



MINISTERSTWO  
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# *Environmental policy in Poland Climate and Energy Policy - Priorities and challenges*

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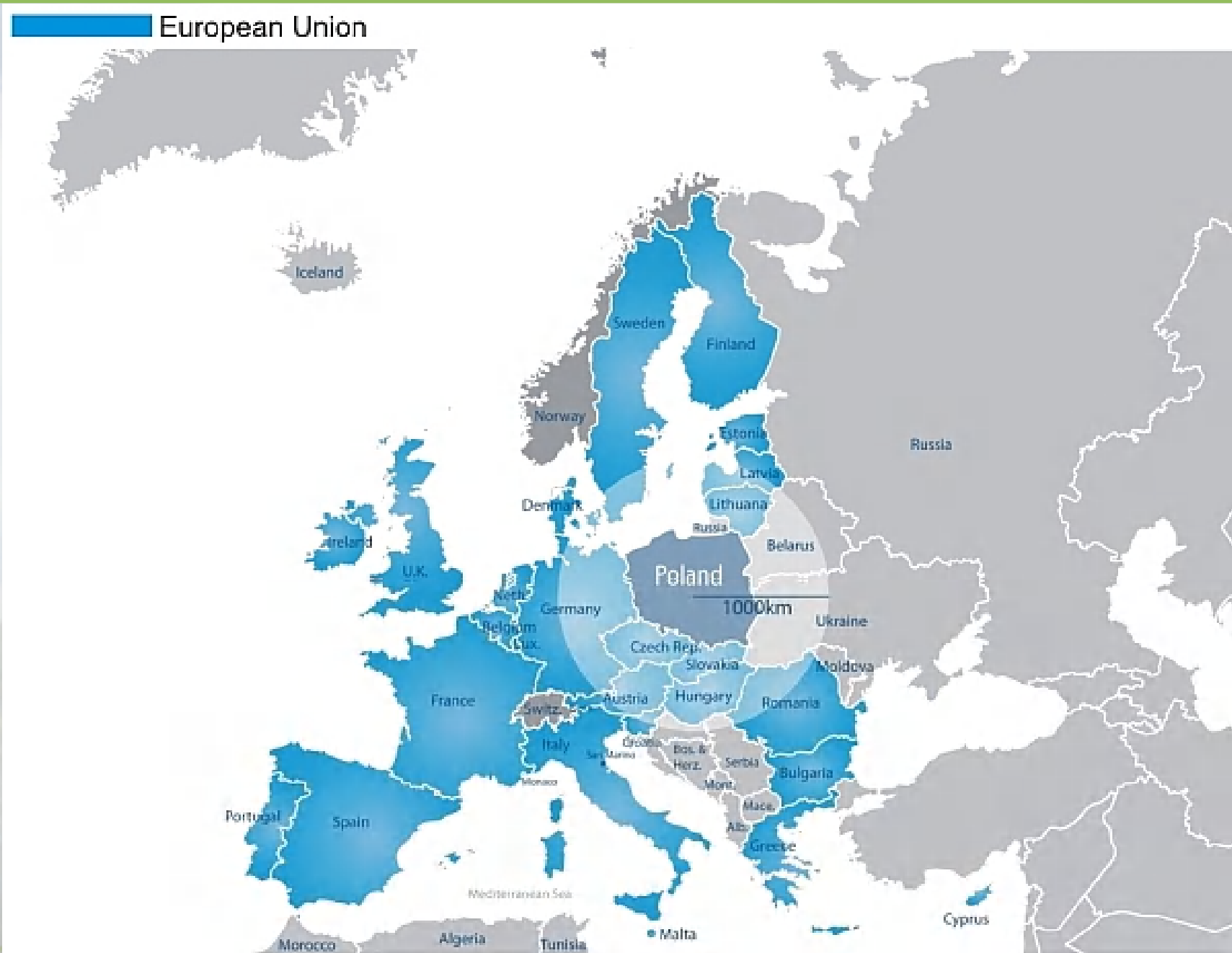
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# Plan of the presentation

1. Introduction - Poland
2. Environmental policy in Poland – achievements
3. Climate and energy policy – priorities
4. Domestic regulations
5. Areas for future cooperation with Japan

# Poland

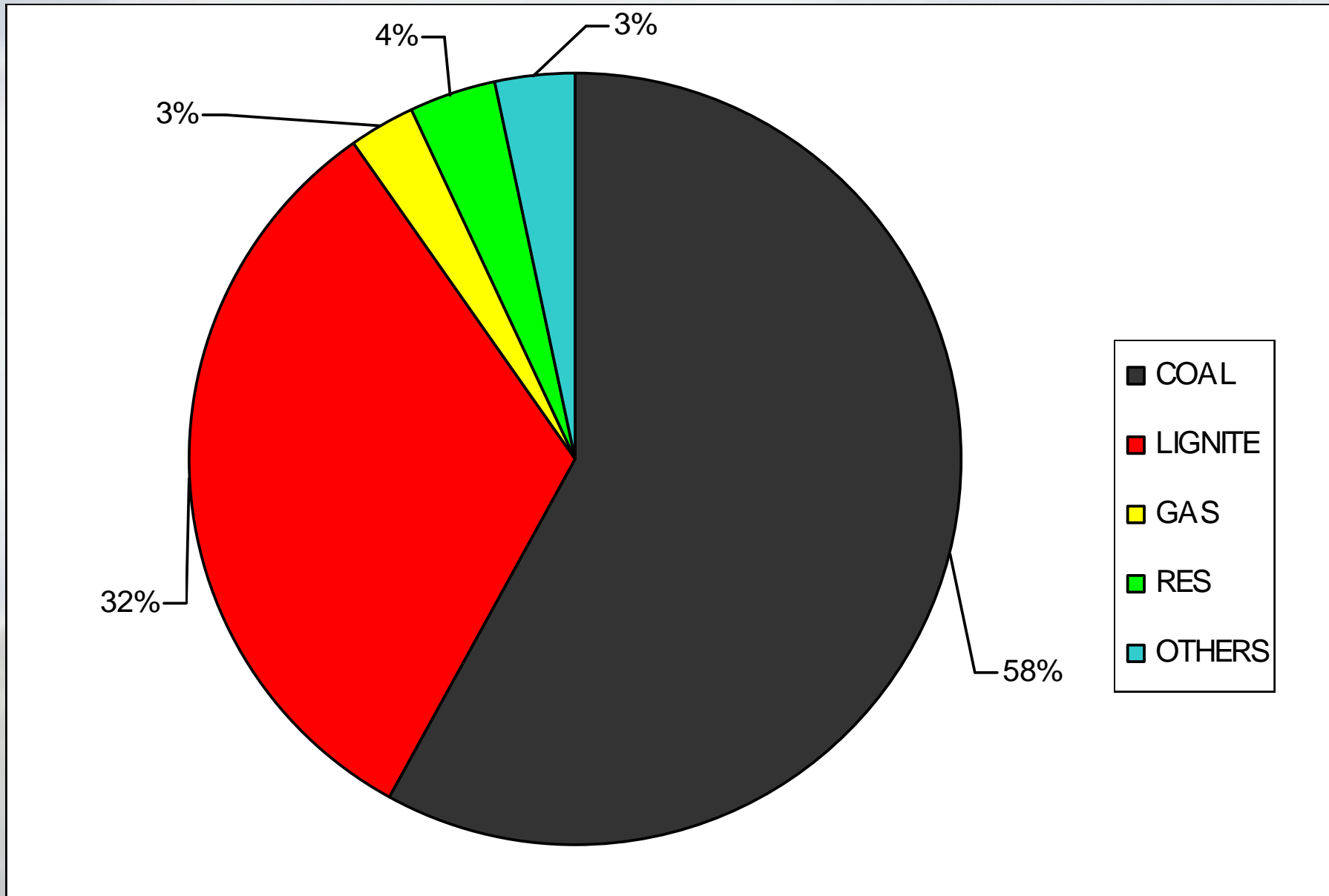
European Union



## Poland – some statistics

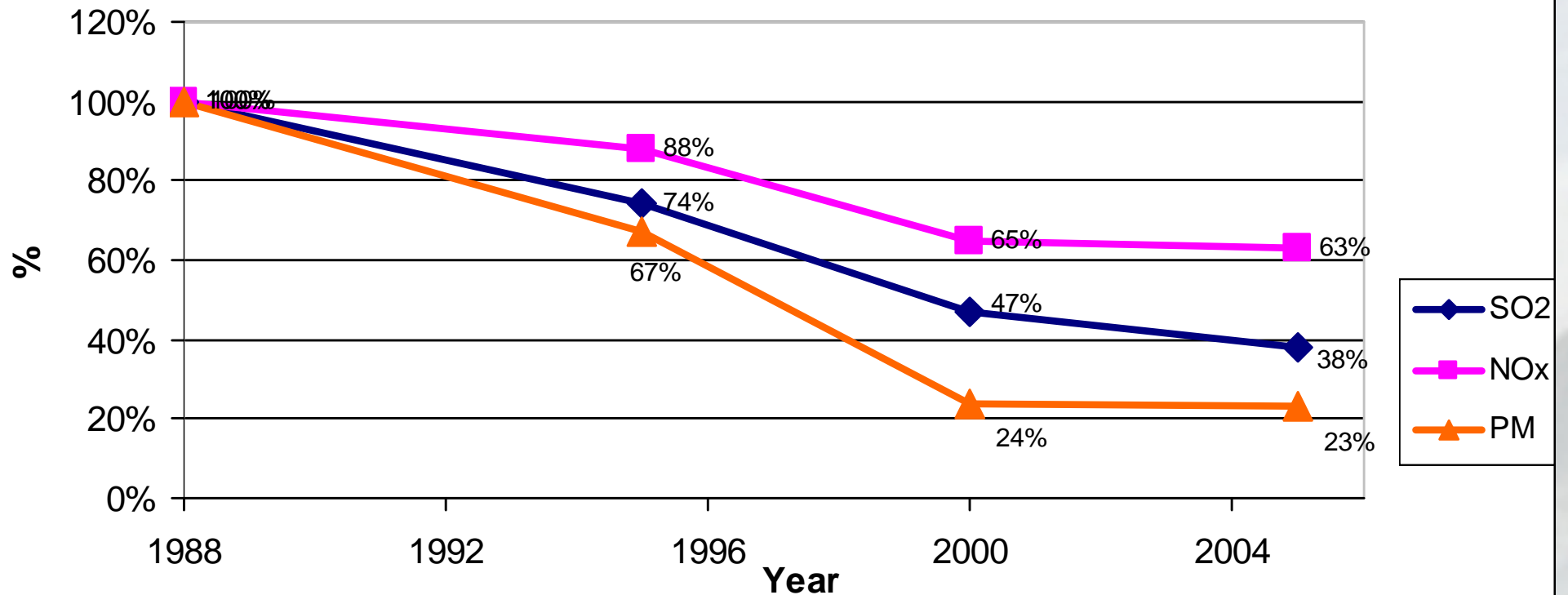
- Location – Central Europe on the Baltic Sea
- Population – 38,1 million (*sixth largest country in EU*)
- Area – 313 679 km<sup>2</sup> (*sixth largest country in EU*)
  
- Growth of GDP in fixed prices – 4,9% (2008)
- GDP/capita (PPS) – USD 16,091 (*55% of the EU average*)

# Poland - electricity production (2007)



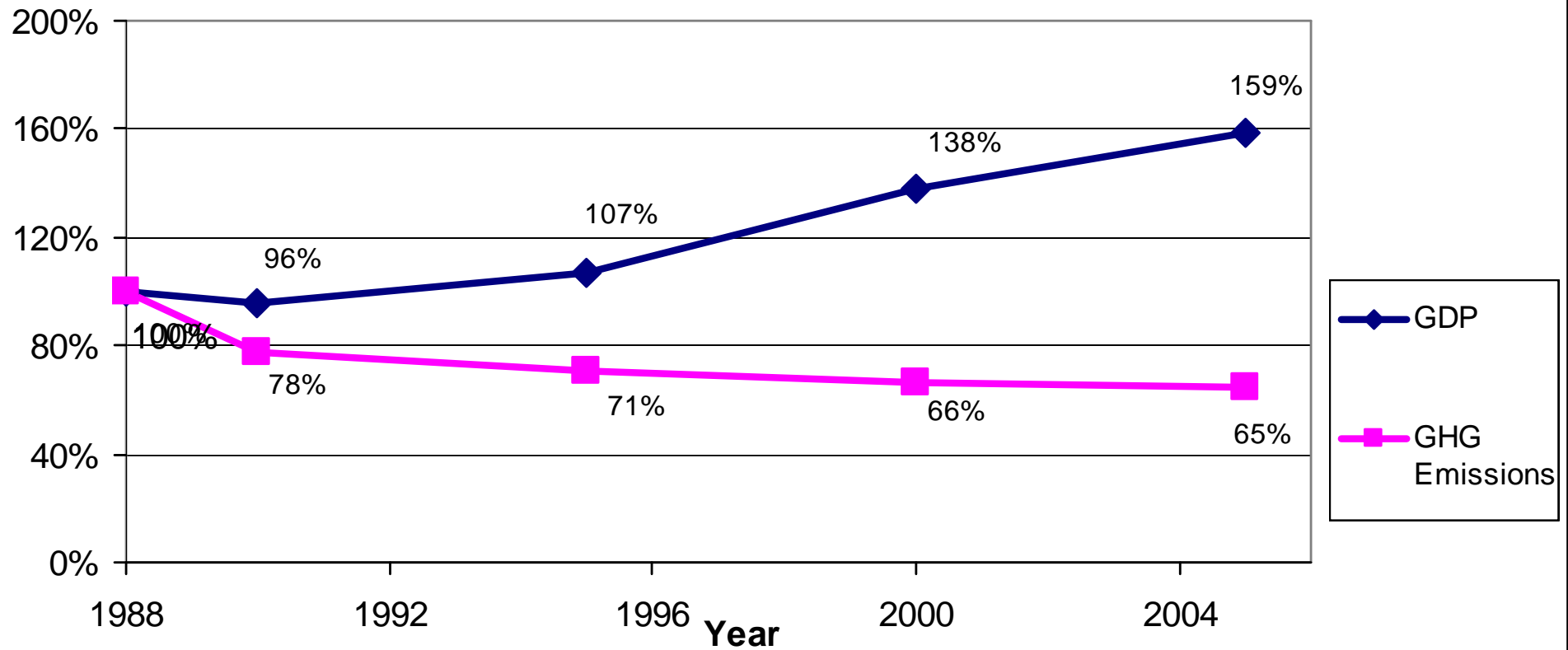
# Poland - achievements (1)

## Decrease in emissions of SO<sub>2</sub>, NO<sub>x</sub> and PM between 1988 and 2005



## Poland – achievements (2)

### GDP vs GHG emissions



## Poland – achievements (3)

- United Nations Framework Convention for Climate Change (UNFCCC) ratified in **1994** and the Kyoto Protocol in **2002**
- Commitment to reduce greenhouse gas emissions in 2008 - 2012 by **6% in respect to 1988**
- GHG emissions reduced by **28,9% between 1988 and 2007** (exclusive of Sector 5. Change of land use and forestry)



# Environmental policy in Poland

The governmental document which sets forth the state environmental policy is:

***the National Environmental Policy for 2009-2012 and its 2016 outlook***

Document adopted by the Parliament - May 2009

It specifies the major objectives, challenges and priorities of environmental policy

Available:

[http://www.mos.gov.pl/g2/big/2009\\_07/2826c539c3015384e50adac8fe920b0b.pdf](http://www.mos.gov.pl/g2/big/2009_07/2826c539c3015384e50adac8fe920b0b.pdf)

# Environmental policy – priorities – air quality and climate

- **Improvement of environmental quality and ecological safety, including protection of air against pollution by:**

- *reducing SO<sub>2</sub>, NO<sub>x</sub> and fine particulate matter emissions from energy generation sector*
- *active use of mechanisms for promotion of energy savings and development of renewable energy sources*
- *modification of the energy generation system*
- *undertake coal gasification efforts*
- *develop and implement programmes where standards for PM are exceeded*

- **Combating climate change**

# Climate and energy policy (1) - strategic documents

- **“Poland’s Climate Policy. The strategy for reduction of greenhouse gas emissions in Poland by 2020”**

Document adopted by Council of Ministers in 2003

**The strategic goal of the climate policy** is Poland’s involvement in the efforts undertaken by the international community to protect global climate through: *implementation of sustainable development principles, first of all within improving energy use, increase in energy efficiency, increase in Poland’s forest and soil resources, streamlining the consumption of raw materials and industrial products, streamlining waste management so as to achieve maximum and long-term economic, social and political benefit*

## Climate and energy policy (2) - strategic documents

- “Poland’s Energy Policy by 2030”

*(draft from September 2009, developed by Polish Ministry of Economy)*

***Priorities:***

- improve energy efficiency
- increase energy security
- develop the use of renewable energy sources, including biofuels
- develop competitive fuel and energy markets
- reduce the energy industry’s environmental impact



## Climate and energy policy (3) Objectives and commitments

### • **UE energy and climate package adopted - December 2008**

#### **For the whole EU by 2020:**

- *reduction of greenhouse gas emissions by 20% below the level from 1990 (optional 30% if there is international agreement)*
- *increasing the share of energy from renewable sources to 20% in the total consumption*
- *increasing the energy efficiency by 20%*

#### *Additional:*

- *increasing the share of biofuels in transport fuel consumption to 10%*

#### **For Poland by 2020:**

- *reduction of GHG emissions within ETS (e.g. energy sector)*
- *increasing emissions of GHG in non-ETS sector (e.g. transport, agriculture) +14%*
- *increasing the share of renewable energy sources in final demand by 15%*

# Priorities in climate and energy policy – energy sector (1)

## Improvement of energy efficiency by:

- *improving the efficiency of energy generation*
- *reducing network losses in energy transfer and distribution*
- *stimulating the development of highly efficient cogeneration*
- *increasing the efficiency of final energy use*



## Increased use of Renewable Energy Sources by:

- *direct support for the construction of new RES installations: biomass, wind etc.*
- *implementing a programme for building agricultural biogas installations*
- *maintaining mechanisms for supporting green energy*

**Modernisation of existing power plants for the purpose of increasing their efficiency and improving the effectiveness of SO<sub>2</sub>, NO<sub>x</sub> and dust emission reductions**

## Priorities in climate and energy policy – energy sector (2)

### Diversification of energy sources

### Changing the structure of energy production by the introduction of new technology solutions e.g.:

- *clean coal technologies e.g. coal gasification*
- *low carbon technologies*
- *carbon capture and storage installations (CCS)*

### Aim of all actions above to limit the impact on the environment also by:

- *introducing permissible product emission factors which allow to reach the established levels of SO<sub>2</sub> and NO<sub>x</sub> emissions*
- *introducing standards which decrease the amount of CO<sub>2</sub> emissions per electric energy unit by 20%*
- *prioritising combined energy production as the technology recommended for the development of new generation capacities*

The background of the slide features a soft-focus photograph of a mountain valley. The sky is filled with light, airy clouds, and the mountains below are covered in sparse vegetation. Two decorative lines, one blue and one green, curve across the lower right portion of the image. A solid green rectangular box is positioned in the upper middle section of the slide, containing the main title.

## **Priorities in climate policy in other sectors**



# INDUSTRY

## Priorities:

- energy efficiency improvement in all sectors
- restructuring industrial sectors, that is, hard coal and zinc and lead mining, iron and steel industry, sulphur mining and processing and cement and chemical industry into more environmental friendly
- consolidation of entities in order to increase their economic potential, research and development activity, increase in innovative solutions, inflow of direct foreign investments and public support



Zakłady Azotowe Puławy S.A.



Guido Coal Mine in Zabrze



Zakłady Azotowe Kędzierzyn S.A.

# TRANSPORT



## Priorities

- promotion and use of biofuels
- changes in energy efficiency of road transport
- promotion of "environmentally friendly" solutions
- introduction of GHG emission standards for cars
- promotion of public transport
- construction of motorways, ring roads and expressways
- speed limits in cities
- improving infrastructure for bikers and pedestrians
- improving the quality of waterway transport
- measures to reduce greenhouse gas emissions in air transport

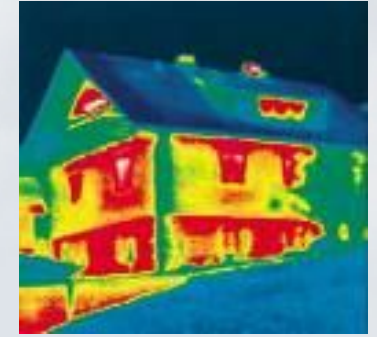
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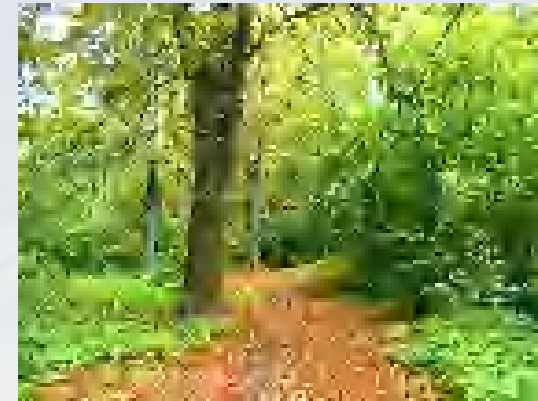
# CONSTRUCTION INDUSTRY AND HOUSING MANAGEMENT

- energy efficiency standards in constructions
- thermal efficiency improvement of buildings
- increasing the awareness of energy saving of building users and proprietors



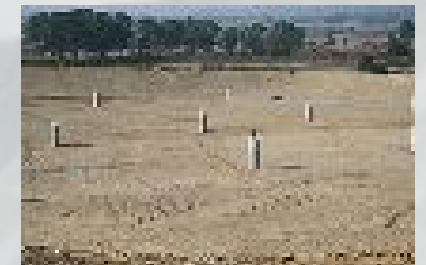
## FORESTRY

- counteracting changes in land use
- streamlining forest management, incentives and measures to support afforestation and protection of forest environmental stability
- plan of wood use for energy generation purposes
- measurements of carbon absorption



## WASTE AND SEWAGE

- reducing material and energy intensity of manufacturing
- use of alternative renewable energy sources
- application of the analysis of full product lifecycles
- use of landfill gas and biogas for energy generation



# AGRICULTURE

- streamlining energy management in agriculture (biomass energy)
- supporting the use of other renewable energy sources in agricultural protection, new farming and plant biomass harvesting technologies
- substituting fuels with hydrocarbon fuels and reducing the consumption of Diesel oil
- reduction of methane emissions from animal manure, use of methane capturing systems for slatted floor ruminant breeding technologies
- preferring crops with high CO<sub>2</sub> absorption index



# Domestic system - instruments and mechanisms (1)

## **The Act of 10 April 1997 - Energy Law** (with changes, in force)

- *Mechanism of „green certificates” for the support of RES*
- *Mechanism of „red certificates” for the support of electricity production in cogeneration*

## **Act on energy efficiency** (draft – Ministry of Economy)

- *Mechanism of „white certificates” for the support of actions for the improvement of energy efficiency*

## **Act on the system of balancing and accounting for emissions of SO<sub>2</sub> and NO<sub>x</sub>**

(draft Ministry of the Environment)

- *Introduction of national trading system of SO<sub>2</sub> and NO<sub>x</sub> for the support to reach emissions requirements for Large Combustion Plants in energy sector*

## Domestic system - instruments and mechanisms (2)

- **The Act of 17 July 2009 on the management system for emissions of greenhouse gases and other substances**

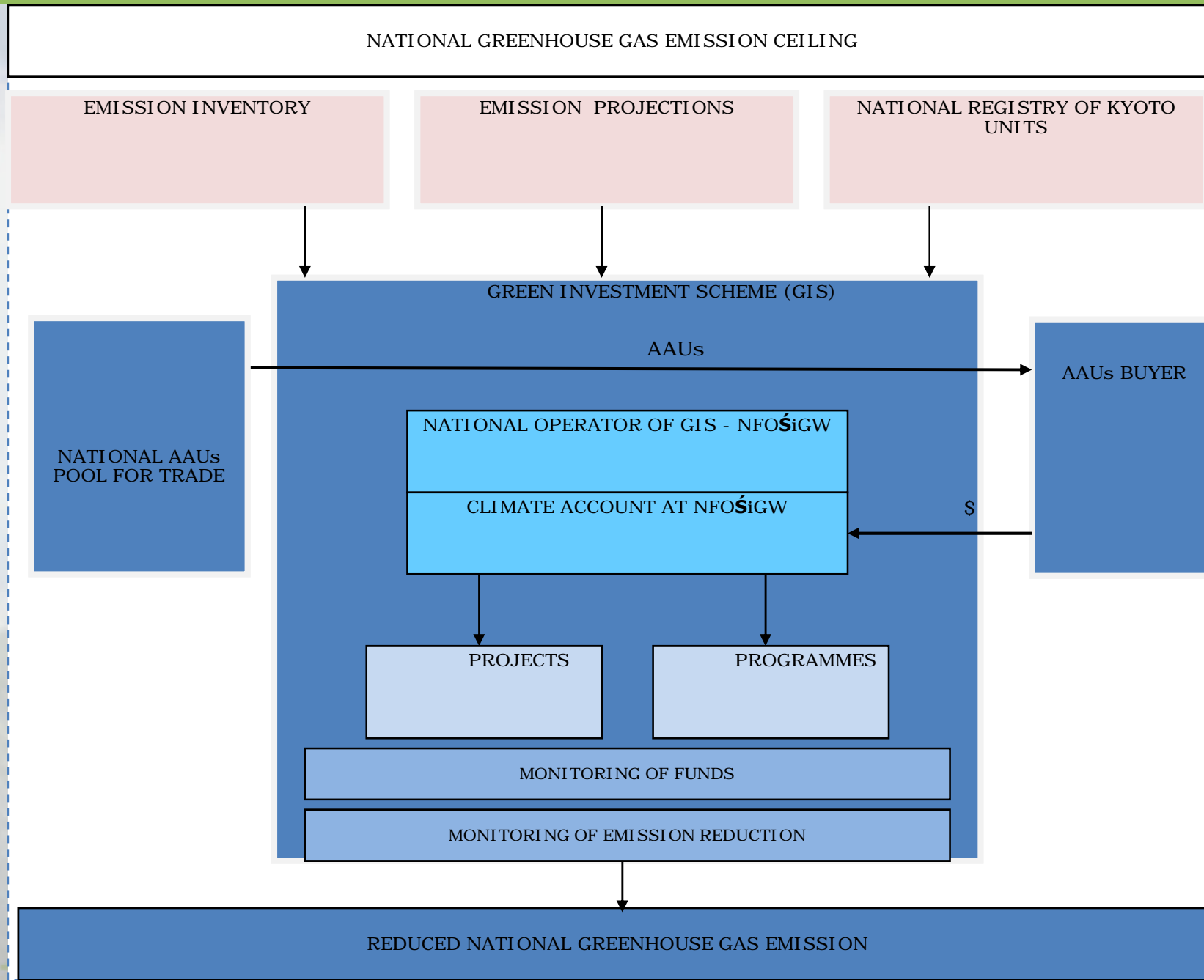
*Aim:*

- *To manage country's upper limit of GHG emissions and support actions aiming at protecting the air and climate*
- *To introduce in legal form mechanisms of the Kyoto Protocol:*
- ***Joint Implementation (JI)***
- ***Clean Development Mechanism (CDM)***
- ***International Emission Trading (IEA)***

*Institutions and systems:*

- ***National Centre for Emission Balancing and Management (KOBIZE)***
- ***National System for Emission Balancing and Forecasting***
- ***To establish a system of Green Investment Scheme (surplus AAU – 500 million tones of CO<sub>2</sub> eq)***

# Green Investment Scheme in Poland (1)



## Green Investment Scheme in Poland (2)

### **„Greening” for:**

- *programmes or projects connected with protection of the environment, in particular with reducing or avoiding national greenhouse gas emissions, absorption or sequestration of carbon dioxide*
- *actions to adapt to climate change*
- *other actions connected with air protection*

### **Types of programmes and projects under GIS:**

- *improving energy efficiency in various economy sectors*
- *improving the efficiency of coal use, also in connection with clean coal technologies*
- *change from the currently used fuel to low carbon fuel*
- *avoiding or reducing greenhouse gas emissions in the transport sector*
- *using renewable energy sources*
- *avoiding or reducing methane emissions*
- *activities connected with the sequestration of greenhouse gases*
- *adapting to climate change*
- *R&D; educational activities*



# Areas for future cooperation with Japan

- **Green Investment Scheme (GIS)**

- **Joint Implementation JI projects**

*Now cooperation on 7 JI projects, including 2 approved (LoA) projects and 5 projects which are at the stage of initial support (LoE).*

*The main areas of JI include the handling of methane from bituminous coal deposits and reducing the emission of nitrous oxide from nitric acid installations*

*3 additional projects approved in renewable sector.*

- **Implementation of innovative Japanese solutions in the area of „climate and energy“:**

- *increase of energy efficiency in all sectors including energy, transport, industry*
- *clean coal technologies*
- *renewable energy sources*
- *smart grids*
- *...*



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THANK YOU VERY MUCH

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