ETC/SCP

European Environment Agency

2011 Survey of resource efficiency policies in EEA member and cooperating countries

COUNTRY PROFILE:

Poland

Country information on resource efficiency policies, instruments, objectives, targets and indicators, institutional setup and information needs

May 2011

This country profile is based on information provided by **Ministry of Economy** (Dept. of Economic Development and Dept. of Energy), **Chief Inspectorate for Environmental Protection** (Dept. of Monitoring and Environmental Information), **Ministry of Environment** (Minister's Bureau, Dept. of Geology and Geological Concessions, Dept. of Nature Protection, Dept. of Waste Management), **Ministry of Agriculture and Rural Development** (Dept. of Fisheries and Dept. of Direct Payments), **Ministry of Infrastructure** (Dept. for Strategic Planning and Transport Policy and Dept. of Construction Market and Technology), **National Water Management Authority** (Dept. of Planning and Water Resources), **General Directorate for Environmental Protection** (Dept. of Nature Protection), **State Forests National Forest Holding** (General Directorate of State Forests). The response was coordinated by Malgorzata Bednarek on behalf of **the Polish EIONET National Focal Point**.
The information is current as of April 2011.

This country profile was prepared as part of the EEA-ETC/SCP 2011 survey of resource efficiency policies, which aims to collect, analyze and disseminate information about national experience in the development and implementation of resource efficiency policies in EEA member and collaborating countries. The work resulted in the following outcomes:

- **Short 'country profiles' (this document)** - self assessments prepared by countries, describing the current status of resource efficiency policies, including key strategies and action plans, policy objectives, instruments, targets and indicators used, institutional setup and information needs.
- **Summary report** - prepared by the EEA and ETC/SCP, the report reflects on trends, similarities and differences in policy responses, showcases selected policy initiatives from member countries and identifies information needs and knowledge gaps.
- A session on resource efficiency policies during the 2011 EIONET workshop to discuss further needs and to facilitate information sharing and experience exchange among EIONET members.

More information about resource efficiency policies, including an analytical report "Resource efficiency in Europe" and thirty one country profiles, can be found at:

http://www.eea.europa.eu/resource-efficiency

1. Resource use in Poland – facts and figures

1.1 General facts and figures about the country

Source: https://www.cia.gov/library/publications/the-world-factbook/index.html

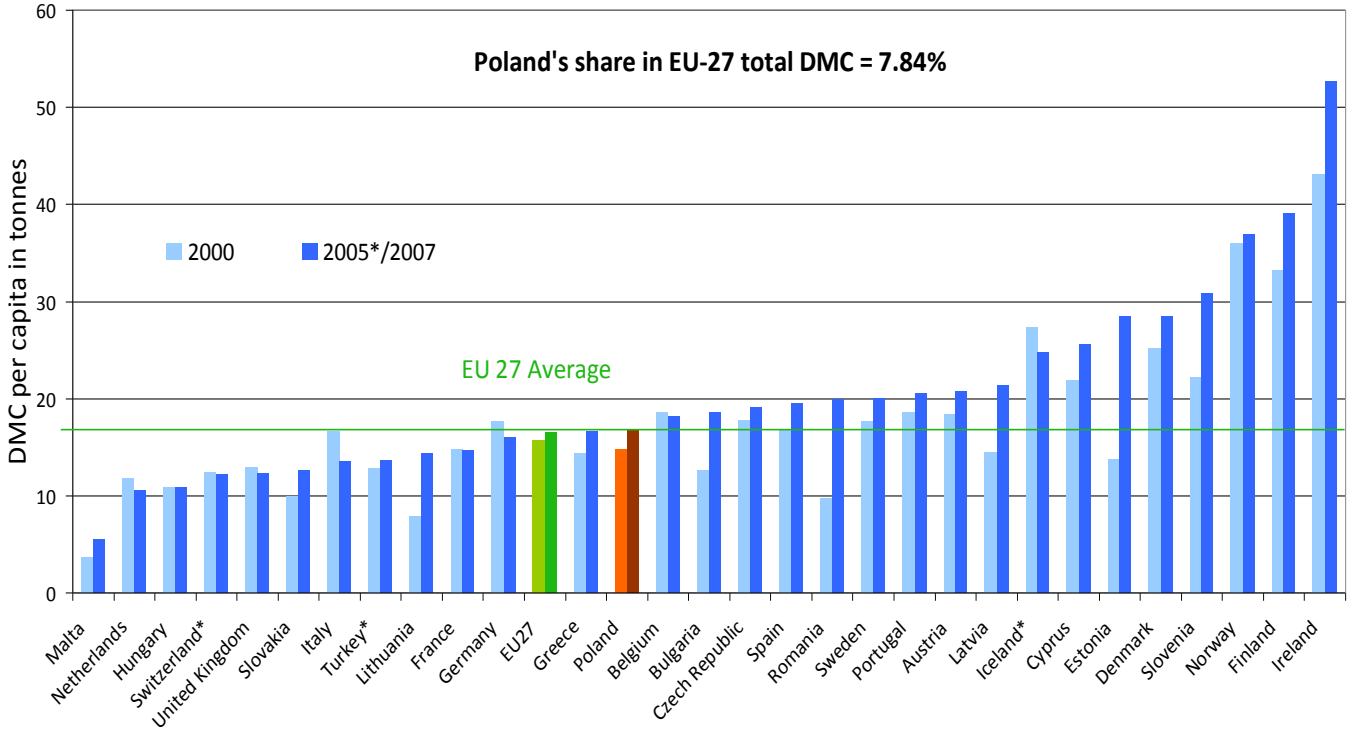
Population (projected inhabitants for 2010) [1]	38,167,329
➢ Percent of total EEA-32	6.5%
Surface area (km^2) [2]	312,685
➢ Percent of total EEA-32	5.5%
GDP at market prices – Purchasing Power Standard – Current Prices (Million Euro, 2009) [3]	544,200
➢ Percent of total EEA-32 (minus Liechtenstein)	4.2%
GDP per capita in Purchasing Power Standards (PPS) [4] EU27=100 (2009)	61
Urban population (rate of pop., 2009) [5]	61.3%
Main economic sectors and their share in total GDP (2009 est.) [2]	
Agriculture	3.9%
Industry	31.8%
Services	63%
EU accession date [6]	1.5.2004

Additional relevant background information on Poland (and on 37 other EEA member and cooperating countries) can be found at the SOER2010 website: http://www.eea.europa.eu/soer/countries/pl

Factsheet on national waste policies for Poland is available at: http://scp.eionet.europa.eu/facts/factsheets_waste/2009_edition/factsheet?country=PL

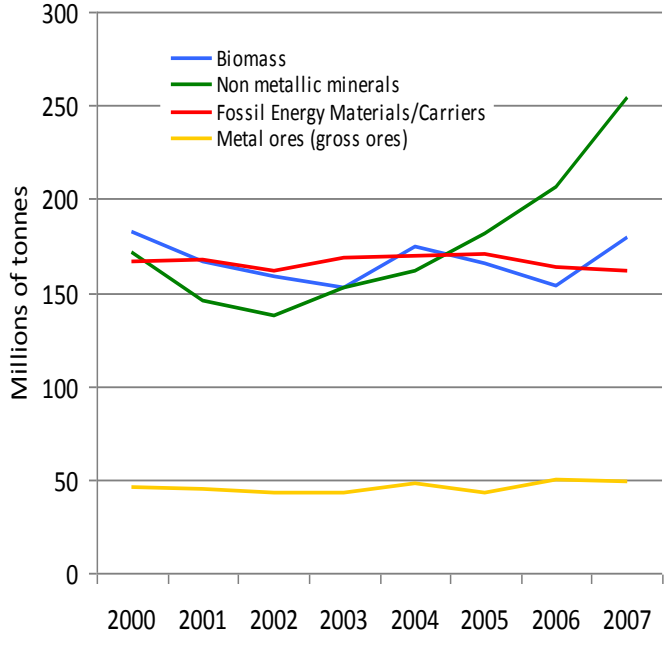
1.2 Facts and figures on resource efficiency for Poland

Use of resources per capita 2000 and 2007 [tonnes DMC/capita]



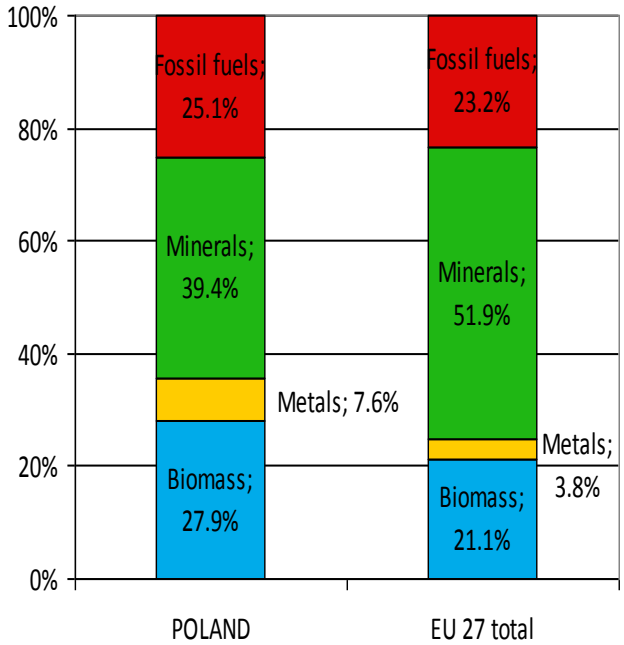
Source: Eurostat, OECD and Total Economy Database [7] * = For these countries data is for 2000 and 2005.

Domestic Material Consumption by category over time, Poland



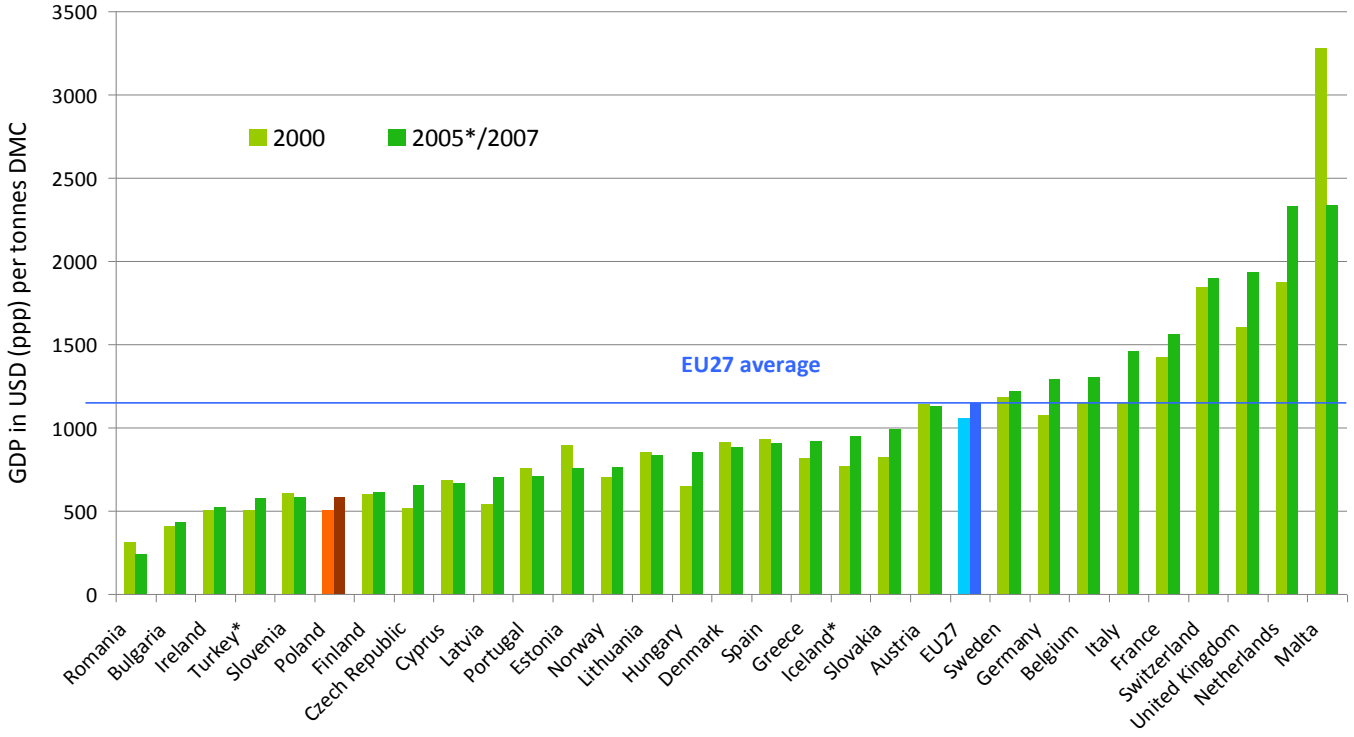
Source: Eurostat [8]

Breakdown of DMC by type of materials (2007)



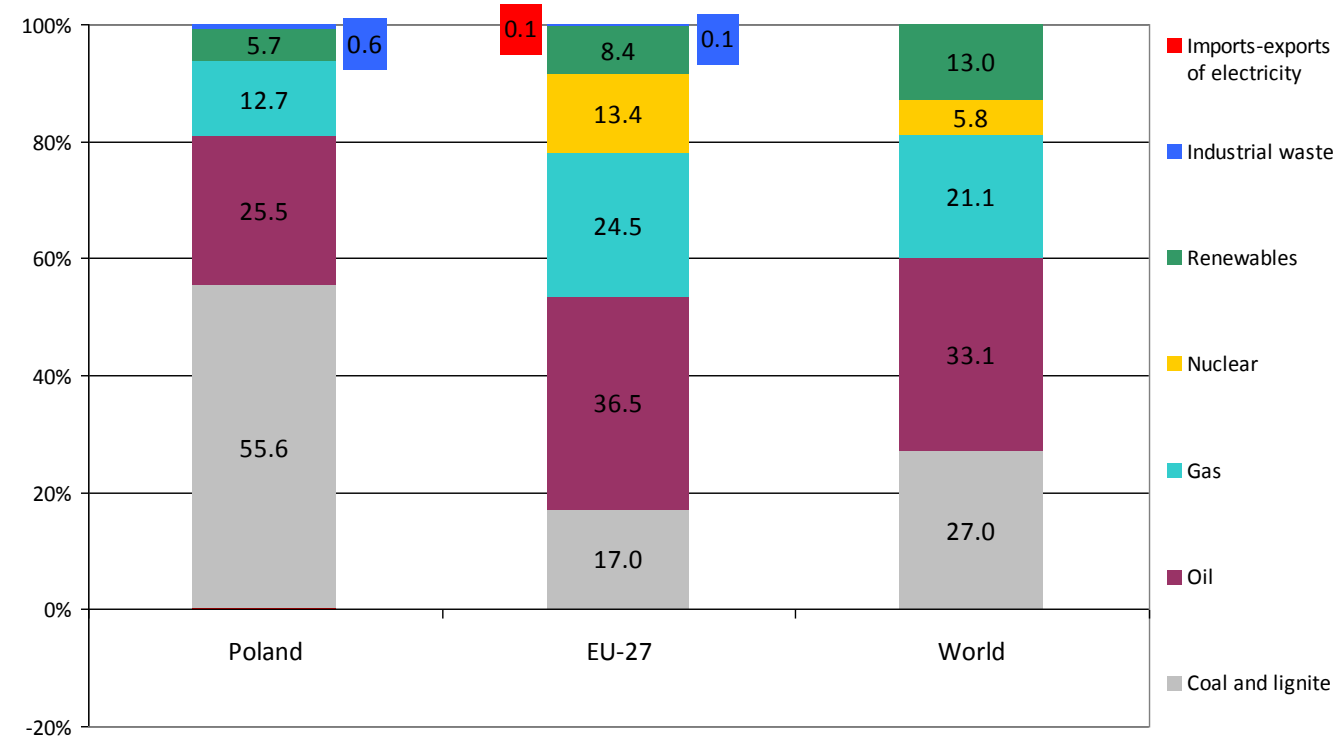
Source: Eurostat [8]

Material productivity 2000 and 2007 [USD ppp/ton DMC]



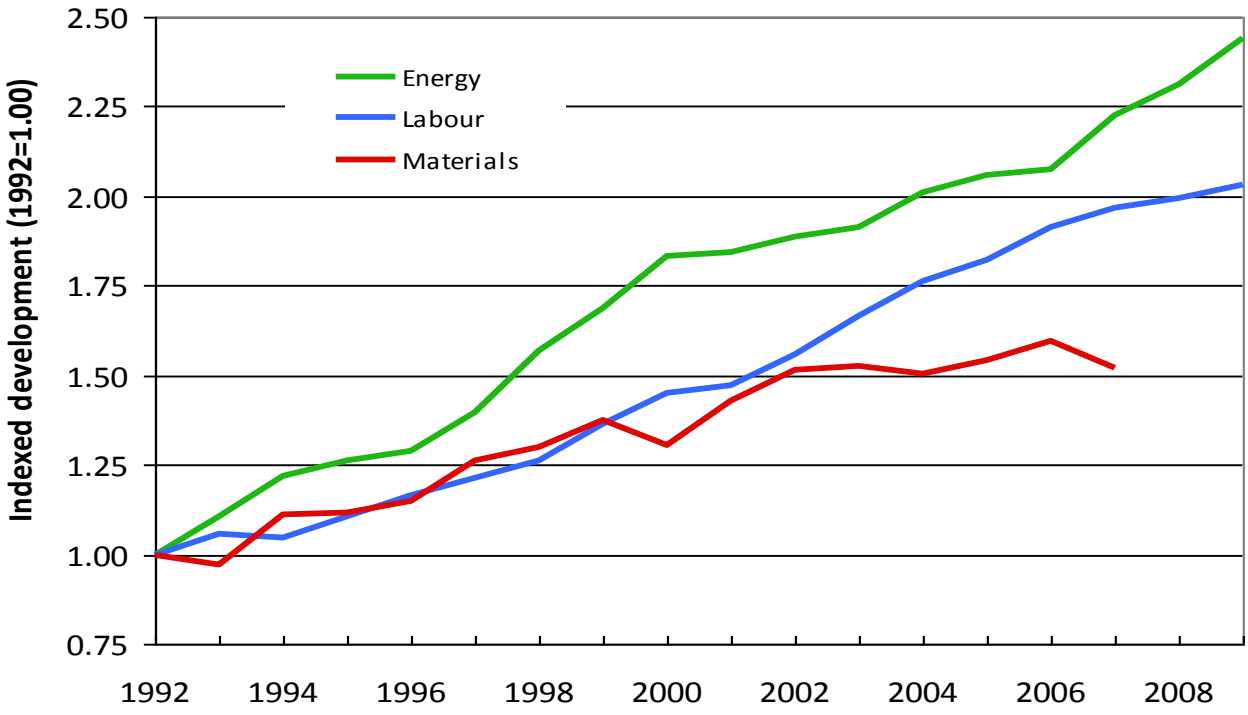
Source: The Conference Board, Total Economy Database, Eurostat [9]
* = For these countries data is for 2000 and 2005.

Primary energy consumption



Source: Eurostat [10]

Trends in labour, materials and energy productivity, 1992-2008



Source: Total Economy Database, IFF Database. WI Database, Eurostat, OECD, IEA Database [11]

2. Evolution and main drivers for the development of resource efficiency policies

Protection and sustainable management of natural resources (including improving resource efficiency and lowering material and energy intensity of the economy) is recognized as an essential condition for a stable performance of the national economy. The exceptionally abundant biological diversity and rich landscape are characteristic features of Poland which makes the country particularly responsible for the protection of natural heritage. Main environmental threats in Poland are typical for highly developed countries: pressures from industry including the energy sector, municipal operations and transport. It is worth mentioning that the significant economic growth in Poland after the accession to the EU did not increase the pressure on the environment (air and water emissions, waste generation) which may confirm the effectiveness of the environmental policy taking into account the sustainable development principles. However increasing income and better living conditions cause changes in consumption patterns which may lead to stronger pressure on the environment and its resources in the future.

Polish economy remains among the most energy- and material-intensive in the EU, but it is expected that market forces and economic considerations will increase eco-innovation and energy and material savings. These will bring about not only economic but also environmental benefits.

Strategic directions of the energy policy are driven by the need to reduce demand for fuels and energy, reducing environmental impacts of the power sector lowering emissions, and reducing dependence on imports of fuels.

While the rate of waste generation is slower than economic growth, key problems include predominance of landfilling as a main mode of waste management, and a declining share of industrial waste undergoing resource recovery.

Despite relatively stable levels of water abstraction, rational management of water resources remains as one of key environmental priorities, partly because of existing water shortages and partly because changes in climate may deepen the water deficit. As indicated in chapter 4, draft National Strategy for Management of Water Resources 2030 indicated a number of operational goals to rationalize water needs and water use. At the same time it also calls for measures on the supply side, mostly to take preventive measures against water-shortages by elaboration and implementation of water retention programmes at national and regional levels.

From the analysis carried out within a framework of the EU Common Fisheries Policy, the main environmental threat to the fish resources is their decline as a result of overfishing. Therefore, EU concerns regarding fish resources concentrates on reduction of by-catch of unwanted species, elimination of discards and adjustment of the fishing fleet to the available fish resources, in order to minimize negative impact on environment and fish stocks, maximize income of fishermen and improve competitiveness of the fishing sector. Poland as one of the EU Member States is actively involved in this process.

3. Overall Policy Approach for Resource Efficiency

The Ministry of Environment and the Ministry of Economy are carrying out work to respond to the EU 2020 and its resource efficiency flagship.

In line with the new EU economic strategy for growth and jobs entitled *"Europe 2020 – a strategy for smart, sustainable and inclusive growth"*, as adopted by the European Council in June 2010, the Member States are obliged to present a new National Reform Programme.

In the **National Reform Programme**, currently being drawn up in the Ministry of Economy, efficient use of resources is going to be emphasized i.e. in the section on infrastructure development, as well as in the section on innovation. Furthermore, taking into account the need to strengthen the ownership of the implementation of the "Europe 2020" Strategy, the Government plans to engage key stakeholders in the work of a Committee on the "Europe 2020" Strategy (to be established). One of the tasks of the Committee will be the coordination of the process of implementation of the "Europe 2020" Strategy in Poland, including the flagship initiatives. The Committee will consist of representatives of the public administration, the regional and local authorities, the employers' and employees' organisations and academia.

Simultaneously, work is being carried out to ensure that the number of applicable strategic documents is limited. At the end of 2009 the Council of Ministers adopted the plan for streamlining and consolidating existing strategies. The sector strategies in Poland covered in different strategic documents are currently being reviewed in order to draw up **key nine integrated strategies** in compliance with the long- and medium-term strategies for national development. Resource efficiency will first of all feature in the **Strategy for Innovation and Efficiency of the Economy** and **The strategy for energy security and environment** which are being prepared by the Ministry of Economy. These are due to be approved by the Government and published in the second half of 2011. Resource efficiency will be also featured in the **Transport Development Strategy** and **Sustainable Development of Rural Areas, Agriculture and Fishery Strategy**.

Furthermore, the Ministry of Economy is currently elaborating **The Enterprise Development Programme** (PRP) for the period 2011-2020 and **National Programme for the Development of Low-Emission Economy**, where one of the objectives will be to improve the efficiency of use of raw materials (adoption of the document expected in 2012, in August 2011 the Council of Ministers adopted the "Assumptions for National Programme for Low-Emission Economy Development"). It is also worth mentioning that on 14 June 2010, the Council of Ministers adopted a new three-year **National Action Plan on sustainable public procurement for 2010-2012** setting out the objectives, timing and system of coordination and monitoring of actions concerning both green and socially responsible procurement.

Green economy, SCP/ SIP and IPP aspects will be incorporated into key strategies and programmes that are currently being elaborated.

As yet, there is no one single policy document in Poland specifically on resource efficiency, but the issue is covered as part of a number of strategies and policies prepared by various ministries.

At present, the main economy-wide policy documents addressing resource use and resource efficiency include:

The National Environmental Policy for 2009-2012 and its 2016 outlook (NEP) identifies main challenges and strategic directions for the national environmental policy. The current policy adopted in 2008 (NEP is updated every four years) distinguishes between 'protection of natural resources', and 'improving the state of environment and environmental security'. Topics covered under the heading of natural resources include nature protection, sustainable forestry, rational use of water resources, soil protection, and sound management of geological resources. Areas under the heading of improving the state of environment and environmental security include health and environment, air quality, protection of water quality, waste management, noise and electromagnetic fields, and chemicals in the environment.

Energy Policy of Poland until 2030, adopted by the Council of Ministers in November 2009 (the Energy Law requires that energy policy be revised every 4 years) includes, among others, provisions for improving energy efficiency and for development of renewable energy sources. The latter mainly concerns the use of biomass and the construction of wind farms, which have the biggest potential in Poland. The Policy recognizes that coal (hard coal and lignite) will continue to be the basic fuel in the Poland's primary energy mix as well as for generation of electricity and heat, but its share in the energy mix will decline.

Within the framework of Directive 2006/32/EU, the Action Plan for energy efficiency was prepared in 2007. The **National Action Plan for Renewables** (December 2010) sets national and sectoral targets for use of renewable energy.

The 'green paper' document **Poland 2030: Development Challenges** was prepared by the Prime Minister's Board of Strategic Advisors in June 2009. It identifies climate and energy security as one of ten key challenges for the next two decades, and calls for the harmonization of energy and environmental policies. Report recommendations include preparing a comprehensive plan for the protection of natural resources and the environment, intensifying the use of renewable sources of energy, and ensuring energy security of the state.

Other environmental and economic strategic documents covering topics related to resource efficiency are described in the following chapter.

4. Strategies or action plans to improve resource efficiency for individual economic sectors, products or product groups

The **National Program for Augmentation of Forest Cover** highlights the importance of nature protection and landscape management as well as increasing the biodiversity resources in the afforesting work. The augmentation of forest cover is the priority of the **Forest Policy** and is particularly important due to the changes in the ecosystems already observed and multipurpose role of forests.

In the **National Strategy for the conservation and sustainable use of biodiversity** and **Action Plan for 2007-2013** the main goals are the preservation of the riches of biodiversity at local, national and global levels and ensuring the possibilities for the development of all the levels of its organisation (within species, between species and at the higher-than-species level), while taking into account the needs of Poland's socio-economic development and the need to ensure the appropriate conditions of life and development for its society.

The **Draft National Strategy for Management of Water Resources 2030** was prepared for the Minister of Environment in 2010. The strategic goal of implementing an integrated water management system is to provide the population with access to clean and healthy water, and reduce the risks related to floods and droughts. This is to be achieved together with ensuring good quality of water resources and related ecosystems, as well as meeting water needs of the economy.

Protection of inland fisheries as well as improvement of the marine fish resources efficiency, were identified as a priorities by the Ministry of Agriculture and Rural Development. The second priority is fulfilled within the framework of the EU Common Fisheries Policy through management and protection of fish resources, common organization of the fish market, structural policy and common external policy with third countries and international organizations. Fishing resources efficiency will be included in the **Strategy for the development of the agriculture and fisheries** and **the Maritime Policy of the Republic of Poland until 2020**, which are currently under preparation. Maritime Policy has been prepared in order to fulfill Polish obligation defined in the EU Commission document "Integrated maritime policy of the European Union (COM (2007) 575)" and conclusions of the European Council adopted at the meeting in Lisbon on 14 December 2007. Maritime Policy will define the main aims of the sustainable management of fish resources until 2020.

The **Project of Sustainable Development of Rural Areas, Agriculture and Fishery Strategy** describes the long-term vision for the development of rural areas including the development of agriculture products base and maintaining native genetic variety of vegetable and animal production. Among the priorities there are the biodiversity as well as water quality and resources protection.

The strategy for energy security and environment (being elaborated) covers all major issues important for both matters, such as energy efficiency, enhanced security of fuels and energy supplies, development of the renewable energy sources, development of competitive fuel and energy markets, efficient natural resources management, sustainable management of geological resources, water management, multifunctional forest management, biodiversity management, waste management, as well as development of services and products complying with the high requirements for environmental protection.

In the **Energy Policy of Poland until 2030** and **The National Environmental Policy for 2009-2012 and its 2016 outlook** there are provisions on rational use of energy resources and geological resources management. Dedicated sections deal with energy efficiency and use of renewable energy sources (RES). RES is also addressed in the **National Action Plan for Renewables**, as a direction for the development of the energy sector. In addition, energy efficiency is tackled in the **National Energy Efficiency Action Plan** (NEEAP 2007) which outlines existing and planned measures to stimulate efficiency improvements in residential, service, industry and transport sectors. Second NEEAP is due to be submitted to the EU until 30 June 2011.

Poland, as a Member State of the EU, is required to introduce minimum energy efficiency standards. These standards are determined by EU regulations based on the Directive 2005/32/EC establishing a framework for the setting of ecodesign requirements for energy-using products and Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products. Since autumn 2008, the European Commission is gradually proposing such standards for different product groups. So far the following 11 group products have been covered by the ecodesign regulations: televisions, refrigerators, washing machines, dishwashers, domestic lighting and tertiary sector lighting office and street, electric motors, standby and off mode losses of electrical and electronic equipment (household and office), simple set top boxes, external power supplies and circulators. The Commission will continue setting stricter performance standards for heating boilers, water heaters, computers, air conditioners, tumble driers, pumps, vacuum cleaners and further types of lighting. It will also bring forward a new working plan for 2012-2014.

In the field of energy efficiency in the building sector, since 2009 there is in Poland *Energy Performance Certificate (EPC)*. EPC is the energy efficiency rating of a property, precisely a building. EPC aims to promote rational and sustainable utilization of energy in buildings and to improve energy efficiency in buildings. *Energy Performance Certificate* is a result of Directive 2002/91/EC relating to the energy performance of buildings, as transposed into Polish law by the act – Construction Law.

At present the main objective is to simplify and clarify the existing framework, and to improve the transparency and the effectiveness of the existing measure, according to the criteria established pursuant to Directive 2010/31/EU relating to the energy performance of buildings.

Furthermore, work is underway to set up national plan for increasing the number of nearly zero-energy buildings, that is buildings in which the nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby.

The **Draft Strategy for Innovation and Efficiency of the Economy** is focused on the cooperation improvement and creating good conditions for enterprise development, innovation and efficient management of human, financial, material and natural resources.

In the field of better products the **Strategy of Implementation of Integrated Product Policies in Poland** and the **Executive Programme for Implementation of an Integrated Product Policy in Poland** were adopted by the Ministry of Environment in 2005. The National Environmental Policy in force also addresses the issue of eco-friendly products. Regarding eco-labelling in Poland, the EU Eco-label and national eco-label are in place. In order to ensure the cohesion of integrated product policy, one main governmental body – The Ministry of Economy – is responsible for integrated product policy in Poland.

The Council of Ministers on 30 July 2007 adopted **The concept of horizontal industrial policy in Poland**. The horizontal approach acts on industry policy should be to continuously increase the quality of framework conditions for industrial activity through a common to all sectors of activities aimed at increasing the competitiveness of industrial enterprises. These activities will primarily lead to the lifting of innovation and technological progress in enterprises, improve the quality of human capital and adapt its structure to meet market demand and to remove legal and administrative barriers that inhibit economic growth. Horizontal approach to industrial policy in the first place will deal with the dominant sectors or total share of private ownership. These sectors include, in particular, the biotechnology industry, chemical, wood, electronics, pharmaceuticals, ICT, light, furniture, machinery and automotive industries. At the same time, the proposed instruments of industrial policy of the horizontal will create conditions for the development of new sectors with high growth potential. These sectors are formed at the interface between traditional industries and are based on intensive use of the results of research and development work. These include emerging markets such as around biotechnology, nanotechnology and information technology and satellite services.

Moreover, the Government is taking a whole range of actions to develop dialogue and co-operation between stakeholders. Seminars and training courses for public servants, as well as representatives of the private sector, are organised. Improved communication between Government departments and representatives of industries and other sectors is also emphasised. Very helpful here is the co-operation, initiated in 2009, between the Ministry of Economy and the Responsible Business Forum (FOB), within the framework of the World Business Council for Sustainable Development (WBCSD). The agreement relates mainly to improved co-operation to promote voluntary business initiatives for sustainable development, in particular action for awareness-raising, experience-sharing and the development of a dialogue platform between representatives of administration, industry organisations and enterprises, as well as scientific circles.

Furthermore Poland participates in the implementation of the ERDF-supported project **Sustainable Production through Innovation in Small and Medium-sized Enterprises in the Baltic Sea Region**, *SPIN.* The aim here is to promote innovative solutions for sustainable development, including eco-innovation, environmental technologies and CSR. Activities undertaken by the project partners focus on:

- the identification and meeting of the needs of SMEs through adjustment of the relationship between the demand and supply of innovation for sustainable development,
- the developing and testing of tools and instruments for the streamlined implementation of innovation for sustainable development within SMEs,

- the identification and testing of appropriate incentives for SMEs to introduce innovation in the name of sustainable development,
- ensuring cohesion in the creation of an international framework by which to promote innovation for sustainable development among SMEs in the countries of the Baltic Sea region.

Moreover, the State Agency for the Development of Entrepreneurship (PARP) is implementing a research project entitled *Sustainable production models in the activity of SMEs – a proposal for systemic solutions supporting the implementation of sustainable production models in SMEs* under Sub-measure 2.1.4 HC OP. The aim of the project is to provide suggestions, recommendations and proposals as regards systemic solutions that support implementation of sustainable production patterns in SMEs, these comprising legislative and institutional instruments, as well as a direct support system. The taking on of the above issues by PARP is a reflection of the growing pressure consumers and public administration bodies exert on entrepreneurs in regard to their meeting environmental requirements. The specific objectives of the project *i.e.* comprise:

- the identification and assessment of the sustainable production patterns used currently by SMEs and the determination of current development trends in that respect,
- the identification of industries within the SME sector exerting the greatest influence on the environment, and the assessment of their possibilities where implementation of sustainable production patterns is concerned,
- the identification of the barriers to the implementation of sustainable production patterns,
- the determination of the state of mind and competence (knowledge, skills) gaps of entrepreneurs and persons employed in the SME sector as regards needs and possible actions aimed at limiting environmental impact and building a green economy,
- the defining of proper forms of support and the proposing of amendments to relevant provisions in law.

The project will comprise qualitative and quantitative research on the implementation of sustainable production patterns by SMEs, along with an analysis of case studies. The research results will be presented in the form of a report and expert opinions that will constitute the basis for a debate on the introduction of legislative changes.

The Minister of Economy chairs the *Chapter of the Polish Register of Cleaner Production and Responsible Entrepreneurship* operated by the Polish Movement for Cleaner Production. The Register is a country-wide, publicly available list of organisational units with outstanding performance related to the implementation of the preventive *Cleaner Production strategy*. The Register includes all organisational units, both production and service enterprises and local government institutions.

Organisational units may apply to be included in the Register if they:

- have implemented and have in place the Cleaner Production strategy in their operation,
- prove consistent reduction of environmentally unfavorable impacts resulting from their activities and/or products manufactured and provide plans for further environmental activities,

- conduct their activity according to the Polish Environmental Protection Law Act,
- submitted required environmental reports in a timely manner,
- signed the International CP UNEP Declaration,
- submitted a declaration on the support of the "Global Compact" programme.

A company is entered into the Register following positive evaluation by the Chapter of the Register. The other members of the Chapter include for example: the Chief Inspector for Environmental Protection and President of the National Fund for Environmental Protection and Water Management. The Chapter of the Register publishes a document updated annually with Environmental Reports of the organizational units included in the Register.

By virtue of Regulation No. 38 of 8 May 2009, the *Group for Corporate Social Responsibility Issues*, as an auxiliary body under the Prime Minister, was appointed to ensure the consistency and coordination of initiatives undertaken to popularise CSR at national level. A representative of the Minister responsible for issues of the economy and enjoying the rank of Under-Secretary of State, presides over the works of the Group, whose tasks include:

- the proposing of solutions as to how to coordinate the activities of different public administration bodies when it comes to promoting and implementing CSR principles,
- the analysis and utilisation of other countries' CSR experiences, as well as the propagation of good practice, in particular instruments devised under the European Alliance for Corporate Social Responsibility framework,
- the creation of conditions facilitating communication and dialogue concerning CSR between administration, business, social partners and NGOs.
- The working groups formed for the effective implementation of the Group's tasks deal with:
    - the system for promoting CSR in Poland,
    - responsible investments,
    - education within the scope of CSR,
    - sustainable consumption.

The Group and its component Working Groups bring together representative experts from government, as well as business partners, social organisations, trade unions and academia. The Working Groups make recommendations for the Group that will further facilitate the development of CSR in Polish conditions.

In November 2009, the *Warsaw Stock Exchange* launched Poland's first index (and one of Europe's few indices) of socially-responsible companies. This is the Respect Index, where the name represents an acronym of words that reflect the essence of CSR, i.e. *Responsibility, Ecology, Sustainability, Participation, Environment, Community and Transparency.* The primary aim of the initiative is to raise investors' interest in companies demonstrating exceptional involvement in CSR initiatives. The analysis covers companies listed on the Warsaw Stock Exchange, with the exception of NewConnect, foreign and dual-listed companies. The companies included in the Index are analysed according to the definition of social responsibility, whereby it is a management

strategy and philosophy of doing business. In assessing the enterprises, the share prices and income from dividends and rights issues are utilised. Currently the Index is performing in line with expectations, *i.e.* is more stable and less volatile than other indices, at the same time ensuring a profitable rate of return.

The **Transport Development Strategy**, which is nearing completion, includes the development of the road, rail, air, marine and inland-water transport in order to modernize it, make it more efficient and more environment-friendly. The strategy includes provisions for economic effectiveness and infrastructure organization improvement through novel technical solutions, ICT, intermodal transport and training professional staff.

The **2014 National Waste Management Plan** adopted in December 2010 covers full range of tasks required to provide for integrated waste management throughout the national territory in a manner ensuring protection of the environment, with regard to both present and future economic opportunities and circumstances, and the technical development level of existing infrastructure. Main objectives of the Plan are reducing the use of resources and increasing the recovery share, by favouring the practical application of the waste hierarchy, from which waste prevention should be the first priority of waste management, and that re-use and material recycling should be preferred to energy recovery from waste, where and insofar as they are the best ecological options. Fulfilling mentioned goals will contribute to improving resource efficiency. The plan sets objectives and tasks for the period 2011-2014 and outlines perspectives for 2015-2022.

5. Individual types of resources identified as priority for national or sector-specific resource efficiency policies

The **National Environmental Policy for 2009-2012 and its 2016 outlook** identified the following priority resources (relevant strategic objectives are presented in the next section):

- Nature and biodiversity
- Forestry
- Soil
- Water resources
- Geological resources (including brines, curatives and thermal waters)
- Energy resources and climate
- Air
- Waste

The protection of nature and biodiversity including rare species is extremely important. Forests are regarded as the foundation of ecological security and balance and have many various functions. Forest ecosystems are the most precious and best-represented component of various forms of nature protection in Poland accounting for nearly 38 per cent of country land area subject to protection. According to the *Forest in Poland 2009* report, the country's timber resources steadily increase and timber resources in state-owned forest (1.7 billion m3) are the

highest in the country and their quality (according to available data) surpasses that of forests under other forms of ownership.

Over 90% of Poland's territory is used for agriculture (about 60%) and forest-related purposes (30%). In Poland soils of average and low agricultural productivity prevail. The arable land's contamination with heavy metals and polycyclic aromatic hydrocarbons is low, the composition of these soils corresponds to the composition of natural or non-contaminated soils. Pressure related to chemical contamination of soils is restricted mainly to industrialized urban and communication areas.

Poland is poor in water resources so sustainable water management belongs to the priorities. National water resources per capita are low and constitute just about 36% of the European average. Water quality, especially the quality of water dedicated to supplying people with drinking water, has a great impact on public health as well as ecosystems. Water quality in Poland improved significantly in recent years, which is the effect of reduced production in many industries, new technologies and new industrial and municipal sewage treatment plants. However the state of purity of surface flowing waters and lakes is still insufficient. The assessment of the groundwater quality shows that definite majority of groundwater resources is characterized by good chemical status.

Referring to the fisheries sector, there are few economically important fish species in the Baltic Sea, which are also identified in the projected "Maritime Policy of the Republic of Poland until 2020". The most important are: cod, herring and sprat, and these species have been identified as a priority resources which should be managed in an effective and sustainable way.

Energy resources (natural gas, oil and its derivatives, lignite, hard coal, coal-bed methane and ores of radioactive elements) have been identified as a priority in the "Energy Policy of Poland until 2030," for reasons of energy security. Annexes to the Energy Policies include projections of demand for fuels and energy until 2030, and an action plan for the years 2009-2012.

Coal will remain the major factor stabilising Poland's energy security, given its large deposits in the country, and considering the dependency of the country on the import of gas (in almost 70%) and of crude oil (in over 95%). Regarding natural gas, the goals are to increase the natural gas mining possibilities on the Polish territory, increasing the natural gas storage capacity, acquiring natural gas using coal gasification technology, and utilisation of coal-bed methane.

Renewable energy sources have been recognized as a priority for the sustainable development of the energy market in Poland.

Waste management (including increasing rate of recovery especially recycling of glass, metals, plastics and paper, also energy recovery, as well as minimizing storage of waste) remains one of the priorities of ecological policy. The "2014 National Waste Management Plan" describes the main objectives and activities. Mining waste is still being used to extract resources which were not captured, which are successfully used for road building and construction industry.
In the case of extractive waste gained from waste facility, for subsequent processing is required to obtain permission for the waste generation, which is referred in Article 18 Act of the Mining Waste of 10th July 2008 (Journal of Laws No. 138, item. 865, and from 2010 No. 28, item. 145) and obtain

a decision approving the waste management plan, which is mentioned in the Article 11 Act of the Mining Waste.

6. Strategic objectives, targets and indicators on resource efficiency

The **National Environmental Policy for 2009-2012 and its 2016 outlook** identified the following strategic goals for the priority resources:

- Nature and biodiversity – protection biodiversity on a particular levels, inventory and valorization biodiversity
- Forestry – ensuring sustainable forestry practices in the sector (e.g. age and species structure of forest stands, preserving biodiversity) and multi-purpose use of forests
- Soil – protection against erosion, re-cultivation of degraded land, and implementing good agricultural and forestry practices
- Water resources – ensuring rational management and use (e.g. reducing consumption of water for industrial and household use, increased water retention, restoring continuity of water basins), and improving quality of water (surface and ground water)
- Geological resources – rational management and use of mineral deposits, including brines, curative and thermal waters
- Energy resources and climate – accelerated use of renewable energy sources, energy savings and efficiency in industry, transport and housing, and modernization of the energy sector
- Air – restriction on emission and significant reduction of SO_2, NO_x and PM10, PM2,5 emissions
- Waste – decoupling of waste generation from economic growth, selective collection of municipal waste, recycling and recovery

In 2009-2012, it is necessary to continue **inventory and valuation of biological diversity** in Poland. This will form the basis for compilation of complete list of protected birds and habitats sites under Natura 2000 European Ecological Network. Besides, it is necessary to enforce the nature conservation requirements to be included in spatial planning and provide for rigorous compliance with environmental protection principles. It is also important that development of the national network of protected areas be continued with regard to establishment of new National Parks, Nature Reserves, Landscape Parks (or enlargement of existing ones), as well as creation of the further nature conservation forms and areas. Also the ecological corridors as the sites performing supplementary role to that of the spatial forms of nature conservation have to be considered in nature conservation system.

Strategic goals of the **National Strategy for the conservation and sustainable use of biodiversity and Action Plan for 2007-2013** are the following:

- the identification and monitoring of the state of biodiversity as well as the existing and potential threats;
- the effective elimination or limitation of emerging threats for biodiversity;

- the preservation and/or enhancement and restoration of the lost elements of biodiversity;
- the full integration of actions for the conservation of biodiversity into the actions in these sectors of the economy which affect such biodiversity as well as those of the public administration and society (including non-governmental organisations), while keeping the correct proportions between the maintenance of a natural equilibrium and the socio-economic development of the country;
- the enhancement of knowledge as well as the shaping of attitudes and activity of the public for the conservation and sustainable use of biodiversity;
- the improvement of mechanisms and instruments for the conservation and sustainable use of biodiversity;
- the expansion of international cooperation at regional and global levels for the conservation and sustainable use of biodiversity resources;
- the use of biodiversity in a sustainable manner, ensuring the fair and equitable sharing of the costs and benefits related to its preservation, also including the costs of failure to take developmental actions in order to protect natural resources.

Forested areas currently make up 28.9% of Polish territory (about 9 million hectares). The protection and sustainable development of forests are key elements of ecological security of the country.

The 2009 green paper **Poland 2030: development challenges** identified among key priorities:

- improved access to water resources and protection of groundwater reserves;
- increasing the share of forested land;
- improving air quality through reduction of emissions;
- protecting designated areas and preventing ecosystem fragmentation.

According to draft **National Strategy for Management of Water Resources 2030**, one of the operational goals to be achieved within the time horizon of the document is to satisfy socially and economically reasoned needs for water. This is to be achieved by the following operational goals:

- to define real water needs for drinking-water supply and other users as well as provide for access to water resources of appropriate quality;
- rationalization of water needs of population, economy and the environment;
- introduction of new legal and financial instruments to enhance rational management of water resources;
- introduction of measures to enhance water saving.

The detailed aims for fish resources efficiency are defined in the **Strategy for the development of the fisheries for 2007-2013** under the EU Operational Programme. These are:

- increase of the competitiveness of the fishing sector;
- obtaining a balance between fishing effort and available renewable fish resources;
- social protection of coastal communities on the areas which depend on fisheries and aquaculture;
- protection of the coastal fisheries;
- improvement of the quality of fish products;
- development of aquaculture;

- regeneration of the fishing fleet;
- continuity of deliveries of fish and fish products, in order to minimize dependency of fish processing on the seasonal changes in fish catches.

With respect to the **management of mineral (geological) resources**, the main goals of the **National Environmental Policy** are to ensure optimal supply of resources to the population and businesses, and to protect resources from qualitative and quantitative deterioration. Specific actions until 2016 include, among others:

- improving regulatory framework for protection of mineral resources and underground water reserves;
- limiting pressures on the environment from geological exploration and resource exploitation;
- eliminating illegal resource exploitation;
- completing identification of disposable resources of curative and thermal waters as well as main reservoirs of ground waters;
- promoting usage of coal-bed methane.

The **Energy Policy of Poland until 2030** identified among its strategic directions 'improving energy efficiency,' 'intensifying use of renewable energy sources, including biofuels' and 'reducing environmental impacts of the power industry.' Overarching goals are to increase the security of fuel and energy supply, and optimizing use of state energy resources through diversification of sources.
Energy efficiency is given priority in the Energy Policy and progress in this respect will be of key importance to implementing all of its objectives. The section on 'Improving energy efficiency' includes the following:

The main energy policy objectives:

- to achieve zero-energy economic growth, i.e. economic growth with no extra demand for primary energy;
- reducing the energy intensity of Polish economy to the EU-15 level.

Specific objectives in the area are as follows:

- to enhance efficiency of power generation by building highly efficient generation units;
- to achieve a twofold increase (as compared to 2006) in power generation with the use of highly efficient cogeneration technology by 2020;
- to limit grid loss during transmission and distribution by i.e. modernizing the existing and building new grid, replacing low efficiency transformers, and developing distributed generation;
- to increase efficiency of end-use of energy;
- to increase the ratio of annual demand for power to the maximum demand for power at peak usage hours, which allows to limit the total cost of meeting the demand for power.

The measures to improve energy efficiency include, among others:

- setting the national objective of enhancing energy efficiency;
- stimulating development of cogeneration ;

- using mandatory energy performance certificates for buildings and apartments upon their marketing or renting;
- determining energy intensity of devices and power-consuming products, introducing minimum standards for power-consuming products;
- committing the public sector to serve as a role model of economical energy usage;
- supporting research and development on new solutions and technologies reducing energy consumption, in all kinds of its processing and use;
- applying Demand Side Management techniques, stimulated by diversification of distribution prices during the day and of electricity prices on the basis of reference prices as a result of introduction of an intra-day market and sending price signals to customers with the use of remote bilateral communication via electronic meters;
- informational and educational campaigns promoting efficient energy use.

In addition, the indicative target stemming from the Directive 2006/32/EC on Energy End-Use Efficiency and Energy Services is to achieve 9% of energy savings by 2016 in the sectors not covered by the EU-ETS. To fulfill this Directive, the Ministry of Economy prepared **National Energy Efficiency Action Plan** (NEEAP) adopted by the European Committee of the Council of Ministers on 31 July 2007, which assumes energy savings of 9% of the annual average amount of end-use energy consumption from the period 2001–2005 by 2016 (i.e. by 53,452 GWh).

In the area of renewable energy sources, the share of renewable energy in total energy consumption is an indicator for the **National Renewable Action Plan of Poland**. The RES target stemming from Directive 2009/28/EC is to achieve 15 % of use of renewable energy in the energy sector and 10 % in transport. In the **Bio-components and Biofuels Act** of 25 August 2006 there is a National Indicative Target defined as the minimal share of biocomponents and other renewable fuels in the total amount of liquid fuels and liquid biofules used during the calendar year in transport described by calorific value.

Waste management in Poland is considered as a one of the priorities in the ecological policy. Waste policy should aim at reducing the use of resources, and favour the practical application of the waste hierarchy (prevention, preparing for re-use, recycling, other recovery, e.g. energy recovery and final disposal). Increasing the recovery share (especially recycling of glass, metals, plastics and paper, also energy recovery) and minimizing storage of wastes are the main objectives adopted in the **2014 National Waste Management Plan**.

Indicators:

Environmental indicators are published regularly by the Central Statistical Office, as part of annual statistical yearbook. Indicators related to resource use and efficiency include for example:

- Devastated and degraded land requiring reclamation and management (as of 31 XII) in thousand hectares;
- Water withdrawal for needs of the national economy and population in hm3;
- Waste (excluding municipal waste) generated during the year in million tonnes: and amount of waste recovered;
- Municipal waste collected (during the year) in million tonnes, and amount treated in incineration and composting plants,

- Consumption in households of water and electricity, including in rural areas;
- Forested area in million ha and % of total;
- Removals of timber m3;
- Sea fish catch and fresh water fish catch (thousand tonnes);
- Consumption in urban area households per capita of the following: water from water supply systems, electricity and cooking/heating gas;
- Reduction of industrial air pollutants in % of pollutants generated;
- Municipal waste landfilled – kg per capita per year;
- Municipal waste incinerated– kg per capita per year;
- Share of renewable energy sources in total electricity consumption - %.

See Statistical Yearbook of the Republic of Poland 2010 and Local Data Bank.

Furthermore, in December 2010, the Central Statistical Office published the most recent annual statistical compendium Environment 2010.

The indicator-based "Report on the state of environment in Poland 2008" was published in 2010 by the Chief Inspectorate for Environmental Protection, based on State Environmental Monitoring data. The report also contains environmental indicators produced by the Polish Central Statistical Office (GUS) and Eurostat and includes, among others, a chapter on 'the use of materials, energy and water' using the following Indicators:

- Production of biomass by type (GUS) in tonnes
- Extraction of mineral resources (GUS) in thousand tonnes
- Domestic material consumption (Eurostat) in thousand tones
- Material productivity GDP/DMC (Eurostat) (ratio)
- Primary energy supply by source (GUS) % share in total
- Trends in energy consumption and economic growth (GUS) – indexed to 1999 base year
- Energy intensity of economies (Eurostat) – kg of oil equivalent per 1000 Euro
- Water abstraction by type of use (GUS) - % share in total
- Share of renewable energy sources in electricity generation (Eurostat) - % share in total
- Water abstraction per capita per year (Eurostat) – m3/person

- Indicators used in the chapter on waste include:
- Generation of industrial waste (GUS) thousand tones
- Waste generated by type (except for municipal waste) (GUS) – million tones
- Trends in industrial waste generation and economic growth (GUS) - indexed to 1998 base year
- Amount of municipal waste collected (GUS) – million tons and kg/capita
- Trends in municipal waste collection and private consumption (GUS) - indexed to 1998 base year
- Management of industrial waste by treatment method (GUS) – % share in total
- Collection of waste electric equipment (Chief Inspectorate for Environmental Protection) – tonnes per year
- Recycling rate of packaging waste (GUS) – % recycling

The State of Environment report can be downloaded from:

http://www.gios.gov.pl/stansrodowiska/upload/file/pdf/download/soer_pl_2008_polski.pdf and in English http://www.gios.gov.pl/stansrodowiska/upload/file/pdf/download/raport2008ang.pdf

See also GIOS State of Environment website.

Environmental indicators are also included in "Report concerning execution of national environmental policy for 2003-2006" The document contains a performance review of objectives and tasks defined in NEP 2003-2006 (including objectives concerning sustainable use of raw materials, other materials, water and energy). It is accompanied by a set of 60 DPSIR indicators which consists an assessment of NEP results. Indicators related to resource use include for example: energy intensity (TJ/1 mln GDP), coal extraction (mln tonnes), industrial wastes (tonnes/1 000 PLN of GDP), water abstraction for municipal purposes (m3/per capita) and for industrial purposes (m3/1000 PLN of GDP).

7. The institutional setup for the development and implementation of resource efficiency policies

The lead role of the implementation of the resource efficiency flagship is within the responsibility of the Ministry of Environment which takes active part in the preparation and implementation of the strategies and policies listed above. Minister of the Environment manages "The Environment" and "Water Management" sectors of the Governmental Administration. Under the *Act on Governmental Sectors* the water management sector includes development, protection and rational use of water resources and the environment sector covers among others: environmental protection and development including rational use of environmental resources, nature conservation including designation sites and species protection, forestry, management of natural resources, geological resources, including underground water reserves.

The lead responsibility for energy-related policies is with the Minister of Economy. This includes setting national targets concerning the energy mix as well as initiatives on renewable energy use and improvement of energy efficiency. The minister responsible for the economy is in charge of raw material policies and in particular the use of energy resources. The Ministry of Economy carries out the economic policy and supports the enterprise and innovation development. It cooperates with the Ministry of Environment.

The Minister of Agriculture and Rural Development is responsible for agriculture, rural development, agricultural markets and fisheries sectors. The Ministry has the lead responsibility in Poland for the implementation of the EU Common Fisheries Policy aiming at ensuring sustainable and effective use of living marine water resources.

The Ministry of Infrastructure is in charge of issues related to construction, spatial order and housing, maritime economy, communications and transport.

The Ministry of Regional Development is responsible for shaping and coordinating numerous policies, including development policy to ensure a durable and sustainable development of the country and socio-economic cohesion, regional policy with the objective to enhance

competitiveness of Polish regions as well as ensure territorial and spatial cohesion, spatial policy to maintain spatial order and a harmonious development of Poland, Cohesion Policy in Poland focusing on reducing the developmental disparities between EU regions. The most important tasks include managing European Funds.

Chief Inspectorate for Environmental Protection and sixteen voivodeship inspectorates for environmental protection are responsible for enforcement of environmental regulations, monitoring and assessment of the state of the environment, and prevention of major industrial accidents. Reports on the state of environment are available at:

http://www.gios.gov.pl/stansrodowiska/gios/index/en

The current State Environmental Monitoring Programme is available at:
http://www.gios.gov.pl//zalaczniki/artykuly/pms.pdf

A great deal of information on waste management, concerning i.e. transboundary shipments of waste, WEEE, ELV recycling, is also available at the GIOS website.

The bulk of environmental statistics and indicators are compiled by the Polish Central Statistical Office (GUS), with many data and indicators produced by the Ministry of Environment and the Chief Inspectorate for Environmental Protection. Regularly published statistics on environment and energy are available at: http://www.stat.gov.pl/gus/srodowisko_energia_ENG_HTML.htm

The area of GUS's activities includes also environmental accounts (material flow accounts, environmental protection expenditures accounts, environmental goods and services sector, NAMEA Air Emission).

The Polish Geological Institute publishes regular statistics on extraction of mineral resources, split by category (energy-related, metals and ores, chemical, and rock and aggregate. They are available at http://old.pgi.gov.pl/surowce_mineralne/. Balances of exports and imports of mineral resources are available at: http://old.pgi.gov.pl/surowce_mineralne/eksp-imp.htm.

The National Water Management Authority is responsible for water conservation and especially for water management and use. The President of NWMA supervises the performance of directors of seven regional water management boards. The director of regional water management board is responsible for water management in the water region. According the Water Law Act, executing his duties he is obliged to provide that waters are managed in line with the principle of the rational and comprehensive treatment of surface waters and groundwater, taking into account their quantities and quality. Moreover, he shall take into account the principle of common interests and co-operate with water users and the representatives of local communities in order to achieve the maximum social benefits. The director of regional water management board is responsible for a preparation of number of strategic and planning documents on a water-region level. Among them there are *conditions for the use of the waters in a water region*, which include i.a. priorities in satisfying water needs and specific requirements/restrictions necessary for the achievement of environmental goals. The *conditions*… are legally binding document on a river-basin level.

The State Forests National Forest Holding is an organization protecting, utilizing, and shaping Poland's forests. It manages publicly owned forests on behalf of the Polish State Treasury.

Specialised agencies supporting work on optimisation of resource use and resource efficiency include among others, the Material Reserves Agency responsible for management of reserves of resources, materials and fuels, medical products, and agricultural products and foods. Other supporting institutions include Sea Fisheries Institute in Gdynia and the Inland Fisheries Institute in Olsztyn, research and development institutions responsible for the scientific supervision of the implementation of the national plan to manage eel resources. Additionally, the Sea Fisheries Institute in Gdynia plays an important role in estimating the condition of the Baltic Sea fish stocks. On the basis of the scientific assessment an effective management of fish resources in the Baltic Sea is planned every year.

8. Selected policy instruments or initiatives on resource efficiency presented in more detail

National Forest Policy

National Forest Policy highlights the multipurpose role of forest covering ecological, production and social functions. Ecological functions include: stabilization of water cycle, preventing flooding, avalanches and landslides, soil protection against erosion and landscape protection against turning into steppe, impacting on local and global climate, stabilization of the atmosphere composition and cleaning the air, making conditions for preserving biological potential of great amount of species and of ecosystems and preserving genetic values as well as increasing the variety and complexity of the landscape and providing better conditions for human life and health and agricultural production. Production functions include among others preservation of long-lasting usage of timber and preservation of timber to be renewed. Social functions include among others: recreational role for the public, positive impact on health, reclamation of degraded area, supporting ecological and cultural education, improving country's defenses. Increasing forested area is one of the priorities of the forest policy in Poland, described in the **National Program for Augmentation of Forest Cover**.

Forest area exceeds 9,08 million hectares. Publicly owned forests (7,06 million hectares) are managed by The State Forests National Forest Holding on behalf of the Polish State Treasury. The State Forests protect and utilize Poland's forests for over eighty years according to idea of the sustainable development. It set up Promotional Forest Complexes as practical element in pursue of the National Policy on Forests and the Forest Act. Forest management is endorsed annually by the Polish parliament. Additionally forest management carried out by The State Forest is certified by Forest Stewardship Council.

See also the *State Forests in figures 2009* and *Forests in Poland 2009* reports.

The Polish Eel Management Plan

The Polish Eel Management Plan was written in accordance with the Council Regulation (EC) No. 1100/2007. The aim of the Plan is to achieve the free escapement of 40% of silver eel population. The goals will be achieved through the following measures:

- Increasing restocking with glass eels or reared eels of a length < 20 cm total length – the plan calls for an annual release of some 13 million glass eels into Polish waters, including 6 million glass eels annually for the Oder River basin and 7 million for the Vistula River basin.
- Facilitating fish migration through increasing river continuity
- Limiting catch mortality from both commercial and recreational fisheries**:**
    - designating a closed fishing season from June 15th to July 15th throughout the country,
    - setting minimum catch length to 50 cm regardless of weight,
    - improving selectivity of fishing gear, by installing selective sieves or by increasing the mesh size in the chamber to 20 mm (bar length),
    - limiting daily catch to two eels per rod,
    - limiting predation by great cormorant,
    - limiting illegal and unreported catches.

The plan covering catchment areas of the two largest Polish rivers – Vistula and Oder, was developed by the Ministry of Agriculture and Rural Development together with scientists of the Sea Fisheries Institute in Gdynia and the Inland Fisheries Institute in Olsztyn, after consultation with the fishing community. The following institutions are responsible for implementing activities set forth in the Eel Management Plan:

- Minister in charge of fisheries (Minister of Agriculture and Rural Development) responsible for, among other things, inland fisheries and the rational exploitation of living marine resources;
- Minister in charge of water management (Minister of the Environment) responsible for, among other things, managing, protecting, and rationally exploiting water resources;
- Minister in charge of the environment (Minister of the Environment) responsible for, among other things, environmental protection, and managing, protecting, and rationally exploiting resources from the natural environment;
- President of the National Water Management Authority (NWMA) – central governmental administrative organ responsible for water management, supervised by the minister in charge of water management and supervising the directors of the regional water management boards;
- Directors of Regional Water Management Boards (RWMB) – independent governmental administrative organs subordinate to the President of the NWMA, responsible for water management in areas determined by water basin regions;
- Marshals of the voivodeships and other offices of regional government – in charge of water management and responsible for, among other things, water use permits, monitoring the rational exploitation of fisheries within fishing regions, and creating and implementing

voivodeship programs for protecting and developing aquatic resources, including making rivers passable to migratory fish;

- Voivodes – superiors of the voivodeship government administration, responsible for, among other things, the National Fisheries Guard (NFG);
- National Fisheries Guard – responsible for monitoring compliance with inland fisheries regulations and others related issues;
- Directors of national parks – responsible for, among other things, devising and implementing a plan to protect the national parks;
- District Inspectorates for Marine Fisheries (DIMF) – bodies for the administration of sea fisheries responsible for monitoring marine fisheries and subordinate to the ministers in charge of fisheries; these bodies execute their duties through the District Inspectorates for Marine Fisheries (DIMF).

Concessions for exploitation of mineral deposits

Rational management of mineral deposits is regulated by the Geological and Mining Law (Official Journal of the Laws of 2005 No. 228, Item 1947). According to the Law, a concession shall be required for:

- prospecting for or exploration of mineral deposits,
- exploitation of minerals from deposits,
- storage of substances and disposal of waste in the subsurface, including in underground mining excavations.

Depending on type of mineral, mining area, amount of extracted minerals concessions are granted by Minister of the Environment, the Voivodeship Marshal or by the County Administrator. Apart from the formal documents concerning the company and financial resources for exploitation, an application for the granting of a concession for exploitation of minerals should also contain a deposit development plan, reviewed by the competent mining supervision authority. After obtaining the concession for exploitation of minerals, the entity shall prepare an operations plan for each of the mining plants, after which it can proceed with the construction of the mine and to the exploitation of minerals. Exploitation of minerals must be consistent with the terms specified in the concession and the deposit development plan. An entrepreneur extracting mineral deposits shall pay the royalty to the local authority in whose territory activities are carried out and fees to the National Fund for Environmental Protection and Water Management.

Area of energy efficiency – Labelling

Poland is required to apply mandatory labelling of products, in accordance with the EU directives, to inform potential purchasers about products' energy consumption. Directive 92/75/EEC of 22 September 1992 introduced mandatory labelling of household appliances such as lamps, ovens, refrigerators, freezers, washing machines, tumble-dryers and dishwashers. The new directive 2010/30/EU of 19 May 2010 extended the scope of the mandatory labelling to "energy-related products" which "have a significant direct or indirect impact on the consumption of energy and,

where relevant, on other essential resources during use".[1] The revised energy labelling directive will have to be transposed into national law by 20 June 2011. The European Commission will review it by 31 December 2014. Appliances and energy related products are classified from A to G, where class A is for the most energy-efficient. Three additional classes can be added, A+, A++ and A+++ showing even greater efficiency compared to class A.

Nationwide information campaigns on energy efficiency

Since 2007, the Ministry of Economy has conducted an informational campaign promoting campaign energy efficiency under the theme "Time to save energy". The campaign aims to promote profitability of energy-saving solutions and to supplement activities of the Ministry of Economy directed towards an increase the energy efficiency of the Polish economy.

In 2008, two brochures were elaborated and 10 000 copies sent out (ie, "Intelligent Energy – a User Guide" and "Intelligent Energy - a guide for manufacturers, distributors and resellers of equipment and household appliances). These materials are intended to promote awareness of energy saving technologies and the creation of social attitudes and behaviour towards a rational and economical use of energy in everyday life. Brochure entitled "Intelligent Energy - a User Guide" includes information relating to energy saving activities in households and offices. This publication aims to facilitate decision making when choosing energy-using equipment that will be both economically and environmentally sound.

In 2009 an updated second edition of "Intelligent Energy - a User Guide" in a 1 000 000 copies were distributed to customers along with the invoice for electricity. Within the framework of this campaign, a booklet addressed to school children and parents to promote issues related to rational use of energy (with a circulation of 200 000 copies) was developed and sent to the Environmental Education Centres throughout the country. In addition Ministry of Economy purchased 54 500 CFLs and forwarded them to all municipalities in Poland as an element of the promotion of energy saving behaviour.

Another important element of the campaign was a multimedia campaign promoting energy demand-side management addressed directly to final consumers. The end results of this action included television and radio spots to alter social behaviour in energy savings. In 2010 the Ministry of Economy purchased air time on the main TV channel (TVP SA) and 28 spots were aired to encourage the efficient and economical use of energy in everyday life. The spots were seen by more than 7.5 million people. Spots were also spread over the radio. Ministry of Economy bought air time on Radio RMF FM where 34 spots were conducted to encourage changes in attitudes and social behaviour to be more energy efficient. Spots on the radio RMF FM were heard by about 3 million people. The Action Plan annexed to the Poland's Energy policy until 2030 envisages further actions in this area in 2009-2012 (http://www.mg.gov.pl/node/10722).

[1] It does not apply to second-hand products and any means of transportation.

Green Public Procurement (GPP)

Prepared by the Public Procurement Office and adopted in 2007, **the National Action Plan on green public procurement for the period 2007-2009** focused on action to better integrate environmental considerations into public procurement, to develop a market for environmental products and to expand the market for technologies for eco-industry. Tasks implemented as part of this Action Plan include:

- three annual conferences devoted to GPP and attended by over 300 representatives of public administration bodies, as well as of industry unions and associations;
- two editions of training on GPP organised for more than 220 civil servants in co-operation with, *i.e.* the Polish National Energy Conservation Agency, the Mineral and Energy Economy Research Institute and Poznań University of Economics;
- a handbook prepared for domestic awarding entities offering guidance on the integration of environmental considerations into contract award proceedings (Part I is devoted to legal aspects of green public procurement, Part II to the assumptions and applicability of Life Cycle Assessment (LCA) and Life Cycle Cost (LCC) as these concern green public procurement, and part III the official version of the European Commission Communication COM(2008) 400 and a verified translation of the GPP Training Toolkit);
- establishment by the Ministry of Economy of informal working groups tasked with developing recommendations on the application of environmental criteria in public procurement.

On 14 June 2010, the Council of Ministers adopted a new three-year **National Action Plan on sustainable public procurement for 2010-2012** setting out the objectives, timing and system of coordination and monitoring of actions concerning both green and socially responsible procurement (See: http://www.uzp.gov.pl/cmsws/page/?F;379). The main objectives of the Plan include increase of the level of consideration of environmental and social aspects in public procurement, development of the market for environmentally friendly products and expansion of the market for technologies for environmental protection industry and the environment-related sector and promotion of sustainable manufacturing and consumption models. A target to achieve by 2012 is that at least 20% of public procurements should meet green criteria.

At the same time, a number of initiatives being implemented seek to create in Poland a modern system that would guarantee disbursement of public funds to stimulate the development of an innovative economy, this goal being consistent with the Ministry of Economy/Public Procurement Office document entitled *"A new approach to public procurement. Procurement and small and medium-sized enterprises, innovation and sustainable development"* (as adopted by the Council of Ministers on 8 April 2008). Additionally, the website concerning GPP was activated in 2010: www.zielonezamowienia.gov.pl. The governmental portal includes information on EU and Polish law in GPP area, examples of the best practices, as well as proposal of environmental criteria which may be used in formulation request in the procurement procedure.

Long term program for the promotion of biofuels

On the 24th of July 2007 the Council of Ministers adopted **Long-term program for the promotion of biofuels in 2008-2014.** The document anticipates activities aiming at increasing the use of biocomponents, liquid biofuels and other renewable fuels in transport. The intention of the authors of the document is ensuring the stability of the operating conditions for all entities dealing with biocomponents and liquid biofuels market – essential condition for preparing long-term economic plans and providing entrepreneurs with effective possibilities for getting funds for new investments. On the 13th of July 2010 the Council of Ministers adopted **Directions of development of agricultural biogas plants in Poland between 2010-2020**. It is intended that in every Polish district (gmina) by 2020 there will be on average one biogas plant using biomass from agriculture – taking into account appropriate conditions existing in the district. For producing agricultural biogas mainly by-products of agriculture and remains of farm and food industry are going to be used.

9. Topics of interest and information needs for follow up work

1. The importance of recyclable sources in the mineral resources demand in EU countries – reality and perspectives.
2. The influence of environmental limitations on efficiency and competitiveness of mineral industry of EU countries.
3. Closed loop/circular economy.
4. How to enhance synergies between environmental protection and economic growth.
5. Ecological Tax Reform.
6. Green public procurement
7. Awareness raising and involving stakeholders
8. Policies for improving energy efficiency
9. Integrating resource efficiency into other policies

10. References

10.1 Facts and figures about the country

[1] Eurostat, 2011 [demo_pjan]
http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjan&lang=en

[2] CIA World Factbook (2009 est.)
https://www.cia.gov/library/publications/the-world-factbook/index.html

[3] Eurostat, 2011 [nama_gdp_c]
http://appsso.eurostat.ec.europa.eu/nui/show.do

[4] Eurostat 2011 [tsieb010]
http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsieb010&plugin=0

[5] World Bank, Migration and Remittances Factbook 2011
http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:21352016~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html

[6] European Commission 2008
http://europa.eu/abc/12lessons/key_dates/index_en.htm visited December 15, 2008

[7] Eurostat, OECD and Total Economy Database
DMC data from Eurostat Database, Material Flow Accounts, and OECD, Population data from Eurostat Database, Population, and The Conference Board — Total Economy Database, September 2010. www.conference-board.org/data/economydatabase/

[8] Eurostat
Material flow accounts, env_ac_mfa, uploaded June 2010

[9] The Conference Board, Total Economy Database, Eurostat
GDP data from The Conference Board — Total Economy Database, September 2010, www.conference-board.org/data/economydatabase/ ; DMC data from Eurostat Database on Environmental Accounts, and OECD.

[10] Eurostat
Energy statistics, uploaded Oct 2010
http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/data/database

[11] Total Economy Database, IFF Database. WI Database, Eurostat, OECD, IEA Database
GDP data and Labour data from The Conference Board — Total Economy Database, September 2010, www.conferenceboard.org/data/economydatabase/; DMC data for 1970–1999 (EU-15): IFF database; DMC data for 1992–1999 (EU-12): WI database; DMC data for 2000–2007: Eurostat Database on Material Flow Accounts except Turkey: OECD database; TPES data from IEA Database

10.2 Resource Efficiency Policy References

National Action Plan on sustainable public procurement for 2010-2012
http://www.uzp.gov.pl/cmsws/page/GetFile1.aspx?attid=3225

The National Environmental Policy for 2009-2012 and its 2016 outlook
http://www.mos.gov.pl/g2/big/2009_07/2826c539c3015384e50adac8fe920b0b.pdf

Energy Policy of Poland until 2030
http://www.mg.gov.pl/files/upload/8134/Polityka%20energetyczna%20ost_en.pdf

National Action Plan for Renewables
http://www.mg.gov.pl/files/upload/12326/KPD_KE.pdf

Poland 2030: Development Challenges
http://www.zds.kprm.gov.pl/userfiles/PL_2030_wyzwania_rozwojowe.pdf

National Program for Augmentation of Forest Cover
http://www.mos.gov.pl/artykul/326_lesnictwo/296_krajowy_program_zwiekszania_lesistosci.html

National Forest Policy
http://mos.gov.pl/artykul/2240_polityka_lesna_i_programy_dzialan/290_polityka_lesna_i_programy_dzialan

Forest Act
http://www.lasy.gov.pl/dokumenty/in_english/files/the-act-on-forests/at_download/file

Draft National Strategy for Management of Water Resources 2030
http://www.kzgw.gov.pl/pl/Projekt-Polityki-wodnej-panstwa-do-roku-2030.html

Project of Sustainable Development of Rural Areas, Agriculture and Fishery Strategy
http://www.bip.minrol.gov.pl/FileRepozytory/FileRepozytoryShowImage.aspx?item_id=43685

Draft Strategy for Innovation and Efficiency of the Economy
http://www.mg.gov.pl/files/upload/12707/SIiEG_konsultacje_02.2011.pdf

Strategy of Implementation of Integrated Product Policies in Poland
http://qcm2.quicksilver.pl/img/20/strategia_ZPP.pdf

The concept of horizontal industrial policy in Poland
http://www.mg.gov.pl/NR/rdonlyres/0F1DC7FE-4A1D-4620-A85A-1EFB5BFDA1EA/36317/Koncepcjahpp.pdf

Sustainable Production through Innovation in Small and Medium-sized Enterprises in the Baltic Sea Region
http://www.mg.gov.pl/Gospodarka/Zrownowazonyrozwoj/Aktualnosci/SPIN+Zrownowazona+produkcja+przez+innowacje+w+MSP.htm

Statistical Yearbook of the Republic of Poland 2010
http://www.stat.gov.pl/cps/rde/xbcr/gus/PUBL_sy_statitical_yearbook_of_the_rep_of_poland_2010.pdf

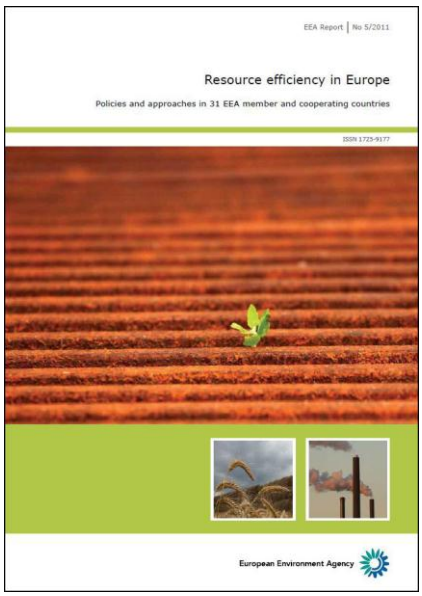
Local Data Bank
http://www.stat.gov.pl/bdlen/app/strona.html?p_name=indeks

Environment 2010
http://www.stat.gov.pl/cps/rde/xbcr/gus/PUBL_se_ochrona_srodowiska_2010r.pdf

Report on the state of environment in Poland 2008
http://www.gios.gov.pl/stansrodowiska/upload/file/pdf/download/raport2008ang.pdf

GIOS State of Environment website
http://www.gios.gov.pl/stansrodowiska/gios/index/en/

Report concerning execution of national environmental policy for 2003-2006
http://mos.gov.pl/g2/big/2009_04/9b78a7128d821aa17bc5f84be4e58306.pdf



Resource efficiency in Europe

Policies and approaches in 31 EEA member and cooperating countries

Further information about resource efficiency policies, including the analytical report and thirty-one detailed country profiles, are available on the EEA website:

http://www.eea.europa.eu/resource-efficiency

Selected examples of resource efficiency policies, instruments or targets presented in the thirty one detailed country profiles