

SGI Sustainable Governance
Indicators 2009

Sustainability

Environment report



Indicator Environmental policy

Question Does environmental policy preserve natural resources and environmental quality?

30 OECD countries are sorted according to their performance on a scale from 10 (best) to 1 (lowest). This scale is tied to four qualitative evaluation levels:

- 10-9 = Policy effectively protects, preserves and enhances environmental sustainability.*
- 8-6 = Policy largely protects and preserves natural resources and environmental quality.*
- 5-3 = Policy insufficiently preserves environmental quality and sustainability.*
- 2-1 = Policy has largely failed to preserve environmental quality and sustainability.*

Austria

value 8 In terms of environmental policy, Austria is a relatively progressive country with a fairly high level of environmental protection and sustainability. On average for OECD countries, Austria ranks high regarding the energy intensity of its economy, carbon dioxide emissions and the share of energy supplied by renewable sources. The connection between sustainable economic development and environmental policy was already recognized in the 1980s. Austrian companies have performed very well on the international market for environmental technologies, renewable energy sources and ecological engineering. Nevertheless, over time, this progressive attitude toward environmental policy has changed, and the goal of economic competitiveness has overridden environmental concerns. Due to budgetary problems, public funding for renewable-energy production was drastically reduced in 2005. While Austria was a pioneer in terms of higher environmental standards in the European Union after its accession, its goals in environmental policy have become uncertain or even vague.

Denmark

value 8 In the international literature on environmental policy, Denmark is often mentioned as being a relatively progressive country. Within the European Union, Denmark has a history of demanding high environmental standards, and a big share of Denmark's current environmental policy is based on EU directives.

Furthermore, the latest Commission Annual Survey on the Implementation and Enforcement of Community Environmental Law covering 2005 showed that Denmark was the second-best performer within the European Union, after Sweden. Denmark reached this position by pursuing the goal over many years of uncoupling economic growth from energy and consumption. For example, in spite of economic

growth, emissions of greenhouse gases in Denmark have been falling since 1996, and in 2002 emissions fell below their 1990 level. For the period between 2008 and 2012, the government has committed itself to reducing emissions to a level of 21 percent below the 1990 level. Moreover, when it comes to the emission of harmful elements (e.g., phosphor and acid compounds) or water usage, there has been a complete uncoupling. At the same time, however, the amount of energy consumed fell in relation to GNP but rose in absolute terms.

Furthermore, according to indicators such as the area of wood or water biotopes, biodiversity in Denmark has been increasing. Moreover, the share of renewable energy has been rising steadily to the point that, in 2005, it reached 16 percent of all energy consumed. The renewable sector is dominated by wind power owing to the country's virtual lack of sources of hydropower.

Annotation: Commission of the European Communities, "Seventh Annual Survey on the Implementation and Enforcement of Community Environmental Law 2005," SEC (2006): 1143.

Germany

value 8

With public opinion in support of environment protection, environmental policy is given high priority in Germany. From 1998 to 2005, the Green Party was part of the government's ruling coalition. Since 2005, the grand coalition's environmental policy has primarily focused on climate policy. As a result, Germany has achieved considerable progress in environmental protection. For example, freshwater consumption has been significantly reduced and the ratio of carbon emissions to GDP is considerably below the OECD average. The Kyoto environmental treaty's target of a 21 percent reduction in greenhouse gas emissions is still in theory realizable. A boom in the construction of wind, solar and biomass installations has doubled the country's renewable energy share from 6 percent in 2000 to 12 percent in 2006. The country also cooperates with other EU members and at the international level on environmental issues. However, concerns about the economic costs of environmental policy remain, especially in industry circles. Despite earlier agreement on a policy to phase out nuclear power facilities, the issue remains a subject of discussion. Some experts say that Germany's environmental policy should be more cost-efficient. Germany also facilitates environmental policy cooperation both within the EU framework and internationally.

Norway

value 8

Norwegian public opinion is highly sensitive to environmental issues. There is broad support for the Kyoto protocol and for high international environmental standards.

The Norwegian government regularly promotes international cooperation on environmental issues. There is a wide range of laws regulating various aspects of environmental policy and the use of natural resources, including specific laws on building regulations, pollution controls, wildlife and freshwater fish, municipal health, environmental protection and motorized vehicles.

Norway has among the lowest CO₂ emissions and highest degree of renewable resource use in the world. Air and water quality is among the best in the world, which is largely due to the country's low population density. These positive indicators are due partly to the fact that Norway's main energy source is hydroelectric power, which is in turn due to the natural abundance of water in the country. Less positively, Norway does not have a good record on waste management, and has also received international criticism for its policy concerning whale hunting. In addition, energy demand and usage per capita is higher in Norway than in the rest of Europe. This is partly attributable to the traditionally low price of energy, which in turn stems from the abundance of hydroelectric power. The government is committed to energy conservation. To this end, conservation standards for new buildings have been increased, and new taxes have been added to the use of electricity and gasoline. However, there is scope for significant improvement in this area.

Moreover, the government's plans for achieving its climate goals have sparked national and international controversy. The intention is to rely strongly on the purchase of international CO₂ quotas, to a degree that appears to be beyond what is acceptable by EU standards (to which Norway is committed despite not being a member itself). Environmental groups have criticized this as a strategy of buying oneself out of the problem rather than enacting appropriate and lasting economic and organizational reforms.

Researchers at government-owned companies have pioneered technological innovations aimed at reducing and ultimately eliminating CO₂ emissions in gas exploitation. These procedures include storing CO₂ under the sea bed (and in the process using it to improve efficiency of exploitation), and the development of CO₂-neutral production of electricity from gas. These initiatives are now moving from research to large-scale experimentation, including in a new gas power plant on Mongstad on the west coast.

Sweden

value 8

Sweden is a highly developed industrial society with a high level of consumption. Owing to the very extensive use of nuclear energy, the country has few incentives to reduce the high level of energy consumption. Moreover, although Sweden is generally considered to be a pioneer "sustainable society," its environmental policy is highly technocratic and "big picture," focusing more on increasing efficiency than on limiting consumption.

At the same time, Swedish industry is among the world's leaders in terms of designing environmentally sustainable production processes and developing technology to protect the environment. Interestingly, Sweden has ranked so high among EU countries when it comes to managing carbon dioxide emissions and other salient environmental problems that the European Union has even allowed it to increase its emissions.

The environmental problem that attracted the most political attention in Sweden during the period under observation was climate change. The government under Gören Persson (1996–2006) tried to make environmental policy one of the larger political issues in Sweden by using the slogan “the Green People’s Home,” an allusion to “the People’s Home,” the slogan of Sweden’s Social Democratic Party (SAP).

The current government of Fredrik Reinfeldt has recently launched two high-profile initiatives in the area of environmental policy. One is the so-called “green car” rebate, a €1000 rebate to private individuals buying new, ecologically friendly cars, which will be offered from April 1, 2007 to December 31, 2009. The other initiative entailed the so-called “Midnight Sun Dialogue on Climate Change,” held in June 2007, when Swedish Minister for the Environment Andreas Carlgren met with environment ministers from the European Commission and 27 countries that are central to global climate negotiations for informal meetings on climate issues aimed at laying the foundation for a new global climate agreement.

Belgium

value 7

Belgium is densely populated and industrialized, with a long history of coalmining and metalworking, especially in Wallonia. The country’s overall ecological debt is significant. Moreover, Belgium suffers environmentally from its position as a key transit area in the heart of Europe, busy with the heavy traffic of trucks and cars. Belgium, therefore, can be considered to have some of the highest amount of traffic-induced pollution in the European Union.

Whereas responsibility for issues of radiation protection, waste transport and product standards rests with the federal government, responsibility for environmental policy has rested with regional governments since the third constitutional reform in 1988. The devolution of environmental policy has meant, however, that different environmental policies are observed in different regions, including differing regulations.

At the time of writing, Wallonia and Flanders maintain separate ministries for the environment and sustainable development. Both regions have developed plans to reduce carbon-dioxide emissions by 2012; Flanders by 5.8 percent and Wallonia by 7.5 percent (Belgium signed the Kyoto Protocol). Both regions have tried to stimulate the production of renewable energies by issuing green certificates and providing tax incentives. Nevertheless, the market share of renewable energies in the

country is still extremely low, about 2 percent of the total primary energy consumption. Nuclear energy still provides more than 50 percent of the nation's electricity. Although Belgium passed a law in 2003 against the future use of nuclear power, this decision is now under pressure as abandoning nuclear energy may prevent Belgium from meeting its carbon-dioxide emissions reduction goals.

Czech Republic

value 7

The fact that environmental issues have been a matter of long-term concern reflects the Czech Republic's landlocked position in Central Europe and long experience of difficulties with water pollution, acid rain and waste disposal. Carbon dioxide emissions are high by international standards. Emission levels have fallen with the decline of heavy industry, but the coal mining industry remains strong because the successful exportation of electricity has provided solid revenues and maintained jobs. Environmental policy in the Czech Republic received a boost in the process of accession to the European Union. In 2004, the center-left government approved a comprehensive sustainable development strategy for the years between 2004 and 2010. In practice, however, environmental issues tend to be neglected in policy-making. Governments have allowed opencast coal mining to continue at a substantial cost to the environment and have proposed very modest targets in the negotiations with the Europe Commission over carbon dioxide emission allowances.

Finland

value 7

While environmental policy is very effective in some areas, including sustainable forestry, the establishment of nature reserves, and the introduction of less-polluting technology in the industrial sector, some areas need more attention. Although difficult climatic conditions make it generally more difficult to reduce emissions or achieve better energy efficiency, better technical solutions and changes in consumer behavior must be pursued by governmental policies. Instead of increasing energy production from renewable sources (which today account for a relatively high 25 percent share), Finland has built new nuclear plants. The question of the final disposal of nuclear waste will be one of the crucial challenges for future environmental policies. However, in the field of maritime protection, Finland has implemented useful policies which should be replicated at the European level.

France

value 7

Despite continued lobbying by environmental groups, France's environmental policy has not played a large role in the public sphere. Apart from some exceptions, the

overall state of the environment in France is good, which is attributed primarily to the comparatively (in Europe) low levels of carbon-dioxide emissions within the country (approximately 80 percent of France's energy is created by nuclear energy). A national environmental policy and sustainability plans have thus been developed only recently.

In 2003, a national strategy concerning the environment was established. The Fillon government has also demonstrated that this issue was a high priority by creating a new ministry and organizing expert hearings. The success of these efforts has yet to be identified.

Japan

value 7

Japan's environmental policy has been most effective in minimizing industrial pollution, especially through technological measures. Decreasing levels of atmospheric pollution have accompanied economic development in recent years, largely as a result of preventive technologies and lifecycle analysis models. The country's record with regard to preserving nature, including wildlife, rivers and coastlines, is less impressive because of the government's longstanding emphasis on public works spending, especially on roads, which serves to stimulate local economies, support construction companies, create jobs and win votes for the ruling Liberal Democratic Party (Imura/Schreurs 2005).

Environmental policy-making is no longer the sole domain of the traditional bureaucracy, which historically assumed an industry-friendly posture. In response to a number of environmental dangers, such as threatened animal species, an "environmental bureaucracy" has developed inside and outside the Japanese government. An impressive alliance of research institutes, nongovernmental organizations and advisory groups nowadays supports the Ministry of the Environment. A number of local governments in Japan have also become quite flexible with respect to pluralizing decision-making regarding environmental affairs (Barrett 2005).

Annotation: Hidefumi Imura and Miranda A. Schreurs, *Environmental Policy in Japan*. (Cheltenham: Edward Elgar, 2005).

Brendan F. Barrett, *Ecological Modernization in Japan*. (London: Routledge, 2005).

New Zealand

value 7

New Zealand's environmental policy is based on the 1986 Environment Act, as well as annual governmental statements of intent. Its implementation has largely been delegated to regional councils, with mixed success. In comparative perspective the

country's efforts can be deemed highly successful.

However, with regard to individual aspects such as water quality and usage, use of natural resources or sustainable energy, room for improvement remains. It is generally agreed that additional central government leadership is needed on the more challenging issues. Point discharges' contributions to water and air pollution have diminished considerably since the current management regime was established in 1991. However, the system has coped poorly with agricultural nutrients, which have grown as a result of agricultural intensification and increased dairy farming, degrading overall water quality. Other policies have been successful, such as eliminating atmospheric lead from vehicle emissions.

New Zealand's energy mix is in general relatively favorable, as a huge part of electricity production is based on hydroelectric power. However, many residential houses are heated by electricity (if at all), which is rather inefficient. Residential buildings' energy efficiency levels are among the OECD's worst. Building regulations introduced in the 1980s require a minimum amount of insulation, but a large number of older houses are still not insulated at all. Furthermore, most houses do not have central heating, but are heated by coal and wood burners, increasing local pollution in winter and the corresponding risk of health problems. New Zealand has one of the highest asthma rates among children.

The country has a very high number of endemic native flora and fauna, many of which are at risk as a result of habitat loss or degradation, or predation by introduced pests. Despite the implementation of government biodiversity strategies, some species remain threatened by regional or total extinction.

Switzerland

value 7

Switzerland plays a leading international role in environmental protection. This is demonstrated in particular by the country's control of water pollution and its high recycling rate. Considerable sums of money have been invested in order to provide effective environmental protection. This has included substantial investments in the country's rail network, with the aim of improving the infrastructure for transalpine goods traffic. Yet although several environmental measures have been successfully implemented, new legislative measures have in recent years faced increasing opposition. As a result, the implementation of new legislation controlling CO₂ emissions has been delayed. The future of atomic energy has also been heavily discussed.

United Kingdom

value 7

Although Britain is on track to meet its obligations under the Kyoto protocol, it has a mixed record in other areas of environmental protection. In March 2005 the

government launched a strategy “Securing the Future,” defining 68 indicators for measuring success in sustainable development. Improvements in several areas could be reported by 2006 when measured against the state of affairs in 1999. But some indicators showed a worsening situation, especially concerning carbon dioxide emissions, energy consumption or water loss through leakages.

While there have been some positive developments in environmental degradation in the United Kingdom, it remains unclear whether these are in fact due to regulation or to structural changes in business (i.e., replacing older technologies with newer ones). In general, environmental policy has so far focused mainly on business rather than on transport or housing, but recent debates such as the carbon tax on flying or building new “eco towns” may shift the focus.

After a slow start, Britain is now considered a leader in the design and implementation of so-called New Environmental Policy Instruments (NEPIs), which are market-based instruments to increase environmental performance. Some of the NEPIs introduced in recent years include: the landfill tax (a charge on the disposal of waste to landfill); the climate change levy (a charge on energy use); the 100 percent capital allowances scheme (available to companies investing in energy efficiency technologies); and the renewables obligation (applies to electricity suppliers). Britain is also the first country with a legally binding obligation – as of 2008 – to operate a system of “carbon budgets.” These budgets are rolling five-year limits placed on carbon-dioxide emissions that have been planned 15 years in advance. An independent commission on climate change will advise ministers on how to meet the respective targets and give annual reports to Parliament. As recent developments, NEPI instruments have yet to be systematically evaluated.

Hungary

value 6

Hungary’s energy intensity and levels of environmental pollution are among the lowest of the new EU members. In the last years, partly in cooperation with the European Union (and with the help of pre-accession funds) some large-scale environmental projects were launched, mainly in the areas of garbage handling, canalization and sewage systems. In several parts of the country, the environment-friendly mentality of the population has become manifest. The new phenomena of waste delivery from EU countries to Hungary and environment-damaging activities by Austria in border areas have further increased public attention to environmental problems.

The National Environment Programs have been well organized along the lines of the European Union’s current Sixth Environment Action Program (2001 – 2010), but they have suffered from a lack of funds and a lack of legal harmonization with other fields. In fact, industrial lobbies are much stronger than the environmental NGOs and the latter are sometimes narrow-minded and dogmatically doctrinaire.

Luxembourg

value 6

Luxembourg subscribed to the Kyoto environmental protocol and agreed to reduce its carbon emissions by 28 percent by 2012. The country's strategy for achieving this goal is to reduce energy consumption. The first important measure towards this goal was the introduction of a vehicle tax related to a car's carbon emissions at the beginning of 2007.

Considerable political debate has also been focused on fuel tourism, or the sale of diesel and gasoline to tourists and residents of neighboring regions. Local fuel prices are much lower than in France, Germany or Belgium. The fuel sold contributes to the country's overall carbon dioxide emissions, but is also a source of revenue adding €1.1 billion to Luxembourg's annual budget. Harmonizing the minimum level of taxes on diesel and gasoline inside the EU would therefore lead to a substantial loss of income for Luxembourg. The country's prime minister announced that he would not oppose this harmonization, but demanded transition measures for the countries whose policies would have to change most as a result. This would allow Luxembourg to avoid abrupt financial and budgetary problems. In the meantime, the income generated through fuel tourism is dedicated to a fund financing Kyoto-related activities. The fund has three objectives, including the support of new energy conservation measures on the national level, the support of projects in foreign countries as compensation for domestic pollution, and the creation of the European carbon emissions trading program.

Netherlands

value 6

Recent years have witnessed decreases in the depreciation of natural resources and in environmental pollution, according to the report "Environmental Balance 2006" by the Netherlands Environmental Assessment Agency. The agency also anticipates the continued decoupling of economic growth and environmental impact in the period up to 2010. Nevertheless, the agency stresses that environmental pollution – including that of water reserves – is too high and does not meet EU environmental objectives. One of the main problems for the Netherlands in reaching EU goals is that it is much more densely populated than other EU member states. As a result, it has much higher emissions per square kilometer than other EU member states and than those agreed to in the European Union's Environment Action Programme, and continued urban development counteracts efforts to lower noise levels and emissions levels of nitrogen dioxide and particulate matter, and thereby improve air quality. Furthermore, EU norms are frequently transgressed when it comes to heavy freight traffic. In this regard, both the Netherlands and Belgium face similar problems. Owing to their central locations and important seaports, both countries serve as major transit crossroads for international road haulage. The fact that the means of public transportation have not sufficiently reduced car usage only aggravates this

problem.

Water management presents another large challenge in the Netherlands with respect to environmental safety. In particular, continued development is greatly reducing the amount of land needed to serve as floodplains between rivers and built-up areas. Furthermore, as of 2001, only half of the barrages met legal standards. As a result of these factors, the Netherlands has become more vulnerable to flooding in recent years, which is a development that openly contradicts stated policy objectives.

Poland

value 6

While Article 5 of the 1997 constitution calls for "sustainable development," the concern over environmental issues among the political elite is relatively low. The legal and institutional framework of environmental policy has largely been shaped by the requirements of EU membership. Meeting EU environmental standards has been a serious challenge and has required a large investment from both the public and private sector. In the case of large-scale infrastructure projects, a conflict between the needs of socioeconomic modernization and environmental protection has emerged. The PiS government paid little attention to environmental policy. Its insistence on building a highway across a protected European nature reserve led to fierce discussions with the European Commission and provoked the first major environmental conflict in Poland since 1989.

United States

value 6

During the period under observation, the United States was the most energy-intensive of all OECD countries. In fact, in 2005, the energy intensity of the United States alone was almost double that of Ireland, which had the lowest ratio of all OECD countries. The United States uses at least as much energy for air-conditioning as it does for heating. In 2005, the contribution of renewable-energy sources to the U.S. energy supply was only 4.5 percent, as compared to 74 percent in Iceland, which was the best performer regarding this issue.

On the other hand, since the 1970s, the United States has made significant progress in terms of reducing air and water pollution. One of the unresolved problems of U.S. environmental policy is that, despite the use of renewable energy, the share of fossil fuels is likely to rise because the share of major non-fossil-fuel sources (e.g., atomic energy and hydropower) is likely to fall over the next decades. Furthermore, environmental and energy policies are poorly coordinated.

For example, the Department of Transportation handles fuel-efficiency standards, the Environmental Protection Agency (EPA) handles vehicle-emissions standards and the Treasury Department is responsible for environmental taxation. Although the United States signed the Kyoto Protocol in 1997, the Senate never ratified it, and the

Bush administration has disengaged from the Kyoto process of setting binding emission targets for greenhouse gases.

In this sense, the United States and the Bush administration have been outliers in terms of international climate-change policy. However, over the past two years, the Bush Administration has responded to public criticism by grudgingly starting to take the issue more seriously (although it has yet to pursue significant reduction goals).

Annotation: Barry Rabe, “Environmental Policy and the Bush Era,” in *Publius* 37 No. 3 (2007): 413–431. *Idem*, *Can Congress Govern Climate Change?* (Washington D.C.: Brookings Institute, 2007). Robert Meltz, *The Supreme Court Climate Change Decision: Massachusetts v. EPA*, CRS Report for Congress, May 18, 2007.

Australia

value 5

Environmental policy performance in Australia is somewhat mixed. The comparative abundance of natural resources and low population density have probably been important contributors to this unevenness, with energy policy in particular somewhat undeveloped. This is not to say that environmental issues are entirely ignored – indeed, on occasion, environmental issues have dominated public discussion. Furthermore, increased community acceptance of the fact of human-induced climate change in the last few years has led to a greater likelihood of substantive policy initiatives with regard to energy usage in the near future. For example, both major political parties have expressed support (if only in principle) for establishing a carbon emissions trading scheme. However, the government has been slow to act, arguing that reductions in greenhouse gas emissions will harm the Australian economy, and emphasizing in particular that Australia has substantial coal reserves and is a large exporter of coal. Failure throughout the period of this review to sign the Kyoto protocol was indicative of the now-ousted Coalition government’s policy.

More generally, ecological sustainability has not been a primary goal of economic policy. Nonetheless, as the driest continent on earth, Australia faces major challenges in this regard. Extensive land clearance over two centuries to support agriculture has resulted in major problems of land degradation and salinity, which only now are beginning to be addressed. Legislation in many of the states and territories now makes it more difficult to clear land of trees and vegetation, although research shows that the problems are still increasing despite reforestation, tree-planting programs and subsidies to farmers to increase biodiversity. Managing scarce water resources is another problem. Current government policy is to take water management in the Murray-Darling Basin out of the hands of the states and territories, which have traditionally squabbled over and mismanaged water rights. The Murray-Darling Basin drains one-seventh of the Australian land mass and is the country’s most significant agricultural area; over 70 percent of Australia’s irrigation resources are concentrated there and it produces 40 percent of the nation’s food.

Canada

value 5

Canada's environmental record is mixed. On the one hand, Canada has been a leader in the fight against chlorofluorocarbons (CFCs) and has significantly contributed to making the Montreal Protocol a success. More recently, Canada has also been a leading advocate of an aggressive phasing-out of hydrochlorofluorocarbons (HCFCs). Nevertheless, many aspects of Canada's environmental performance are deficient. The most obvious failing is Canada's poor performance in the fight against climate change.

Given the Canadian economy's strong resource-based sector (and the importance of nonrenewable resources, such as gas and oil), ambitious efforts to protect the environment very often collide with the aim of economic development and growth. The most striking example of this tension is Canada's approach to the Kyoto Protocol. Despite being one of the first countries to sign this agreement, Canada nevertheless ranked 27th out of 30 OECD countries in 2000 for the intensity of CO₂ emissions as relates to GDP.

While this may be partly explained by the resource-intense nature of Canada's economy, it should also be noted that successive governments have been either reluctant to or inept at taking strong action to minimize increases in CO₂ emissions. The current government is even less sympathetic to climate change and has even proposed abandoning the Kyoto Protocol in favor of a domestic solution.

Canada also fares poorly on other facets of environmental policy. The lack of a market mechanism for regulating water usage (and only marginal costs for additional water usage) is one of the most obvious environmental policy failures.

Ireland

value 5

Environmental policy in Ireland is mainly driven by the legal requirements of EU membership and the threat of substantial fines for breaching EU regulations. The enforcement of environmental policy is largely in the hands of the Environmental Protection Agency (EPA), which is also responsible for licensing industrial processes with pollution potential, monitoring the quality of the environment, licensing and waste management systems, monitoring air and water quality, and drafting and implementing a plan for emissions trading.

Air quality in Ireland is generally good, largely because prevailing west winds from the Atlantic Ocean result in the almost continuous movement of clean air over the country. The smog problem that existed particularly in urban areas in the 1980s and early 1990s has now been considerably improved.

Ireland still has quite a way to go before meeting the requirements of the Water Framework Directive by 2015. There is an ongoing problem with the poor quality of

some local water supplies. Although the quality of groundwater and bathing water has improved, the nitrate levels in rivers continue to rise, as have fish kills. There has in the past been considerable resistance to implementing the Nitrates Directive.

The EPA's National Waste Report 2006 indicates a considerable improvement in recycling, waste recovery and diversion from landfills, but it also shows a considerable overall increase in waste over the preceding three years. Illegal dumping and unauthorized waste collection has been considerably reduced, while non-compliance with regard to exported waste has been eradicated. However, the EPA still feels that management practices in the waste disposal sector are poor.

Ireland is a signatory to the Kyoto Protocol and has agreed to limit emissions to 13 percent above the baseline estimate in the period between 2008 and 2012. Furthermore, a recent government strategy statement indicates that Ireland will adhere to the terms of that protocol. According to EPA figures, however, in 2005, Ireland's emissions were 25.4 percent higher than that baseline, with agriculture being the only sector to report a fall in emissions. In 2006, moreover, the European Commission estimated that, if current trends continue, Ireland's emissions by 2010 will be 30 percent above the 1990 levels.

Mexico

value 5

Mexico gives environmental policy a reasonably high priority. Sustainable development is explicitly addressed in the country's 2007 – 2012 development plan. It is a signatory to the Kyoto Protocol. Mexico's environmental agency works closely with international organizations and has a quite sophisticated understanding of the major issues. However, the country does face real environmental problems. It is overurbanized, and its system of land tenure, with too many legally protected smallholdings, is conducive to erosion. It is also overpopulated, with a rural population under severe economic pressure due to the opening of Mexican agricultural markets to imports from the United States.

Energy consumption is based on oil and gas, and capital stock is often antiquated because the state oil monopoly has insufficient resources for modernization. Despite these issues, major disaster has been avoided. Given the nature of Mexico's problems, that quite possibly qualifies as a satisfactory record.

Portugal

value 5

During the period under review, environmental policy in Portugal has mainly consisted of the transposition of EU directives, new legislation on noise reduction and the elaboration of various plans and projects (related to, e.g., the improvement of air quality, water provision and management, agricultural residues, conservation and CO₂ licenses). However, many of these plans and projects have yet to be

implemented, and the effectiveness of the new regulations has yet to be assessed.

In more practical terms, there has been some noticeable action in the field of managing and treating industrial residues, for example, with the establishment of co-incineration plant in two locations following years of controversy and local protests. In addition, new legislation concerning recycling and landfills was also approved, and considerable progress seems to have been made in waste management. Portugal has rapidly progressed in terms of the share of its waste that is not placed in landfills, and it has even surpassed countries such as Italy, the United Kingdom and Greece.

Nevertheless, energy production remains heavily dependent on fossil fuels. While Portugal's investments in wind energy made it one of the EU countries with the highest increases in the use of this form of energy production in 2005 and 2006, hydroelectric energy production has progressed sluggishly. As regards CO₂ emissions, it is highly unlikely that Portugal will meet the standards set by the Kyoto agreement, and some experts even predict that Portugal will have some of the greatest increases in CO₂ emissions among the EU countries by 2012.

On the other hand, December 2005 saw the approval of the Water Framework Law, which finally set the framework for the sustainable use of what is a very scarce resource in Portugal, and 2006 saw the preparation of the second national strategic plan for the treatment of urban waste.

South Korea

value 5

Environmental policies in Korea have to date been insufficient to protect and preserve the sustainability of natural resources and the quality of the environment. The challenges are huge. Uncontrolled urbanization, waste of resources, and air and noise pollution are serious problems, particularly in the metropolitan areas. Korea has the highest population density in the OECD, and half of the population produces more than half of the country's GDP in the greater Seoul metropolitan area alone. The government, which established the Ministry of Environment in 1994, has failed to slow down urbanization by making rural areas more attractive.

Environmental issues often cause conflicts between civil society and industry, and between environmentalists and the government. Only recently have there been some localized efforts to improve urban recreation areas, such as the renaturalization of a river area in Seoul in 2005 through the demolition of an elevated highway. The Seoul metropolitan government has also improved public transportation in hopes of slowing down the growth of traffic.

Korea has been successful in decoupling economic growth and pollution growth by imposing higher environmental standards. Attempts to increase energy efficiency and the production of CO₂ have been progressing more slowly, however. Energy efficiency and the energy mix are among the worst in the OECD. In other areas, such as water and waste management, there has been considerable progress, and environmental policies can be generally summarized as progressing, albeit from a

very low initial level. Some very active environmental NGOs have started to lobby for more green policies, and have helped raise the public's environmental consciousness.

Iceland

value 4

Governmental environmental policy does not guarantee the protection, preservation and sustainability of natural resources or the quality of the environment.

Iceland is rich in energy and water resources on land, and the surrounding seas harbor rich fisheries. However, there has been almost no discussion about how to preserve the energy and water sources. The general attitude seems to be that these sources are unlimited, but in fact there is a danger of overuse.

Perhaps the most serious environmental problem facing Iceland is the continual erosion of its topsoil. Despite repeated calls for government action to stop the erosion, livestock such as sheep and horses remain free to roam around the countryside, causing great damage to the natural environment. This is why large swaths of Iceland's countryside are grey rather than green. The government's unwillingness to require livestock to be fenced reflects in part the disproportionate political power of farmers, even though their share in the country's total labor force has declined below 3 percent. Not coincidentally, the Soil Conservation Service of Iceland is supervised by the Ministry of Agriculture rather than by the Ministry for the Environment.

Iceland's new industrial policy, aimed at increasing sources of hydroelectric energy, is viewed by many as a serious environmental threat that may cause irreversible damage to the Icelandic highlands. A huge dam being proposed for Kárahnjúkar, north of Vatnajökull, Europe's largest glacier, would produce electricity for a new aluminum smelter in the eastern part of Iceland. Others worry less about this issue, arguing that few Icelanders were interested in the highlands region until the plan was underway.

A third problem concerns overfishing in Icelandic waters. In 2007, it was decided to cut cod catches by one-third, in order to conserve stocks. The quota system used to regulate the fisheries creates incentives to discard small fish, because boat owners prefer to fill their quotas with the most valuable fish possible. Because discarding is illegal, not much is known with certainty about the extent of the problem. The government maintains that the problem is minor, but does little to investigate charges of rampant discarding. A fourth problem worth mentioning is that Iceland is more energy intensive than any other OECD country. Total primary energy consumption per dollar of GDP in 2004 was three times as high as in Denmark and 43 percent higher than in Norway according to the U.S. government's International Energy Annual 2004 report.

Italy

value 4

While environmental policy has not been a priority in previous government programs, the Prodi II government seemed to reinforce environmental objectives. Rightly so, since climate change foresees warmer weather as a vital threat to a third of the Italian coastline over the next 50 years.

Since the Kyoto protocol became effective, Italy has taken few steps to enforce its most important principles and in general, the country lags far behind its targets. First of all, Italy remains still very much dependent on fossil fuels (such as coal and oil), and little has so far been done to stimulate uses of renewable energy sources. This is a particularly negative situation, considering that it would be relatively easy for Italy to exploit solar energy in a simple and efficient manner. Secondly, nothing has been done so far to improve energy efficiency in civil or industrial areas. Last but not least, there are no signs of improvement in the sustainability of the mobility and building industry.

Carbon dioxide and other greenhouse gasses have been augmented from 2000 to 2005 by 12.3 percent – in contrast to goals to reduce them by 6.5 percent. Further, Italy has been strongly hit by typical climate change phenomena such as wildfires and erosion. Particulate matter is a serious problem of air quality in most Italian cities.

Particularly in southern Italy, waste disposal and recycling seem to be difficult challenges for municipalities and regions. It is reported that a large part of the “waste business” is attached to Mafia-type organized crime groups. Natural resources such as rivers and coastal waters close to large towns are strongly polluted and air quality in urban centers is often poor.

Slovakia

value 4

Environmental policy has not been a government priority and most initiatives have been driven by EU obligations or NGO pressure. The European Union finances more than half of the Ministry for the Environment’s budget. While EU directives have been fairly well implemented, the ministry has not managed to spend all EU money potentially available.

The Dzurinda government, which approved a medium-term Action Plan for Sustainable Development and founded a new task force in 2005, did not initiate any substantial change. Although it emphasized a commitment to improving environmental policy in its platform, the Fico government took steps in the opposite direction by drastically cutting the ministry’s budget and abolishing the parliamentary committee for environmental and nature conservation.

Spain

value 4

Spain falls short on most environmental issues. Despite a rise in availability of renewable energies, the country's usage is limited; its carbon-dioxide emissions do not comply with Kyoto Protocol targets; and it has yet to address important problems related to water scarcity and deforestation. Following international and European Union guidelines, the Spanish government has approved a wide range of measures that have yet to show improvements; the country too has not taken advantage of the potential of environmental taxes. Legislation was passed in 2006 to tackle soil pollution.

To address climate change, efforts such as the CO2 Allocation Plan 2005-2007, the Strategy of Climate Change and Clean Energy, the Plan for Renewable Energies 2005-2010 and the Strategy of Air Quality are in effect. The government has defined water policy as an environmental priority through a water management program called "A.G.U.A." The program, covering the period 2004-2008, introduces a new approach to structural water scarcity suffered mainly in the southern and eastern portions of the country by systems of water treatment, re-use and desalination as opposed to the Spanish traditional system of reservoirs and transfer between rivers.

Greece

value 3

Greece lacks a comprehensive and long-term environmental policy integrating town-planning and energy policies and addressing the country's excessive dependency on coal and oil. According to a 2005 European Environment Agency report, Greek coastal waters and beaches are of high quality, and Greece's biodiversity is high. However, the broader environmental policy is undeveloped and is mostly externally driven, shaped by the European Union and other international organizations.

Recycling efforts are minimal, particularly in rural areas. Greece ranks last in Europe both with regard to recycling rates and the development of renewable energy sources. Greenhouse gas emissions have increased steadily over the past ten years, due to continued dependent on coal mining and imported oil. Renewable energy sources supply just 8 percent of the power used to generate electricity, compared to the EU average of 14 percent. Due to rapidly increasing water demand the country may face future water shortages, a problem already felt in the Aegean islands during the summer season. Expectations of Greek environmental policy progress relating to the Natura 2000 framework have only been partially fulfilled. This can be attributed to a slow legislative process, a general lack of environmental awareness within the Greek populace, which frequently establishes illegal waste dumps, and fragmented responsibilities and bureaucratic hurdles in government administration.

Turkey

value 3

Economic concerns in Turkey have always taken priority over environmental concerns. Occasionally it appears the government intends to enact limited environmental policies, yet this perception often proves false. Watersheds are not protected; construction is permitted dangerously close to water reservoirs in urban centers; industrial waste disposal is not controlled; air and water pollution is serious. Few measures have been taken (such as the introduction of unleaded gasoline) largely because of the necessity to conform with EU regulations. Turkey is not yet a signatory to the Kyoto accord over greenhouse gas emissions.

Within the EU harmonization process, even though progress has been achieved regarding waste management, nature conservation and protection and impact assessments over noise and environmental issues, many regulations are still needed. As of 2004, according to statistics obtained from 1,911 of 3,225 municipalities, 80 percent of the population within municipal boundaries have access to sewage services; 47 percent has access to wastewater treatment facilities; 93 percent has access to water for drinking and daily use; and 42 percent has access to drinking water treatment facilities.

According to one estimate, the cost of adjusting the country's infrastructure to meet EU environmental laws will fall between €28 billion and €49 billion. According to the OECD, Turkey's spending on environmental issues is around 0.5 percent of GDP. With EU accession this figure would have to double, or more likely, increase by a factor of three or four. In addition, a much higher level of current spending would also be required.

This report is part of the Sustainable Governance Indicators 2009 project, which assesses and compares the reform capacities of the OECD member states.

More on the SGI 2009 at www.sgi-network.org

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