

IRELAND

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CONCLUSIONS AND RECOMMENDATIONS*

Ireland has achieved remarkable economic performance in recent years: its GDP has grown by 9% annually since 1994, and its GDP per capita now surpasses the EU average. This has been made possible, inter alia, by a large inflow of foreign direct investment (2% of GDP annually) and considerable EU net transfers (in the range of 3-4% of GDP annually). With relatively low average population density, Ireland is experiencing rapid suburbanisation and population growth.

The new Irish economy (a large share of which is now made of the booming electronics and pharmaceuticals industries) is less energy and material intensive per unit of GDP than it was several years ago. However, absolute pressures on the environment have continued to increase, even if less rapidly than GDP. Ireland continues to face many environmental challenges, in particular controlling air emissions from transport and energy production, reducing pollution loading to water from municipal and agricultural sources, and improving waste management and nature protection. These challenges largely reflect insufficient environmental infrastructure, together with changes in consumption patterns associated with recent increases in per capita income. This makes it all the more necessary for Ireland to: i) further implement environmental policies and strengthen environmental infrastructure; ii) better integrate environmental concerns into economic decisions; and iii) reinforce international environmental co-operation.

This OECD report establishes a baseline for assessing future environmental progress and examines Ireland's environmental performance, i.e. the extent to which its domestic objectives and international commitments are being met, based on environmental effectiveness and economic efficiency criteria. A number of recommendations are put forward that could contribute to strengthening the country's environmental performance.

1. Implementing Environmental Policies

Ireland generally has good environmental quality. Thanks to its environmental policies and to the "new economy", energy and material intensities fell in the 1990s. However, despite progress in some areas, particularly with regard to reducing emissions and effluents from industry, pollution intensities are often high compared to those in other European countries. Major challenges remain concerning environmental pressures from energy production and agriculture, in particular from intensive livestock rearing. Pressures from municipal waste water are gradually decreasing with progress in waste water treatment, but they remain high. There are growing problems relating to changes in consumption patterns: for example, waste generation, transport and urban sprawl, particularly in the Dublin and Cork areas. To achieve higher environmental performance, Ireland will need to implement its environmental policies in a more cost-effective way. Due to insufficient investments in the past and requirements relating to new populations and urban development, it should increase its financial efforts to build a full-fledged modern environmental infrastructure.

Improving the cost-effectiveness of environmental policies and strengthening environmental infrastructure

Ireland has a modern and coherent body of environmental law. EU environmental law is fully transposed in national law. Most environmental legislation is less than ten years old; the new Planning and Development Bill consolidates physical planning legislation since 1963 and substantially updates strategic spatial planning at regional and local levels. The Environmental Protection Agency (EPA) plays an effective role in implementing environmental policy and monitoring performance, particularly through Integrated Pollution Control (IPC) for large industrial plants. Nevertheless, the EPA should have a more prominent role in licensing by local authorities and capacity building at the local level. Local authorities are responsible for managing municipal waste, water supply and waste water collection and treatment. For investment purposes they depend to a very large extent upon financing channelled by the Department of Environment and Local Government (DOELG), whether the funds come from European sources or national taxpayers. Up until now, Ireland has made only limited use of economic instruments to address pollution issues. Eliminating water charges for households was a step in the wrong direction. However, Ireland is progressively implementing a comprehensive charging system in respect of non-residential users. In a period of substantial investment in housing construction, water meters should be installed on new dwellings. Proposals for an increase in energy taxation, balanced by reductions in social charges, have been studied but not yet applied.

* Conclusions and Recommendations reviewed and approved by the Working Party on Environmental Performance at its meeting on 4 July 2000.

In the 1990s, Ireland launched investment programmes to build waste water collection and treatment facilities with a large share of EU support. Some time will be required to complete these programmes. As important investments in water supply, waste water treatment, waste treatment and air pollution control are still needed, Ireland should step up its national environmental investment effort. Environmental operating expenditure will also grow. In the 1990s, environmental expenditure (i.e. pollution abatement and control expenditure, together with that on water supply and nature protection) increased but did not exceed 1% of GDP. Pollution abatement and control expenditure represents 0.6% of GDP, less than in most other OECD countries. Since EU support will progressively be phased out as a consequence of its economic performance, Ireland must prepare for a much more significant public and private financial effort with regard to environmental investment and management. Even if the Irish budget situation has improved, environmental expenditure will increasingly need to be covered by charges levied on polluters and resource users. Recent public-private partnerships in water services (e.g. build-operate-transfer projects) are steps in this direction.

In the 1990s, Ireland renovated its environmental monitoring and reporting capacity (e.g. State of the Environment reports, environmental indicators) and set up effective arrangements to translate into practice public access to environmental information (e.g. access to licenses, EIA processes and courts). The national environmental information centre (ENFO) provides valuable free access to a wide range of environment related information and is particularly active in environmental education.

It is recommended to:

- extend the positive experiences of the IPC licensing scheme to a number of other activities not yet covered;
- foster co-operation between EPA and local authorities in licensing and enforcement, e.g. through training and capacity building;
- extend the use of economic instruments that help inform polluters and resource users of the true costs of their activities;
- make the introduction of revenue neutral eco-taxation a subject in the new partnership agreement among the social partners;
- prepare for increased national financing of environmental expenditure, given the need for higher investments in water supply, waste water treatment, waste management facilities and air pollution control, likely increases in current expenditure, and the planned reduction of EU support;
- extend the range of environmental projects using public-private partnerships.

Water

Ireland has a well-developed system for monitoring water quality in rivers, lakes, groundwater and marine bathing water; data indicate that the state of Irish water quality is generally satisfactory. The institutional and legal systems, the latter influenced by EU legislation, address national major water management challenges. During a decade of rapid economic growth, Ireland has taken the measure of the water challenge it faces. A large programme of investment in water supply and waste water treatment put in place in the 1990s is progressing; between 1994 and 1999, this programme benefited from large EU support. A number of farmers are required to adopt nutrient management plans. They receive direct payments as part of the Rural Environmental Protection Scheme (REPS) to support water quality protection measures. Integrated Pollution Control, implemented under the responsibility of the Environmental Protection Agency, includes licensing of waste water discharges from large industrial facilities. Efforts are being made to improve co-ordination among the various institutions involved in water management, in particular by promoting water basin management. Flood prevention schemes are well-maintained.

Since systematic records began to be kept in the early 1970s, there has been a substantial decline in water quality in Ireland's rivers and streams. This is nowadays largely attributable to increased nutrients from crop and livestock production. There are still "black spot" areas near urban centres that lack facilities to provide advanced urban waste water treatment. Improved enforcement of regulations and implementation of planning schemes are needed, especially in rural areas. The ecological management of water bodies should also be improved. Leakage from water supply systems accounts for as much as 45% of the water in distribution systems in some urban areas. Drinking water quality in rural areas is variable: up to 400 000 people may receive drinking water of substandard quality. Control of water pollution and of public water supply is supervised by the DOELG, which should facilitate consolidation of the various pieces of water legislation. Household water charges were discontinued in 1997, but charges applying to industrial and commercial establishments have not been abolished. Local authorities' expenditure on water services is mainly covered by the central government budget. To ultimately cover increasing capital and

operational expenditures associated with water management, the User-Pays and Polluter-Pays Principles should be progressively applied. Public-private partnerships could also be encouraged, to address Ireland's challenging infrastructure deficit in the light of reduced EU funding. Overall, Ireland's water policies must meet very significant challenges. They are beginning to move towards better balancing of investment and operational management, better central and partenerial management, and autonomous and less EU-dependent financing.

It is recommended to:

- strengthen catchment management, with a greater role for river basin districts, and promote participatory approaches to the development of catchment plans;
- consolidate water legislation in order to increase accountability and clarify responsibilities;
- accelerate development of statutory nutrient management plans and by-laws for controlling water pollution from agriculture;
- develop voluntary initiatives aimed at water quality enhancement, such as contracts between fishermen and farmers to protect rivers;
- progressively apply the User-Pays and Polluter-Pays Principles to water pricing policy concerning both households and economic sectors, taking account of social and distributional concerns;
- promote greater private sector involvement in providing water services, technical expertise and access to financing;
- improve drinking water quality where necessary, especially regarding group water schemes;
- continue efforts to reduce leakage from water supplies to acceptable levels;
- develop ecosystem-based environmental quality objectives that are more holistic than current water management objectives, and that take into account nature conservation objectives;
- extend the highly effective surface water monitoring system to consider nature conservation issues, including habitat issues.

Air

Ambient air quality is high in small cities and rural areas and has improved significantly in large cities in regard to smoke, SO_x and lead. Since 1990, Ireland has successfully implemented a range of regulatory measures to improve urban air quality and reduce air emissions associated with transport and the housing sector. EU vehicle and fuel standards have been implemented. A ban on bituminous coal (instituted in Dublin in 1990, in Cork in 1995 and subsequently in ten other urban areas) has drastically reduced smoke emissions and improved urban air quality. Ireland achieved considerable energy intensity reductions in the 1990s, driven to a large extent by "dematerialisation" of the economy and increased market penetration by natural gas (21% of TPES). It uses some economic instruments to support air quality management objectives (e.g. in the transport sector).

Despite recent transformation of Irish industry, per capita air pollutant emissions (kg/per capita) remain considerably higher than the OECD Europe average: by 62% for SO_x, 20% for NO_x and 30% for CO₂. Despite recent progress, the emissions intensity (kg/USD 1 000) of the Irish economy exceeds the OECD Europe average by 25% for SO_x and 11% for CO₂. During the 1990s, Ireland did not take adequate steps to meet a number of international commitments to reduce emissions of certain pollutants, as envisaged in the Oslo and Sofia Protocols. Urgent measures are needed to improve emissions control, especially since Irish power stations continue to burn "dirty fuels". Some steps are being taken (e.g. decision to implement IPC licensing for all power plants by the end of 2002; there is a voluntary cap on SO_x emissions from the power sector). Continued use of peat for power production, especially its continued subsidisation, should be re-evaluated. Peat's energy conversion efficiency is low, associated air emissions are rather high, and the environmental impact of peat harvesting is severe. Assuring that peat-fired plants are subject to IPC licensing from 2002, as scheduled, should be made a priority. Wider use of economic and fiscal measures to encourage use of cleaner fuels and cleaner energy should be given more consideration. In addition, several concerns about urban air quality (e.g. regarding PM₁₀, NO_x, VOCs and O₃) will require attention in the near future. Because of the rapid growth of its economy in recent years, Ireland confronts the challenge of using newly available resources to reduce emissions, notably in the face of greater energy demand, changing consumption patterns and increased commuting.

It is recommended to:

- develop and implement a national plan to reduce air pollutant emissions, to be co-ordinated with development plans for key sectors (e.g. transport, energy), and, inter alia, to identify cost-effective measures to reduce emissions of SO_x, NO_x, VOCs and GHGs;
- design and implement additional measures aimed at improving energy efficiency in industry and in the residential and commercial sectors, with consideration given to energy standards, pricing, and economic and fiscal incentives;
- continue to promote the use of cleaner energy (renewables, natural gas) compared with other sources of primary energy supply (coal, peat, oil);
- retrofit power plants with flue gas desulphurisation or denitrification equipment, to the extent that this is more cost-effective than creating incentives to use low-sulphur oil and coal; confirm a timetable for progressive phase-out of existing peat-fired power plants, especially those over ten years old;
- continue to implement the IPC licensing scheme and explore means to strengthen local authorities' monitoring and inspection capabilities, to ensure that facilities not licensed under the IPC scheme are adequately regulated;
- examine the environmental effectiveness and economic efficiency of variable transport costs, giving consideration to the use of higher taxation of motor vehicle fuels and the introduction of road-use pricing systems (e.g. use of tolls);
- further develop monitoring of ambient concentrations of PM₁₀, NO_x, VOCs and O₃, particularly in major cities.

Waste

Progress in waste management has been made in recent years, following enactment of a comprehensive Waste Management Act in 1996. The EPA has carried out detailed inventories of waste generation and landfill conditions; local authorities have prepared waste management plans providing for development of new waste infrastructure at the regional level. Industrial and municipal waste treatment and disposal facilities are now subject to IPC licensing by the EPA. The EPA has prepared a draft National Hazardous Waste Management Plan, currently at the public consultation stage. Ireland has ratified the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal; it also conforms to the OECD Council Decision on Transfrontier Movements of Wastes Destined for Recovery Operations.

Waste management is the environmental area which, until recently, received the least attention in Ireland. Almost all municipal waste is disposed in landfills, most of which require to be upgraded to meet adequate environmental standards. Recycling rates are low and do not meet national targets. Recycling of construction and demolition waste needs to be encouraged. Neither regulatory nor economic measures are currently used to encourage recycling or reclamation of transport related wastes. More effort is needed to improve waste prevention and reduction, in particular through promoting development of low waste generation technologies. Efforts to increase separate collection of municipal waste should be pursued. Collection and disposal of end-of-life vehicles, used oil, tyres and batteries needs to be improved. It is estimated that 20% of the hazardous waste generated is not reported, of which a significant part is from the agricultural sector. Serious efforts are needed to increase the capacity to treat hazardous waste. Only one-half of municipal waste management costs are recovered through waste charges and landfill gate fees. The Polluter-Pays Principle should be applied more widely, in particular through applying household waste charges in all local authorities and, to the extent possible, linking them to the quantity of waste disposed. There is considerable scope for increased private sector involvement and investment in waste management.

It is recommended to:

- implement waste management legislation at the local level, in particular through completing the adoption of regional waste management plans;
- pursue efforts to close down or upgrade unsatisfactory municipal landfills as part of the development of a modern network of treatment and disposal facilities;
- promote prevention of waste generation, in particular by encouraging the uptake of low waste generation technologies;
- improve recovery and recycling of municipal and industrial wastes, including construction and demolition wastes, organic materials and transport wastes (used oil, lubricants and tyres);
- apply more fully the Polluter-Pays Principle, in particular through the general use of household waste charges and the proper pricing of landfill waste disposal, and promote private sector involvement in waste management;
- enhance hazardous waste treatment capacity (e.g. incineration), in particular by adopting and implementing the National Hazardous Waste Management Plan;
- further develop producer responsibility initiatives aimed at improving waste recovery performance.

2. Towards Sustainable Development

Integrating environmental concerns in economic decisions

During the 1990s, Ireland experienced i) steady economic growth (the highest among OECD countries); ii) structural change, with the rapid growth of, inter alia, information technology and biotechnology based industries; iii) improved income levels; and iv) a growing population and suburbanisation, particularly in Dublin, Cork and other coastal areas. Tourism has expanded rapidly, building on the country's "green image". This move towards a "new economy" has translated into a decrease in the energy and material intensities of production (per unit of GDP), but not an absolute decrease in environmental pressures. Overall, only a weak decoupling has taken place, compared to best international practices. Transition to the new economy has also translated into higher land prices and an increase in environmental pressures relating to consumption: greater waste generation, greater motorisation and mobility, greater land consumption, and related demands for environmental infrastructure.

Some sectors and industries that have serious negative impacts on the environment continue to benefit from low taxation and from subsidies, including EU support. For example, peat based electricity production is controversial given its low economic efficiency (as a subsidised activity) and environmental effects (air emissions, damage to landscapes and habitats); economic incentives with regard to agriculture should be reconsidered under the revised EU Common Agricultural Policy, to take advantage of "cross-compliance" opportunities (making farm support conditional on compliance with environmental standards) and agri-environmental payments (under the REPS programme).

In 1997, Ireland issued a national Strategy for Sustainable Development covering economic, social and environmental concerns. To implement this strategy, a high level inter-ministerial committee (the Environmental Network) and National Sustainable Development Partnership (Comhar) have been established. Comhar, which brings together a range of social partners, should help raise awareness, monitor progress and mobilise public support. Strategic environmental assessment has been introduced to systematically assess potential impacts of sectoral policies on the environment and sustainable development. They should be implemented in the context of the new National Development Plan 2000-06, marked by a significant phasing out of EU support.

Ireland has recognised a need to reform and strengthen its spatial planning framework at the national and regional level. The new Planning and Development Bill, when enacted and implemented, should introduce a more strategic and integrated approach to territorial development at the sub-national level. Strategic planning guidelines for the Dublin area have shown the way. A national spatial strategy should be prepared, providing a framework for longer-term spatial development at the national level. Systematic analysis of current and future pressures on Ireland's coastal zones, and of policy options to manage their future development and protection, needs to be carried out.

Local Agenda 21s have been initiated. The Environmental Partnership Fund, supporting participatory local co-operation projects, will help broaden the local movement for sustainable development and encourage the activities of NGOs.

It is recommended to:

- make the national Sustainable Development Strategy fully operational, particularly within the context of the National Development Plan 2000-06 and other sectoral policy initiatives;
- promote better integration of environmental concerns in sectoral policies, for example by using environmental impact assessments of plans, programmes and projects;
- reduce distortions created by subsidies for energy and agricultural production, and consider using cross-compliance mechanisms if support payments are granted;
- adopt and implement the new planning and development bill, providing a greater role for strategic guidelines and regional co-ordination on protection and development of urban and coastal areas;
- complete and implement the national spatial strategy to provide a framework for long-term spatial development at the national level;
- facilitate participation and partnership of local community groups and environmental NGOs in preparing, implementing and monitoring Local Agenda 21 initiatives, including through the Environmental Partnership Fund.

Towards sustainable transport

Since 1994, Ireland has successfully implemented a range of regulatory measures to reduce negative environmental externalities associated with transport. EU vehicle and fuel standards have been implemented effectively and on time. Leaded fuel was phased out from 1 January 2000. A national scrapping programme between 1995 and 1997 led to the removal of some 61 000 old vehicles (6% of the fleet at the time). Wide-ranging traffic management measures implemented in the Dublin region since 1997 (e.g. environmental traffic cells, parking management, dedicated bus corridors) have helped reduce congestion significantly. Economic instruments (taxes on vehicle sales, fuel and registration) are used to encourage the purchase of smaller and/or cleaner vehicles. Public transport passes provided to employees are given tax exempt status, and expenses associated with passenger car commuting are not deductible from income tax. EIA procedures, which are well-established in Ireland, are routinely applied in the case of large transport projects; public participation appears to be active and adequate.

Nevertheless, there is a need to expand transport infrastructure, particularly motorways, high-quality dual carriageways, public transport and links to ports and airports. This need has thus far been largely addressed through use of EU funds. Public-private partnerships are not widely utilised, and the User-Pays Principle is weakly implemented; their increased application should be considered, especially in view of increasing operational and maintenance expenditure and reduced EU support. Co-ordination of responses to increases in both international freight movement and passenger traffic has not yet been adequately addressed: the result is over-concentration of traffic in the Dublin area. Poor land use planning and the lack of integration of spatial planning with traffic management objectives, together with rising land prices and income levels, have encouraged urban sprawl and increasing personal mobility. The recently passed Strategic Planning Guidelines for the Dublin Area may help address this problem. Overall, there is not enough emphasis on taxing vehicle use, and possibly too much on vehicle ownership. Fuel prices are relatively low compared to those in neighbouring countries; apart from two bridges in Dublin, road tolls have not yet been used. Ireland's implementation of emissions testing for in-use vehicles, which has been delayed, should be given priority. Looking ahead, decisions made in the late 1990s will provide certain benefits, but the likely continuation of economic growth will generate further increases in freight traffic, urban sprawl and personal mobility. This will present major challenges regarding the environment and sustainable development.

It is recommended to:

- accelerate and expand application of in-use vehicle emissions testing (including for second-hand imports);
- continue to implement inter-modal demand management measures in Dublin and other major cities, in order to stimulate demand for public transport and limit demand for private vehicles (e.g. environmental traffic cells, parking management, dedicated bus corridors);
- accelerate completion of congestion-alleviating road infrastructure (e.g. by-passes, ring roads, tunnels);
- implement measures (e.g. planning, economic incentives) to shift freight and passenger traffic out of Dublin to the extent feasible;
- seek better application of the User-Pays Principle to road transport, giving special consideration to an increase in vehicle use taxation (e.g. fuel taxation) relative to ownership taxation (e.g. vehicle registration, sales tax), and to other economic instruments.

3. International Co-operation

Ireland, which is heavily dependent on both exports and imports of goods and services, is attracting foreign direct investment flows. It wants at the same time to retain its "green" image in order to promote agricultural exports and attract international tourism. Beginning its full-scale international environmental co-operation relatively recently, Ireland has ratified a very large number of significant international agreements on protection of the environment during the last 15 years while transposing very thoroughly nearly all EU directives. Irish environmental law has been driven to a large extent by that of Europe, and investment in environmental protection has mainly been funded by EU Structural and Cohesion Funds. Ireland is the cohesion country that has attracted the greatest amount of European support. At the same time, its economic development during the 1990s has been the most rapid in Europe: it is now the cohesion country with the highest GDP per capita and is a very active partner in the framework of the EU.

Ireland actively participates in global environmental co-operation, as well as North-east Atlantic and Pan-European co-operative activities. It has banned disposal of industrial waste and of sewage sludge at sea, together with incineration at sea. Progress has been made concerning surveillance of ships in the Irish Sea that transport hazardous goods or radioactive material. Prior notification of passage is taking place on an increasing basis. Ireland

co-operates with Northern Ireland on many local issues, and further progress can be expected. Co-operation with the United Kingdom on protection of the marine environment has been thorough and fruitful. Ireland has contributed to the protection of biological diversity by designating a significant part of its territory for conservation, in the framework of EU directives or under the Ramsar Convention. It has also designated all of its marine waters as a whale sanctuary. Ireland has increased aid to developing countries since 1992 by the largest percentage of all DAC countries; its level of aid is now much higher than the DAC average.

Reflecting the lower priority given to international issues over many years, as well as its unexpectedly rapid economic growth, Ireland has had difficulty meeting agreed emissions targets. NO_x emissions have increased since 1994 instead of being stabilised at their 1987 level, as agreed under the Sofia Protocol. The national target for CO₂ emissions in 2000 will most likely be exceeded, as measures taken so far are inadequate. SO₂ emissions, which are significant in relative terms (compared with those in other western European countries), will require substantial reduction in 2000 to meet requirements of the Oslo Protocol. Ireland is the only EU country that did not sign the Protocol on VOCs. In addition, implementation of a number of EU directives is not fully consistent with EU deadlines (e.g. for drinking water quality in a number of small rural communities, and for a large number of Habitat sites). Progress towards developing Local Agenda 21s has been fairly slow. Concerning protection of the marine environment from land based sources of pollution, measures have been initiated but have had little effect so far. In the context of energy policy, exploitation of peat bogs of European significance has been subsidised and has led to the disruption of peat habitats and to large emissions of greenhouse gases per unit of electricity produced by peat-fuelled power stations.

Major difficulties probably lie ahead, due to progressive reduction of EU funding and the increasing operating costs and investment expenditure for new facilities. Challenges include meeting deadlines for completing waste water treatment plants, requirements for higher drinking water quality, and new international commitments concerning reduction of air emissions (Kyoto, Gothenburg). Stringent measures to control air emissions now need to be taken, having been postponed for a considerable time.

It is recommended to:

- strengthen co-operation with Northern Ireland on all relevant aspects of environmental protection and nature conservation in boundary regions and, where appropriate, on an all-island basis;
- promote activities at the local, national and international level aimed at protecting the marine environment, in particular from land based sources of pollution;
- ensure effective protection of designated nature protection areas under international or EU schemes by increasing resources for management and conservation, public consultation and awareness raising, and for compensating affected parties where necessary;
- give particular attention to protecting peat bogs of great ecological significance;
- adopt and strengthen measures to reduce emissions of SO₂ and NO_x with a view to meeting international commitments;
- take measures to reduce VOCs emissions with a view to conforming to international standards (EU legislation, Gothenburg);
- take measures to limit increases of greenhouse gas emissions to meet the Kyoto target, despite rapid economic growth;
- continue ongoing efforts to increase Irish official development aid.

