

# POLAND

CONCLUSIONS AND RECOMMENDATIONS (see next page)

## OUTLINE OF THE REPORT

1. THE CONTEXT .....

### Part I

#### MANAGEMENT OF POLLUTION AND NATURAL RESOURCES

2. AIR MANAGEMENT .....

3. WATER MANAGEMENT .....

4. WASTE MANAGEMENT .....

5. NATURE CONSERVATION .....

### Part II

#### INTEGRATION OF POLICIES

6. ENVIRONMENT AND ECONOMY .....

7. SECTORAL INTEGRATION: ENERGY .....

8. SECTORAL INTEGRATION: INDUSTRY .....

### Part III

#### CO-OPERATION WITH THE INTERNATIONAL COMMUNITY

9. INTERNATIONAL CO-OPERATION .....

ANNEXES .....

## CONCLUSIONS AND RECOMMENDATIONS\*

Poland has undergone rapid economic changes since 1989 and has set itself the objective of reconciling economic development with environmental protection. Significant environmental improvements have been achieved, largely as a result of the contraction of economic activity and the restructuring of the industrial and energy sectors, but also as a result of environmental policies adopted and implemented.

With sustainable development as an underlying principle for the formulation of socio-economic policies, the challenge now is to reduce further the pollution and resource intensity of the Polish economy, as recovery and economic growth set in; the second challenge will be to promote convergence of environmental policies and conditions with western European and other OECD countries, in parallel with political and economic convergence.

This OECD report has set out the baseline for assessing future environmental progress and has examined Poland's environmental performance in four key areas:

- integrating environmental and economic decisions;
- reducing the pollution burden;
- conserving nature;
- strengthening international co-operation.

In each of these areas, the extent to which government policy objectives are being met has been assessed. This assessment includes both domestic objectives and international commitments, and is based on environmental effectiveness and economic efficiency criteria. A number of recommendations are put forward that could contribute to further environmental progress in Poland.

### 1. Integrating Environmental and Economic Decisions

#### *Economic transition, environmental performance and environmental convergence*

In 1990, the environmental situation of Poland was characterised by a relatively wasteful use of resources (e.g. energy, water) and by a heavy pollution burden reflecting a bias towards heavy industry in the national product mix and an ageing, inefficient and highly polluting capital stock. The environmental situation, however, was not all negative: while 11 per cent of Poland was considered to be "severely environmentally threatened", 27 per cent was in a natural or close to natural state; pressures on the environment from transport, agriculture and the consumer goods sector were less, overall, than in OECD countries.

Economic reform and the contraction of economic activity reduced environmental pressures significantly. However, the decreases in pressures have often been greater than the decrease in GDP, pointing to the effectiveness of environmental measures. A National Environmental Policy was successfully launched with sustainable development as an underpinning principle. Economic instruments are used extensively. Poland has been remarkably successful in mobilising financial resources for environmental investment. These investments reached 1.3 per cent of GDP in 1992. Environmental investment in Poland is largely financed from domestic sources (including environmental fees and fines), with foreign assistance providing 4 per cent in 1992. An innovative development is the first debt-for-environment swap involving public (rather than private) debt.

Nevertheless, the pollution, energy and resource intensity of the Polish economy is still considerably higher than in OECD countries: by a factor of two for water and energy intensity; by a factor of three for municipal waste, NO<sub>x</sub> and CO<sub>2</sub>; and by much higher factors for SO<sub>x</sub> and particulates. By and large, the major ministries have not internalised a commitment to the environment and existing arrangements have not been effective in holding them accountable for the environmental consequences of their policies: the environment is still seen as an expensive "add-on", which is the responsibility of the Ministry of Environmental Protection, Natural Resources and Forestry. Growth in the transport sector, particularly urban traffic but also motorway construction, as well as waste streams and the burdens they might place on municipalities, will deserve strategic consideration. Poland should reconcile the human and financial efforts and the speed of convergence with environmental conditions in OECD countries. This can be best achieved through the integration of economic and environmental decision making, the implementation of cost-effective environmental policies and the provision of adequate resources.

---

\* Conclusions and Recommendations approved by the Group on Environmental Performance at its November 1994 meeting.

To better integrate environmental and economic decisions, it is recommended that consideration be given to the following proposals:

- co-ordinate different national and international environmental planning activities within an implementation strategy for the 1991 National Environmental Policy. This strategy should include a programming framework, strengthened procedures for priority and target setting, and guidance for implementation and financing;
- strengthen the integration of environmental concerns into policies, budgets and projects formulated in the different administrations and economic sectors (energy, industry, transport, agriculture, forestry); specific attention should be given to environmentally harmful subsidies and fiscal policy;
- ensure that sectoral ministries give account on their efforts to integrate environmental concerns into their budgeting and financing processes;
- include environmental concerns in contractual voluntary agreements with specific stakeholders, such as industrial branches;
- use environmental impact assessments systematically for relevant projects;
- integrate environmental concerns fully into the different forms of privatisation, in particular liquidation and mass privatisation;
- strengthen access to environmental information and public participation;
- develop environmental education through increased use of mass media, the requirement of an environmental component in teacher training and the re-introduction of environment as a subject in the school curriculum.
- strengthen the capacity of the Ministry of Environmental Protection to fulfil its integrative role, which includes: evaluating the economic impact of environmental policies and the impact of economic policies on the environment; maintaining or developing links with sectoral ministries and the Central Office of Planning; providing support of interdepartmental committees; supporting environmental decision making at the local level; and expanding its international responsibilities, such as negotiating agreements, monitoring their implementation and participating in international work, in co-operation with the Ministry of Foreign Affairs.

### ***Sectoral integration: energy***

The development of the 1992 Energy Policy specifically included an analysis of industrial restructuring, energy efficiency opportunities and environmental policy options. The Energy Policy incorporates the objectives of the National Environmental Policy; as a result, there has been substantial progress in integrating environmental concerns into national energy policy and programmes, at least for the power sector. Poland has made major progress in bringing fuel and energy end-use prices towards market levels, in line with energy efficiency objectives and economic reform. Effective action was taken early in the transition period in lowering air emissions from the power sector through reductions in the use of low quality coal, the construction of plants to reduce coal sulphur content and improved particulate removal from exhaust gases.

Poland's energy intensity, however, remains very high. Although energy efficiency figures prominently in both energy and environmental policies, no major national programmes have been set up to promote energy efficiency, and the National Energy Conservation Agency was established only in 1994. The widespread use of coal, often of low quality, in household stoves and small boilers remains the single most important cause of poor ambient air quality in urban areas; the liberalisation of energy prices has encouraged low income families to use cheaper, lower quality coal. Major environmental problems created by underground mining, the discharge of saline water to the Vistula and Oder and the accumulation of mining waste, have not yet been tackled.

It is therefore recommended that consideration be given to the following proposals:

- pursue improvements in energy efficiency as one of the main mechanisms for reducing air pollution and as one of the country's most important energy "sources" in the near and medium term. A national programme should be launched to overcome barriers to energy efficiency in energy production and distribution, in industry, and in the residential and commercial sectors;
- reduce emissions of air pollutants from small-source combustion of coal, through fuel standards and taxes to favour the use of higher quality coal and through national and local plans to co-ordinate improvement of district heating systems, expansion of natural gas networks and promotion of energy efficiency in residential and commercial buildings;
- carry out a full analysis of the options for the control of environmental costs associated with coal mining, including saline water discharges, accumulated mining waste and land subsidence;

- expand research and development in alternative energy sources, with a focus on coal-bed methane, biomass and possibly wind power.

### ***Sectoral integration: industry***

Industry is a major sector of the Polish economy and an important source of pressure on the environment, mainly through atmospheric emissions, waste water discharges and waste generation. These pressures are reinforced by outdated technology, wasteful use of raw materials, a specialisation in heavy industry and concentration of industry in a few voivodships and "hot spots". Since 1989, Poland has achieved significant reductions in emissions. This reflects the fall in industrial production and the related industrial restructuring as well as the implementation of environmental measures. Enforcement has been focused effectively on the most polluting enterprises and on targeted areas such as Upper Silesia.

However, the goal of establishing adequate management for industrial and hazardous waste has not been achieved. Major investments to upgrade pollution abatement capacity are needed for both emissions into air and discharges into water bodies. This applies to many enterprises, and not only in "hot spots". Concerning industrial policies, it is not enough to rely almost exclusively on the benefits of industrial restructuring and modernisation for the reduction of industrial pollution. The integration of environmental concerns into industrial policies and practices is therefore now urgently needed.

It is recommended that consideration be given to the following proposals:

- integrate environmental protection measures into the practice of industrial management by fostering "good housekeeping" and environmental audits to identify low-cost solutions for environmental improvements, and by promoting environmental labelling;
- strengthen the institutional integration between the relevant ministries at the stage of industrial policy formulation — for instance, ensure that agreements between government and industry to restructure specific branches address environmental objectives, and assess future environmental pressures from new emerging industries; integration efforts should equally apply at regional level (e.g. Upper Silesia, Łódź);
- stabilise and further clarify the framework of environmental regulations, fees and fines for industrial enterprises, to reduce uncertainty about policy developments and allow for medium-term planning;
- further enforce environmental permits and related fees and penalties concerning air emissions and waste water discharges from industrial enterprises;
- when and where most cost-effective, promote investments in industrial pollution abatement facilities, waste management facilities and technologies that are cleaner and less intensive in water and energy use.

## **2. Reducing the Pollution Burden**

### ***Air***

Poland has placed high priority on controlling air pollution. Air pollution problems have been clearly identified, the relationship between the problems and economic activities has been analysed, and priorities, goals and targets — some of them quantitative — have been defined at the highest government level and have received public support. Beyond these intentions, Poland has achieved considerable reductions in major air emissions over the past five years, notably from the power sector and industry. A mix of regulatory and economic instruments as well as increased financial resources have contributed to this achievement. The monitoring network for air pollution has been improved in recent years through efforts at both the national and voivodship levels and greater co-ordination between environmental and health authorities.

Despite these efforts, Poland's atmospheric emissions of pollutants such as SO<sub>2</sub> and particulates, as well as CO<sub>2</sub>, remain very high compared with European OECD countries. Local air quality remains poor in many urban areas. Although emissions from power plants and industry have decreased, those from district heating plants and residential coal combustion have not fallen significantly. In addition, motor vehicles are creating a growing share of urban air pollution problems. Poland's legal framework for managing air pollution is complex and unwieldy for stationary sources, and is only being introduced and needs further development for mobile sources.

It is recommended that consideration be given to the following proposals:

- formulate implementation plans to improve air quality in local areas, starting with highly polluted urban areas; such plans should include intermediate target levels for air quality and cost-effective measures to reach these levels, including energy efficiency and fuel switching initiatives; mechanisms should be conceived to increase financing for such measures;
- reform the legal and regulatory system for air pollution control to improve its effectiveness and enforcement. This reform could take place in the context of harmonising air pollution regulations with EC directives, and of Poland's international commitments (e.g. UN-ECE protocols). It should focus on regulating a few, key air pollutants;
- renew efforts to contain or reduce environmental damage caused by Poland's growing stock of motor vehicles: extending UN-ECE emission standards to all newly registered automobiles; introducing emission standards for trucks and buses; developing a system of inspection and maintenance for in-use vehicles; considering the use of economic instruments, such as buy-backs, annual charges or customs duties, to ensure that highly polluting and obsolete vehicles are rapidly eliminated from the market;
- integrate transport and environmental policies at the national level, especially for major infrastructure decisions, and at the local level, for policy choices that affect public transport systems, traffic management and urban planning;
- for the longer term, ensure that sectoral air pollution reduction plans are formulated with participation from relevant ministries, enterprises and other interested parties, specifying intermediate and final target levels for emissions by sector and emphasising energy efficiency and the introduction of clean technology.

### *Water*

Poland has placed high priority on dealing with problems of water quality and supply. It has channelled significant financial resources into water pollution abatement (0.5 per cent of GDP in 1992) and into the mobilisation of water resources (0.7 per cent of GDP in 1992). Economic instruments (fees and fines) generate the major part of the funds for pollution abatement. A new water law is in preparation and will provide, *inter alia*, for a more integrated and effective river-basin organisation of water management. Pressure on water quality through household, municipal and industrial discharges has started to decrease, partly as a result of environmental policies, partly as a reflection of the contraction of economic activity.

In spite of this progress, the overall quality of surface and coastal waters remains poor, due to significant water pollution at the beginning of the transition period, as well as financial constraints and lead times for the completion of waste water treatment plants in municipalities and industry. Improvements could be accelerated through more cost-effective spending on water pollution abatement. For instance, financing for waste water treatment plants is spread among several hundred communities; given resource constraints, the completion of biological plants is unlikely to occur in the near future.

Poland is relatively poorly endowed with water resources: this creates occasional problems of water supply and adds to the concentration of pollutants. Water prices for households cover only a minimal share of the actual cost of supplying drinking water. The absence of a metering system tends to further increase household consumption and undercuts efforts at demand management. Whereas urban drinking water quality is generally satisfactory, concerns remain with the quality of drinking water in rural areas.

Based on the above assessment, it is recommended that consideration be given to the following proposals:

- continue the successful efforts to reduce the pollution load from municipal and industrial sources;
- give high priority to the rapid adoption of the proposed new water law and continue the rapid implementation of river-basin water management;
- reassess priorities for the completion of unfinished waste water treatment plants — for example, spending limited sums on unfinished plants at strategic sites in order to provide mechanical or chemically enhanced mechanical treatment as soon as possible, deferring plans for more elaborate treatment until these can be assessed in the context of the relevant river basin;
- ensure that new waste water treatment capacity is accompanied by the necessary sewage collection network; examine and improve the efficiency of existing waste water treatment plants;
- continue efforts to improve the quality of drinking water supply in rural areas, and reduce wastage in the transport of drinking water in urban areas;
- consider, over the medium term, a gradual increase in water prices, as well as a rapid introduction of metering systems to link water bills more closely to actual water consumption.

## ***Waste***

Poland is one of the major producers of industrial waste in Europe: over 120 million tonnes of waste per year. Waste treatment capacity is extremely low in Poland: less than 1 per cent of industrial and municipal waste is treated through incineration or composting, resulting in heavy pressure on landfill capacity and the environment. Significant amounts of hazardous waste have accumulated in factories and landfills (estimated at over 400 million tonnes in 1991). Two-thirds of landfills do not meet the safety criteria or are unclassified.

Work is under way to formulate a comprehensive waste management law and to reduce gaps in legal and administrative regulations that tend to constrain implementation and enforceability. Excellent progress has been made in controlling the import and export of hazardous waste, through rapid co-ordination and effective use of the existing administrative structures. Fees for waste disposal constitute a major policy instrument. Fees are differentiated by toxicity of waste, thus giving an incentive to reduce the generation and disposal of environmentally harmful waste. Problems of enforcement exist, however, where the economic situation of major waste generators (such as coal mines) seriously impairs their capacity to pay fees.

It is recommended that consideration be given to the following proposals:

- give high priority to the rapid finalisation, enactment and implementation of waste management legislation and corresponding regulations to establish a clear framework for federal, regional and local authorities and the private sector; this includes the development of enforceable compliance schedules and efforts to promote low-cost interim solutions that will substantially reduce waste;
- continue monitoring efforts, particularly to assess hazardous waste disposal sites where significant risks to human health are suspected; where problems are found, priorities should be defined and short-term measures taken without delay;
- concerning industrial and hazardous waste, encourage waste reduction, reuse and adequate treatment, and give specific priority to: reusing fly ash and slag from coal combustion and pyrite tailings generated by the desulphurisation of hard coal; recovering and reusing metals from metallurgical waste; reusing phosphorus-gypsum derived from fertilizer production; constructing toxic waste incineration plants, in compliance with internationally recognised standards.
- increase opportunities for public involvement in waste management plans, improve access to information and reinforce the system of accountability for waste generators failing to meet requirements, including responsibility for damage.

## ***Cost-effectiveness in pollution abatement policies***

By 1991, Poland had already reassessed its environmental problems, and endorsed a National Environmental Policy that distinguished short-, medium- and long-term priorities. Further, environmental expertise and institutions were in place to implement pollution abatement policies using regulatory and economic instruments and specific environmental funds. A number of environmental decisions had already been delegated to voivodships or local levels of government.

Having achieved a number of successes in addressing its short-term environmental priorities, Poland now has to consolidate these results and to deal with its medium-term environmental priorities. This entails increased cost-effectiveness in addressing pollution.

Accordingly, it is recommended that consideration be given to the following proposals:

- reconsider ambient environmental standards so that they are realistically matched with emission standards, permits and the rates of fees and fines;
- complement economic and regulatory instruments by other instruments such as EIA, voluntary agreements and labelling schemes;
- review the cost-effectiveness of public expenditure on the environment in the forms of grants, loans and tax breaks and through environmental funds, with a view to assessing their environmental and economic effectiveness, as well as their compatibility with the polluter pays principle;
- examine pricing policies or tariff structures for such key natural resources as energy and water; aiming at greater environmental and economic efficiency;
- decentralise environmental management in accordance with the principle of subsidiarity and the objective of administrative efficiency.

### 3. **Conserving Nature**

Poland's efforts to protect plant and animal species have been substantial and, on the whole, quite successful. The system of protected areas has been significantly increased since 1989. The creation of new nature reserves and national parks, covering previously unprotected habitats such as wetlands and grasslands, is a particularly important achievement. The system now protects most habitats of international importance. The Green Lungs of Poland initiative is an innovative new regional programme: its lessons are likely to influence integrated plans for sustainable resource use in other parts of the country and in other central and eastern European countries.

The lack of implementation plans, however, has delayed progress in several policy areas; in particular, there is a lack of management of protected landscapes, which make up over two-thirds of the total protected area. Efforts are also needed for the protection of marine and coastal resources, within the context of regional efforts for the Baltic Sea. Often, responsibilities have been transferred to local authorities which lack the financial and institutional capacities for their new responsibilities. Current proposals to give local authorities a greater role in land use planning might only exacerbate these problems, create co-ordination difficulties and threaten national goals for protected areas.

It is recommended that consideration be given to the following proposals:

- develop management plans for each protected area and landscape park, as well as guidelines for the sustainable management of key ecosystems (forest, wetlands, wet and dry grasslands, rivers and lakes, coastal and marine areas, and mountains);
- make a critical assessment of the staff and funding levels needed to manage Poland's expanded system of protected areas and to implement fully the Bern, Bonn and Biological Diversity Conventions; consider more diversified funding mechanisms, including budgetary and environmental fund sources and both public and private sources; and improve the administrative capacity of the municipalities to undertake new roles for nature conservation;
- integrate environmental and nature protection concerns in agricultural and forestry policies, in order to promote farming and forestry practices that provide environmental benefits, in particular with regard to landscape protection, preserving biodiversity and preventing and controlling pollution from agro-chemicals;
- manage the development of rural and nature tourism to provide both economic development and environmental protection in the relevant areas of the country.

### 4. **Strengthening International Co-operation**

Poland has succeeded over the last few years in strengthening its international co-operation with industrialised countries and in building a positive image internationally as regards its endeavours to protect the environment. It has taken positive steps to ratify many relevant international conventions and agreed to move towards harmonisation of its environmental law with the laws of OECD Member countries and in particular with EC law. Co-operation with neighbouring countries has been strengthened and Poland has begun to share its environmental management experience with other central and eastern European countries. Poland has attracted more technical and financial assistance for environmental purposes from OECD Member countries than have other central and eastern European countries. To date, Poland has concluded debt-for-environment swaps with four OECD Member countries.

Emissions of SO<sub>x</sub> and CO<sub>2</sub> have decreased and consumption of CFCs and halons has been reduced. Progress has been achieved in the area of transboundary water pollution and protection of national parks of international significance. Co-operative agreements have been launched with European Member countries to combat transfrontier air pollution and to reduce pollution of the Baltic Sea.

At the same time, many measures required to meet international obligations are not yet implemented. New investment for pollution control has been made but results are not yet visible in many instances. Air pollution in the "black triangle" area is still severe because emissions and transboundary movements have not been sufficiently reduced. Polish emissions in the Baltic are still high. A number of international commitments may not be fulfilled because they require investment that Poland may not be able to make in the coming years. In some cases, these commitments might even not be economically efficient for Poland.

It is recommended that consideration be given to the following proposals:

- continue and strengthen legal work aimed at introducing into Poland's laws the concepts and approaches developed in other European countries, such as the fundamental principles underpinning EC environmental law and recent international conventions;
- in order to achieve short- and long-term national and international goals, develop action plans and strategies that are implementable and do not exceed reasonably available financial means;
- make full use of opportunities for foreign assistance with the aim of further strengthening Poland's environmental management capacity, introducing cleaner technologies and contributing to the solution of priority international environmental problems;
- continue co-operation with neighbouring countries to solve severe environmental problems arising in Polish frontier regions;
- report regularly to international forums on progress actually achieved and obstacles encountered in the solution of international environmental problems involving Poland (e.g. transboundary air pollution in frontier areas and in Europe; pollution of international rivers and of the Baltic Sea