

Sustainable Development Strategy – implementation in Poland, aspect of the climate change

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Poland's strategic choices in the context of EU accession negotiations

Accession negotiations priorities:

- Achieve high level of civilisational development while at the same time having respect for environment
- Maintain high level of economic growth
- Improve infrastructure with the help of Structural Funds,
- Put off in time implementation of certain EU ecological regulations in order to achieve the above

Poland's strategic choices in the context of EU accession negotiations

Ecological legislation - which refers to the quality of life - cannot impede the growth of economy of new member states.

Poland received long transitional periods in many aspects of EU environment legislation

Kyoto Protocol commitments

- Poland assumed commitment to reduce its greenhouse gas emissions by 6% during 2008–2012 in relation to the 1988[1]) base year emissions

[1] The 1988 base year covers data from gaseous emissions including: carbon dioxide, methane and dinitrogen monoxide from 1988, and industrial gases of the HFCs and PFCs group, and and sulphur hexafluoride of 1995.

Kyoto Protocol commitments

- in 1988–2005 Poland achieved considerable reduction of greenhouse gas emissions by as much as 32%
- *reduces emisivity or unitary emission* - (amount of kg of emitted CO₂ per kg of production)

Climate change - EU commitments

In order to limit the growth of the mean global temperature by more than 2 C above the pre-industrial period level

- On 8-9 March 2007, the Council of Europe held its meeting which considered climate change issues the important priorities. So called 3 x 20 objectives were agreed upon there. i.e.:
- 20 % reduction of greenhouse gas emissions by 2020;
- 20% Community average share of energy produced with the renewable sources in the total energy use; achieve at least a 10% share of commercially available biofuels by 2020 in all Member States
- 20 % energy efficiency.

Climate change - EU commitments

- The principle of sharing the commitments („burden sharing” mechanism) has to be followed as it was applied in course of agreeing upon the reduction targets for the period the Kyoto Protocol 2008-2012

Climate change - EU Kyoto commitments up till 2012

- **By Decision 2002/358/EC, the Member States (EU-15) agreed upon the allocation scheme of 8-percent emission reduction which in a different degree imposed the burden on the Member States in meeting this commitment, allowing even for emission increases (Greece as much as by 25%, Spain by 15%, Portugal by 27%, Ireland by 13%, or Sweden by 4%). The highest reduction for that period was assigned to Luxemburg by 28%, Germany by 21%, Denmark by 21%, or United Kingdom by 12,5%.**

Climate change - EU Kyoto commitments up till 2012

- **According to Article 4 (4) of the Kyoto Protocol, 10 States which acceded the European Union on 1 May 2004 (EU-10, including Poland) are not included into overall EU commitment to reduce greenhouse gas emissions, i.e. 8% reduction in relation to 1990 during the first commitment period being 2008 – 2012.**
- **EU 10 does not have possibility to achieve 8 % reduction (around 2%)**
- **New EU Member States will have to contribute to the 8% reduction level.**

Allocation of the Emission Allowances for 2008 – 2012 for Poland

- Proposed Polish National Allocation Plan provided for 284 mln t allowances
- On 26 March 2007, the Commission of European Communities notified to Poland the Commission Decision on the National Allocation Plan for the allowances of greenhouse gas emissions
- The condition imposed by the European Commission to restrict the overall quantity of the allowances to about 208.5 million allowances per annum (25 % reduction) will undoubtedly have strong impact on restraining the national economic growth and causing disturbances to sustainable development.

Allocation of the Emission Allowances for 2008 – 2012 for Poland

- hampering of Poland's economic growth and in consequence the unavailability of the opportunities to eliminate the development gap those have emerged after Poland's integration with the European Union, essential growth in competitiveness of the manufactures from outside the European Union and discrimination of the Polish and the Community ones,
- relocation of the manufactures' production processes from Poland to outside of its national and the Community borders (to Ukraine, Belarus, Russia, China, for example those concerning cement, steel, paper, glass),

Allocation of the Emission Allowances for 2008 – 2012 for Poland

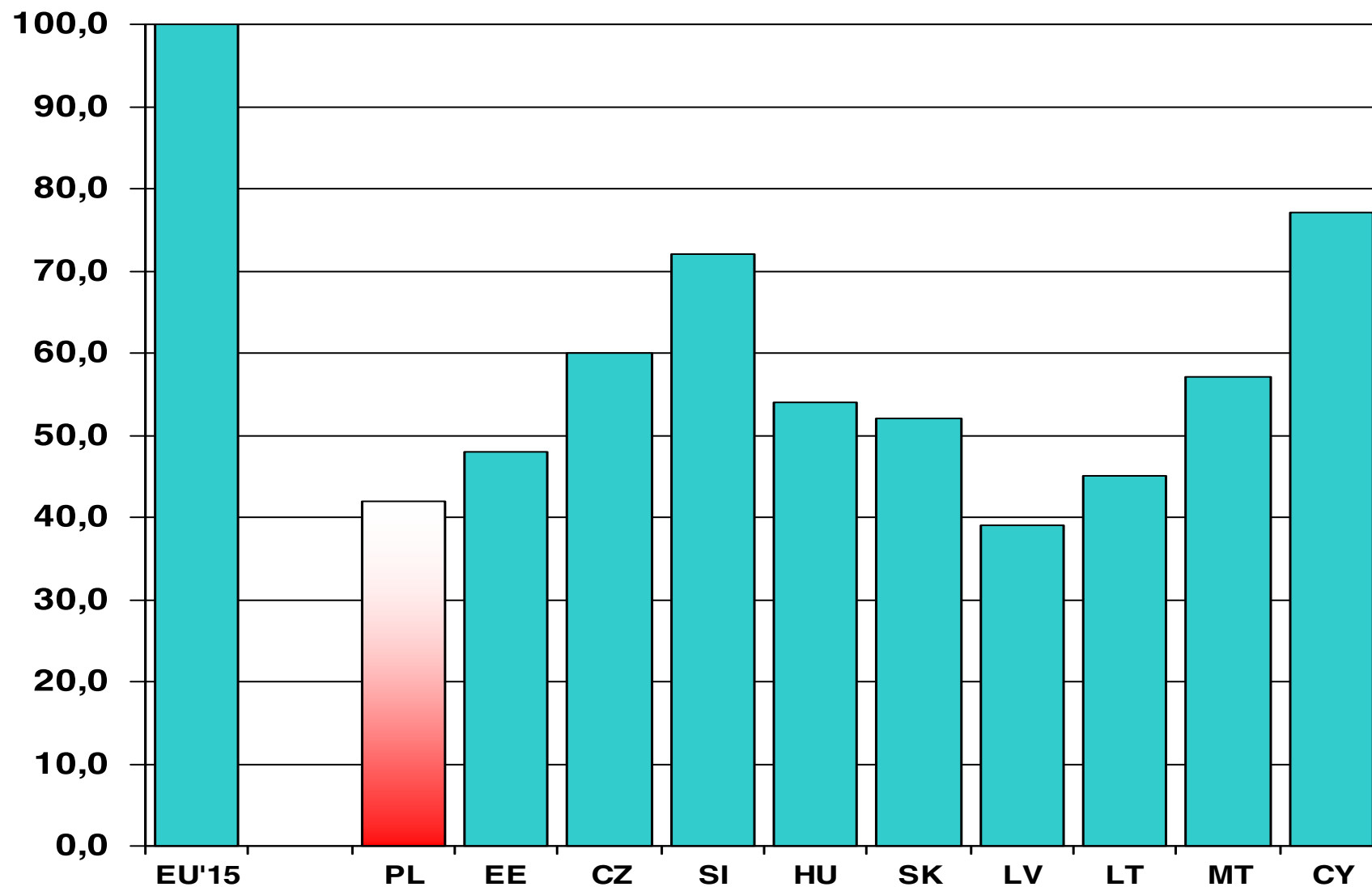
- growth in unemployment, drop of the budgetary income, negative impacts on the public finance, decline of the economic growth rate (as expressed in increase of GDP),
- reduction of Poland's attractiveness to foreign investors and in consequence slowing down the economic innovation,
- failure to use the Cohesion Fund and Structural Funds financial resources as presented to Poland to use during 2007– 2013 budgetary period.

Allocation of the Emission Allowances for 2008 – 2012 for Poland

- Polish developing economy requires very complex approach regarding allocation of CO₂ emission allowances for 2008 – 2012. Above all, the calculation formula has to take into account the need for rapid growth and specific situation of each particular sector covered by NAP.

Gross domestic product *per capita*

[%] of EU-15 average



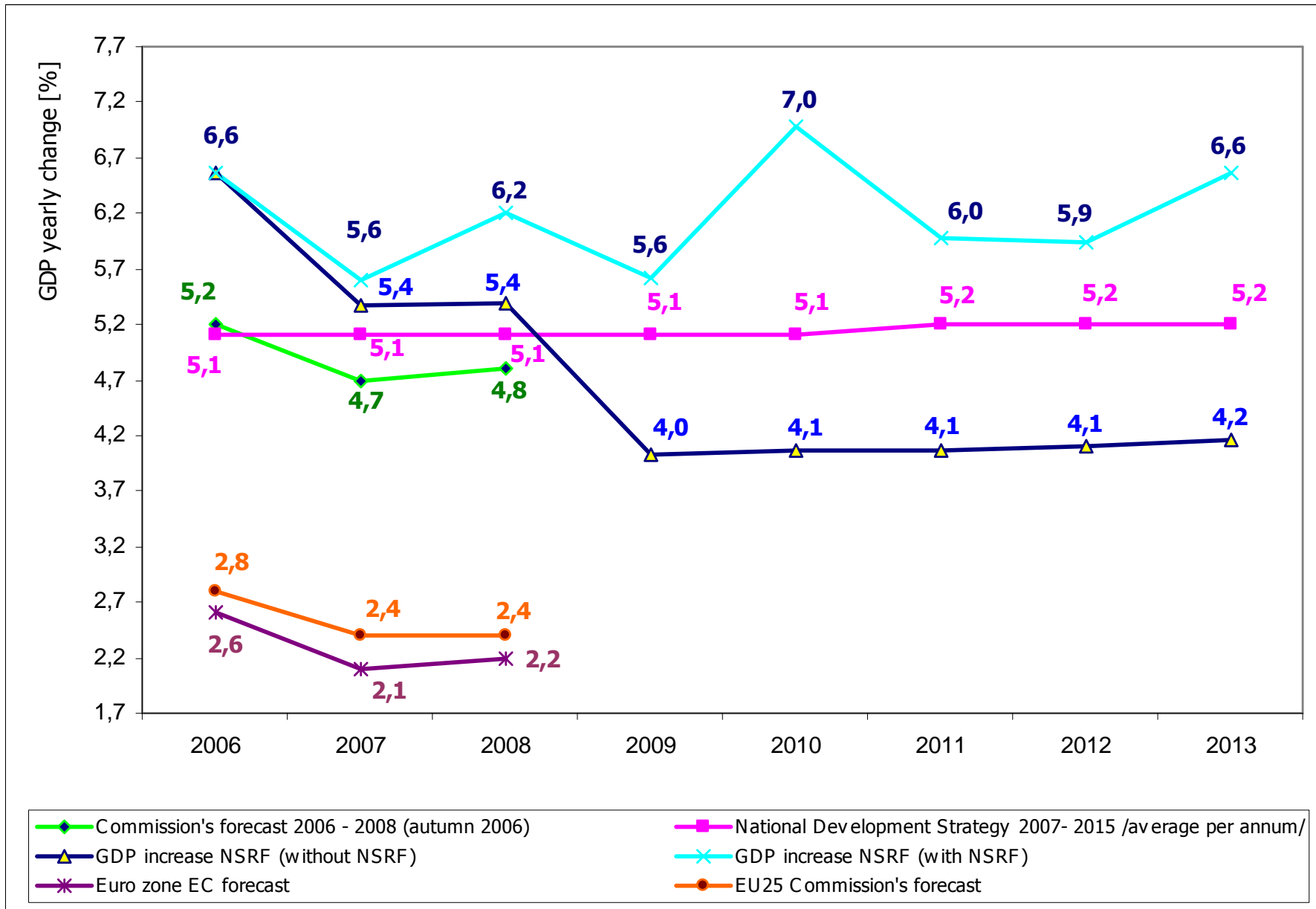
Poland today

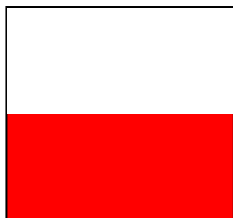
- Below EU average standards of living and consumption per capita.
- Many young, educated people work abroad
- The highest in EU25 unemployment rate and insufficient number of skilled personnel for new businesses in certain areas.
- Growing demand for new flats and houses.
- To fulfil this demand we need 10 flats/1000 people per annum

No of flats / an.	
<u>Spain</u>	
year 2002	9,2
year 2003	8,9
<u>Portugal</u>	
year 1999	10,5
year 2000	10,7
<u>Poland</u> now	2,6

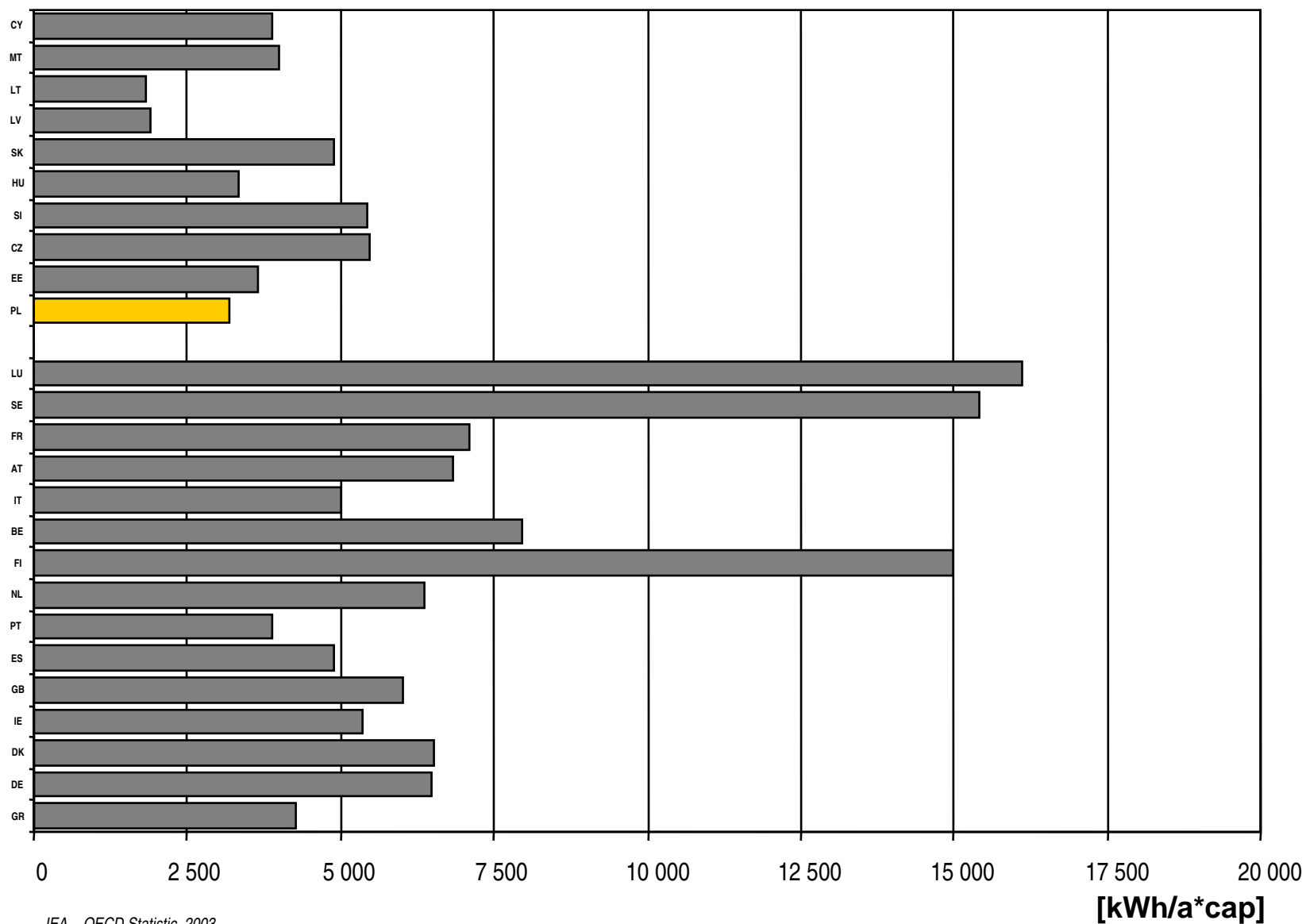
- Development is the only reasonable solution for all Poles as well as for the environment thanks to new technologies that can ensure lower emissions.

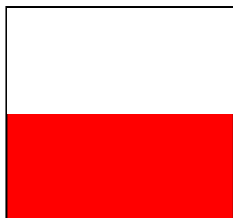
New National Development Strategy



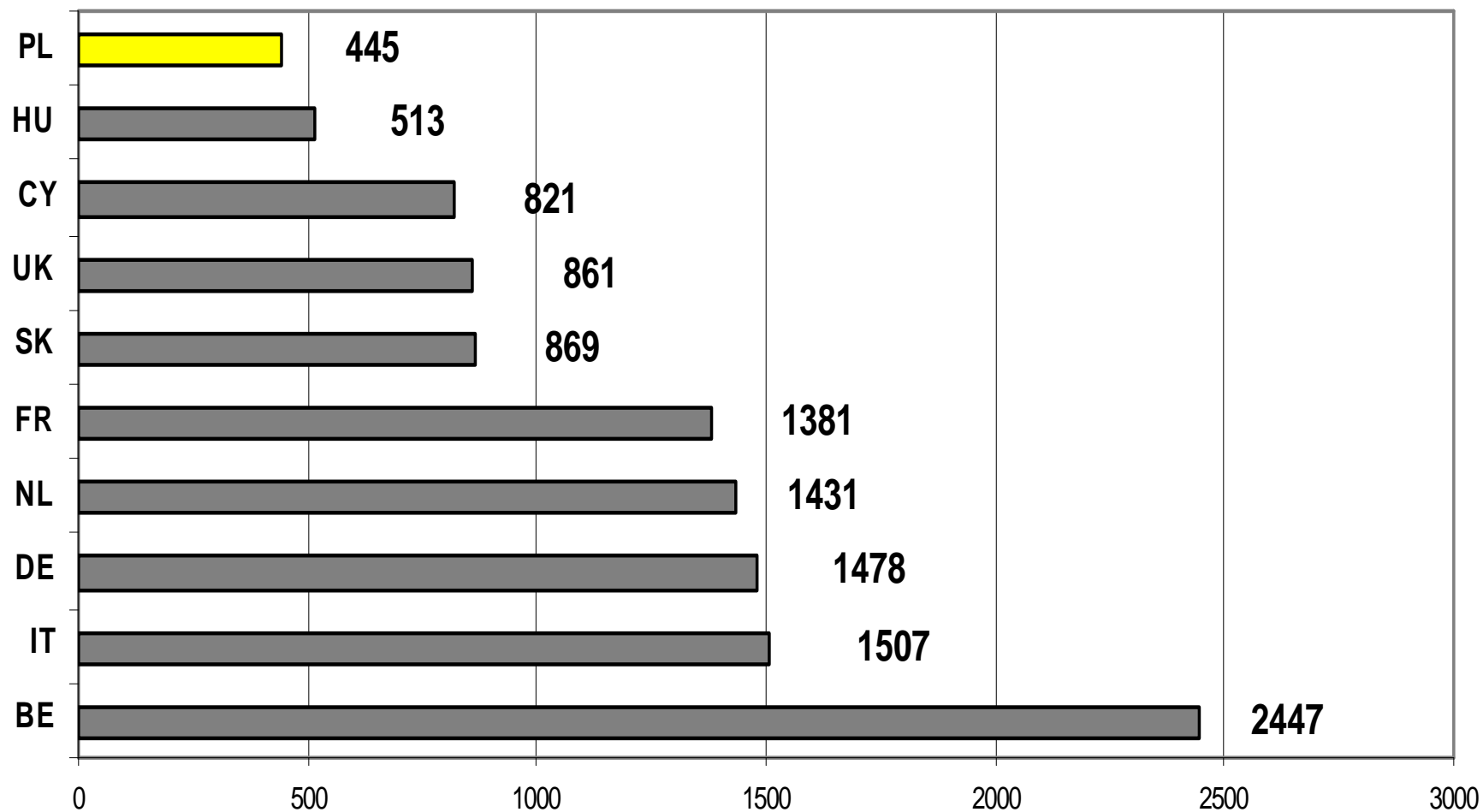


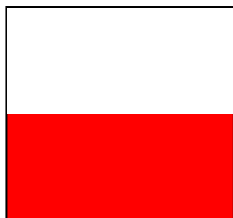
Electricity consumption per capita in 2003



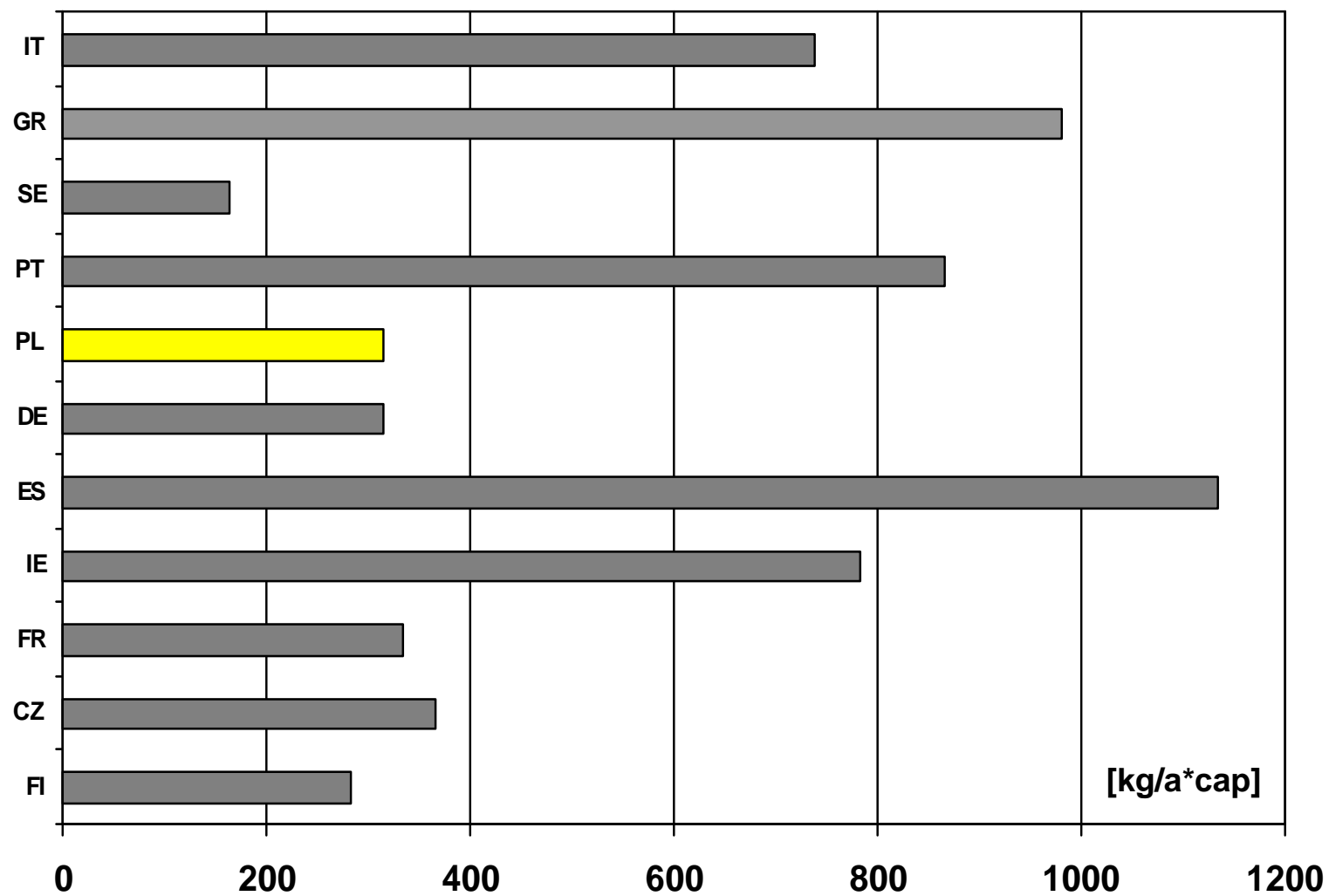


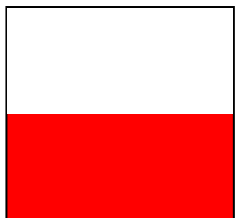
Chemical consumption per capita in Poland and other EU countries in 2005 (in EUR)



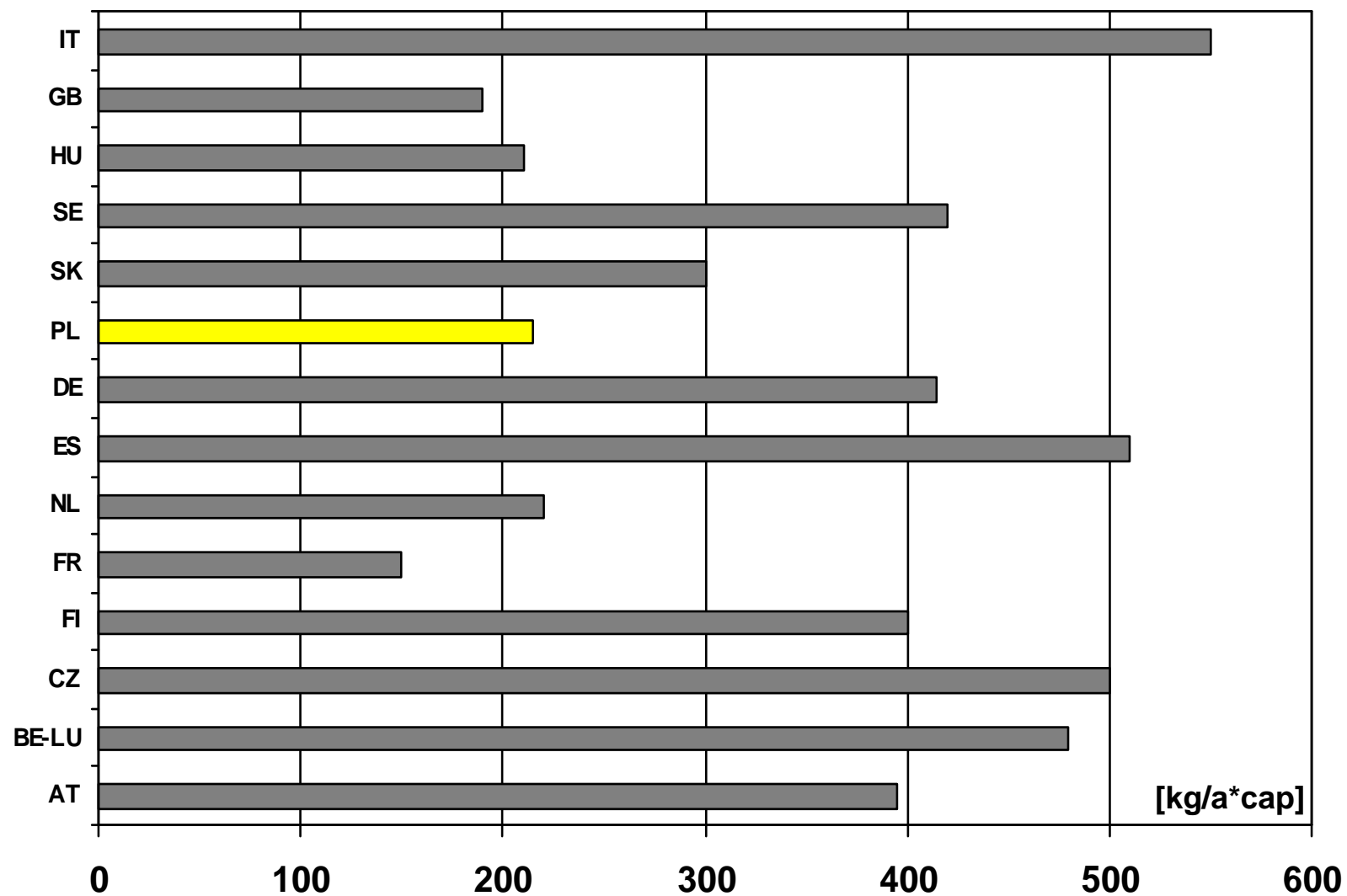


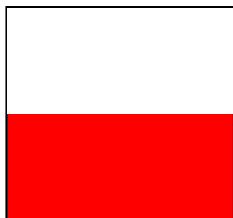
Cement consumption per capita in 2004





Steel consumption per capita in 2003

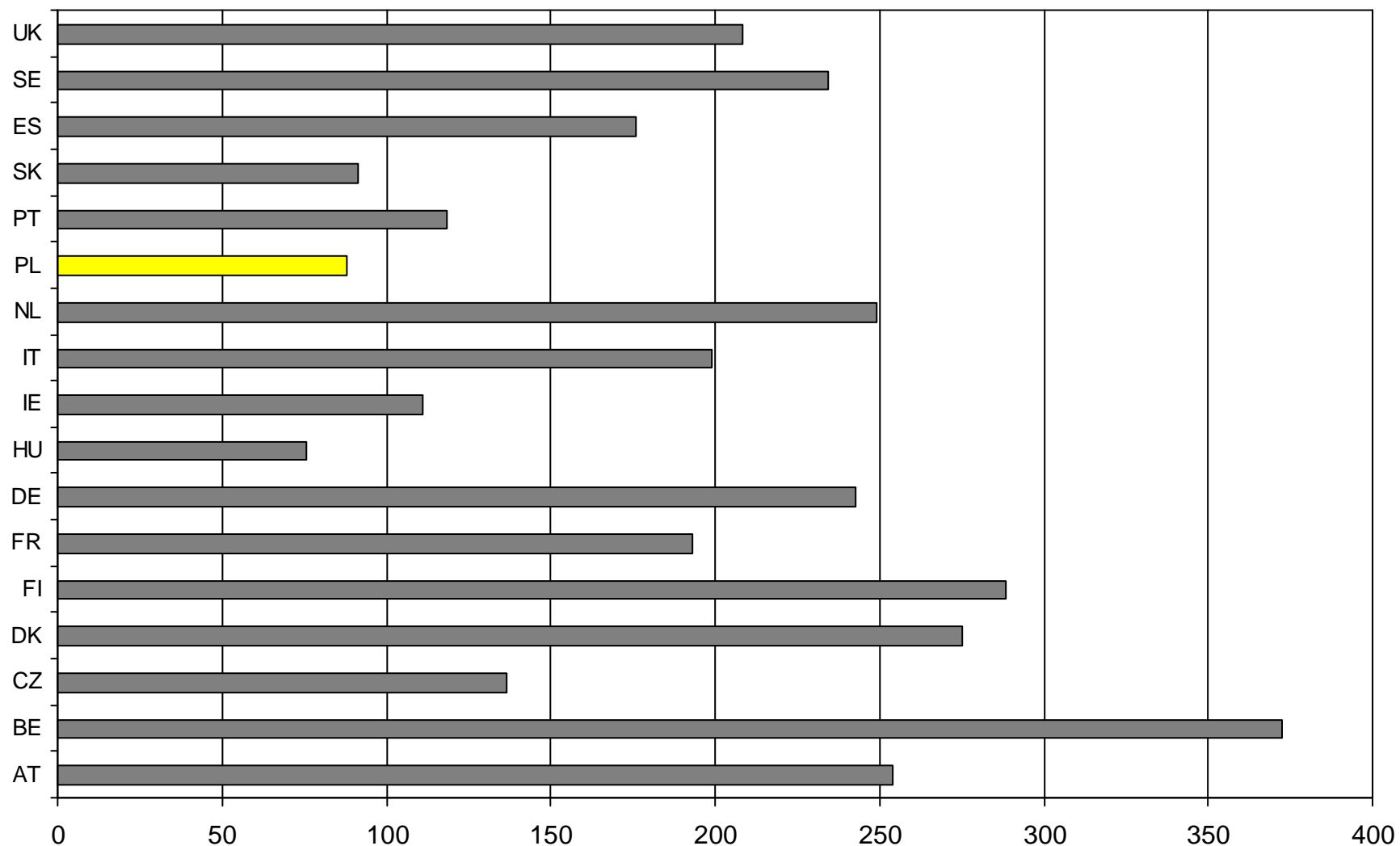




Paper consumption per capita in 2005



(in kg/a*cap)



Poland is following post-accession history of Greece, Spain, Portugal

- Growth in building houses & flats
- Investments in road transport & other infrastructure
- Investments in environmental protection infrastructure
- Stable growth of GDP foreseen during the first 5 – 7 years after accession thanks to the EU structural funds
- Foreign capital investments in local industries thanks to improving infrastructure and free access to EU common market
- Installations in all sectors including power, CHP, cement, ceramic, glass, chemical, steel industries are becoming cleaner (BAT & IPPC permitting)

Poland has undertaken its obligations concerning CO2 emissions seriously

- Legislative changes in the form of The Act on the Emission Allowances Trading
- Promotion of renewable energy sources
- Promotion of sustainable transport
- Cautious support for Technology of capturing and storage of carbon dioxide in geological deposits (Carbon Capture and Storage - CCS) as Poland is highly dependent on coal and lignite for energy production (95%)

The Act on the Emission Allowances Trading

Existing Act of 22 December 2004 on the Greenhouse Gas and Other Substances Air Emission Allowances Trading will be modified in order to:

- put in order the provisions relating to operation of the Community and national emission allowance trading schemes,
- provide for legal opportunities to sell the emission allowances through auction with use of the resources gained on such selling with the aim to achieve the targets, as referred to in Article 2 the Protocol of the United Nations Framework Convention on Climate Change, that was done in Kyoto on 11 December 1997,

The Act on the Emission **Allowances Trading**

- reduce, in a cost-effective manner, the emissions of substances released into the air, including in particular those of greenhouse gases being responsible for climate change,
- use of the assigned amount units,
- manage emission units derived from sinks, emission reduction units, and certified emission reduction units,
- set out the air emission levels for greenhouse gas and other substances,
- establish the National Emission Inventory Scheme,
- prepare prognoses of the air emissions of greenhouse gas and other substances.

Renewable energy

- **The share of renewable energy in the total energy produced [%]**
 - **2000 - 4.75**
 - **2001 - 5.08**
 - **2002 - 5.16**
 - **2003 - 5.20**
 - **2004 - 5.48**
 - **2005 - 5.43**

„The 2001 Strategy for Development of Renewable Energy Sector”

assumes the achievement in 2010 the 7.5% share of renewable energy in the primary energy balance, and the rise in this share up to 14 % in 2020.

It was assumed that this target could be achieved through using renewable energy sources to generate electric energy, thermal energy (heating), and production of biofuels

„The Long-Term Programme for the Promotion of Biofuels for 2008-2014”

- provides for development of biofuels production and use on the transport-fuel-market that is up to 5.75% in 2010, and 10% in 2020.

The Draft Strategy for Development of Transport in 2007-2013

- Objective 1: Establishment of transport network conforming to the future national transportation needs.
- Objective 2: Development of market relations in transport.
- Objective 3: Territorial and branch integration of transport.
- Objective 4: Improvement in traffic safety.

The Draft Strategy for Development of Transport in 2007-2013

The national roads:

Put into operation more than 1000 km highways (including about 470 km under commercial scheme and the PPP system) and 2300 km new express roads,

Adapt the roads to a more stringent wheel load standard for trucks according to the time-schedule as set out in the Accession Treaty (TP until end 2010),

Improve the condition of the national roads maintenance, so that the following indicators are achieved by 2013:
good condition - 75 %

- unsatisfactory condition - 15 %
- poor condition - 10 %

Carbon Capture and Storage - CCS

The European Union has attributed priority to this technology in the scope of reduction of carbon dioxide emissions from coal combustion processes for energy purposes

Carbon Capture and Storage - CCS

Poland's position is that at the present stage one has to be moderately optimistic in relation to promoting CCS technology, since this technology has not been so far available on the market in full commercial scale and yet many aspects have been still remained unknown, such likewise its durability and leaks, and its sustainability has been questioned by both the non-governmental organisations and the scientific groups