Environment Report

Environmental Policy

Sustainable Governance Indicators 2020

SGI Sustainable Governance Indicators

BertelsmannStiftung

Indicator

Environmental Policy

Question

How effectively does environmental policy in your country protect and preserve the sustainability of natural resources and environmental quality?

41 OECD and EU 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 = Environmental policy goals are ambitious and effectively implemented as well as monitored within and across most relevant policy sectors that account for the largest share of resource use and emissions.

8-6 = Environmental policy goals are mainly ambitious and effectively implemented and are monitored within and across some of the relevant policy sectors that account for the largest share of resource use and emissions.

5-3 = Environmental policy goals are neither particularly ambitious nor are they effectively implemented and coordinated across relevant policy sectors.

2-1 = Environmental concerns have been largely abandoned.

Denmark

Score 9

Denmark is considered to be a front-runner in environmental policy. According to the 2018 Climate Change Performance Index of the Climate Action Network Europe, Denmark ranked 17 out of 178 countries. Climate and environmental policies have taken center stage in recent policy discussions, and a wide range of aspects concerning sustainable living and production have been discussed.

Denmark is doing relatively well when it comes to renewable energy, as 23% of energy consumption is renewable, which puts Denmark in eighth place among OECD countries. Water usage is relatively low in Denmark compared to other OECD countries.

While carbon dioxide emissions measured on the basis of Danish production have been reduced by about 20% since the mid-1990s, the reduction is only about 5% when measured in terms of consumption. There is broad agreement on targeting a 70% reduction in greenhouse gas emissions by 2030 relative to 1990 levels.

Denmark has set rather ambitious goals including that energy production should be fossil free by 2050. Several sub-targets have been set to reach this goal. While the long-term goal is for Denmark to be independent of fossil fuels by 2050, the government has also called for green realism in environmental policy and there are signs that some environmental goals will be softened.

In June 2018, all parties in the Folketing approved an energy agreement, which aimed to produce 100% of electricity consumed in Denmark from renewable sources

by 2030. As such, three large offshore windfarms were planned, taxes on electricity were to be reduced and money was also budgeted for promoting green transport (e.g., electric cars).

On 9 October 2018, the government put forward a new climate plan with 14 specific proposals, mostly concerning the phasing out of petrol and diesel cars by 2030, and earlier for buses and taxis.

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"Politisk forståelse mellem Socialdemokratiet, Radikale Enstre, SF og Enhedslisten: Retfærdig retning for Danmark,"https://ufm.dk/ministeriet/regeringsgrundlag-vision-og-strategier/reger ingen-mette-frederiksens-forstaelsespapir (accessed 15 October 2019).

Norway

Score 9

Norwegian public opinion is highly sensitive to environmental issues, and the 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's share of renewable-resource use is among the highest in the world. Air and water quality are among the best in the world, largely due to the country's low population density and 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

received international criticism for its policy concerning whale hunting. In addition, energy demand and usage per capita are higher in Norway than in the rest of Europe. This is partly attributable to a legacy of inexpensive energy, a factor that international energy markets have now made a thing of the past. The government is committed to energy efficiency. To this end, conservation standards for new buildings have been tightened, and new taxes have been added to the use of electricity and gasoline. However, there is significant scope for improvement in this area.

Moreover, Norway is also a major oil and gas producer, which directly and indirectly contributes to increased global carbon dioxide emissions. The government's plans for achieving its climate goals have sparked national and international controversy. The intention is to continue to tax carbon dioxide emissions, rely strongly on the purchase of international carbon dioxide quotas to a degree that appears to be exceed EU standards (to which Norway is committed despite not being an EU member state), and to promote emission reductions across all sectors of the economy. In the course of this plan, it has been involved in projects to save forest land in Africa, Asia and South America. Environmental groups have criticized the country for attempting to buy its way out of the problem rather than enacting appropriate and lasting economic and organizational reforms.

Research performed by government-owned companies has led to pioneering technological innovations involving carbon dioxide storage in seabeds, which aim to reduce and ultimately eliminate carbon dioxide emissions associated with gas exploitation. However, these initiatives have proved difficult and costly in the transition from research to large-scale experimentation.

Recent positive developments include an announcement that the state petroleum fund will stop investing in coal and petroleum-related businesses, as well as the boost in electric car sales resulting from e-mobility subsidies and incentives. The government also plans to introduce similar measures for electric ships. Citizens, in particular young voters in urban areas, are increasingly seeing climate policy as the most important priority.

Sweden

Score 9

As is the case with global social injustice, Sweden tries to be a forerunner in environmental policy as well. Sweden performs extremely well in areas such as reduction of greenhouse gas emissions and the use of renewable energy sources but is not a leader in recycling or water usage. Thus, while there is strong political commitment among all the major political parties, the execution of that commitment in some aspects is still lagging. Meanwhile, Sweden continues to push environmental issues in international forums such as the EU and is a strong supporter of the Paris Agreement.

Environmental policy made its way onto the political agenda in the 1970s and has remained a salient set of issues. With its legacy as a high-energy consuming industrial economy, Sweden certainly has a long way to go, but the data suggest its environmental policy is working. It should be noted that environmental policy is an integrated component of the larger project of restructuring the economy and making it more sustainable; much of this work takes place at the urban level.

After the 2014 elections, the Social Democrats formed a coalition government with the Greens; a government which remains in office despite a slight setback in the 2018 election. While both are strongly committed to "green" issues, it seems as if the Greens' ascendance to power has further increased the attention on environmental issues. Nonetheless, the two coalition partners disagree on some issues. For instance, they do not seem to agree on the future of nuclear power. As fate would have it, two nuclear power plants are scheduled to be closed over the next few years by their owners due to low profitability resulting from falling electricity prices.

The commitment to sustainable development and addressing climate change is strong among all political parties. After the 2018 election, the government is reliant on the parliamentary support of the Liberals and Center Party. There is nothing to suggest that this new parliamentary situation has altered the coalition's commitment to green issues and sustainable development.

Switzerland

Score 9

In this area, the most remarkable developments in recent years have been made through the integration of environmental protection and sustainability issues into a wide range of areas that both directly and indirectly concern environmental policy per se. Following the OECD's strategy of green growth, Switzerland has launched several studies aimed at reconciling the goals of sustainability and economic development. Furthermore, Switzerland has in recent years developed several cross-sectoral strategies focusing on issues including noise management, pesticide mitigation, sustainability, biodiversity, climate change adaptation and forest management. New guidelines for integrated water management were published in 2011, taking into consideration the use and protection of natural water sources.

In 2011, the federal government decided to phase out the use of nuclear power over the course of the next several decades. In 2016, the "Energy Strategy 2050" was adopted by parliament and won a majority in a popular vote in May 2017. It aims to significantly develop energy efficiency and exploit the potential of hydropower as well as other renewable energies (e.g., solar, wind, geothermal and biomass). There will be no permits for the construction of new nuclear power stations or any fundamental changes to existing nuclear power stations. However, existing nuclear power stations may stay in operation for as long as they are deemed safe. A more

radical initiative was rejected in a popular vote on 27 November 2016. It would have led to the shutdown of existing nuclear power plants in the near future. Three out of the five nuclear power plants would have been closed down by 2017.

Switzerland invests considerable sums in the area of environmental protection. For example, there are about 8,000 jobs related to protection of the environment at the federal level (500), the cantons (1,500) and the municipalities (6,000) combined. Public spending on environmental protection amounts to 0.7% of GDP, substantially higher than the OECD average of 0.5%. A new article (Article 84.2) was added to the constitution in 1994, stating: "Transalpine freight in border-to-border transit shall be transported by rail. The federal government shall take the necessary measures. Exceptions shall be permitted only if they are inevitable. They shall be specified by statute." This article has not yet been effectively implemented, but the country has made enormous investments in improved railway infrastructure, particularly with regard to transalpine freight.

In certain regards, the ecological challenges facing Swiss policymakers have been much less demanding than in other countries. Switzerland never developed significant smokestack industries and industrialization took place as a decentralized process. Thus, Switzerland has no regions with large concentrations of industries with significant emissions. Nonetheless, the country's record is mixed in terms of environmental policy overall, as demonstrated by the following:

• Switzerland is ranked very highly internationally in terms of controlling water pollution and has implemented significant environmental-protection measures as a part of its water-infrastructure planning.

• Air quality has improved over the past 25 years, but ozone and other threshold values are frequently exceeded, and legislation for more ambitious norms on CO2 reduction has suffered setbacks.

• Switzerland recently updated its national climate change mitigation policy. A broad combination of voluntary, regulatory and market-based instruments are expected to produce a reduction in emissions through 2020. The country has committed to reducing by 2030 its greenhouse gas emissions by 50% (measured against 1990 levels), which includes purchasing international credits that reduce emissions elsewhere. The targeted domestic reduction amounts to 30%. Switzerland has also announced a goal of reaching net zero emissions by 2050 (including international credits).

• Considerable success has been achieved in the area of waste management policy, especially with respect to hazardous waste. Furthermore, Switzerland's recycling rate is one of the highest worldwide. On the other hand, the volume of household waste remains large.

• In Switzerland, 1.6 million people (every fifth inhabitant) are exposed to harmful or

disturbing road traffic noise during the day and every seventh inhabitant to overall noise disturbances. Total traffic noise generates costs of around CHF 1.9 billion annually.

• Soil protection has improved.

• Average to high levels of success have been achieved in regulating the use of chemical substances.

• Policies seeking to prevent the release of hazardous materials into the environment have been very successful.

• There has been little success in terms of nature conservation and protection. The number of animal and plant species that have become extinct or are at risk of extinction continues to rise. In Europe, Switzerland has the lowest share of conservation areas for sustaining biodiversity. Biodiversity remains therefore one of the most pressing environmental challenges for Switzerland.

• Even though Switzerland's agricultural sector is rather small compared to other European countries, pesticide use per inhabitant is one of the highest in Europe. Negative externalities and exposure risks are to be addressed by the "plant protection action plan" introduced in 2018.

In the 2019 national election, the green parties recorded a major increase in votes received. The green party increased by six percentage points its share of votes and the green-liberal party increased this by three percentage points, while the two major parties suffered losses of four (Swiss People's Party) and two percentage points (Social Democrats) respectively. By Swiss standards this is a tectonic change indicating much better prospects for enactment of environmental policies. A major challenge for environmental policies in Switzerland remains the adequate and bona fide implementation of federal rules by cantonal and municipal institutions.

In December 2018, the National Council failed to find a compromise on revising the 2012 CO2 law. The Council of States delivered an ambitious draft of comprehensive measures in the fall of 2019. Should this draft be implemented, the target of reducing by 2030 domestic greenhouse gas emissions by 30% could be reached.

Citation:
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Estonia

Score 8

The Ministry of Environment manages an integrated system of environmental protection, which covers the entire country, and ensures the preservation of the environment and sustainable use of natural resources. The Ministry of Economic Affairs and Communication is responsible for the energy sector and efforts to address climate change. The current national development plan, Estonia 2020, defines several goals for energy production and diversification. These include a target that renewable energy sources supply 25% of total energy consumed, total energy consumption be brought down to 2010 levels and greenhouse gas emissions be kept within 11% of 2005 levels. The next national development plan for the energy sector, which will run until 2030, was approved in October 2017. The next plan aims to increase the proportion of total energy consumed supplied by renewable energy sources to 50%, generate 80% of heat energy from renewable sources and limit vehicular fuel consumption to 2012 levels by 2030. Various efforts to increase the energy efficiency of buildings are already being implemented, with further measures planned (e.g., new buildings must conform to a near zero-energy standard). By 2050, Estonia aims to decrease greenhouse gas emissions by nearly 80% compared to 1990.

Estonia has invested significantly in renovation and water infrastructure. As a result, water pollution has decreased and the quality of tap water has improved. However, most of the country's lakes and rivers are very small, and therefore highly sensitive to any pollution whatsoever.

More than half of Estonia's territory is forested. Commercial forests account for 75% of all forest area, while the remaining 25% has been placed under various protection regimes. Although the volume of cutting has remained stable in recent years, citizens are sensitive to the issue and there is significant public demand for more responsible forest management.

Finally, Estonia has a rich biological diversity, being home to a wide variety of wildlife species. To keep the population of its main species stable, the government regulates hunting through licensing and limits. One of the main risks for biodiversity is increasing traffic and road construction, though the newest roads have been constructed in accordance with environmental protection regulations. Strong emphasis has been put on environmental concerns in the process of planning the route for the Rail Baltic high-speed railway.

Finland

Score 8

Finland faces quite specific environmental challenges in terms of climate change and population growth; yet the country's contribution to larger efforts in combating climate change have to date been fairly modest. Still, after being ranked 18 out of

178 countries in Yale University's 2014 Environmental Performance Index, Finland ranked first ahead of Iceland, Sweden and Denmark in 2016. However, in 2018 it fell to 10th place. According to a report released in May 2019, Finland's greenhouse-gas emissions grew by 2% from the previous year, to a total of 56.5 million tons of carbon dioxide. According to another recent report, Finland emits around one metric ton of jet fuel CO2 per capita, which is the second-highest such figure in the world.

Water pollution is a major challenge in Finland. While pollution emissions from large industrial facilities have to a large extent been successfully curbed and polluted lakes and rivers have been cleaned, waterborne nutrient emissions generated by farms remain a pressing problem. According to calculations, some 1,500 lakes are in need of more active restoration measures to combat eutrophication. Finland's most valuable natural resource is its forests. The overall annual growth rate of trees in the forests exceeds the total timber harvest, a result of institutionalized protections. Separately, efforts to halt an ongoing decline in biodiversity have proved insufficient, though the government has created networks of protected areas. The environment and natural resources are among the responsibilities of 13 centers for economic development, transport and the environment. The Ministry of Employment and the Economy supervises the general administrative work of these centers. Recent research suggests that in environmental matters in which economic factors play a key role there is a trend toward restricting the rights of citizens to be informed about and influence decisions.

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Latvia

Score 8

First, ensuring the sustainability of natural resources and protecting the quality of the environment in Latvia is evidenced by the country's consistently high rankings in the Environmental Performance Index produced by Yale and Columbia universities (37th in the world rankings in 2018). However, overall environmental performance indicators have slipped due to sub-par performance in climate change.

In 2017, Latvia spent €152.3 million (1.5% of total government expenditure) on research and management of environmental quality, focusing in particular on waste treatment, disposal facilities and protection of water resources. However, the EU Environmental Implementation Review (2019) and the OECD Environmental Performance Review (2019) have emphasized that, despite the overall positive

performance, Latvia would benefit from setting more ambitious goals when it comes to environmental performance.

In particular, waste management remains a challenge. Latvia is at risk of not attaining its municipal waste recycling target for 2020. In addition, Latvia ranks low for eco-innovation, despite ranking as the third most fastest growing innovator in the European Innovation Scoreboard 2019, while material recycling rate remains very low at 10%. In addition, the OECD has emphasized the need for Latvia to invest in green public procurement, eco-labeling and market incentives, and promote public awareness, better enforcement and more ambitious goals in this area (e.g., the current government goals for green procurement is to reach only 20% of government spending by 2020).

Nevertheless, Latvia is on course to achieve many of the Sustainable Development Goals, with significant opportunities for accelerating the move to a low-carbon, greener and more inclusive economy. OECD has noted that this would be achieved by investing in energy efficiency, renewables, sustainable forestry, and sound waste and material management.

Second, Latvia is a heavily wooded country, with 2.9 million hectares (44.5% of the total area) of its territory forested, of which 50% is state owned. The government acts as both regulator and largest landowner with respect to Latvia's forests. Protection of forests is well organized and secured through legislation, which regulates all related economic activities, including harvesting, management plans, regeneration, and monitoring and control of tree species.

Natura 2000 designated sites cover 12% of the territory of Latvia, representing 327 different areas for the protection of habitats and species. The Protection of Species and Habitats Law provides for the establishment of micro-reserves to protect small-scale biologically rich areas that lie outside the protected territories. Over 2,000 micro-reserves had been established as of 2012.

In 2015, Latvia adopted a new Environmental Policy Strategy for 2014 – 2020, prioritizing a new financing model for the use of natural resource tax revenue, creating a deposit system for waste management, improving standards in wastewater management, and improving research and development capacities.

Overall, Latvia has been able to make progress in decoupling economic growth from environmental pressures, such as greenhouse gas emissions and most air pollutants. Furthermore, the use of renewable energy sources has increased, and access to and the quality of water and waste services have improved. In addition, Latvia has pioneered a Mapping and Assessment of Ecosystems and their Services (MAES) assessment for marine waters, which confirms the substantial progress Latvia has made since 2016.

Third, overall, Latvia has a strong regulatory framework for environmental management with well-developed and effective mechanisms of environmental governance. However, the OECD has noted a few institutional capacity constraints that hamper more effective implementation of environmental law and use of good regulatory practices, particularly in compliance assurance.

Over the last decade, Latvia's environmental performance has improved in several areas (such as emissions of greenhouse gases and air pollutants, residential energy efficiency, wastewater treatment and waste management). However, the progress has not been even and leaves much to be desired when it comes to energy efficiency, recycling and eco-innovation. Furthermore, continued, sustained economic growth is likely to intensify pressures on the environment and biodiversity in the near future.

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Luxembourg

Score 8

The government placed a high priority on the issue of climate change in its 2020 budget. Public transport will be made free to users throughout Luxembourg from March 2020 onwards, which will cost the state about €40 million a year. Moreover, €200 million will be spent on expanding the tram network and €1.3 billion on an expansion of the country's railway infrastructure. The state also provides financial support for the purchase of e-bikes.

Under the leadership of Environment Minister Carole Dieschbourg, a new Water Act was passed that came into force in the summer of 2017, replacing the Water Act of 2008. Farmers can now receive transfer payments from the water fund, which was not possible in the past. Previously, only private individuals and municipalities could apply for subsidies, for example if they minimized the risk of contaminating groundwater by replacing oil with a renewable energy source for their heating system. Subsidies from water suppliers are also provided directly to the farmers.

Other subsidies are also distributed differently now. Outdated sewage treatment plants now receive less funding than previously. This has motivated many municipalities to build new sewage treatment plants or modernize old ones, in order to be able to benefit from the old regulations. Nevertheless, there are still problems with sewage treatment plants. Due to a technical defect in a sewage treatment plant in the capital's Beggen district, the Alzette river was very heavily polluted in the autumn of 2019. The fish population dropped to almost nothing, with thousands of fish dying. More generally, sewage treatment plants in Petingen, Schifflingen and Beggen have been expanded, and the municipalities on the Moselle have been connected to wastewater treatment plants. However, a fourth stage of filtering that would filter out micro-sized particles and drug residues is largely absent. In 2019, chemicals resulting from the molecular breakdown of the pesticide metazachlor were detected in 80% of all water samples. The substance has been banned since 2015, but is still used in agriculture.

The government plans to achieve the major goals of the National Climate and Energy Plan (NECP) by 2030 through implementation of the following main measures: a CO2 tax; the electrification of car, bus and truck traffic; the introduction of the A+ energy-efficiency standard for new residential buildings; improvement of the "PRIMe House" support program for the climate bank; replacement of oil heating with renewable energy sources or connection to heating networks; introduction of the Nearly Zero Energy Standard for functional buildings; and an expansion of heating networks.

Citation:
"Carole Dieschbourg et Claude Turmes au Conseil Environnement." Communiqué 25 Juin 2018. https://gouvernement.lu/fr/gouvernement/turmes_claude/actualites.gouvernement%2Bfr%2Bactualites%2Btoutes_actualites%2Bcommuniques%2B2018%2B06-juin%2B25-conseil-environnement.html. Accessed 22 Oct. 2018.
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Slovenia

Score 8

Over the last decade, Slovenia has established comprehensive environmental legislation. It has transposed most EU environmental directives into the 2004 Environmental Protection Act and other national laws. Environmental policy has also been guided by the country's Development Strategy 2030 which was approved by the government in December 2017. Certain environmental policy goals such as those regarding waste are ambitious, and the implementation and coordination of environmental policy has been largely effective.

With regard to resource use (land, water, materials, energy), the following can be established:
Resource productivity has improved overall in Slovenia in the last 10 years, though it remains below the EU average, particularly when compared with the EU-15. In 2017, it reached €1.43/kg compared to the EU average of €2.04/kg. The circular (secondary) use of material in Slovenia was 8.5% in 2016 (EU-28 average 11.7%), which was less than previous years. At the same time, Slovenia performs above the EU-28 average in terms of the number of people employed in the circular economy (2.09% of total employment in 2016 vs. the EU-28 average of 1.73%). New policy instruments were introduced in 2019 to promote waste prevention, make reuse and recycling more economically attractive and shift reusable and recyclable waste away from incineration.

With regard to environmental pollution (water, air, soil), the following can be established:
Slovenia has registered 378 sites where potentially polluting activities have taken or are taking place. Air quality in Slovenia continues to give cause for concern. For 2015, the European Environment Agency estimated that about 1,800 premature deaths were attributable to various sources of air pollution (i.e., fine particulates). Slovenia planned to take action to reduce the key sources of emissions in 2019 under the National Air Pollution Control Programme. The ecological status of most natural lakes and rivers as well as all coastal waterbodies have been assessed as “good” or better. From 2015 to 2017, the share of water bodies assessed as good or better increased from 52% to 58%. Chemical pollution, followed by organic and nutrient pollution, have been identified as having the most significant impact on all surface water categories. Despite ongoing protests from local communities, two waste-processing plants (Kemis Vrhnika and Ekosistemi Zalog) that were the site of massive fires in 2017 have resumed operation. Further plants (Salomon Lenart, Saubermacher Lenart, Publicus Komenda) were the site of more such massive fires that took place in 2019. As a consequence of these events, new safety mechanisms and procedures are being implemented at all waste-processing plants, though policy implementation is clearly lacking oversight and monitoring. As a result, various municipalities are increasingly turning away from hosting waste-processing plants on their territory.

With regard to climate issues, the following can be established:
From 2013 to 2017, Slovenia’s greenhouse gas emissions were below that of targets set for each year. For 2020, Slovenia’s national target under the EU Effort Sharing Decision is to avoid increasing emissions by more than 4% compared to 2005. For 2030, Slovenia’s national target under the Effort Sharing Regulation will be to reduce emissions by 15% compared to 2005. Since 2016, Slovenia has had a National Adaptation Strategy in place, developed through its Strategic Framework for Climate Change Adaptation. The framework provides a long-term vision and strategic guidelines for adaptation-related activities. Slovenia is currently in the

process of developing a National Action Plan based on a comprehensive national Climate Change Vulnerability Assessment. Sectors that have devoted the most attention to climate change adaptation action are water management (and the associated risks of flood and drought), agriculture and forestry.

With regard to biodiversity protection:
Slovenia has more than 350 Natura 2000 sites. These include 324 sites of community importance under the Habitats Directive and 31 special protection areas under the Birds Directive. Together, these sites cover 10.6 km² of marine waters and 37.9% of the country's land area, which is the largest share of land area coverage in the EU (EU average 18.1%). As planned for within the context of the EU's Action Plan for Nature, People and the Economy, a bilateral meeting involving authorities and stakeholders in all economic sectors was held in March 2018. The main challenges to implementation were discussed at the meeting, which delivered agreement on a number of conclusions and actions to be taken and followed up upon in 2019. Considering the Natura 2000 coverage in Slovenia, there is no doubt it forms the backbone of efforts to promote green infrastructure. This infrastructure requires an upgrade in order to improve ecological connectivity among Natura 2000 sites and to provide green infrastructure in urban areas outside Natura 2000 sites.

Citation:
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United Kingdom

Score 8

Environmental goals were ostensibly close to the heart of both governments led by David Cameron. Yet, some critics have expressed dismay at cuts in subsidies for green energy, and an increase in government support for natural gas fracking and nuclear power. The latter was reaffirmed in the decision to proceed with new reactors, but recent re-assessments of the commercial viability of nuclear energy may prevent it happening. The coalition government (2010 – 2015) set itself the goal of becoming "the greenest government ever," and its Conservative successor governments have not noticeably changed tack. However, worries about the cost of living led the government to suspend automatic increases in fuel duties for seven years in succession, and there have been rumblings of discontent over the 2008 Climate Change Act, which forms the legislative foundation for climate-change polices.

In many areas, the Cameron government continued previous government's initiatives. For example, market-based environmental policy mechanisms, and a planning system designed to preserve and protect "green belts" around major conurbations. The "eco towns" initiative of the former Labour government,

promoting low carbon emissions, renewable energy, expansive green space and high recycling rates, was substantially scaled back due to spending cuts.

After taking over from Cameron in July 2016, Prime Minister Theresa May dissolved the Department of Energy and Climate Change, which had existed since 2008, merging it into the newly established Department for Business, Energy & Industrial Strategy. This step was harshly criticized by environmentalist groups. In her keynote speech at the Conservative and Unionist Party Conference, Prime Minister May did not mention any environmental topics beyond the ratification of the Paris Climate Agreement which took place on 11 November 2016. In a speech given at the U.N. General Assembly in September 2017 she stressed again the importance of staying within that agreement. There are renewed signs under the current environment minister, Michael Gove, that environmental policy will feature more prominently in the government's agenda in the future, while air quality has become an issue of growing public concern.

Much environmental policy is still determined by the European Union (e.g., the Water Framework Directive or the Biodiversity Agenda) beyond which there is little space for nationally specific initiatives. After "Brexit," some divergence from the European Union could occur, although there is no reason to believe that the United Kingdom will renege on big issues such as the Paris climate accord. Renewable water resources have never been an issue for the United Kingdom, although utility companies are being encouraged to reduce leaks and improve sewerage. Forestry policy is a devolved competence. In England there is Forestry Commission, which has responsibility for both tress and biodiversity.

The "#FridaysForFuture" movement and the more radical "Extinction Rebellion" group have – like in many other European countries – pushed climate policy into the limelight and elicited commitments from all parties to do more during the 2019 election campaign.

Canada

Score 7

Environmental policy, across the board, is more-or-less balanced in Canada, with some areas preforming better than others. Biodiversity in Canada's forests and waterways has declined over the past decade, and climate change and renewable-energy policies have featured prominently in public policymaking in the last several years.

Since taking office in 2015, the Liberal government's environmental record has been mixed. On the one hand, the decision to approve and then – in an attempt to rescue the project following investor uncertainty – nationalize the highly controversial Kinder Morgan pipeline expansion at a cost of CAD 4.5 billion raised serious questions about Trudeau's commitment to fighting climate change and protecting

Indigenous rights. The government has finished a second round of consultations and reapproved the project (following a court decision to allow for further consultation), with construction expected to begin in 2020. The pipeline still faces challenges from British Columbia, whose premier has said he will do everything in his power to prevent the expansion.

On the other hand, 2019 saw the passage of bills C-48, a moratorium on large oil tankers accessing ports on British Columbia's north coast, and C-55, which establishes a network of protected marine areas and prohibits certain activities in these areas. These actions are signs of an effort to improve the country's marine-resources conservation. In 2016, Canada ratified the Paris Agreement on Climate Change, committing to a reduction in greenhouse-gas emissions by 30% compared to 2005 levels by 2030. This commitment has been adopted as a national target. Canada has also set a legally binding target of net zero emissions by 2050. The Pan-Canadian Framework on Clean Growth and Climate Change represents a collaborative effort to ensure that the target is met through carbon pricing, investments in energy efficiency and renewable-energy strategies. Renewable-energy policy is largely the responsibility of the provinces, and several provinces have already made significant efforts to address climate change. However, the 2017 Commissioner of the Environment and Sustainable Development report concluded that federal government departments and agencies are "nowhere near being ready to adapt to the impacts of climate change."

A parliamentary review of Canada's federal environmental assessment and regulatory processes, initiated by the Trudeau government in 2016, led to the proposal of sweeping changes to a number of laws related to the environment. Bill C-69, which passed in June 2019, is designed to streamline the impact assessment process, while simultaneously widening its scope from purely adverse environmental factors to considerations such as the government's ability to meet its climate-change commitments, contributions to sustainability, and the impact of policies on Indigenous groups and their rights. This measure was applauded by environmental groups and Indigenous peoples, and has the potential to speed up the assessment process and reduce uncertainty, which may also benefit industry.

The government has also passed legislation to impose a carbon tax in provinces without a comparable program. Experts agree that this carbon tax is too low to achieve Canada's commitments. At the same time, the Trudeau government continues to face fierce opposition to the tax from some provinces. Attempts to challenge the law in court have so far failed, but the issue is expected to go to the Supreme Court.

Citation:
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France

Score 7

In its 2016 environmental report, the OECD stated that France had significantly improved its environmental performance over the last 10 years. However, its performance record with respect to environmental targets is not optimal. According to OECD indicators, France is ranked in the lower-middle group in most areas. Too often, environmental policies continue to be subordinated to sectoral policies or weakened by protest movements. While being extremely active at the international level (e.g., Cop 21 and related forums), France has been unable to reach its own targets in most of areas. This is due to lobby groups’ resistance to the full implementation of environmental policies. A government report in October 2019 noted that the country has been unable to make progress over the past four years, particularly with regard to meeting its own commitments to fight climate change.

France’s good performance with regard to carbon emissions (sixth place for CO2 emissions per GDP unit within the OECD in 2017) can be credited to the country’s nuclear sector. A July 2015 energy transition bill set several objectives, including a reduction of nuclear power’s share in total energy production from 75% to 50% by 2025, and an increase in the share contributed by renewable energy sources to 40% from what was then a 12.5% share. However, these goals are unlikely to be met, given the complex authorization processes for renewable energies. The Macron government has passed laws prohibiting oil exploration on French territory (including overseas territories), ordering a closure of coal mines by 2022, and closing the Fessenheim nuclear plant beginning in 2020.

Until the recent Volkswagen scandal, the government refused to deviate from incentives for diesel cars, as French companies have a marked preference for diesel engines. Following public pressure, the government decided in October 2016 to end the tax privileges it provided to diesel fuel. The decision to raise taxes on petrol and diesel from 2019 provoked the Yellow Vest riots in November and December of 2018, leading the government to withdraw this decision. This was reminiscent of a similar government retraction in 2014, when President Hollande was forced to cancel the so-called eco-tax on trucks. On 24 October 2019, France was condemned by the European Court of Justice (ECJ) for being unwilling or unable to reduce NO2 levels to meet EU targets in place since 2009. In April 2019, Macron announced a new initiative, launching a “Citizen Convention for the Climate,” which assembled 100

citizens representative of the French population to address the question: “How can greenhouse-gas emissions be reduced by 40% by 2030 in a spirit of justice and equity?” The proposals from that group in January 2020 will be submitted to the parliament or to the people by referendum. Some pesticides (e.g., Glysophate) will be banned in the future, but the government rejected an opposition request to advance the deadline, set by the European Union, in France.

In the field of renewable water resources, France has long experience dating to the 1960s, and has set up water agencies to monitor the use and protection of its resources. However, the objectives set out in the Ecophyto plan (2009) to enhance water quality have not been met by 2015. French authorities have been unable to resist the agriculture lobby, which is the largest consumer of water. The use of pesticides has increased by 29% (2008 – 2014). The attitude of the government is split between a desire to reduce pesticides and a need to respond to pressure from farmers, who are reluctant to abandon pesticides before substitutes become available.

The municipal composting, waste management and recycling sectors trail far behind counterparts in northern European countries. The situation is better with biodiversity and forests, the latter of which are experiencing a growth in surface area. A new law on biodiversity was adopted in August 2016. However, the protection of biodiversity has met resistance in metropolitan France due to many countervailing interests (agriculture, construction and transportation), and protection levels have actually been reduced according to official reports.

To summarize, France has set ambitious environmental-policy goals, but implementation of governmental decisions has often turned out to be incomplete, producing only limited impact. This has been due to interference by conflicting interests, lobbies and government departments, which have been able to weaken environmental targets. Moreover, there is no systematic sustainability check reviewing the environmental effect of policies.

Citation:
OECD Environmental Performance Reviews: France 2016, Paris, OECD, 6 oct. 2016
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OECD: Environment at a glance indicators, 19 November 2019 (https://www.oecd-ilibrary.org/sites/ac4b8b89-en/index.html?itemId=/content/publication/ac4b8b89-en)

Iceland

Score 7

Environmental policy has historically not been a high priority on Iceland’s political agenda. The Ministry for the Environment and Natural Resources (Umhverfis – og auðlindaráðuneytið) was established, comparatively late, in 1990. The ministry was a single-issue ministry until 2013 when it was merged with the former Ministry for Fisheries and Agricultural Affairs. However, a new minister for environment and

natural resources was appointed at the end of 2014, separating the two ministerial positions. At the time of writing, this arrangement remains.

The country is rich in onshore energy and freshwater resources, and has substantial offshore fisheries. However, apart from the fisheries management system in operation since the mid-1980s, there has been little discussion about how to preserve these resources, reflecting a popular assumption that these resources are, in effect, unlimited.

In April 2019, the Jakobsdóttir cabinet resolved to reduce the government's carbon footprint by instructing public employees to:

1. Reduce both domestic and international air travel, and use digital technology instead;
2. Use the most environment-friendly option possible to get to and from work;
3. Use electric rental cars where possible.

In September 2018, the Icelandic government announced a new climate strategy, intended to boost efforts to cut net greenhouse gas emissions. The new measures aim to help Iceland meet its Paris Agreement targets for 2030 and reach the government's ambitious goal to make Iceland carbon neutral before 2040. The main emphasis of the new plan is on two measures: to phase out fossil fuels in transport; and to increase carbon sequestration through afforestation, revegetation, and restoration of wetlands. Climate mitigation measures will receive a substantial increase in funding, almost ISK 7 billion, between 2019 and 2023. A general carbon tax, already in place, will be gradually increased.

So, even though environmental policy has historically not been a high priority on Iceland's political agenda, it seems to be gaining ground.

Citation:
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Government Offices of Iceland: https://www.government.is/news/article/2018/09/10/Iceland-launches-new-Climate-Strategy-boosting-efforts-to-reach-Paris-goals/. Accessed 22 December 2018.

Ireland

Score 7

Climate Policy:

In 2013, the government published a draft Climate Action and Low Carbon Development Bill. A commitment to producing up to 40% of the country's energy from renewable sources is being implemented, relying heavily on the construction of wind farms. During 2015, progress was made toward attaining these targets.

Ireland is a world leader in carbon-efficient agriculture and food production.
At a EU summit in October 2014, Ireland argued strongly for concessions in its carbon-emission reduction targets outside the Emission Trading System, because its agricultural sector (dairy farming in particular) produces almost half of the country's carbon emissions. The country's negotiators claimed that displacing this production from Ireland to countries outside the European Union would ultimately result in higher global emissions.

During 2015, it was announced that the ban on smoky bituminous fuels, which had been progressively extended to the main cities and towns since 1990, will be applied countrywide by autumn 2018.

The increase in the carbon tax, albeit a small one, in the 2020 budget at least demonstrates that a further step has been taken with respect to increasing the price of carbon from €20 to €80 per tonne by 2030. Against the backdrop of an assumption of a hard Brexit, the minister of finance only provided for a €6 per tonne increase in the carbon tax. Importantly, the money so raised by this tax to fund climate action measures has been ring fenced.

Ireland has one of the highest proportions of electricity provided by wind power in the world. On 23 February 2017, wind power generated 55% of Ireland's total supply of electricity compared to 45% in Germany and only 18% in the United Kingdom. The figures vary daily according to weather conditions. In 2018, electricity generated from wind and hydro (normalized) accounted for 21.1% and 2.5% respectively of Ireland's gross electrical consumption.

Renewable water resources:
In 2000, Ireland signed the EU Water Framework Directive into national law. Article 16 of the directive requires the introduction of charges for domestic water. Full implementation of this measure was included in the Troika Agreement with Ireland. In July 2013, Irish Water (Uisce Éireann) was incorporated as a semi-state company under the Water Services Act 2013. The creation of Irish Water merges the water and waste-water services of 34 local authorities together within one national service provider. Irish Water is now responsible for public water services, including the management of national water assets, and making capital investment decisions regarding the country's water infrastructure. Irish Water is accountable to the Commission for Energy Regulation and the Environmental Protection Agency (EPA).

The installation of domestic water meters began in 2014 and, despite sometimes violent local opposition, this process is now more than three-quarters complete. Substantial up-front costs were incurred with significant savings yet to be achieved. The proposed structure of the domestic water tariffs, which became the focus of fierce public protests, has been repeatedly revised. The water charge element was greatly attenuated, so that the levy became little more than a property-tax surcharge. Consequently, it provides only a weak incentive for conserving water usage.

In June 2016, the minister of the environment appointed an Expert Commission on Domestic Public Water Services. Its final report, the Report on the Funding of Domestic Public Water Services in Ireland, was published on 29 November 2016. The commission recommended that "the optimal arrangement is one involving the funding of water services, for domestic and personal use, as a charge against taxation." It also suggested that "excessive or wasteful use of water will be discouraged by charging for such use and therefore is consistent with the "polluter pays principle." Essentially the commission marginalized the issue of water charges, suggesting that the "question of metering is one of policy and is outside the Expert Commission's terms of reference."

Finally, in 2015, Eurostat ruled that the mechanisms proposed by the Irish government to fund Irish Water did not meet the criteria for classifying it as a commercial company. As a result, for national accounting purposes, its budget must be included in the public sector budget (for further details see our section on Policy Communication).

Forest area:
Significant grants for increasing the proportion of the territory under forestry have been in place for some time. The state-owned forestry service operates forests that now cover about 7% of the country's land area. The privatization of the harvesting of some of these forests was recommended in the Troika agreement but now has been shelved in response to concerns about the potentially adverse effects on the amenity value of these land assets. Increased afforestation has been proposed in exchange for leeway on the emissions from the Irish dairy sector.

Biodiversity:
Ireland is broadly compliant with EU directives on biodiversity, and engages in enforcement measures to protect wildlife and flora. An extensive rural environmental protection scheme has sought to encourage farming in a sustainable and environmentally sensitive manner. In addition, a large number of protected areas have been designated.

:
Department of Finance, Budget 2020.
Report on the Funding of Domestic Public Water Services in Ireland, November 2016.
Climate Action and Low Carbon Development Bill 2015
http://www.oireachtas.ie/documents/bills28/bills/2015/215/b215d.pdf

For an update on Ireland's progress in regard to renewable energy see
http://www.seai.ie/Publications/Statistics_Publications/Energy_in_Ireland/Energy-in-Ireland-1990-2013-report.pd

The latest data on emissions, etc. are contained in an EPA factsheet:
http://www.epa.ie/pubs/reports/indicators/epa_factsheet_waste_v2.pdf

Information on the National Biodiversity Data Center is available at:
http://www.biodiversityireland.ie/

The coverage of protected areas is set out in:
http://www.npws.ie/protected-sites

Italy

Score 7

Italy was not an early mover in the field of environmental policies compared to other European and OECD countries, but in a number of aspects its environmental record has significantly improved. For instance, Italy ranks above average in its performances for CO2 emissions in comparison to GDP. In the field of renewable energies, where Italy traditionally fared reasonably well thanks to its large hydroelectric (and geothermic) plants, the promotion of new sources (e.g., solar or wind energy) has been very effective in recent years thanks to generous incentives. Because of budgetary constraints (and in part also because of other conflicting environmental reasons, such as the protection of landscapes) incentives for solar energy have been reduced in the recent years. Nonetheless, the transition toward renewable energy has gained momentum and renewable energy sources now supply between 32% and 35% of total energy demand (data from GSE). Strong fiscal incentives for sustainable house building and renovations have existed for several years. An initial discussion about the return to nuclear energy with the purpose of further reducing CO2 emissions was stopped by the Fukushima disaster.

Forest areas have been growing significantly in recent years and biodiversity is above the European average.

In other dimensions, such as water efficiency, Italy fares less well. Disparities between northern or central Italy, and southern Italy remain significant. Some waste emergencies (e.g., in Rome, Naples, Palermo and other places in southern regions) have demonstrated in recent years the lower performance of some local and regional authorities in environmental matters. The absence or inadequacies of purification plants still affects parts of the coastline and rivers. As with other oceans, the Mediterranean is polluted by microplastics.

Recycling rates have increased very significantly in central and northern Italy. According to Reuters, Italy ranks very highly in Europe for recycling. Recent ISPRA data also indicates significant improvements in southern Italy where recycling rates had traditionally lagged behind.

Erosion, flood and earthquake prevention should be a high priority for the government, as the geology of the Italian peninsula means that the country is very exposed to natural disasters. After the recent 2016 earthquakes, the government is launching a long-term investment policy to promote public and private rebuilding.

Climate change has and will have a huge impact on Italy. The country has among the highest numbers of cars per capita in the world, and this combines with poor short-, medium- and long-haul public transport to make life in cities difficult. It also compromises the transport of goods and persons across Italy. Smog, particulate

matter, poor air quality and traffic jams undermine the quality of life significantly, especially in large cities. Perhaps more so than any other policy area, the environment demands a stronger strategy and corresponding political action to prevent Italy from dropping back from the European level of quality of life.

The first Conte government declared that it would pursue a strong pro-environment orientation, but its activities tended to focus more on slowing the pace of new infrastructure development rather than providing incentives for positive actions. The second Conte government has said it would introduce green-oriented tax incentives.

Citation:
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http://www.asvis.it/rapporto-2017/
https://it.reuters.com/article/topNews/idITKBN1CE1D5-OITTP

Lithuania

Score 7

Lithuania's environmental performance varies significantly by sector. The country's energy intensity is above the EU average, with the residential-housing sector and the transport sector being particularly energy-inefficient. Lithuania lacks ambitious greenhouse-gas emission targets, with its binding EU target being a reduction of only 9% (compared to that of 30% i n the EU). In addition, since emissions in the country are forecast to rise by 6% by 2030 as a baseline compared to the level of 2005, significant efforts will be necessary to meet the national climate and energy goals. Since taxes on transport are the lowest in the EU in the country, Lithuanian authorities have proposed taxing polluting cars. The Ministry of Environment announced the possibility of imposing €20 in tax per vehicle emitting over 130g/km. However, this was transformed into a vehicle-registration tax during the debates over the 2020 budget. Thus, fiscal needs were prioritized over environmental objectives. This was also visible in the decision to reallocate funds from the country's climate-change program to other budget programs, mostly in response to public protests by teachers, lecturers, doctors and other professions demanding wage increases in 2020.

The proportion of energy produced from renewable sources in Lithuania reached 25.8% in 2017, above the country's Europe 2020 target of 23%. The heating sector, where the share of renewables reached 46.5%, largely contributed to this achievement. In terms of the overall share of renewables in domestic energy production, Lithuania is second after Denmark due to expanding solar- and wind-energy capacities. The National Energy Strategy includes further regulatory and financial incentives for the use of wind and solar energy, with the goal of having all domestic production of energy be based on renewables by 2050.

Water-supply and sewage infrastructure has improved substantially over the years thanks to the use of EU structural funds. However, the provision of adequate

connections to the public water supply still remains a challenge in some areas. Moreover, wastewater treatment is inadequate in some respects, with significant differences evident between rural and urban areas. In February 2017, the European Commission initiated an infringement procedure against Lithuania for failing to comply with EU wastewater-treatment requirements.

In the Environmental Performance Index 2018, Lithuania ranked 29th out of 180 countries, with the best rankings in the areas of agriculture, biodiversity and habitat, and ecosystem vitality, and the worst ranking in the category of forests (119th). With respect to biodiversity, Lithuania's protected areas cover 15.6% of the country's territory, but only 22% of habitat types and 54% of the protected species in Lithuania are subject to preservation efforts, according to European Commission reports. A popular initiative to expand a natural reserve in the pinewood of Punia was reversed by a new minister for the environment seeking to protect the interests of foresters, hunters and local inhabitants. Inadequate legislation and ineffective enforcement in the field of pollution control failed to prevent substantial damage to the environment when a major fire broke out in a tire-recycling facility in Alytus in October 2019. The country's municipal-waste recycling rate reached 48.1% in 2017, which is still below the EU average. Infrastructure for waste sorting and recycling is insufficiently developed, and most nonhazardous waste is disposed of in landfills. Landfills remain the predominant means of disposing of waste in Lithuania, as this is the cheapest option for municipal-waste management. Additional investment will be necessary to meet new EU recycling targets for different waste streams in the future.

To sum up, while the goals of environmental policy are ambitious, particularly with regard to the expansion of renewable energy capacities, related policies are not implemented consistently. This is clearly illustrated by the outcome of the planned tax on polluting vehicles and the plans to reallocate money from the climate-change program illustrate. Thus, there is considerable potential to integrate environmental concerns better across relevant policy sectors.

Citation:
COMMISSION STAFF WORKING DOCUMENT, country report Lithuania 2019: https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-lithuania_en.pdf
The Article 17 EU Habitats Directive Reports available at http://ec.europa.eu/environment/nature/knowledge/rep_habitats/
The Environmental Protection Index is available at http://epi.yale.edu/epi2012/country profiles
Environmental Performance Index 2018, https://epi.envirocenter.yale.edu/sites/default/files/2018-ltu.pdf

New Zealand

Score 7

The performance of New Zealand's environmental policy is mixed. New Zealand derives 85% of its energy from renewables, and Fonterra, the country's largest dairy company, is reducing its use of coal-fired power. However, in the 2018 Environmental Performance Index, New Zealand slid to 17th (from 11th in 2016) out of 180 countries ranked, but nonetheless ranks at the top of Pacific region countries.

However, in the group of OECD countries, it holds only an average overall position. The 2017 OECD Environmental Performance Review concludes that "New Zealand's growth model, based largely on exploiting natural resources, is starting to show its environmental limits with increasing greenhouse gas emissions and water pollution."

Many of New Zealand's environmental problems stem from the country's large agricultural sector, which accounts for more than half of merchandise exports – in particular, through the export of meat and dairy products. Methane and nitrous oxide gases created by farming make up around half of New Zealand's total greenhouse gas emissions. In addition, the booming meat and dairy sector has taken a toll on the country's freshwater resources. According to a 2014 report by the Environment Ministry, about 60% of the country's rivers and lakes are heavily polluted and are unfit for swimming. According to experts, water quality has since deteriorated further; efforts to remedy this situation were established in 2019. A dedicated water regulator and new water regulations will be implemented from mid-2020, which the government expects will ensure safe drinking water around the country and prevent sewage and farm run-off ending up on beaches, in rivers, and in lakes.

New Zealand's biodiversity is also facing a crisis. According to the 2019 National Report to the United Nations Convention on Biological Diversity, 4,000 species are at risk in New Zealand – including 90% of seabirds, 76% of freshwater fish, 84% of reptiles, and 46% of plants. The government is currently seeking consultation on a new biodiversity strategy that would set goals for the next 50 years (Stats NZ, 2019).

In November 2019, the government passed the Climate Change Response (Zero Carbon) Act that set new domestic greenhouse gas emissions reduction targets for New Zealand. These include: reducing net emissions of all greenhouse gases (except biogenic methane) to zero by 2050; reducing by 2050 emissions of biogenic methane to anywhere from 24% to 47% below 2017 levels; establishing a system of emissions budgets to act as stepping stones toward the long-term target; requiring the government to develop and implement policies for climate change adaptation and mitigation; establishing a new, independent Climate Change Commission to provide expert advice and monitoring to help keep successive governments on track to meeting long-term goals (MfE 2019).

Citation:
Environmental Performance Index 2018: New Zealand (Yale/Columbia: Yale University/Columbia University 2016) http://epi.yale.edu/downloads (accessed June 30, 2016).
OECD Environmental Performance Reviews: New Zealand 2017 (http://www.oecd.org/environment/country-reviews/oecd-environmental-performance-reviews-new-zealand-2017-9789264268203-en.htm) (accessed January 18, 2018).
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RNZ, Government seeks feedback on biodiversity strategy (https://www.rnz.co.nz/news/national/395976/government-seeks-feedback-on-biodiversity-strategy)
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MfE 2019. https://www.mfe.govt.nz/climate-change/zero-carbon-amendment-act
Stats NZ 2019. https://www.stats.govt.nz/information-releases/new-zealands-environmental-reporting-series-environment-aotearoa-2019

Spain

Score 7

In recent years, Spain's policies regarding sustainability, protection of its exceptionally diverse natural habitats or general environmental quality have been ineffective and/or have lacked ambition. However, in February 2019, the Council of Ministers presented the Strategic Energy and Climate Framework, which includes:

a) The National Integrated Energy and Climate Plan 2021 – 2030, which aligns with an EU goal for reducing greenhouse gas emissions and current rules for sharing out.
b) The Draft Bill on Climate Change and Energy Transition, which aims to achieve carbon neutrality by 2050.
c) An accompanying strategy of support and just transition, which will ensure that individuals and regions make the most of the opportunities created by this transition.

Combined together, these different elements introduce a more solid and strategic framework for the decarbonization of Spain's economy.

According to the Framework Plan, which is expected to mobilize €235 billion in investment between 2021 and 2030, Spain aims to reduce greenhouse gas emissions by 2030 by between 20% and 21% compared to 1990 levels, and will increase the proportion of renewable energies within total energy consumed to 42%. As regards electricity generation, the percentage of renewables will stand at 74%. The Framework Plan was submitted in February 2019 to the European Commission for evaluation. Although the International Institute of Law and the Environment considered the Framework Plan a step in the right direction, the institute also stated that more concrete measures and more ambitious objectives are necessary.

So far, a number of private sector participants have announced concrete measures. Iberdrola, the country's largest energy company, is set to close all its coal-fired power plants by June 2020. In 2019, Iberdrola also laid out a plan to build Europe's largest solar power plant in Spain.

Despite this progress, air quality remains a big problem in Spain's larger cities, such as Madrid and Barcelona. Though local governments in Madrid and Barcelona have approved measures to reduce pollution, Madrid and the metropolitan area of Barcelona continue to exceed the limits on nitrogen dioxide. In 2019, the European Commission warned Spain that it may face disciplinary action if it does not introduce tougher measures to reduce air pollution. Finally, regarding the protection of natural resources and biodiversity, the country has a mixed record.

Citation:
July 2019, El Pais: "Brussels calls on Madrid, Barcelona to do more to combat air pollution"- https://elpais.com/elpais/2019/07/11/inenglish/1562829294_423030.html

September 2019, El Pais:, “Madrid Central considered one of the most effective anti-pollution plans in the EU” https://elpais.com/elpais/2019/09/11/inenglish/1568214176_656688.html

July 2019, Catalan News, Colau’s new plans for Barcelona to tackle the climate crisis https://www.catalannews.com/society-science/item/colau-s-new-plans-for-barcelona-to-tackle-the-climate-crisis-2

Austria

Score 6

Austria’s government has sought to establish a policy course balancing economic growth and protection of the environment. In reality, this is very often thought of as a contradiction. Environmental policies may have significant effects for employment and even for economic growth in the long run, but in the short run – and the Austrian government, like any democratic government, is first and foremost focused on short-term effects – traditional economic incentives are given priority most of the time, at the cost of environmental protection.

Ecological values have been embraced by virtually all political parties, not just the Greens, and as long as protecting the environment is not in immediate conflict with economic growth, the government has promoted environmental policies. But the ambiguity remains, as well as a tendency to think within traditional frameworks that favor economic growth over environmental protection. Public opinion in Austria is inclined to think the country should be in the vanguard of international environmental protection and for that reason Austria’s signing of the Paris Agreement on Climate Change in Paris at the end of 2015 was not disputed domestically. Despite all this, Austria is one of the very few EU member states that has failed to meet the objectives of the Kyoto Protocol. To this day, Austria’s greenhouse gas emission levels are very high for a country of its size, well above those of its neighbors France, Italy and Switzerland, but below Germany.

Partly due to EU laws (the so-called Eurovignette directive), more international transit and partly due to the failure to make railroads a more attractive way to transport goods, Austria has completely failed to decrease carbon dioxide emissions from vehicle traffic. Greenhouse gas emissions for heavy vehicles and trucks have not decreased since 2005 – contrary to other traffic emission sources.

Industry and commerce remain the largest contributor to carbon dioxide emissions. Economic growth and cheap carbon-market certificates for carbon dioxide can be seen as the principal reasons for the increase in carbon dioxide emissions in this sector. In part due to strong lobbying by economic actors, the Austrian government has failed to control the supply and prices of tradable carbon dioxide certificates, contributing to a significant fall in certificate prices. As the FPÖ – a party that has repeatedly denied the existence of human-induced climate change – has become a governing party, there is not much reason to expect that this trend will be reversed.

The FPÖ has proven to be less strict in promoting restrictions on carbon dioxide emissions. This can be seen in the decision of the FPÖ’s minister of infrastructure

and transportation to increase the speed limit on highways, although (for the moment) this is limited to a rather short part of the highway system. As this is defined as an experiment, the final outcome is still open. However, such an experiment, demonstrates a tendency to perceive climate change as a less serious challenge. Similarly, the government is aiming to speed up approval procedures for projects of "national interest." The first drafts of this act left no doubt that the primary motivation of the government was to bypass environmental regulations, which the government considers to be too severe.

The end of the ÖVP-FPÖ coalition in summer 2019 has already an impact. Almost immediately after the coalition collapsed, parliament voted (against the votes of FPÖ members, but with the votes of ÖVP members and former opposition party members) to implement strict non-smoking rules for restaurants and cafés, which had been postponed under the coalition due to the FPÖ's veto.

In the 2019 election campaign, all parties – to various degrees – paid lip service to strengthening climate change policy. It will depend on the outcome of the ongoing government formation negotiations (which will likely result in a coalition between the ÖVP and a new partner, not the FPÖ) to what extent Austria will try to become a leading advocate for climate protection policies in Europe.

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Belgium

Score 6

Young people are at the forefront of future climate change initiatives in Belgium. A wave of weekly demonstrations initiated by "climate express" and "coalition climate," and supported by young students propelled environmental concerns to the top of the recent election debates. Climate experts' policy proposals made the headlines for weeks. Yet, the government's climate policy remains relatively ineffective, largely due to historical political tensions and institutional arrangements. At the time of writing, November 2019, the government's dedicated climate website continued to state that the 2009 – 2012 National Climate Plan was current government policy. At the request of the European Commission, the government started a new initiative the National Energy-Climate Plan 2021 – 2030. However, the initiative had still not been finalized at the time of writing. Though the initiative is due to be submitted to the European Commission at the end of 2019.

Nevertheless, federal delays have not prevented local initiatives. Though local initiatives sometimes contradict one another and there remains a need to develop a coherent policy with concrete and implementable steps. Belgium's environmental policy is split between the federal government and the three regions (not counting the possibility of each municipality to set up its own additional rules). This makes it almost impossible to coordinate the different facets of a green transition. Hopefully, European regulations will eventually force the country to improve its approach.

Positive evolutions include the Michel government's decision to slash tax deductions for company cars, which should have a visible effect as of 2021. The other initiatives are located at the regional level, but remain difficult to coordinate or roll out. For instance, the Brussels region announced a plan to ban fossil fuel cars between 2030 – 2035. Though there is just no strategy for the future of electricity production, nor is there a sufficient budget to improve intercity transport. Meanwhile, Flemish climate expert Pieter Leroy accuses the new Flemish government of effectively withdrawing from the Paris Agreement. Flanders' new government agreement seems to primarily focus on housing. In parallel, it will invest in an enhanced ring around Antwerp to facilitate car traffic. Wallonia, on its side, has just appointed a Green Party representative as minister for the environment and wants to commit to an ambitious plan to reduce greenhouse gas emissions. The concrete details of the policy are far from clear, however. Significant improvements in water treatment and forest management have been recorded in all regions.

Such initiatives, if they work, should improve air quality, which is currently below the OECD average. The European Environmental Agency's report indicates that "significant forms of air pollution (i.e., particulate matter, nitrogen dioxide, ozone and sulfur dioxide) have improved, but that a high percentage of the Belgian population is still exposed to excessive concentrations of the four most important air pollutants (PM, NO2, O3 and SO2)."

Car traffic is unlikely to decrease in the short term. In its latest Traffic Index, TomTom identified Brussels as the fifth most congested city in Western Europe (out of 185 cities), on par with London. One contributing issue is of course Belgium's geographical location, which makes it a dense transit area, especially for road traffic.

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Chile

Score 6

In general terms, environmental-policy goals tend to be ambitious, especially when taking into account the country's economic structure and dependence on natural resources. As several studies show, Chile is highly vulnerable to the effects of climate change. For this reason, the country has initiated an active climate agenda coordinated by the Ministry of the Environment and the Council of Ministers for Sustainability, which includes mitigation and adaptation measures by various sectoral authorities.

Chile has an efficient but scarcely restrictive environmental regulatory system. From 2010 onwards, it has boasted a modern environmental institutional system. For example, the former National Commission for Environmental Issues (Comisión Nacional del Medio Ambiente) was upgraded to the Ministry of Environment (Ministerio del Medio Ambiente). Some progress has been achieved regarding the creation and implementation of complementary institutions, such as environmental tribunals (Tribunales Ambientales) and a chairperson for the environment (Superintendencia Ambiental). In September 2016, Chile signed the Paris Agreement on climate change, which was ratified in January 2017.

However, Chilean environmental policy prioritizes compliance with standards required by international markets, and thus does not necessarily focus on non-commercial aspects like ecological sustainability. In addition, Chilean environmental policy is also subject to major domestic political pressure by the industrial sector, especially in the field of water and forestry use and regulation. This constraint often leads to clashes over the protection, preservation and sustainability of natural resources and the quality of the environment. The judiciary has often acted to stop investments and projects on ecological-sustainability grounds. Tangible environmental-policy impacts on the productive sectors tends to take the form of ex post fines (applied once the law has been violated) rather of preventive regulations and compliance. This weakness can be observed, for example, in the fishery industry. In the field of agriculture and mining, water-use rights and their environmental, social and economic impact have become a prominent public issue. However, especially in the field of water-use rights, environmental concerns are often not integrated across relevant policy sectors.

Chile has imposed a green tax on the energy sector since 2017 with the goal of lowering CO2 emissions and favoring ecologically efficient production. The country is poised to enact a climate change law (Ley de Cambio Climático) intended to establish a more effective climate governance system and reduce carbon-dioxide emissions. A preliminary draft of the law proposal has been drafted, and it is scheduled to be presented to parliament in 2020. With this initiative, Chile is seeking to become carbon neutral by 2050.

A number of recent initiatives in the capital city of Santiago have been taken with the aim of diminishing air pollution and promoting a more sustainable public transport system (e.g., the implementation of electric buses and a significant increase in bicycle paths).

Chile was scheduled to host the COP25 U.N. Climate Conference in December 2019; however, President Piñera canceled the summit due to the political and social crisis of October 2019.

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Germany

Score 6

In the latest Environmental Performance Index, Germany ranks only among the second tier of “strong performers,” behind its European peers. After ranking sixth worldwide in 2014, Germany dropped to 30th place in 2016, but has since recovered to rank 13 in 2018 (EPI 2018). However, its score has continuously decreased over this time, from to 84.26 in 2014 to 78.37 in 2018 (Environmental Performance Index 2018). Behind this overall picture, the country’s performance varies substantially across the various dimensions, as noted below.

Resource use (land, water, materials, energy): Germany uses about one-third of its land for agricultural production. Intensity of production and the negative impact on

biodiversity are problematic issues. The country is rich in forests, which cover about 30% of the land.

Environmental pollution (water, air, soil): The degree to which Germany's population is exposed to fine particulate matter is clearly a problem. Wastewater treatment fulfills the highest standards, and the quality of water has continuously improved over recent years and decades. Nitrogen pollution of the soil by the agricultural sector is heavily debated, but Germany achieves a relatively good rank 14 in the Environment Performance Index in this area. The country performs best with regard to the population's minimal levels of heavy-metal exposure.

Climate: Although the German economy's CO2 intensity has declined, it is still high by international comparison, in part as a consequence of the still relatively high share of GDP contributed by industrial production. The energy sector still depends to a large degree on fossil-fuel-based electricity production.

Biodiversity protection: Despite the controversy regarding the effect of agricultural production on biodiversity, Germany is ranked third worldwide in the Environmental Performance Index for the issue of biodiversity and habitat.

Climate protection become a leading topic in the German public in 2019 as a partial consequence of the younger generation's frequent and massive demonstrations on the issue (e.g., the "Fridays for Future" movement). The climate issue has replaced the migration issue as the public's top policy concern. The government has reacted to this mounting pressure in part by abandoning its complacency over the threatened failure to reach its own emissions-reduction targets. Two events in 2019 illustrated this change of course toward a much more ambitious climate policy.

First, in January, the Coal Commission presented its comprehensive roadmap for the phase-out of coal-fired power generation in Germany by 2038, which includes generous financial compensation for the coal-mining regions affected. The government has declared its intention to follow the commission's recommendations.

Second, both parliamentary chambers, after intense discussions and the adoption of significant amendments, accepted the government's climate package, originally presented in a draft version in September. The package includes one crucial innovation: the introduction of a CO2 price for traffic and housing, and hence for sectors that do not currently take part in the EU's Emission Trading System and its pricing mechanism for CO2 emissions. From 2021 onward, CO2 emissions associated with traffic and house heating will carry a price tag. As part of the agreement, the initially proposed starting CO2 price of €10 per ton was raised to €25. That price is envisaged to rise even further to €55 by 2025. The climate package includes a variety of further measures, such as a VAT reduction for railroad services, financial support for a faster buildup of electric-automobile infrastructure, and subsidies for more environmentally friendly heating systems. Under its new climate-protection act, Germany is now obliged to cut greenhouse gas emissions by 55% by

2030 as compared to 1990 levels. An independent expert commission will annually review the reduction path. Federal ministries are responsible for ensuring that emissions within their portfolio areas are in line with the legal provisions.

Nevertheless, substantial challenges remain. It is not certain whether the phase-out of fossil-fuel-based energy production in combination with the shutdown of the last nuclear-power plants by 2022 is in fact consistent with ensuring a safe and uninterrupted power supply. Germany has seen a consistent increase in the share of power produced from renewable energy sources. Whereas in 2015, only 33% of energy production originated from renewable energy sources, this share had risen to 38.6% in 2017, about 41% in August 2018 and 47.7% by the middle of 2019 (Fraunhofer Institut 2018). As a key component of the energy policy, the government committed in its coalition agreement to increase the share of renewable energy in electricity consumption to at least 65% by 2035. However, given substantial local resistance to windmill construction and a decline in new investment, it is questionable whether these targets are in reach.

Despite these open questions, Germany has demonstrated a new ambition in climate policy, and has set a course toward the implementation of a far-reaching CO2 price mechanism with a significant starting price in 2021. Through this approach, Germany has once again joined the club of countries with ambitious climate plans.

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Japan

Score 6

Japan used to be a global leader in terms of effective anti-pollution policy and energy conservation. More recently, however, the government has faced the top-priority challenge of adjusting its domestic energy mix in the wake of the triple 3/11 disaster. While the official vision of the government is to create a “circular and ecological economy,” a goal that necessarily touches on various public-policy domains, environmental concerns have taken a back seat in terms of energy policy. The government has reiterated that nuclear power will remain an important part of the country’s energy mix well into the future. All 48 nuclear-power reactors were shut down between 2011 and 2012. In mid-2019, nine reactors meeting new, stricter standards had resumed operations. Opposition has made it difficult to restart more. The environment minister appointed in September 2019, Shinjiro Koizumi, has even hinted that he wants to explore a means of scrapping all nuclear reactors.

According to the 5th Strategic Energy Plan, released in July 2018, the basic proportions envisioned for the country's 2030 energy mix remain unchanged, including the goal of a 22% to 24% share for renewables and 20% to 22% for nuclear energy. This is ambitious, and will be hard to achieve if many nuclear reactors remain shut down. Given the uncertainty, ideas for phasing out coal-based power plants have thus far not been approved.

Japan has a severe plastics problem. According to a 2018 UN report, Japan is the world's second-largest consumer of single-use plastic packaging per person, trailing only the United States. It is also the world's second-largest exporter of plastic waste. While the government supports the development of more plastics recycling facilities, as well as research into biodegradable plastic and its applications, its 2030 target for a 25% reduction in single-use plastics is relatively unambitious compared to EU plans, for example.

Japan has made great progress in recent decades with regard to waste-water management. The country today has one of the world's highest-quality tap-water systems, for example. Japan also has a proactive forestry policy. The 2018 Forest Management Law promotes the commercialization of forestry, which may create some tension with wider societal and environmental objectives. Japan's biodiversity is not particularly rich compared with other Asian countries, but the government has in recent years taken a more proactive stance under its National Biodiversity Strategy.

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Netherlands

Score 6

The Rutte III government has described itself "the greenest coalition" to date, and put climate change on its political agenda. A Climate Act was approved by parliament in December 2018. Broad consultations eventually produced a climate agreement that set the goal of a 49% reduction in CO2 emissions by 2020. Before the

Paris Accords, the Dutch government had resisted more ambitious international climate goals. While the current government has started negotiating a new climate agreement (currently in the third round of negotiations), the government's ambitions remain neatly within the boundaries of the Paris agreement with few specific policy measures to work with.

There has been a clear policy shift in recent years toward climate adaptation. This appears manageable today because any adverse developments in the Netherlands will be gradual. The Netherlands' natural-gas reserves have diminished rapidly and will necessitate gas imports from 2025 onward, despite decreasing demand. Meanwhile, earthquakes and soil subsidence are damaging houses in the northern provinces where the Dutch gas reserves are located. The government has introduced compensation measures for victims (still contested as too small). This led to the decision to stop gas production in the region by 2030. Consequently, all households are to be gas-free (for cooking and central heating) by 2050. Sustainable agriculture, particularly meat and dairy farming, is on the agenda and is gaining social support. Plastic is seen as a problem, but is dealt with largely at the municipal level, as a part of local recycling programs. A deposit paid by consumers on certain forms of packaging will eventually be introduced by 2021.

The quality of air and surface water in the Netherlands remains poor, with intensive farming and traffic congestion the primary causes of concern, as well as soil salification within agricultural lands. Half of the country's rivers, canals and lakes contain too much nitrogen and phosphates. Air pollution, especially particulate matter in the region around Amsterdam, Rotterdam and The Hague, is among the highest in Europe, and the concentrations of ozone and nitrogen dioxide are linked to a very considerable amount of premature deaths.

In October 2018, the Urgenda environmental association won a major victory, with the Court of Appeal ruling that the government's failure to reduce carbon dioxide emissions significantly violated its human rights obligations. The verdict was upheld by the Supreme Court. In a separate case, courts rejected a scheme for trading future emissions in nitrogen, deeming that it failed to protect the environment sufficiently, and failed to assure air quality. The verdict effectively brought a large number of construction projects, including housing construction, to a halt. The reaction was to turn a focus on a primary culprit in this area – Dutch industrial farming, particularly livestock farming, which is the largest contributor to the country's nitrogen emissions. A call to reduce the sector (which constitutes the second-largest meat exporter in the world) by half led to mass demonstrations by farmers, and even riots in some locations. Construction workers also protested, as their jobs viewed as being at risk.

All in all, the government that originally called itself "green" was forced by these verdicts to increase the pace of its climate action, in some cases through the use of emergency measures. The most visible of these has been the speed-limit reduction on highways to a maximum of 100 kilometers per hour during daylight hours. It remains

to be seen whether the industrial farming sector will be affected and/or provided with compensation. These measures have become possible due to a gradual shift in public opinion. The discussion is no longer if emissions reductions will happen, but about the distribution of costs. For example, many have expressed a fear that the weakest shoulders will carry a disproportionately high burden.

At the same time, the Netherlands continues to invest heavily in fossil fuels. Recently, the sustainability of biomass (an important element in the climate agreement) has been called into doubt. The airline industry is still not paying its fair share with regard to the amelioration of pollution, although the government has pledged to to resolve this issue at the European level.

Although the Netherlands is praised as a pioneer in the area of mapping and assessing ecosystems and their management, and on developing natural capital accounting systems, significant problems remain. The most serious problems involve habitat fragmentation and biodiversity loss, atmospheric nitrogen deposition, desiccation and acidification. Over the last 25 years, about 140 species inhabiting the North Sea have suffered a 30% decline, mainly due to recently forbidden commercial fishing techniques.

With so many changes at a speed typically foreign to Dutch politics, 2019 may well represent a turning point in the country's climate policy.

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Portugal

Score 6

The reduction in production resulting from the 2009 – 2014 economic crisis eased environmental pressures in the first half of the 2010s. This was particularly apparent during the bailout period and economic downturn, when Portugal ranked third in the 2014 and fourth in the 2015 Climate Change Performance Index (CCPI), which measures overall climate protection performance.

As noted in the previous SGI report, the subsequent economic recovery was accompanied by a decline in Portugal's ranking and score, falling to 18th place worldwide in the 2018 CCPI, with an overall score of 59.16 (albeit with a somewhat different methodology) – Portugal's worst result over the past five years. This decline was arrested in the 2019 CCPI, with Portugal ranking in 17th place and marginally increasing its score to 60.54.

Though it should be noted that Portugal scores highly in the "Domestic Policy" component of the CCPI, which assesses the policies and measures of countries as well as their implementation and effects. However, as in other areas, there is some lag between the legal texts and actual implementation of environmental legislation.

If we look at environmental policy more broadly, Portugal shows improvements in some areas but also challenges in others. The European Commission's 2019 Environmental Implementation Review for Portugal notes substantial progress with regard to the circular economy, a flagship policy of Ministry of Environment and Climate Action under the first Costa government, as well as some progress on marine conservation and water management, all of which had been areas of challenge noted in the 2017 review. Likewise, Portugal performed above the EU average with regard to eco-innovation, environmental tax revenues as a percentage of GDP and the proportion of land area that is protected.

At the same time, however, the review noted persistent challenges with regard to nature conservation, waste management (including low levels of recycling), water management, low productivity in using material resources to generate wealth and urban sprawl, among others. Overall, the review also noted that sustainable development was not fully taken into account across policy areas.

In the previous SGI report, we noted the political tension around subsidies for the renewable energy sector, perceived to be excessive by a number of international bodies as well as by the Socialists' left-wing parliamentary allies. While not against renewable sources, the Left Bloc and the Communist Party were against passing through the cost of these subsidies to consumers and have demanded that additional measures be taken against excessive rents in the renewable energy sector. We also noted that a proposal in late November 2017 by the Left Bloc to tax producers of renewable energy was blocked by the Socialist party.

In the period under review, these three parties coalesced to approve the report of the Parliamentary Inquiry Committee on Payment of Excessive Rents to Electricity Producers in May 2019, which concluded that there were indeed excessive rents. Though no legislative measures were introduced as a result, it does increase political pressure to address this issue.

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Bulgaria

Score 5

Environmental policy has not been among the Borissov government's top priorities, and has thus been neither ambitious nor consistently implemented or coordinated. This is not surprising given that Bulgarians are the EU's most skeptical population when it comes to the urgency of climate-change policies. According to Eurobarometer, only 14% of Bulgarians believe that combating climate change and preserving the environment should be a priority for the EU, and only 16% based their European Parliament vote on environmental issues (partly due to the lack of candidates addressing the issue, no doubt). However, as the 2019 local elections showed, at least in the larger cities, the Bulgarian public's sensitivity to environmental issues has risen, with clean air being the greatest concern. Especially in the capital, Sofia, candidates giving environmental issues a clear priority achieved very strong results.

As for resource use, water management has remained a major problem. The fact that responsibility for this activity it rests predominantly with municipalities has created problems of coordination and strategy development. Another problem is that a considerable quantity of Bulgaria's renewable water resources are also affected by actions in neighboring countries (i.e., Romania, Turkey, Greece), requiring international coordination. In the summer of 2018, the government appropriated a relatively large budget to fund improvements in dam maintenance and management, but this decision has not yet shown major effects. While energy efficiency has risen, the waste-recycling rates have remained low.

The low air quality and the limited progress with urban wastewater collection and treatment have been the main issues in the area of environmental pollution. Both topics featured prominently in the European Commission's 2017 Environmental Implementation Review, but have been only partially addressed.

Improvements in energy efficiency and shift to fuel sources with lower rates of carbon emissions than their predecessors have led to a gradual decrease in the economy's carbon dioxide intensity. However, the formulation of a national strategy for climate policy has progressed slowly. While Bulgaria is meeting its international commitments with regard to renewable energy, the share of renewables in the country's energy mix has stagnated since 2013, so that it is likely to miss the revised targets.

Bulgaria ranks among the countries with the greatest biological diversity in Europe. It has a relatively large share of protected biomes. Approximately one-quarter of its territory is under protection or special status. As opposed to many other issues, there is an active civil society sector working on biodiversity and conservation issues, which is capable of applying political pressure and sometimes achieves results. However, powerful business actors with access to policymakers often manage to violate environmental-protection policies in order to further business interests. Most violations of this kind take place in the tourism and mining sectors. In the summer of 2019, there was a clear and deliberate attempt by identifiable business interests to take over a major Bulgarian environmental NGO, the Bulgarian society for the protection of birds; this took the form of a coordinated action to enlist a large number of new members in the month before a key general assembly. The goal of the takeover, which eventually failed, was twofold: to acquire valuable society assets, including large areas of forest land, and to prevent the society's future actions against certain business projects.

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Croatia

Score 5

Environmental policy in Croatia has been strongly shaped by Croatia's accession to the European Union. The regulatory framework was extended in 2018 with the amendments to the Environmental Protection Act. However, while improving the environment reporting system, the amendments failed to expedite the passing of the rules and regulations required for the enforcement of laws.
According to the National Strategic Reference Framework, which guides the use of European Structural and Cohesion Fund money, Croatia is required to spend almost €10 billion on waste management, water management and air protection – the three most important environmental issues in the EU accession negotiations – by 2023.

However, implementation of the envisaged measures has progressed slowly, largely due to the incoherent Public Procurement Law. The uncertainty caused by the law's interpretation has been a significant drag on ESIF absorption in Croatia. In 2019, Croatia was almost bottom of the EU-wide list in terms of the percentage of funds spent.

Primarily as a result of its EU membership obligations, Croatia has made some improvements in water and waste management, and has passed several action plans. However, there is still much to be done in terms of actual enforcement and implementation. In water management, substantial investment in the public water supply and drainage system, and wastewater treatment system is needed, because there is still a high percentage of water loss (48%). The progress with waste management is also slow: of 12 regional waste management centers planned, only two have been completed – both in western parts of the country. Another problem is the fact that these planned waste management centers are to be focused primarily on mixed municipal waste, which is to be treated mechanically and biologically and turned into the fuel for incinerators in the regional centers. The system of waste management clearly lacks coordination between different administrative levels, it does not provide appropriate incentives for ordinary citizens and businesses to avoid, collect and separate waste, and there is a lack of enforcement capacity.

Environmental pollution has declined. However, air pollution remains a significant problem, especially in the capital, Zagreb. Additional efforts are needed to fulfill the emission reduction commitments laid down in the new National Emissions Ceilings Directive for 2020 – 2029 and beyond.

Croatia has succeeded in implementing the targets for climate protection set by the Kyoto Protocol and Paris Climate Agreement. By procuring almost 30% of energy consumed from renewable sources, it stands both above the level stipulated in the Lisbon Strategy, as well as above the EU average share of renewables used. However, the share of renewables used in the transportation system is rather low. Progress in formulating the country's low-carbon 2030 development strategy has been slow. Some initial steps have been taken to define national objectives, policies and measures; however, these have not been finalized or adopted.

Since 2017, Croatia has made some progress in protecting biodiversity. The Natura 2000 network in Croatia, which is the second largest in the European Union relative to country size, is now largely complete. However, the conservation of Natura 2000 sites continues to suffer from a weak legal framework and a lack of resources. Moreover, further designations need to be made in the marine network.

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Czechia

Score 5

The main priorities of the State Environmental Policy of Czechia 2012 – 2020 are the sustainable use of resources, climate and air protection, nature and landscape protection, and a safe environment. However, environmental policy goals lack ambition, and national leadership and environmental concerns are not adequately integrated across most sectors. The European Union is the key actor in environmental policy. In addition to providing financial resources, the European Commission drives the agenda-setting process and exercises oversight. Its 2019 Environmental Implementation Review for Czechia identified a number of weak points, including failures in areas such as efforts to reduce fossil-fuel based heating, a task for which EU funding is available.

Water management, an issue identified as a priority by the Babiš government, follows the general pattern, earning criticism for the government's lack of commitment on issues including storm-water management, water retention in agriculture and urban wastewater treatment. These policy areas require coordination between a number of agencies, with problems magnified by human activity, especially in agriculture.

Poor air quality, particularly in North Moravia and North Bohemia, has made addressing pollution a high-priority issue. The problem is primarily a result of energy policy and the country's heavy dependence on fossil fuels.

Efforts to improve energy efficiency and expand the use of renewable energy sources are critical with regard to addressing climate change. With regard to the first of these, a lack of political leadership and a fragmentation of implementation responsibility among several public authorities has hindered improvement. Although funds are available for many energy-efficiency improvement measures, public awareness of these opportunities is minimal, and there is only modest interest in drawing the funds. The legal and institutional framework for renewable energy projects is not yet complete, and domestic energy generation faces technical, legal and bureaucratic hurdles. There are also disagreements over the desirability of reducing the use of coal, partly due to arguments about strengthening raw-materials security, and partly due to some regions' economic dependence on coal mining. Skepticism about the sources of climate change, including from leading political figures, also contributes to this foot-dragging. The National Energy and Climate Plan, which includes an overview of investment needs for the 2021 – 2030 period, had not yet been adopted as of the time of writing, but the draft integrated National Energy and Climate Plan (NECP) was submitted to the European Commission in early 2019. It received a mixed response, mainly because of its low ambitions particularly in areas such as renewables and energy efficiency. The proposed plans remain unspecific and rather abstract (which is a strategic choice to provide room for

maneuver). And while the country is on track to meet the targets, the plan does not realize the country's full potential given the positive economic environment.

In the area of biodiversity, the first strategy produced by the Ministry for the Environment was adopted in 2005, shortly after accession to the EU. This included objectives and indicators for monitoring results, but no allocation of specific tasks. An updated strategy produced in 2015 (Ministerstvo životního prostředí 2016) lamented the low public awareness of the issue of biodiversity, particularly as the overall situation was continuing to deteriorate due largely to agriculture and transport activities; indeed, this meant that the issue could not be addressed by the Ministry of the Environment alone. The Nature Conservation Agency for Czechia (Agentura ochrany přírody a krajiny ČR) actively monitors the country's biodiversity, and also administers various categories of protected territory, which cover 16% of the country's area. Nearly all were designated before 1990, but there was a 6% increase in their area between 2005 and 2018. Maintenance and development in this area has been helped by the use of EU funds.

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Hungary

Score 5

As the 2011 constitution incorporated "green" values, the constitutional basis for environmental policy in Hungary is strong. However, environmental policy under the Orbán governments has suffered from a lack of commitment, institutional fragmentation, and weak implementation and coordination. Since 2010, no independent ministry for environmental policy has existed and environmental issues have largely been dealt with by a department in the Ministry of Agriculture. Confronted with increasing public sensitivity to climate issues, especially among young people, the Orbán government initially focused on discrediting green activists as disguised communists. As this strategy has failed, the government has tried to give itself a greener image.

Resource efficiency is low. While Hungary has made progress in waste recycling and recovery, more than half of the country's waste is deposited in landfill. According to the Hungarian Energy Efficiency Institute (MEHI), Hungary uses 87% more energy than the EU average for a unit of GDP. This is partly due to low energy prices, especially for households, which have featured prominently in the government's

"utility price reduction" program. The megalomaniac construction activities of the government have led to a serious "deforestation" in Budapest and other cities.

While air quality has increased, environmental pollution in Hungary is still relatively high. Energy supply has remained largely dependent on fossil fuels. CO2 emissions declined in Hungary from 1990 to 2014, but have started to increase since 2014 as a result of using the Mátra carbon-based power station, which is owned by the influential oligarch Lőrinc Mészáros. As a result of the tight finances of municipalities and weak oversight, cases of contaminated drinking water and mismanaged garbage sites, which have poisoned local environments, have increased. The problems with waste management have turned into a countrywide waste crisis, resulting in the proliferation of rats, especially in the capital city.

While the government has softened its campaign against "climate hysteria," its climate policy has suffered from a lack of ambition. In the EU context, the government has argued that Hungary, as a less developed country, needs higher emission quotas in order to catch up. The government has been reluctant to expand renewable energy sources. Incentives for people to invest in small, private solar or wind energy projects are ineffective due to being improperly set, or excessive legal or administrative hurdles. The extension of the Paks nuclear power plant has been one of the biggest bones of contention between the government and the opposition, since the Danube may not be sufficient in cooling the hot water produced by Paks-2.

Hungary has a well-developed network of protected areas covering over 22% of its territory, exceeding the respective international target. However, the management of these protected areas suffers from a lack of resources. While progress has been made in integrating biodiversity considerations into policymaking for the agricultural, forestry and fisheries sectors, efforts to integrate biodiversity protection into energy, transportation, tourism and industry strategies have been limited.

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Israel

Score 5

Israel faces significant environmental challenges due to its small territory, high population growth, and poor natural water resources. Its geopolitical climate adds another challenge since unlike many OECD countries, Israel's relationship with its neighboring countries prevents it from sharing power facilities and thereby reducing environmental costs. Security and political considerations also overshadow environmental issues, resulting in long-term neglect of environmental policy even as OECD accession has bound Israel to conform with Western standards and goals.

However, Israel has demonstrated significant recent advances with regard to environmental policy. At the end of 2016, the country ratified the Paris climate agreement. Earlier that year, the government approved an ILS 500 million national program aimed at reducing greenhouse gas (GHG) emissions and increasing energy efficiency; as a part of this policy, it has committed to reducing its GHG emissions by 26% from the 2005 emissions level. An additional ILS 260 million has been allocated to a two-year program focused on reducing air pollution. A reduction in emissions intensity was reported in 2017, indicating some early success for the policy effort. In addition, a new solar-power station, one of the largest in the world, was launched in 2017 in the Negev desert. Israel also has a unique green-tax policy, created to encourage customers to purchase less pollution-intensive cars. This innovative policy has led to positive results and is regarded as a model within the OECD.

Recently, Israel launched the "Israel 2030 Energy Goals," which includes various paths to increase the country's use of natural gas and renewable energy sources. According to this new initiative, Israel plans to stop using coal as an energy source by 2030, and replace coal with natural gas and other less-polluting sources of energy (e.g., solar energy). These plans were criticized by the Ministry of Finance as well as the oil and gas industry, while some environmentalists expressed skepticism, describing the plan as ambitious.

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Mexico

Score 5

Mexico is a signatory of the Paris Agreement and has shown every sign of taking environment policy seriously. However, it continues to face several very serious environmental challenges. The provision of clean water to Mexico City, air pollution in the capital and other major cities, deforestation and erosion in rural Mexico are some of the most pressing problems. While a marked decrease in population growth is relieving some environmental pressure, policies aiming to conserve the environment and reduce pollution should remain a top priority for ensuring sustainable development. While environmental policy has become more sophisticated, particularly in Mexico City and other major cities, the enforcement of environmental standards and regulations is often lacking. It is worth noting the substantial variation between government levels and across issues; the federal government is much more capable, with better and more efficient regulations and monitoring. This is not the case at the local level, where funds, human capital, and administrative resources are scarce; in particular, in the most ecologically rich but poorest regions of the country. In terms of environmental issues, Mexico has very strong air quality regulations and made significant progress over the last two decades. In contrast, norms regulating water consumption and pollution are far less advanced.

From a comparative perspective, the government's recent economic reforms were more diluted and slower to pass than its environment legislation, but implementation of policies and regulations remains a major challenge. Many companies do not comply with existing regulations and the high degree of informality in the economy is further aggravating the challenge of non-compliance. Despite an increasing awareness of environmental challenges among the broader population, particularly among the young, public pressure and support for environmental NGOs remains weak when compared to many other OECD countries. Business interest groups are much more powerful than their environmental counterparts. It is worthwhile noting that the Mexican Green Party is not as "green" as its name might imply in other countries; environmental interests are still weakly nested in the major political parties.

In addition to liberalizing energy prices for gasoline and natural gas, the energy reform of 2013, established provisions for an increasing participation of renewables in the energy mix in Mexico. Private power generators are now able to sell

electricity, but the new regulations also provide incentives for the use of renewables and the reduction greenhouse-gas emissions by constraining the biggest consumers to get a proportion of their power from clean energy sources. The reform was fully implemented in 2018. It is considered to have been quite successful so far, since the framework of the electricity sector and especially the sector of renewable energy has become more stable and competitive.

President López Obrador was heavily criticized by environmentalists during his first year in government. In particular, criticisms have focused on his three major projects: the construction of a new Santa Lucia airport, the troubled Tren Maya railway project and the construction of the Dos Bocas oil refinery.

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Romania

Score 5

While EU accession has improved environmental protection, environmental policy goals in Romania remain modest. Environmental concerns are not effectively integrated across relevant policy sectors. And the implementation of various environmental policies is deficient at best.

The implementation of various environmental taxes, including those for landfills and car registration, have faced persistent delays. Air pollution via households, the energy sector, and car use has resulted in especially poor air quality. Romania's woodlands are under great threat, as up to 20 million cubic meters of wood (700 million cubic feet) are illegally harvested each year. Romania continues to lag behind other EU members on green infrastructure, climate change adaptation, risk prevention and resilience, and emissions. The waste management system remains underdeveloped and characterized by extremely low recycling rates due to a lack of separate collection (14% as of 2017), a lack of infrastructure and administrative capacity, and poor economic incentives to move away from disposal, among others. The media has criticized the import of recyclable materials to ensure recycling companies remain open and regulatory weaknesses which enable the burning of potentially dangerous waste. While attempts to address some of these concerns have been put into motion, including an interministerial committee, a number of EU-funded projects, and national and county-specific waste management plans, the results remain to be seen, with implementation expected to prove challenging. Climate and biodiversity protection remain deficient as well.

Slovakia

Score 5

In Slovakia, interest groups and policymakers have traditionally assigned priority to economic growth rather than the protection of the environment. As a result, the approach to environmental issues has tended to be patchy rather than holistic, and the implementation of environmental laws and regulations has been weak. However, citizen sensitivity for environmental and climate issues has gradually increased, and the quality of environmental policy has slowly improved.

The government took part in the 2018 voluntary national review of the United Nation's High Level Political Forum on Sustainable Development and initiated a review of the country's sustainable development strategy with a view to incorporating the Agenda 2030 for Sustainable Development. In February 2019, the Slovak government approved a new strategy for environmental policy, Greener Slovakia. This document sets concrete and measurable goals which should be met by 2030. The document also identifies the biggest environmental challenges facing Slovakia and hence environmental policy areas that need to be prioritized, including waste management, air quality, and habitat and species conservation, especially in forest, meadow and wetland ecosystems. To meet these ambitious goals, the special Government Council for Agenda 2030 was established, which brings together key line ministers, as well as representatives of NGOs, academia, the private sector, and associations of cities and regions. More importantly, some of these ambitious goals have already been implemented. For example, in 2019, the government approved an environment protection law, which prohibits logging in national parks and protected areas. The recently elected Slovak president, Zuzana Čaputová, in her inaugural address, underlined her focus on environmental issues.

In Slovakia, the use of land, water, material and energy resources is very mixed.
Regarding land, the condition of almost 99% of agricultural land fund is hygienically satisfactory. Recently, the physical properties of soil has noticeably deteriorated. Contaminated soil occurs predominantly in areas of industrial activity, while the proportion of contaminated soil in mountain and foothill regions has remained stable. Compared to other EU member states, soil in Slovakia contains relatively small amounts of nutrients, which leads to higher consumption of industrial fertilizers. The average consumption of industrial fertilizers is higher than in most EU member states and reached about 40% of consumption in 1990. Organic farming accounts for approximately 9.5% of all agricultural land.

Regarding water, Slovakia has one of the largest reserves of quality drinking water in the Visegrád group of countries. At the same time, Slovakia uses only a fraction of its reserves each year. Water consumption decreases annually and is one of the lowest in the European Union. Due to the uneven distribution of groundwater resources, there are also areas with insufficient groundwater reserves (e.g., Krupina and Košice). Total water consumption has slightly declined over the long run, which

may have a positive environmental impact. Public water supply networks comply with the hygienic limits and supply 88% of the population. However, less than two-thirds of the population are connected to public sewers, and the improvement in this area lags behind the development of public water supply networks.

Regarding energy, Slovakia relies heavily on nuclear power (roughly 62% of energy consumed is produced by nuclear power plants), which means low greenhouse gas emissions. Despite the lack of additional policies supporting the production of renewable energy, the share of renewable energy has increased due to increases in EU Energy Trading System (ETS) carbon prices. The country's dependence on nuclear energy has made the planned construction of a third and fourth nuclear power plant in Mochovce a major issue, the former is planned to open in February 2020 and the latter in 2021. The newly-adopted EU 2030 targets of 32% for renewables and 32.5% for energy efficiency are higher than assumed, and imply that Slovakia will need to adopt ambitious targets for both renewable energy sources (RES) and energy efficiency (EE). A recent study done by the World Bank and the Slovak Ministry of the Environment estimates that Slovakia will need to achieve 22% for RES and 30% for EE. This means that both biomass and variable renewables will have to be developed, accompanied by the strongest possible building renovation policy.

Regarding air, air pollution in Slovakia's urban centers is mostly caused by industry, transport and the small-scale burning of wood. PM2.5 is monitored in OECD countries. In Slovakia, PM2.5 levels are 20.6 micrograms per cubic meter, much higher than the OECD average of 13.9 micrograms per cubic meter and higher than the annual guideline limit of 10 micrograms per cubic meter set by the WHO.

Regarding biodiversity, Slovakia aims to prevent the deterioration of protected species and habitats. The country's new strategy aims to restore at least 15% of degraded ecosystems by 2030. The country urgently needs to simplify the current system of protected areas and degrees of protection, as the system does not enable a stricter protection and targeted care in accordance with international standards. After the planned 2024 assessment, the core zone of territories without human intervention will comprise 50% of the total area of each national park management category II of protected areas under the International Union for Conservation of Nature (IUCN) by 2025 and 75% by 2030. A valuation and payments for ecosystem services will be improved and an integrated concept of landscape protection will be implemented by 2030. This task is complicated by the lack of comprehensive datasets on biodiversity, while the map of ecosystems in Slovakia was only recently elaborated.

Regarding the climate, in Slovakia, climate change-related policies focus on reducing greenhouse gas emissions, protecting and revitalizing ecosystems, and reducing and mitigating the risk of floods and soil erosion. The current challenge is to prevent and reduce the consequences of drought and other unwanted impacts of climate change. Despite the recommendations of international organizations (e.g., the European Commission and OECD), there has been very little progress in the areas of

environmental taxes, waste management, waste water and air quality. More significant progress in climate policy was achieved in international cooperation on climate change and energy.

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Australia

Score 4

In recent years, environmental policy in Australia has focused strongly on water security. Some progress has been made over this time, including the construction of desalination plants and the creation of the Murray-Darling Basin water-management plan. However, this focus has not resolved water-management issues, not least because sustained droughts affecting large areas of the country appear to have increased in severity.

Environmental pollution is almost entirely the policy domain of state governments. There is considerable variation in the extent of pollution mitigation across the states, and it is difficult to assess overall performance. However, in general, most states enforce relatively strict standards on environmental pollution. There has been no clear change in this regard in the review period.

Climate change policy, clearly the most important component of environmental policy in the current era, has been largely absent. One of the early acts of Prime Minister Abbott’s Liberal-National coalition government was to abolish the carbon tax introduced by the previous Labor government in 2012, which ceased to apply from 1 July 2014. The federal government remains committed to reducing by 2030 carbon emissions by anywhere from 26% to 28% compared to 2005 levels, but currently has no effective means of achieving this.

Energy consumption levels are generally high, and despite great potential for solar and wind energy, the contribution of renewable energy to the grid remains considerably lower than it could be. A government-commissioned review of the national electricity market was published in June 2017. Most of its recommendations were accepted, but in the intervening period up to the end of the review period, there has been almost no progress on the policy front. Industry uncertainty therefore persists, undermining incentives to invest in energy generation and contributing to record-high energy prices for consumers, low levels of reliability and very limited progress on emissions reductions.

Biodiversity decline is also a significant concern in Australia, with considerable evidence of an acceleration in decline over recent decades. In response to this concern, in October 2010 the Australian government released "Australia's Biodiversity Conservation Strategy 2010 – 2030," which provides the guiding framework for conserving Australia's biodiversity over that period. Various policies to address the decline in biodiversity have been implemented, though more action is required.

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Cyprus

Score 4

Cyprus' performance with respect to protecting natural resources and limiting or minimizing pollution is deficient as is made clear by the EU with respect to Europe 2020 targets. Environmental policies are insufficient and not adequately implemented. Basic targets of Europe 2020, such as the reduction of greenhouse gas emissions and increasing the share of renewable energy in gross final energy consumption, have not been met.

The national program for the 2010 to 2020 period aims at reforestation and the reduction of fire hazards. However, the protection of Natura 2000 areas, both inland and at sea, is not yet regulated and projects without impact-assessments that are still promoted threaten these areas. The Akamas peninsula and other sites remain at risk by those seeking profit at the expense of environmental protection. Although the European Commission insists on considering water management as the major environmental challenge, authorities continue to approve new water-intensive projects (e.g., golf courses). They also favor desalination while wastewater reuse remains limited. Energy policy is defined to a great extent by the focus on offshore fossil fuel explorations put in motion in recent years. According to the European Commission's 2019 Post-programme Surveillance Report, Cyprus has "missed the opportunities to explore its natural advantages in solar energy," and that it could invest in innovation and promote the construction of energy efficient buildings.

Waste management is a major challenge, as waste generation in Cyprus is very high. It generates per capita three times more municipal waste and recycles less than one third of the EU average. In 2018, Cyprus received warnings from Brussels for failing to integrate EU directives on the environment into national laws, failing to meet recycling targets and to efficiently manage waste.

The European Commission suggested in 2019 that reducing gas emissions in transport requires more action. In 2017, renewable energy use in transport was only 2.7%, while the overall renewable energy use was 8.9%. The 2020 targets are 10% and 13% respectively.

The "weak environmental performance is a major concern and Cyprus remains vulnerable to climate change" notes the EU in 2019. This conclusion comes as no surprise given the absence of any comprehensive and coherent policy.

Yale University's Environmental Performance Index ranks Cyprus rather positively. However, Cyprus regularly ignores warnings by experts and existing EU rules, approving new projects with significant negative effects on ecosystems. A 2017 law leaves the door open for the privatization of beaches. The unruly construction of very high buildings in violation of town planning rules is already producing problems as wastewater is being discarded into the sea during construction.

Political expediency favoring financial interests at the expense of environmental protection continued in 2019. There have also been incidents of local authorities violating protection areas and obstructing the on-the-ground work of local and foreign experts on environmental protection. Also, politicians, businesses, and representatives from both public and private institutions are persistently asking the government and the Commission to relax environment protection rules. Local and central government authorities continue to highlight profit to justify the relaxation or cancelation of environmental protection rules.

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Greece

Score 4

In comparison to many other countries, Greece performs rather well on environmental policy. In the Yale University's Environmental Policy Index 2018, Greece was ranked at 22nd place out of 180 countries for overall environmental

performance, with a score of 73.60. Greece is among the 10 top world performers in terms of access to water and sanitation, but compared to residents of other more industrially developed countries, Greeks overuse water sources and create a lot of waste.

Given that Greece, which has a population of 11 million inhabitants, receives an annual inflow of approximately 30 million tourists, one should expect a reliable policy of waste management. Such a policy, however, does not really exist. Particularly during the prolonged tourist season, waste overflows landfills in tourist areas.

Industrial production and greenhouse-gas emissions in Greece declined after 2010, as one consequence of the economic crisis. Recycling has increased only modestly over the past 15 years, and waste management is not systematically practiced.

Several causes lie at the root of Greece's environmental challenges: a lack of state mechanisms capable of controlling sources of pollution, unchecked urban development, large infrastructure projects and negligent consumer behavior. Environmental and forest management is haphazard and subject to the vicissitudes of changing political leaderships and interests.

The crisis has exacerbated a tendency to privilege economic growth at the expense of environmental protection; nowadays growth is pursued at all cost. For example, on Greece's coasts new hotel construction is mushrooming without much care for environmental concerns. In cities and rural areas, public works and town planning have likewise always been afforded priority over environmental protection. The result has been that important targets of environmental protection – climate change, renewable water sources and forest biodiversity – have never been pursued in a systematic fashion.

On a positive note, since 2017 the government has implemented a new eco-tax for every plastic bag used for shopping or garbage. Greeks use plastic bags at twice the average European rate. It has been estimated that plastic bags make up half of the waste in Greece's waters.

In general, environmental policy cannot be regarded as ambitious. Due to the financial crisis, governments since 2010 have focused more on immediate economic concerns than on long-term environmental goals. Environmental policymaking is rather fragmented across different ministries and state agencies, which negatively affects its integration across policy sectors. If there is one priority area in which tangible results have become increasingly obvious, it is the promotion of renewable energy. Here, the country has significant natural capital in the form of solar, wind and tidal resources.

In sum, as the latest EU Environmental Implementation Review notes, there has been some progress on waste-management issues, ecosystem protection and the

implementation of the EU's Urban Wastewater Treatment Directive. However, complex administrative structures and procedures continue to cause significant delays and bottlenecks. Paired with local political hurdles and "not in my backyard" movements, these are among the main obstacles to the implementation of environmental legislation. Nevertheless, central and local authorities as well as state and private companies have become increasingly sensitive in implementing environmental legislation.

Citation:
Data on Greece's performance regarding renewable energy sources, water management and recycling is drawn from the SGI database available on this platform.

Data from the Environmental Performance Index for 2018 is available at https://epi.envirocenter.yale.edu/epi-topline

European Commission, The Environmental Implementation Review 2019 (https://ec.europa.eu/environment/eir/pdf/report_el_en.pdf)

Malta

Score 4

Malta's environmental challenges are complicated by large population density, a constant challenge to create employment opportunities, attract foreign investment and improve standards of living. As an EU member state, Malta is bound to fulfill key climate targets within the context of the Europe 2020 Strategy. Although the country ranks among the top five countries with the least amount of renewable energy per capita, Malta appears to be only two percentage points short of meeting its national target of deriving 10% of its energy from renewable sources. Moreover, the country is aiming to become carbon neutral by 2050, apart from working to fulfill its targets within the EU Emissions Trading Scheme. Presently, Malta continues to show the EU's second-highest level of CO2 emissions increases. In 2020, the country will purchase €2 million in renewable energy credits from Estonia in order to reach its energy targets, though there has been a slight improvement relative to 2017. The volume of plastic waste in Malta has increased by nearly one-third over the last decade, making the country one of the worst performers in the EU. However, the government has gradually banned the use of free plastic bags in shops, and will be phasing out single-use plastics. Shortcomings are largely a result of the country's continued high dependence on cars, the growing dependency on air conditioning, and the slow reduction in the island country's forest and parkland area.

Several initiatives to fulfill these targets have been undertaken. These include the generation of photovoltaic power, the establishment of photovoltaic farms, construction of an interconnected electricity system with Sicily, a shift to the sole use of electric cars paired with a phase-out of fuel-inefficient cars, plans for a more bicycle-friendly road network, the promotion of car-sharing facilities, free public transport access for young people and the construction of a gas-fired power station. A differentiated waste-collection system that had previously been voluntary became mandatory at the end of October 2018.

Fresh water is a scarce resource in Malta. Nonetheless, the government's approach to this important issue was until recently inconsistent, and in general inadequate to the task of protecting the island country's water reserves. The production of water for domestic and commercial use is heavily dependent on reverse-osmosis plants. To relieve pressure from reverse-osmosis water generation, a National Flood Relief Project was concluded at the end of 2015 with the aim of increasing the amount of water collected annually.

The Maltese countryside is protected from unsustainable development through a regulatory process of permits and enforcement. Within this context, the Planning Authority recently launched a public consultation process aimed at updating its Rural Policy Design Guidance. EU data highlights the fact that Malta has one of the highest proportions of artificial land cover, coupled with a population density that is among the highest in the EU. Between 2017 and 2018, the number of planning permits granted shot up by 48%. Many government road-building projects have not followed proper planning procedures. In 2010, the government refused to ratify the European convention that would oblige it to protect heritage buildings and respect its threatened landscapes. The Malta Environmental and Planning Authority (MEPA) was restructured and divided into two separate entities (Planning Authority and Environment and Resource Authority) which are respectively responsible for planning and environmental issues. The split and many of the related changes have generated considerable controversy, including increased ministerial powers in the selection of board members, reducing the autonomy and independence of these boards and the strange anomaly that allows a representative of the environmental authority to sit on the planning authority boards only when invited to do so. However, under the new prime minster, responsibility for planning and environmental protection have been placed under the same ministry; time will tell whether they will ultimately be fully merged as under the old model. The new minister for environment and planning intends to log all meetings with stakeholders and lobbyists and publish a transparency register.

A new agency called Ambjent Malta was established in August 2018. Rather than being a regulatory institution, it is intended to bring together all of the country's environmentally related directorates. Its aim is to improve people's quality of life and appreciation of the environment. A new underwater cultural heritage unit has also been established. However, the government decision to extend the hours of hunting to 12:00 in the Majjistral Nature and History Park, Malta's first national park, against the unanimous objection of the advisory board, undermines these policies, as did the decision to allow autumn hunting in 2019 despite flagrant abuses. The introduction of a fuel service-station policy deemed to have a negative impact on undeveloped land was meant to be reassessed; however, this process had not taken place by the end of the review period.

Citation:
Commission Staff Working Document – Country Report Malta 2019 SWD (2019) 1017 final p.4
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Malta's National Biodiversity Strategy and Action Plan (2012-2020)
https://msdec.gov.mt/en/Ambjent_Malta/Pages/home.aspx
Malta Today 22/03/19 Malta still refuses to ratify European Convention that could protect its threatened landscapes
Times of Malta 26/01/20 Malta must pay Estonia E2 million to reach renewable energy targets

Poland

Score 4

Poland has enshrined the principle of sustainable development in Article 5 of its constitution, and has broadly adopted EU environmental standards. However, there is a political consensus in the country that economic growth should be given priority over protection of the environment, which has translated into a lack of ambition and the weak implementation of environmental policy. Moreover, all governments have been keen on protecting the domestic coal industry, which is a large employer and reduces the country's dependence on Russian energy, an issue that has taken on even greater prominence since the Ukrainian crisis.

The resource productivity of the Polish economy has been low. While the updated National Waste Management Program prioritizes separate collection and recycling, landfill has remained the dominant form of waste treatment. Municipalities often lack power or incentives to enforce waste legislation.

The strong reliance on fossil energy has kept environmental pollution high. In September 2019, ClientEarth, an international NGO that seeks to protect the environment through legal action, took a subsidiary of the state-owned Polska Grupa Energetyczna to court over emissions at the Bełchatów plant due to its enormous burning of brown coal. Attempts to end the combustion of low-quality coal in substandard domestic boilers remain half-hearted. Despite substantial investment in building necessary infrastructure, including projects co-financed by the European Union, Poland missed the final deadline in 2015 for achieving compliance with the Urban Waste Water Treatment Directive. Over 1,000 agglomerations require an estimated €6.1 billion in additional investment in collecting networks and treatment plants.

As international climate debates and protests have reached Poland, the PiS government has reconsidered its stance on climate policy. Following the 2019 parliamentary elections, a separate climate ministry has been established, which is headed by Michal Kurtyka, the former COP24 president. While the details of the new strategy are not yet clear, the PiS government now plans to reduce the share of coal in energy production to 50% by 2030, and increase the share of renewables (currently a meager 1%), shale gas and nuclear energy.

While Poland has made some progress with drawing up plans for managing Natura 2000 sites, the protection of biodiversity has not featured very prominently on the government agenda. Biodiversity is threatened by the rapid development of infrastructure (e.g., roads), the regulation of rivers for navigation, flood defenses and intensive agriculture. The logging of the Białowieża primeval forest, a protected Natura 2000 site, only stopped following a European Court of Justice decision in April 2018.

Citation:
Court of Justice of the European Union (2018): Judgment in Case C-441/17, Commission v Poland (Białowieża Forest). Press Release No. 48/18, Luxemburg (https://curia.europa.eu/jcms/upload/docs/application/pdf/2018-04/cp180048en.pdf).

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South Korea

Score 4

Environmental policies remain unable to protect the environment and ensure sustainable resource use. Moreover, South Korea has increasingly been losing ground to the front runners in the transition to a carbon-neutral and ecologically sustainable economy. While “green growth” has in the past been a buzzword in Korean politics, this has always been more about growth than about environmental protection.

The main problem appears to be a lack of ambition. Environmental policies largely do not match the scale of environmental challenges. Those measures that are implemented, such as the bans on free plastic bags and paper cups, usually have a relatively quick and tangible impact. However, the integration of environmental policies is a major problem, as measures seem to be ad hoc and fragmented. There is as yet no comprehensive strategy for moving toward a carbon-neutral economy. Environmental policies have not been accompanied by an environmental-tax reform featuring higher tax rates on resource and energy consumption. While Korea has introduced a large emissions-trading system, the market has thus far failed to increase emission prices appreciably.

Nevertheless, the country’s environmental problems remain very serious, particularly with regard to air quality and greenhouse-gas emissions. In the 2018 Yale

Environmental Performance Index, Korea improved to rank 60 out of 180 countries overall, but ranked poorly with regard to climate and energy (110) and biodiversity (144). Problems with fine dust exposure are among the world's worst, with the country ranking 174th in this field. While some of this pollution originates in China, most of it is homegrown. Korea is the world's seventh-largest emitter of CO2, and the share of energy production accounted for by renewables is the second-lowest in the OECD. The Moon administration plans to expand the share of renewables to a not very ambitious 20% by 2030. South Korea is the fifth-largest generator of nuclear energy in the world, which means that the nuclear waste problem will be substantial and a burden for many generations to come. While Moon originally pledged to reduce reliance on both coal and nuclear energy, he later backed away from some of the more ambitious timelines.

Despite the well-developed public transport system, Korean cities remain car-centered, with pedestrian and bicycle traffic given a lower priority. Limits on car traffic on days with bad air pollution apply only to public vehicles. In August 2019, the Seoul government announced that vehicles with the lowest emission-control grade would be blocked from entering the immediate city center. Although this will affect less than 2% of vehicles, it is the first very timid step to reduce car traffic in a society where cars are still seen as a status symbol.

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United States

Score 4

The United States has had ambitious environmental programs since the early 1970s. By the 1990s, major enactments covered the entire range of significant environmental concerns, including resource use (e.g., water resources, wetlands, endangered species and the protection of forests). In some areas of environmental pollution, such as hazardous-waste management and new sources of air pollution, environmental controls have imposed excessive costs. The issue of climate change, however, requires the implementation of costly controls for the sake of benefits that

will occur years or even decades in the future and that will affect the rest of the world as much as the United States itself.

The Trump administration has been a rapidly escalating disaster for environmental policy. Trump has embraced an extreme version of climate-change denial and withdrawn the United States from the Paris Climate Agreement. Although some of the country's more liberal states will continue to seek reductions in carbon emissions, no national action can be expected to be taken under the Trump presidency. Indeed, Trump has promised to rejuvenate the coal-mining industry, an economic absurdity. He appears to want to reverse any action that was taken by the Obama administration – for no other reason than that – and thereby torpedo ambitious environmental policy goals. There is no coherent policy approach across different relevant policy fields.

Meanwhile, Trump has appointed hardliner opponents of environmental regulation from industry to top environmental positions. Under his leadership, the Environmental Protection Agency (EPA) has ordered the cancellation of numerous Obama-era environmental regulations – actions that have generally been undertaken without benefit of serious analysis and may, in many cases, eventually be struck down by the courts. The Trump administration has decimated the EPA's scientific and expert staff, leaving the agency unlikely to enforce many regulations that remain on the books.

Turkey

Score 3

According to the European Commission (2018), Turkey has some level of preparation in relation to environment and climate change. However, enforcement remains weak, especially regarding waste management and industrial pollution. In the short term, Turkey should complete its alignment with EU directives on water, waste management and industrial pollution, and ensure that the Environmental Impact Assessment Directive is correctly implemented. In addition, Turkey should complete its alignment with the acquis on climate change. However, Turkey's continued use of coal for energy production and desire to continue to be ranked among the group of emerging countries in order not to risk its economic status undermines government commitments, and renders the country's environmental policy efforts ineffective and unsustainable.

Some of Turkey's strategic goals appear very ambitious. Under goal 1.1, "Protecting the environment and nature, preventing pollution, combating climate change," the ministry aims to achieve several far-reaching targets by 2023. These include plans to expand its zero waste policy, separate waste at the source, provide recycling services to businesses, and provide solid waste and wastewater treatment services to all citizens. The number of public and private buildings implementing the Zero Waste Project increased from two to 13,000 in one year following a government campaign. During this period, the amount of waste collected and separated at source within the

scope of the Zero Waste Project totaled 27.8 million tones. However, there is no available information regarding recycling services provided to businesses.

In 2017, monitoring and reporting on the activities of the ministry and its units was expanded, and macro evaluations and guidance procedures were developed to assess policy results. For this purpose, performance indicators were requested from ministerial units on a quarterly basis. At the end of each monitoring period, the units would be assessed. However, available information on concrete results is rather limited. Most related ministerial activities have focused on developing awareness, institutional capacity-building and infrastructural improvement (e.g., knowledge and software). Nevertheless, the ministry has achieved most of the targets set in the strategic plan.

The Ministry of the Environment and Urban Planning outlined several aims in its strategic plan for 2018. These aims focus on protecting the environment and nature, preventing pollution, and combating climate change; monitoring and controlling environments in order to improve environmental quality; accelerating environmental impact assessment processes for investments; and spatial planning and urban transformation for disaster resilient, energy efficient and environmentally friendly construction projects. While these aims can be related to certain sectors theoretically, it is not obvious from the ministry's annual activity report how the ministry has connected these aims with the relevant sectors, including in policymaking, policy implementation and the assessment of outcomes.

According to TURKSTAT data, total greenhouse gas emissions was 526.3 million metric tons in 2018. The largest contributor to emissions is energy consumption with 72.2%, followed by industrial enterprises and product use with 12.6%, agricultural activities with 11.9%, and waste with 3.3%.

A legislative proposal allowing thermal power plants to continue to operate without modern filters until the end of 2021 was adopted by the Turkish parliament in November 2019.

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