for the River" which integrates climate adaptation and mitigation policies into spatial planning.

#### **Climate Change**

In 2005 greenhouse gas emissions were 212.1 million tonnes CO<sub>2</sub> eq., a 1.1% decrease since the base year. Projections for 2010 indicate that the Netherlands will achieve the Kyoto target with a 4.1% over-delivery.

The Netherlands had an energy intensity of 196 kg oil equivalent/€1000 GDP in 2005, which is around the EU average. In 2006 almost 8% of gross electricity consumption came from renewable sources, while the target is 9% for 2010. In 2005 almost 30% of electricity was generated from combined heat and power, among the highest levels in EU.

- The government has adopted a plan "Clean and Efficient" to reduce greenhouse gas emissions, increase energy efficiency and increase the use of renewable forms of energy. The targets are to reduce emissions by 30% compared to 1990 levels by 2020, increase the rate of energy saving from 1% to 2% per annum and to increase the proportion of sustainable energy to 20% of total energy use by 2020.
- The government awarded an additional €12.6 million for energy saving projects, and agreed to invest an additional €43 million in the transition to cleaner household energy. The financing will be used partly for research on projects aimed at testing new energy technology.
- The subsidies previously available for investors in renewable energy will be reinstated under strict conditions. The subsidies will depend on the wholesale price of electricity and will be limited in size. In 2007, the Netherlands presented its national programme on climate adaptation and spatial planning, including internal administrative arrangements for implementing this strategy.

#### **Nature and biodiversity**

The Natura 2000 network included 77 Special Protection Areas and 142 Sites of Community Importance by the end of 2007. The progress in establishing these areas is largely complete. The Netherlands has been the first to comply with the minimum standards of the Habitats Directive.

- The government has continued to purchase more land for nature development in 2007 and encouraged regional initiatives to promote nature and biodiversity plans.

## **Environment and health**

- The government decided to allocate €300 million to improve air quality through transport-related measures such as compulsory filters and catalytic converters in the period up to 2010. Concrete measures are expected in 2008.
- Air quality is a major problem in urban areas although concentrations of particulate matter and ozone have shown a decrease in recent years.

## **Natural resources and waste**

From the 625 kg/per capita of municipal waste produced in 2006, 34% were incinerated and only 2% were landfilled, the rest being treated by other means such as recycling or composting.

- The National Waste Management Plan was updated. It contains a policy framework and sector plans, and includes minimum requirements for the processing of waste products.
- On the basis of a new regulation subsidies can be requested for projects aimed at tackling waste with a budget of €16.4 million.

## **Environmental technologies**

- The government has decided to reserve €50 million until 2011 for research aimed at making the Netherlands "climate proof", so it can adjust to variations in climate in such a way that leaves no unplanned side-effects. During the next five years various government agencies and a broad research team from five institutions will develop the necessary knowledge.
- Additional loans are supplied to investment funds providing financing to start-up companies in clean energy technology and in tests with cleaner buses in the public transport.
- €60 million have been earmarked for a European invitation to tender for development of CO<sub>2</sub> underground carbon capture technology.

## **Implementation**

At the end of 2007, the Netherlands had 8 EU environmental legislation infringement cases, thus being the country with the smallest number among the EU-15.

## **OUTLOOK FOR 2008**

- The government is expected to introduce specific legislation for implementation of the national "Clean and Efficient" plan.
- The government has agreed to develop a framework to stimulate sustainable energy production.
- Detailed plans for improving the health quality of the housing stock that can simultaneously generate energy efficiency are due to be revealed in 2008.

- Research is ongoing into a feasible toll system for driving linked to the number of kilometres.

## **POLAND**

### **HIGHLIGHTS 2007**

The early elections in October 2007 and consecutive change of government prevented some environmental laws and strategies from being adopted by parliament. This concerns in particular the updated National Environment Policy 2007-2013, a major strategic document.

The European Commission in late 2007 approved a number of Operational Programmes co-financed by the EU Structural and Cohesion Funds for 2007-2013. Priorities of the "Infrastructure and Environment Operational Programme" include water, sewage and waste management infrastructure and energy efficiency. The total budget of this programme is € 37.6 billion, the biggest ever operational programme in the whole of the European Union.

#### **Climate change**

Greenhouse gas emissions in Poland decreased by 32% in the period between the base year 1988 and 2005. This means that emissions were considerably lower than the threshold set in the Kyoto Protocol (6% reduction). Although emissions will grow to some extent, the projections suggest that by 2010 Poland will have emissions 28% below the base year.

In 2006 almost 3% of gross electricity consumption came from renewable sources, which is still far short of the 2010 target 5.7%. Energy intensity was 584.7 kg oil equivalent/€1000 GDP in 2005, far above the EU average.

- In July 2007 the amended Energy Act introduced significant changes into the system supporting co-generation. Furthermore, based on the Energy Act the so-called 'red certificates' were introduced for energy originating from co-generation.
- The European Commission in 2007 assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and cut the proposed number of emission permits to be allocated by 27% to 208.5 million tonnes CO<sub>2</sub> eq. per year. Poland filed a lawsuit on the Commission Decision to the European Court of Justice. This does not affect the obligation to implement the National Allocation Plan in conformity with the Commission Decision.
- The Act on the monitoring system and control of liquid fuel quality and the Act on bio-components and liquid biofuels are in force since 1 January 2007. Both legal instruments are essential for the functioning of the market for bio-components and liquid biofuels.

#### **Nature and biodiversity**

- Efforts of the Ministry of Environment were focused on completing the list of Natura 2000 sites, including a complex stocktaking of the areas considered important for the Polish environment. The Natura 2000 network comprises 362 Sites of Community Interest (SCI) covering 9.1% of the land area and 124 Special Protection Areas (SPA) for birds, which cover 16.1% of land area. But the network of SPAs is considered as incomplete, the SCI is being evaluated. Poland is very far from reaching the minimum standards of the Habitats Directive, having reached only 17% of its target (the minimum value among Member States).

- The European Commission filed a lawsuit against Poland to the European Court of Justice over the construction of the Augustow and Wasilkow road bypasses. The construction of the two roads could damage important nature areas like primeval woodland and a unique wetland system considered to be of exceptional European value by scientists. Following the lawsuit, work on the two bypasses has been suspended.
- The government adopted the National Action Plan for Organic Food and Farming in Poland 2007-2013 together with the National Rural Development Plan 2007-2013.

### **Environment and health**

Air quality is an increasing problem in urban areas: concentrations of particulate matter and ozone in 2005 were very high and they had increased significantly compared to 2004. Among the new Member States, Poland is the country with the highest levels of freight transport in 2006.

### **Natural resources and waste**

In 2006 Poland produced 259 kg/capita of municipal waste, the lowest amount in EU (50% of EU average). More than 90% were landfilled. Poland recycled 29.5% of its packaging waste in 2005, far below the EU average of 55%. Significant efforts need to be undertaken in order to change the situation and allow the country to comply with the targets of the Packaging Directive, the Landfill Directive and the requirements of the revised Waste Framework Directive.

- In November 2006 the government adopted the renewed National Waste Management Plan till 2010. It specifies the competencies of local and regional authorities in this field more precisely.

### **Environmental technologies**

- The Implementation Programme for the National Environmental Technologies Action Plan for 2007-2009 was adopted in February. Priority thematic areas for environmental technologies include protection of water resources, the air protection and the mitigation of global climate change, sustainable production and consumption, including integrated product policy and soil protection research.

### **OUTLOOK FOR 2008**

- The Energy Efficiency Act is scheduled to be adopted in May 2008, in line with the provisions of the Energy Performance Directive. The Act sets out the obligatory 'white certificates' mechanism, by which energy companies involved in electricity, natural gas and heat sales to end users may obtain, extinguish or trade certain numbers of certificates of energy-saving actions.
- In December 2008 the next Conference of the Parties of the United Nations Framework Convention on Climate Change will take place in Poznań. Like the Bali conference, the Poznań event is expected to raise public debate about climate change after the US Presidential elections.

- A green public procurement guide for contracting authorities is expected to be issued in 2008.

## **PORTUGAL**

### **HIGHLIGHTS 2007**

The environmental priorities for the Portuguese Presidency during the 2<sup>nd</sup> half of 2007 were climate change, water scarcity and drought, and biodiversity. Portugal led the EU delegation at the global climate talks in Bali, and hosted a major stakeholders conference with the aim of linking business with biodiversity issues. The Portuguese Presidency also successfully concluded negotiations on the important air quality and marine strategy directives.

Also in 2007, the National Climate Change Plan and the National Plan for Allocation of CO<sub>2</sub> emission allowances were completed. The Carbon Fund, with a budget over €354 million for investing in Kyoto Protocol Clean Development Mechanism projects, was put in place.

#### **Climate change**

Portugal has a target not to exceed the greenhouse gas emissions by more than 27% for the period 2008–2012 compared to the base year. In 2005 emissions were 85.5 million tonnes CO<sub>2</sub> eq. or an increase of 40.4%. Projections for 2010 indicate that it will fall short of achieving the Kyoto target unless additional policies are implemented.

In 2005, 16% of gross electricity consumption came from renewable sources, which is an important drop compared to 2004 (24%) and 2003 (36%), due to low hydropower production. Strong additional efforts will be necessary to achieve the target of producing 39% of electricity consumption from renewable sources in 2010. At 241.4 kg oil equivalent/€1000 GDP energy intensity was slightly above the EU average in 2005.

- The main pillars of the Portuguese strategy are the National Climate Change Plan approved in 2006 that introduced an action plan for all sectors, the National Plan for Allocation of CO<sub>2</sub> emission allowances approved in 2007, and the Carbon Fund established in 2006.
- The government unveiled a new and ambitious package of climate and energy measures aimed at reducing greenhouse gas emissions through an increase in renewable energy production. The national target for energy from renewable sources has been increased to 45% of gross energy consumption by 2010. Calls for tenders were launched for the construction of new plants.

#### **Nature and biodiversity**

As part of Natura 2000 network there were 50 Special Protection Areas (10.1% of the land area) and 94 Sites of Community Importance (17.4% of the land area) by the end of 2007, but the network is not yet complete.

- A number of initiatives aimed at restructuring the policy for conservation of nature and biodiversity were developed in recent years. The most important measure is the transformation of the Institute for Conservation of Nature and biodiversity, including streamlining of the proceedings and assigning the Institute a more proactive role.

## **Environment and health**

- The initiatives adopted in 2007 relate to the enforcement of legislation regarding the newly approved Water Law, the new Strategy on the Treatment of Water Supply and Waste Water for 2007-2013, and the new General Noise Scheme, which introduces a new noise indicator and noise limits.
- Air pollution is an important problem in urban areas, and the situation worsened slightly in 2005 compared to 2004, in terms of the concentrations of particulates matter and ozone.

## **Natural resources and waste**

In 2006, 435 kg/per capita of municipal waste were generated in Portugal, against an EU average of 517. Of this, 63% were landfilled and 22 % were incinerated.

- A new Strategic Plan for solid urban waste was approved for the period 2007-2016. The plan aims at a substantial improvement in the treatment and selective collection of waste. It reinforces the role of the national Institute for the Regulation of Water and Waste responsible for this area.
- In parallel, and to coincide with the operational start of the co-incineration of dangerous wastes by two cement plants and the creation of the new Integral Centres for the recuperation, revalorisation and elimination of hazardous waste, the government has sped up all the necessary procedures to effectively set up these new Centres.

## **Use of market-based instruments**

- In 2007, promotion of the biofuels market was established through an increase in the oil and energy products tax and biofuels exemptions from this tax. The additional tax revenues will be transferred to the Carbon Fund.
- Motor vehicle tax was reformed to promote energy efficient vehicles. Since July the taxable base has included on average a 70% component related to the engine capacity and a 30% environmental component related to CO<sub>2</sub> emissions. From January 2008 the percentages were altered to 30% and 60%, respectively.

## **OUTLOOK FOR 2008**

- The national programme for the prevention of solid urban waste is planned for approval in 2008. It will complement the new Strategic Plan for Solid Urban Waste and addresses the need for preventive measures such as awareness raising and a new taxation system reflecting the expenses of managing solid urban waste.
- A working group has started work on the draft of a new strategy for the integral management of Portugal's shoreline. The new strategy will be publicly discussed and approved at the end of 2008 or the beginning of 2009.
- Legal implementation of the National Strategy for the Conservation of Nature and Biodiversity will be completed and new agreements between stakeholders will be sought for searching further funds for protected areas.



## **ROMANIA**

### **HIGHLIGHTS 2007**

Romania joined the European Union in January 2007. Transposing the acquis and preparing the institutional framework for the implementation of a broad range of new tasks dominated the environment policy agenda.

A new energy law and the Energy Strategy of Romania for 2007-2020 were adopted. They promote the use of renewable energy. The government started to revise and update the National Strategy and Action Plan on Climate Change. The strategy will cover the period 2008-2012 with a perspective to 2020.

The European Commission in 2007 adopted a number of Operational Programmes co-financed from the EU Structural and Cohesion Funds for 2007-2013. Environmental priorities include water and waste water systems, integrated waste management systems and rehabilitation of contaminated sites, restoration of urban heating systems, management systems for nature protection, infrastructure for natural risk prevention. The total budget of the programme for environment is € 5.6 billion.

#### **Climate change**

According to greenhouse gas emission projections, Romania will meet its Kyoto Protocol commitments even with strong economic development. Romania is required to decrease its greenhouse gas emission by 8% as compared to the 1989 level, while by 2005 emissions were reduced by 45.6 % mainly due to the economic transition.

The energy intensity of Romania in 2005 was 1 165 kg oil equivalent/€1000 GDP, which is more than five times the EU average and second highest in the EU. Therefore improving energy efficiency is an important objective. According to the government, around 80% of the initiatives from the National Action Plan on Climate Change for the period 2005-2007 are implemented. The revision of the National Strategy and Action Plan on Climate Change started in 2007 and will be finalised in the first half of 2008. In 2006, 31.4% of electricity was produced from renewable energy sources, close to the 2010 target; about 26% of electricity came from combined heat and power in 2005.

- A new energy law was adopted. The law promotes the use of new and renewable energy sources and gives the possibility to the government to approve support schemes for promoting electricity generation from renewable sources.
- The Energy Strategy of Romania for 2007-2020 was adopted in November. The planned objectives include increasing the share of electricity from renewable sources from 31% in 2006 to 33% in 2010, 35% in 2015 and 38% in 2020, producing energy through efficient co-generation and promoting end-use energy efficiency.
- The biofuel target for 2010 is 5.75%. A phase-in timetable was adopted in order to place on the market blends of biofuels and conventional fuels.
- The European Commission in 2007 assessed the National Allocation Plan for greenhouse gas emissions in 2008-2012 and substantially cut the proposed number of emission permits

to be allocated by 21% to 75.9 million tonnes CO<sub>2</sub> eq. per year. Romania filed a lawsuit on the Commission Decision to the European Court of Justice. This does not affect the obligation to implement the National Allocation Plan in conformity with the Commission Decision.

### **Nature and biodiversity**

- Its rich biodiversity is one of the most important natural assets of Romania. Concerning the Natura 2000 conservation network, Sites of Community Importance (SCI) cover 11 % of its land area, and Special Protected Areas (SPA) 16 %. The European Commission however opened an infringement case due to delays in designating SPAs. Romania sent a revised list to the European Commission in December.
- The government initiated a project for the organisation and establishment of a National Agency for Protected Natural Areas and Conservation of Biodiversity. The Agency will address conflicts of interest between nature conservation and infrastructural development projects.

### **Natural resources and waste**

- Waste management needs significant improvement in Romania. The average recycling rate for packaging waste was 23% in 2005, less than half of the EU average. Romania has set up a deposit-refund scheme to implement the Packaging Directive in order to decrease the amount of waste.
- In 2006 385 kg per capita of municipal waste (a large part of which is biowaste) were generated (less than EU average), the vast majority of which (85%) were landfilled. Significant efforts need to be undertaken in order to change the situation and allow the country to comply with the targets of the Packaging Directive, the Landfill Directive and the requirements of the revised Waste Framework Directive.
- Investment projects in the field of drinking water, sewage and waste disposal are under preparation, co-funded by EU Structural and Cohesion Funds. The focus is on drinking water and waste water treatment plants and networks, in particular in municipalities with less than 100 000 inhabitants. Similar investments are also covered by the National Rural Development Programme in rural municipalities.

### **Use of market-based instruments**

Environmental taxes as a share of total revenues from taxes and social contributions amounted to 7.4% in 2005, which is slightly above the EU average.

- In 2007, Romania set up a deposit-refund scheme to implement the EU directives on packaging waste in order to decrease the amount of packaging waste.

## **OUTLOOK FOR 2008**

- The government plans to finalise the revision of the National Sustainable Development Strategy, as well as the monitoring system for its implementation. The current strategy dates back to 1999 and needs to be updated.
- On water policy, government plans include the finalisation of river basin management plans, initiatives to reduce Black Sea coastal erosion and measures to improve civil protection by reducing the risk of floods, drought and extreme weather events.
- The updated National Strategy on Climate Change is expected to be adopted

## **SLOVAKIA**

### **HIGHLIGHTS 2007**

Environment policy in Slovakia has an increasing focus on climate change and energy. In 2007 the government approved an action plan on energy efficiency for the period 2008-2010. It also approved a strategy of increased use of renewable sources of energy, which aims to boost the amount of energy produced from renewable sources.

In December the European Commission adopted a Decision on proposed amendments to the Slovak national plan for allocating carbon dioxide emission allowances for the 2008-2012 trading period of the EU Emissions Trading Scheme.

#### **Climate change**

In 2005 greenhouse gas emissions were 33.6% below the base year level, so the Slovak Republic is currently well on track to meet the Kyoto target for greenhouse gas emissions. By 2010, its emissions are expected to be some 12% below the Kyoto target, and 15% when additional policy measures are taken into account. In 2006 16.6% of electricity was produced from renewable energy sources. In 2005 energy intensity was 868.6 kg oil equivalent/€1000 GDP, more than four times the EU average, and has steadily decreased in recent years.

- In October the government approved an action plan on energy efficiency for the period 2008-2010, according to which Slovakia should achieve savings in final energy consumption of 3% by 2010.
- The European Commission in December adopted a Decision on the proposed amendments to the Slovakian national plan for allocating carbon dioxide (CO<sub>2</sub>) emission allowances for the 2008-2012 trading period of the EU Emissions Trading Scheme. This Decision constituted the finalisation of the Commission's assessment of amendments. The cleared annual allocation for Slovakia for 2008-2012 is now fixed at 32.6 million CO<sub>2</sub> allowances, which is 20% below the amount requested by the Slovak government. Slovakia initially filed a lawsuit on the Commission Decision to the European Court of Justice but withdrew it in January 2008.
- The strategy of increased use of renewable sources of energy was approved by the government in April. It aims to boost the amount of energy produced from renewable sources, which was at 6.7% of total energy consumption in 2005. In line with this, the Ministry of Economy has prepared a programme for greater use of biomass and solar power in households.

#### **Nature and biodiversity**

In 2006 Slovakia had 6.4% of used agricultural land under organic farming, and a sizeable increase compared to the 2.5% of 2004.

- The government approved in June the National Forest Programme.

- Slovakia in June adopted a Law on Protection of and Trade in Endangered Species of Wild Fauna and Flora (CITES), which changes and complements domestic law and will be implemented from January 2008.
- The European Commission opened an infringement case on non-sufficient designation of Special Protection Areas for birds (SPA). Out of 38 areas to be protected according to the Birds Directive, in line with the government proposal of 2003, only 5 have so far been protected, and the government indicates that additional 15-16 SPAs are to be designated soon.
- In May the Ministry of Environment announced the new zoning of the Tatra National Park. The originally assigned A-zone, in which no economic activity could take place, was reduced by 3500 ha which also included areas protected under Natura 2000.

### **Environment and health**

- Bad air quality is a major concern in urban areas as population is exposed to high concentrations of particulates and ozone.

### **Natural resources and waste**

In 2006 around 300 kg/capita of municipal waste were generated in Slovakia, among the lowest amount in the EU. Of this about 78% was landfilled and 12 % was incinerated.

### **Better regulation**

- The government presented an 'Agenda of Better Regulation in the Slovak Republic' in July, according to which new legislative proposals should be accompanied by a Regulatory Impact Assessment, including an environmental impact assessment.

### **Use of market-based instruments**

- In accordance with the Eurovignette Regulation Slovakia in 2009 will introduce a tax based on distance driven, while taking into account the environmental performance of the vehicle and the number of axles.

### **OUTLOOK FOR 2008**

- Legislation on environmental burdens from the past (i.e. contaminated industrial land and old agricultural supplies of pesticides) is expected in the second quarter of 2008. The Slovak Environment Agency is preparing an inventory and building a corresponding information system on the environmental burdens in the country, which will be linked to the environment information system in the Slovak Republic. The work is expected to be finalised by the end of 2008.
- Slovakia plans in the period 2007-2013 to build 180 anti-flood installations with a total cost of €250 million, including in the Bratislava and Devín area in 2008-2009.
- The government is expected to adopt the third National Environment Action Plan and an Action Plan of the National Forest Programme.

## **SLOVENIA**

### **HIGHLIGHTS 2007**

Environment policy measures for 2007–2013 are outlined in the Operational Programme of Environmental and Transport Infrastructure Development co-financed by the EU Structural and Cohesion Funds. Significant investments are planned on energy efficiency, renewables and railway infrastructure. Measures to maintain biodiversity are included in the Rural Development Programme for 2007-2013.

#### **Climate change**

Under the Kyoto Protocol, Slovenia has taken measures to reduce greenhouse gas emissions by 8% in the period 2008-2012 compared to 1986 levels. In 2005 however emissions were 0.4% above the 1986 level. Most recent projections indicate that with existing measures greenhouse gas emissions are likely to exceed the Kyoto target by 3.5%; however, the country would meet its commitments with planned additional policies and measures.

With an energy intensity of 320 kg oil equivalent/€1000 GDP, Slovenia was above the EU average in 2005. Slovenia has a relatively high share (24.4 % in 2006) of renewable energy sources in its gross electricity consumption. However, high annual electricity demand is overshadowing the modest increases of recent years. National budget allocations for investment grants and feed-in tariffs put Slovenia in a good position to reach its 2010 target of 33.6%.

- Slovenia adopted the Operational Programme of Environmental and Transport Infrastructure Development for the period 2007-2013. Priorities include energy efficiency, energy production from renewable sources and co-generation.
- A joint declaration was issued with Germany and Spain on a renewable energy feed-in system to promote electricity production from renewable energy sources.

#### **Nature and biodiversity**

Slovenia is the Member State with the largest share of Natura 2000 areas proposed under the Habitats and Birds Directive, or 35.5% of total land area. The Natura 2000 network comprises 27 Special Protection Areas (SPA) and 259 Sites of Community Importance (SCI). However, the network of SPAs is not yet complete and SCIs are being evaluated.

#### **Natural resources and waste**

432 kg per capita of municipal waste was generated in Slovenia in 2006, a decrease from 596 kg in 1995. 362 kg per capita or almost 84% of the waste was sent to landfills.

- The main objectives of waste management policy are to increase material and energy recovery and reduce greenhouse gas emissions from organic wastes. The implementation of investment intensive projects such as regional waste management will continue to be supported with EU funds.

- In February, the Maribor Declaration on sustainable management of the Drava River basin was adopted. It intends to establish integrated cross border management of the basin area.
- The Rural Development Programme for 2007-2013 includes significant sustainable natural resource management measures such as improving the economic value of forests and the quality of agricultural production.

### **Environment and health**

Slovenia has the highest per capita NOx emissions from transport of all Member States. High concentrations of particulates and ozone are a severe problem in almost all parts of the country. However air quality plans are not yet in place in any major Slovenian city.

- In January the government adopted a revised programme on national emission ceilings for atmospheric pollutants.

### **Environmental technologies**

- Environmental investments are financed by the Environmental Fund. Legal amendments are under way to allow the Fund to make high risk investments in companies for the development and marketing of environmental technologies to a level of approximately €21 million.

### **Use of market-based instruments**

- Total environmental taxes as a share of total revenues from taxes and social contributions amounted to 8.2% in 2005, above the EU average.
- The government decided to establish a working group on environmental reform of public finances. It would aim at an integrated and balanced system of gradual reduction of fiscal burdens on labour and capital transactions, and a parallel increase in the use of environmental goods (soil, water, air, energy, raw materials, etc.).

### **OUTLOOK FOR 2008**

- Climate change and biodiversity will be Slovenia's top environment priorities under its EU presidency in the first half of 2008.
- New support schemes will be introduced for energy production from renewable energy sources.
- A national strategy on education for sustainable development is expected to be adopted in 2008.
- A Motor Vehicles Tax Act is under preparation whereby the tax burden applicable to motor vehicles will be made dependent on CO<sub>2</sub> emissions.

## **SPAIN**

### **HIGHLIGHTS 2007**

Of all Member States, Spain faces the biggest gap between its Kyoto target and emissions projections. Even with additional policies, the country expects to miss the target by 14%. Some important measures to combat climate change took place in 2007. In October, the National Council for Climate Change approved the National Strategy for Climate Change and in parallel the National Plan of Urgent Measures. This plan includes 198 measures and 75 indicators to monitor progress.

Spain has devoted efforts to plan, develop and approve the legislative framework for environment policy. The Law on Environmental Responsibility was approved by the parliament in October. It affects some 5 000 industrial sites, 30 000 transport companies and more than 1 million farms. Also in 2007, the Air Quality Strategy, the Law on Environmental Responsibility and the Law on Natural Heritage and Biodiversity Framework were adopted.

#### **Climate change**

Greenhouse gas emissions increased by 52.3% between the base year and 2005. Spain currently shows a sizeable gap between 2010 projections and its Kyoto target. Even with all additional policy measures, use of Kyoto mechanisms and carbon sinks, Spain is projected to miss the Kyoto emissions target by 14.2%. Spain will need to identify further emission reduction policies and measures.

- In October, the National Council for Climate change - involving all Spanish regional governments - approved both the National Strategy for Climate Change and the Plan of Urgent Measures. The Plan aims at achieving the objective of a 27.1 Mt CO<sub>2</sub>/year reduction in the period 2008-2012, which is, at present, still very far from being reached.
- Furthermore, the Spanish National Adaptation Plan to Climate Change has been prepared in end 2007 and it is currently under discussion.
- Other initiatives launched in 2007 aim at stimulating energy efficiency, and promoting cogeneration and offshore wind energy projects. In 2005 Spain produced 15% of electricity from renewable sources and plans to increase this share to 29% in 2010.
- The new "Hydrocarbons Law" introduced criteria for compulsory introduction of biofuels (1.9% in 2008, 3.5% in 2009 and 5.83% in 2010), in line with the Biofuel Directive.

#### **Nature and biodiversity**

- By the end of 2007, 23.4% of Spain's land area was designated as Site of Community Importance under the Habitats Directive, and 19.1% as Special Protection Area under the Birds Directive. However, the Natura 2000 conservation network is still incomplete.
- In June, the European Court of Justice ruled that Spain needed to further classify as SPAs territories of adequate size in the regions of Andalusia, the Balearics, and the Canaries, and territories of sufficient number in the regions of Andalusia, the Balearics, the Canaries, Castilla-La Mancha, Catalonia, Galicia and Valencia.



## **Environment and health**

- In 2007, efforts were made on the urban environment strategy, with focus on health problems related to air, and water quality and other environmental factors.
- The Spanish Air Quality Strategy was approved by the government in February. Its aim is to guarantee the effective implementation in Spain of the EU Thematic Strategy on Air Quality. Measures in the strategy include updating the legislative framework, strengthening administrative instruments, developing investment programmes and public information about air quality. Following the adoption of the Strategy, the cabinet drafted an Air Quality and Atmospheric Protection Law, which was sent to the parliament.

## **Natural resources and waste**

Spain produced 583 kg of municipal waste per capita in 2006, 13 % above the EU-average but this is 11 % less than in 2001. 289 kg/capita (50 %) went to landfill and only 41 kg/capita (7%) was incinerated, the rest was treated by other means.

- Water management and sustainable use is a key issue. The main aim in 2007 was to properly implement the Water Framework Directive, with strong attention on improving the irrigation systems. A law adopted in 2007 imposed stricter control on exploitation of water resources and particularly addressed the new construction areas.

## **Environmental technologies**

- The National Plan for Scientific Research, Development and Technology Innovation 2008-2011 approved in July puts particular emphasis on research into clean energy and renewable energy sources.

## **Implementation**

Spain had 42 ongoing cases of infringement of EU environmental legislation as of 31 December 2007, most of these relating to nature protection legislation and water legislation.

## **OUTLOOK FOR 2008**

- While a legislative framework and the main environmental strategies had been adopted in 2007 or before, the focus in 2008 should be on their implementation. This includes full application of the National Strategy for Climate Change and the Plan of Urgent Measures, application of the Renewable Energies Plan, the Air Quality Strategy and other measures.
- One outstanding area is coast management, where the situation is difficult due to overdevelopment. A law is planned.

## **SWEDEN**

### **HIGHLIGHTS 2007**

Some changes in the environment policy objectives were expected since a new government came into power in September 2006. The government emphasised two areas of importance: climate change and the marine environment, particularly pollution of the Baltic Sea. A range of new initiatives was launched aimed in particular at emissions from road traffic and more generally the use of fossil energy.

New measures have been introduced to prevent eutrophication in the Baltic Sea and Sweden has promoted stricter regulations for all countries along the Baltic Sea confirming its role as the driving force in this area.

#### **Climate change**

Sweden is on track to meet its EU burden sharing commitment to maximum increase its greenhouse gas emissions by 4% compared to the base year. According to projections, Sweden will achieve its target, using only existing domestic policies and measures. Greenhouse gas emissions were at 67 million tonnes CO<sub>2</sub> eq. in 2005 or a 7.4% decrease.

Electricity generated from renewable energy sources accounted for 48.2% of gross electricity consumption in Sweden in 2006. The target for Sweden is 60% of gross electricity consumption by 2010. Renewable energy produced from biowaste, solid biomass, off-shore wind and solar energy have shown significant growth in recent years. Energy intensity was 204 kg oil equivalent/€1000 GDP in 2005, slightly below the EU average.

- The government has announced that it will start a process of setting a new long-term target without committing to the 25% target of decrease in emissions in 2020 compared to 1990 introduced by the former government.
- In April, the government introduced a measure to support expanding wind power industry. 30 million Swedish crowns (€3.3 million) are allocated annually for two years to help municipalities and investors identifying optimal locations in terms of wind potential.

#### **Nature and biodiversity**

Under the Natura 2000 network 530 sites have been designated as Special Protection Area (6.2% of the land area) and 3 971 Sites of Community Importance (13.7% of the land area) by the end of 2007. The process is not yet complete, but there has been significant progress recently.

- Efforts to develop regional landscape strategies, a national action programme to conserve the genetic variation of wild plants and animals, and a national strategy and action plan to establish a system to manage the introduction and release of alien species and genotypes were under way in 2007.

#### **Environment and health**

- In order to limit air pollution caused by traffic, incentives to purchase diesel cars with particle filters have been in effect since April (the green car premium). An individual buying a new green car between April 2007 and December 2009 will receive a premium of 10 000 Swedish crowns or €940. The government has allocated about €27 million to the green car premium.
- From August a congestion tax was introduced in Stockholm to reduce congestion on roads, and for environmental reasons. For the first five years "green cars" are exempted from the tax.
- The first European Commission report on the implementation of the Water Framework Directive showed that Sweden is significantly behind in implementing the Directive. More efforts are needed in the near future.

### **Natural resources and waste**

In 2006, 497 kg/per capita of municipal waste were produced, around the EU average. Of this, 47% was incinerated, 5% was landfilled and the rest recycled or composted.

- Pollution of the Baltic Sea and the Skagerak Sea is one of the priority areas within environment policy, especially over-fertilisation, over-fishing and spills of hazardous substances. Some initiatives in this area begun in 2007 while others will be launched in the years to come.
- In order to cope with the growing challenge of eutrophication in the Baltic Sea, Sweden notified a proposal for a national ban on phosphates in laundry detergents for private use to the EU Commission.
- The government adopted an action plan to increase the environmental requirements in public procurement in March and added financing to support public institutions in specifying environmental requirements.

### **Environmental technologies**

According to two surveys by the Swedish Environmental Technology Council, Swedish environmental technology companies are at the forefront in the areas of renewable energy and water and waste water treatment. The most recent figures show an 11% increase in the sector's turnover between 2005 and 2006 amounting to about €10.4 billion. The exports increased by almost 20%, to €2.7 billion in 2006. Between 2003 and 2006 the exports of cleantech companies increased by 75%, turnover by 36% and employment by 13%.

### **Use of market-based instruments**

In 2005 environmental taxes represented 5.7% of total tax revenue, mostly related to energy.

### **OUTLOOK FOR 2008**

- The government will strengthen climate efforts with an upcoming Budget Bill allocating a further one billion Swedish crowns (€100 million) for 2008-2010 to climate research, energy efficiency measures, pilot and demonstration projects for second-generation

biofuels, network for wind power, sustainable yield of bioenergy in agriculture and forestry, climate investments in other countries, and a programme for sustainable cities.

- The government has proposed a climate tax package comprising a total of more than 3 billion Swedish crowns (€322 million) in higher energy and climate taxes in the Budget Bill for 2008. Carbon dioxide tax will be raised to a total of SEK 1.01 (€0.11)/kg carbon dioxide. For consumers, this will mean a total cost increase of SEK 0.29 (€0.03)/litre petrol.
- Further implementation of the Natura 2000 network continues and new marine Natura 2000 sites are expected to be proposed.

## **UNITED KINGDOM**

### **HIGHLIGHTS 2007**

The UK government was very active on energy and environment policy in 2007. A Climate Change Bill was published in November with targets for reductions in CO<sub>2</sub> emissions by 2020 and 2050. The Energy White Paper was released in May 2007 and sets out the government's international and domestic energy strategy to address the long-term energy challenges and deliver four energy policy goals: to cut CO<sub>2</sub> emissions by 60% by 2050, with real progress by 2020; to maintain the reliability of energy supplies; to promote competitive markets in the UK and beyond; to ensure that every home is adequately and affordably heated.

An Air Quality Strategy was announced with the overall aim of improving health through the adoption of emissions standards.

The government launched a new Waste Strategy for England. The objectives of the strategy include decoupling waste growth from economic growth and more emphasis on waste prevention and re-use.

#### **Climate change**

Greenhouse gas emissions were 657.4 million tonnes CO<sub>2</sub> eq. in 2005 or 15.7% less than in the base year. The UK is on course to meet its Kyoto target of 12.5% emission reduction and is – together with Sweden and Germany - one of the three Member States that should achieve it, using only existing domestic policies and measures. Energy intensity has been falling and was 202.6 kg oil equivalent/€1000 GDP in 2005, slightly lower than the EU average. Renewables accounted for 4.6 of gross electricity consumption in 2006; more measures might be necessary to reach the 10% target in 2010.

- A Climate Change Bill proposed to establish a 26-32% reduction in CO<sub>2</sub> emissions by 2020 against the 1990 level and at least a 60% reduction by 2050. An independent Committee on Climate Change will advise government on an 'optimal trajectory' to the 2050 target in the form of rolling three-to-five year carbon budgets.
- Energy efficiency gains in the residential sector have been aided by changes to Building Regulations covering the efficiency of boilers and thermal performance of windows.

#### **Nature and biodiversity**

The Natura 2000 network includes 265 Special Protection Areas (6.2% of total area) and 616 Sites of Community Importance (6.8% of total area) but is not yet complete. The Department of Environment, Food and Rural Affairs published a series of biodiversity indicators, which highlight the areas of key concern. These include farmland species, which have suffered a 45% decline since 1970, with bird populations particularly affected.

#### **Environment and health**

- The UK is meeting its targets to reduce air pollutants across 99% of the country's area. However, the targets will probably be missed in three of the nine key pollutants: particles,

ozone and nitrogen dioxide. In 2007, the UK reported also one air quality zone exceeding (daily) limit value for protection of human health for sulphur dioxide.

- An Air Quality Strategy was published in July with the overall aim of improving health through the adoption of new and more stringent European emissions standards to improve air quality.
- The government has set up a Beacon Scheme which recognises local authority excellence in managing air quality. 120 individual authority action plans had been submitted by July.

### **Natural resources and waste**

The UK produced 588 kg municipal waste per capita in 2006, this is 13.7% more than the EU average. 353 kg per capita (60%) were landfilled, 55 kg (9.3%) were incinerated and the rest was treated by other means, including recycling and composting.

- The government launched a new Waste Strategy for England. According to estimates, the strategy will save 9.3 million tonnes CO<sub>2</sub> eq. per year compared to 2006. The policies described in the strategy include information campaigns, investment in waste collection, and the use of public procurement to accelerate the development of less resource intensive products.
- The standard rate of tax on landfill will increase by €11 per year from 2008 to 2010. There will be consultation on removing the ban on local authorities from introducing household financial incentives for waste reduction and recycling.

### **Better regulation**

- 19 government departments have published simplification plans that would lead to private and third sector administrative savings of over €2.8 billion by 2010. The Department of Environment, Food and Rural Affairs aims to save €220 million or some 5.5% of its current resource budget.

### **Use of market-based instruments**

- The economic instrument that has delivered the largest emission reductions from businesses is the Climate Change Levy, a tax on the use of energy in industry, commerce and the public sector, which has been in force since 2001.
- UK energy and environment policy now places a much greater emphasis on traded instruments to promote technology development such as the Renewables Obligation.
- In 2005 the share of environmental taxes over total taxation revenue was 6.7%, around the EU average. This has steadily decreased since 2000.

### **Environmental technologies**

- The Energy Technologies Institute has raised over €420 million of private funds in addition to the government's commitment of €765 million over ten years and has announced a competition to design and build a project demonstrating Carbon Capture and Storage.

- The Market Transformation Programme has helped bring energy efficiency products to the market by working with regulators, advisory groups, business and government.
- In England the Business Resource Efficiency and Waste programme has the aim of reducing waste from business and returns some of the tax receipts to help improve resource efficiency and waste management.

### **OUTLOOK FOR 2008**

- The government submitted the Climate Change Bill to parliament in November 2007 and it is expected that this will be approved by mid-2008. The government also intends to submit the Energy Bill to implement the legislative aspects of the Energy White Paper with the aim of having these in place by summer 2008.
- Subject to consultation, some elements of the Waste Strategy announced in 2007 will be implemented in 2008. Local governments will work with retailers to implement a programme to reduce the use of plastic bags by 25% by the end of 2008.
- A report is expected in spring 2008 on progress towards improving the environmental performance of products across their life-cycle.