Effective Climate Action

Sustainable Governance Indicators 2024





Indicator

Policy Efforts and Commitment to Achieving Climate Neutrality by 2050

Question

How committed is the government to the goal of achieving net zero emissions by 2050?

30 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 = The government is clearly committed to achieving climate neutrality by 2050.
- 8-6 = The government is largely committed to achieving climate neutrality by 2050.
- 5-3 = The government is only somewhat committed to achieving climate neutrality by 2050.
- 2-1 = The government is not at all committed to achieving climate neutrality by 2050.

Denmark

Score 8

With the enactment of the Climate Law in 2020, the Danish government sent a strong signal that it is committed to meeting the criteria and goals formulated in the Paris Agreement. The law set the target for Denmark to cut its emissions of greenhouse gases by 70%, using emissions in 1990 as the baseline. It further stipulates that Denmark should be climate neutral by 2050. The law is built on four premises, which are:

- 1. Climate challenges are global;
- 2. Danish industry must be part of the solution to climate challenges, and should not be dismantled;
- 3. Meeting Climate Law goals, cannot have social costs; and
- 4. In meeting the goals, Denmark cannot simply transfer greenhouse gas emissions outside its borders.

There is a potential inherent tension in the law depending on how criterion 2 is interpreted.

To achieve these goals, the government has set five-year milestones, the first of which is in 2025. Furthermore, the government has created an independent body, the Climate Council, which is tasked with reporting on the progress being made and the likelihood of meeting the goals outlined in the law. In its most recent report, the Climate Council finds that there is considerable uncertainty as to whether the goals for 2025 will be met. There is currently a debate concerning the extent to which the Danish state can be held legally accountable if the 2025 target is not met.

To coordinate policy, the government has created a new internal committee chaired by the minister of finance, with six members. This committee is responsible for coordinating policy across all areas, lending credibility to its role due to the minister of finance's leadership. The committee meets weekly.

The government has been criticized for not taking sufficient action to reach these goals and for relying too much on technologies that are still being developed in order to reach the target. Critics question whether this approach is feasible without structural changes, including in the agricultural sector.

Climate Law. 2020. https://www.retsinformation.dk/eli/lta/2021/2580

Green committee. https://www.stm.dk/regeringen/regeringsudvalg/

Finland

Finland is dedicated to achieving carbon neutrality by 2035, as per its government program and the Climate Change Act of 2022. Effective from 2022, this act establishes emissions reduction targets for 2030, 2040 and 2050, with a specific

focus on carbon neutrality by 2035. The act - a cornerstone of Finland's climate policy – now encompasses emissions from the land use sector and includes a novel target focusing on enhancing carbon sinks (State Treasury 2021).

Emissions reduction goals in the Climate Change Act are derived from recommendations issued by the Finnish Climate Change Panel aiming for a 60% reduction by 2030, 80% by 2040 and at least 90% – with an aspiration of reaching 95% – by 2050, relative to 1990 levels. The revamped Climate Change Act reaffirms these emission reduction targets for the specified years. The targets are binding in the sense that they are expressed in law. They have been broken down into specific areas.

The strategy and designated policies regarding the aforementioned goals are comprehensive. The Annual Climate Report for 2022 documented a roughly 4% decline in Finland's emissions. However, additional measures are deemed necessary, particularly to fortify the carbon sink in the land use sector.

The government monitors progress through the independent climate council, the Finnish Climate Change Panel, which uses a set of indicators to assess progress.

Current estimates suggest that achieving the 60% emissions reduction target by 2030 will be feasible. Notably, the emissions trading sector witnessed a substantial 6% decrease in 2022, primarily attributed to changes in energy use, including a halving of natural gas consumption due to rising prices and the discontinuation of Russian imports. A swift phaseout of fossil fuels in the electricity and heat production sectors is anticipated in the coming years, potentially surpassing initial expectations.

Score 8

The land use sector became a minor carbon sink in 2022, but fell short of the targeted level. The forest carbon sink's size fluctuates yearly; however, it has notably decreased in recent years due to increased forest harvesting, slowed forest growth and heightened soil emissions from peatlands.

The achievement of the EU-mandated effort-sharing sector's obligations remains uncertain, with a 3% decrease in emissions in 2022. However, emissions from transport and agriculture – the sector's largest emissions sources – remained largely unchanged from the previous year. The EU's agreed-upon target for Finland is a 50% reduction in emissions by 2030.

To achieve its ambitious climate targets, the Finnish government is focusing on a clean transition and industrial investments. The emphasis is on doubling clean electricity production, increasing the share of renewable energy, and phasing out fossil fuels in heat and electricity production by the 2030s.

However, as part of the 2023 government program, it was decided to make gasoline more affordable, undermining climate goals. Currently, public procurement is not aligned with the climate action strategy. The courts do not review the achievement of climate targets.

Citation:

State Treasury. 2021. "Carbon Neutral Finland 2035." https://www.treasuryfinland.fi/investor-relations/sustainability-and-finnish-government-bonds/carbon-neutral-finland-2035/

Germany

Score 8 Germany's climate protection policy consists of three main pillars: the Federal Climate Change Act (Klimaschutzgesetz), the Climate Action Plan 2050 (Klimaschutzplan 2050), and climate protection programs.

The Federal Climate Change Act forms the legal framework for climate policy. Enacted in 2019, the act makes climate targets legally binding, defining both overall climate action goals and annual emission limits for individual sectors. It outlines procedures for monitoring and compliance and includes mechanisms for readjustment. Following a 2021 ruling by the Federal Constitutional Court, the targets were intensified: the act now aims for net climate neutrality by 2045 and a reduction of greenhouse gases (GHG) by at least 65% by 2030 and 88% by 2040, compared to 1990 levels. The annual emission volumes for each sector were also adjusted (BMWK, 2023a).

The Climate Action Plan 2050, introduced in 2016, is Germany's long-term climate protection strategy following the adoption of the Paris Agreement. Although initially based on achieving climate neutrality by 2050, it outlines the federal government's

climate policy goals and principles, encompassing environmental, economic, and social dimensions. The plan addresses all relevant sectors: energy, building and transportation, industry, and agriculture and forestry.

Each sector has a specific action plan within the Climate Action Plan, detailing both general targets and sector-specific measures. For instance, the forestry sector focuses on GHG sequestration through land use, while the energy sector targets the expansion of renewable energy. The building sector aims to promote sustainable construction through increased use of sustainable materials. These action plans include concrete milestones to be achieved by 2030, serving as indicators to measure the overall success of the measures (BMUB, 2016).

The third component, climate protection programs, establish concrete measures to achieve climate targets. The latest program, the Climate Protection Program 2023, was adopted by the cabinet in October 2023. Developed to address a gap of 200 million tons of CO2 equivalents between 2022 and 2030, the program aims to reduce this gap by 80% through comprehensive policies.

The program includes specific measures for the energy, building, industry, transportation, and agriculture sectors. For example, the building sector plans to introduce a heat planning act to nationalize heat planning and decarbonize heating networks. The agricultural sector aims to expand organic farming and develop climate- and animal-friendly livestock practices. For transportation, measures include strengthening and digitalizing Deutsche Bahn's network and expanding railway capacity.

It is anticipated that the current climate protection gap can be closed by 2030 through measures in the electricity and agricultural sectors and significantly reduced in the building sector. However, the program indicates that further action is needed in the transportation sector despite the proposed measures (BMWK, 2023b).

Compliance with the Federal Climate Change Act is not reviewed by the courts but is monitored by the Federal Environment Agency (Umweltbundesamt), which annually calculates emission data for each sector and publishes it in March of the following year. An independent council of experts reviews this data, monitors progress, and reports its evaluation to the Bundestag (Die Bundesregierung, 2019).

The Climate Change Performance Index ranks Germany 14th out of 63 countries and the EU for 2024, with a score of 65.8, indicating high performance. While Germany has adopted multiple policies to accelerate the expansion of renewable energy, the building and transport sectors are still falling short of their targets. Nevertheless, Germany's performance has improved compared to the previous year (CCPI, 2023a; CCPI, 2023b).

Various strategies contribute to achieving net-zero emissions. The Federal Ministry for Economic Affairs and Climate Action (BMWK) introduced the System

Development Strategy to establish a climate-neutral energy system by 2045. This initiative includes a cross-sectoral mission statement and a strategy for transforming the energy system (BMWK, 2023b). Additionally, the Federal Action Plan on Nature-based Solutions for Climate and Biodiversity promotes soil preservation to protect its significant role in GHG sequestration (BMUV, 2023).

The federal administration plans to be climate neutral by 2030, making environmentally friendly public procurement crucial. Article 13, Paragraph 2, of the Federal Climate Change Act states that the federal government must align investment planning, selection, and implementation with the climate targets set by the act.

It is unclear whether the central government can intervene at lower political levels if effective implementation is endangered or if ministries monitor implementation. However, the National Climate Initiative (NKI) supports climate action in companies and municipalities through diverse projects and network initiatives. According to the NKI, over 1,150 companies and municipalities are involved in these networks, and around 42 projects were carried out from 2016 to 2020 (NKI, 2021).

Citation

BMUB. 2016. "Klimaschutzplan 2050, Klimaschutzpolitische Grundsätze und Ziele der Bundesregierung." https://www.bmwk.de/Redaktion/DE/Publikationen/Industrie/klimaschutzplan-

2050.pdf?__blob=publicationFile&v=4

BMUV. 2023. "Federal Action Plan on Nature-based Solutions for Climate and Biodiversity." https://www.bmuv.de/fileadmin/Daten_BMU/Pools/Broschueren/ank_publikation_en_bf.pdf

BMWK. 2023. "Nationale Klimaschutzpolitik." https://www.bmwk.de/Redaktion/DE/Dossier/nationale-klimaschutzpolitik.html

BMWK. 2023b. Die Systementwicklungsstrategie: Ein Rahmen für die Transformation zum klimaneutralen Energiesystem. https://www.bmwk.de/Redaktion/DE/Dossier/ses.html

2023."

BMWK. 2023. "Das Klimaschutz-Programm https://www.bmwk.de/Redaktion/DE/Downloads/U/ueberblickspapier-

klimaschutzprogramm.pdf?__blob=publicationFile&v=2

CCPI. 2023. "CCPI 2024: Ranking and Results." https://ccpi.org/

CCPI. 2023b. "Germany." https://ccpi.org/country/deu/

Die Bundesregierung. 2019. "CO2-Ausstoß verbindlich senken." https://www.bundesregierung.de/bregde/schwerpunkte/klimaschutz/kimaschutzgesetz-beschlossen-1679886

NKI. 2021. "The National Climate Initiative."

https://www.klimaschutz.de/sites/default/files/NKI_Praesentation_Feb_2021_EN.pdf

Portugal

Score 8

The Climate Change Performance Index 2023 (CCPI), an independent monitoring tool that evaluates countries' efforts in climate protection across categories such as greenhouse gas (GHG) emissions, renewable energy, energy utilization, and climate policy, serves as a vital instrument for assessing the implementation of the Paris Agreement, which aims to limit global warming to 1.5°C. Portugal holds a notably favorable position in the CCPI, securing the 14th spot out of 63 countries with a score of 61.55, surpassing the EU27 average.

Moreover, Portugal anticipates that its current policies will result in emissions falling below the set limits by 2030, primarily due to a significant reduction in emissions within the energy supply sector since 2005. This positions the country on track to achieve carbon neutrality by 2050.

Citation:

European Environment Agency (EEA). 2023. "Trends and Projections in Europe 2023." https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2023

Climate Change Performance Index 2023. 2023. https://ccpi.org/wp-content/uploads/CCPI-2023-Results-3.pdf

Spain

Score 8 The current government strategy for climate transition is composed of three main guiding tools.

In May 2021, the Climate Change and Energy Transition Law was passed. This law establishes the minimum national targets for the year 2030:

- A reduction of greenhouse gases by at least 20% compared with 1990
- A renewable energy share of at least 35% in final energy consumption
- An electrical system in which at least 70% of the energy comes from renewables
- A reduction in primary energy consumption of at least 35%

The law establishes that the National Plan for Adaptation to Climate Change 2021–2023, which aims to coordinate government actions against climate change, should be implemented through a specific work program. The Ministry for Ecological Transition collaborates with other ministerial departments and autonomous communities to produce reports at least every five years. These reports detail the progression of climate change impacts and risks, as well as policies and measures to enhance resilience and mitigate vulnerability. The work program for 2026–2030 will be formulated based on these reports.

Law 7/2021 establishes the Committee of Experts on Climate Change and Energy Transition, an advisory body tasked with preparing an annual report to be submitted to and discussed in parliament. However, the committee has not yet been established. Several autonomous communities have created their own Committees of Experts.

The Spanish Climate Change Office within the Ministry for Ecological Transition is responsible for promoting daily assessments related to climate change impacts, vulnerability, and adaptation. The work program includes several indicators to monitor and evaluate progress. For instance, the integration of climate change into the Strategic Plan for Health and Environment includes an indicator requiring the approval of a Strategic Plan that outlines objectives and actions to prevent climate change impacts on human health.

In 2021, the government adopted several sector-specific action plans in line with the Climate Change and Energy Transition Law, including the Circular Economy Strategy, the Green Infrastructure Strategy, and a new hydrological planning cycle.

Within the RRP, the government moved its 2025 energy transition targets forward to 2023 and increased investments in renewable energy, ecosystem and biodiversity protection, housing stock renewal, and electric mobility infrastructure.

In recent years, the government has oriented all public policies to align with its main climate action objectives. However, some subsidies, such as those for fuels, have been counterproductive. The Green Public Procurement Plan was approved in 2018, and similar plans have been adopted by autonomous communities. The Quality of Architecture Act, adopted in 2022, supports a new energy and ecological transition model promoting greater inclusion and social cohesion.

Regarding courts' review of climate targets, in July 2023, Spain's Supreme Court ruled in favor of the government in the country's first climate litigation case. Environmentalists, including Greenpeace, Ecologistas en Acción, and Oxfam Intermón, had sued the government, arguing that its targets for reducing greenhouse gas emissions were not ambitious enough. The court determined that the state's climate plan fulfills its commitments as an EU member.

The governance of climate change involves different responsibilities across various levels. While central government ministries do not intervene at lower political levels, national legislation is obligatory for other administrations. Law 7/2021 established a framework providing some flexibility for autonomous communities. Conflicts exist in areas such as land management (managed by autonomous communities) and water use (central state responsibility).

Citation:

Poder Judicial. 2023. "Noticias, 27 de julio de 2023." https://www.poderjudicial.es/cgpj/es/Poder-Judicial/Tribunal-Supremo/Noticias-Judiciales/El-Tribunal-Supremo-desestima-el-recurso-de-varias-organizaciones-ecologistas-contra-el-Plan-Nacional-de-Energia-y-Clima-2021-2030

Law 9/2022 of 14 June, Calidad de la Arquitectura

Gobierno de España. 2021. Law 7/2021, de 20 de mayo, de cambio climático y transición energética.

Gobierno de España. 2020. Plan Nacional de Adaptación al Cambio Climático 2021-2030.

Gobierno de España. 2020. Plan Nacional Integrado de Energía y Clima 2021-2030.

Gobierno de España. 2021. "Programa de Trabajo 2021-2025 del PNACC." https://www.miteco.gob.es/content/dam/miteco/es/cambio-climatico/temas/impactos-vulnerabilidad-y-adaptacion/PT1-PNACC.pdf

Sweden

Score 8

Sweden has a long tradition of stringent climate policies and regulation. The regulatory framework is detailed and consequential, with evaluations showing progress or lack thereof. However, the right-wing alliance elected in 2022 has relaxed environmental regulations to the point that the ambitious targets will not be reached within the suggested timeline.

The Climate Act of 2017 (SFS 2017, 720) mandates a reduction in carbon dioxide emissions and other greenhouse gases, assigning emission targets to the Riksdag. Sweden's climate actions are guided by 16 sector-specific environmental targets and an overarching generational goal. Evaluations are conducted yearly, with extensive reviews every four years at both national and regional levels.

The generational goal conceptualizes environmental problems as a duty the current generation has to future ones: to solve environmental issues without exacerbating environmental and health problems in countries outside of Sweden.

The environmental targets encompass 16 different areas, including the built environment, natural habitats, littoral areas, and land, affecting both humans and non-humans. Each target contains extensive and precise descriptions, totaling 78 specified indicators, reports, suggested measures, and an evaluation of whether the targets will be reached.

Currently, only the target for protected ozone layers is being reached. The targets for fresh air, an environment free of toxins, and safe radiation environments are close to being reached. The targets can be considered political goals and are not legally binding. As a consequence of the targets' lack of legal status, they are not mentioned in the verdicts from the land and environmental courts. In turn, this means that regulation attached to these goals is voluntary.

The government presented a heavily criticized climate action plan in 2023, with few measures to reduce Sweden's emissions in the near future. Instead, emissions are expected to increase in the short term. Two opposing parties, the Center Party and the Environmental Party, declared a vote of no confidence against the Minister of Climate and Environmental, Romina Pourmokhtari (The Liberal Party), as a result of the climate action plan, but the minister survived the vote.

Nevertheless, the environmental action plan covers thematic areas related to environmental politics. For example, sustainable public procurement and policy development in procurement are encouraged in the action plan, and the government has commissioned the National Agency for Public Procurement to update its system for analyzing climate impact on procurement (Skr. 2023/24/59).

There are several agencies working to reach the environmental targets. These include the Swedish Environmental Protection Agency, the National Board of Housing, Building and Planning, the Swedish Agency for Marine and Water Management, the Swedish Board of Agriculture, the Swedish Forest Agency, and the county boards.

Sweden has set five stage targets to limit climate impact. The primary aim is to reduce greenhouse gases from domestic transport by at least 70% by 2030 compared to 2010 levels. Additionally, Sweden aims to cut greenhouse gas emissions in the ESR sector (operations not included in the EU's system for trade and emission rights) with several milestones: a 63% reduction by 2030 compared to 1990, and a 75% reduction by 2040. The final target is to achieve zero greenhouse gas emissions

by 2045 and subsequently attain negative emissions. By 2045, at minimum, emissions from Swedish territory should be at least 85% lower than in 1990. However, these targets will not be reached under the current policy landscape (Sveriges Miljömål, 2023).

The government reduced taxes on gas and diesel by SEK 5.64 million during 2024, and the reduction obligation (reducing greenhouse gas emissions) was lowered by six percent between 2024 – 2026 and removed for 2027 – 2039. The argument for reducing taxes and reduction obligations was to lower fuel prices. However, the government's decision to lower fuel prices undermines policy efforts and environmental targets to reduce greenhouse gas emissions.

Sweden's surface is covered by 69%, or 29 million hectares, of forests, making it the EU country with the largest forest area. Of these lands, 2.1 million hectares are productive forests (Mittuniversitetet, 2022). "Living forests" is one of Sweden's national environmental targets, with indicators to measure the results that include formally protected forest lands, voluntary provisions, consideration areas, unproductive forest lands, old forests, nesting birds in the forest, environmental considerations in forestry, and structures in the forest landscape. With current and planned policy efforts, the target will not be reached, and the development for the forests is negative.

The Swedish Environmental Protection Agency released a report in 2022 concerning policy instruments to expand natural greenhouse gas sinks. The report concluded that there is a lack of incentives among stakeholders, specifically forest owners, leading them to use their forests for other purposes, such as forestry (Gong et al., 2022). In the national environmental action plan, the government states that measures are needed in forestry and agriculture to expand natural greenhouse gas sinks, but no specific measures are suggested (Skr. 2023/24:59).

Citation:

Mittuniversitetet. 2022. Skogens värden. ISBN: 978-91-89341-70-8.

Gong, P., Knutsson, A., and Elofsson, K. 2022. Styrmedel för att öka kolsänkor i skogssektorn. Stockholm: Naturvårdsverket.

Skr. 2023/24:59. 2023. Regeringens klimathandlingsplan – hela vägen till nettonoll. Regeringens skrivelse, Stockholm.

SFS. 2017. Klimatlag. https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/klimatlag-2017720_sfs-2017-720

Sveriges Miljömål. 2023. "Utsläpp av växthusgaser till år 2045." https://www.sverigesmiljomal.se/etappmalen/utslapp-av-vaxthusgaser-till-ar-2045/

United States

Score 8

The commitment of the U.S. federal government to achieving net-zero emissions by 2050 is greatly influenced by the administration in office. The current administration, under President Joe Biden, has explicitly committed to working toward zero emissions by 2050 in Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad." In his first days in office, President Biden re-entered the United States in the Paris Climate Agreement. He hosted the Leaders Summit on Climate and reiterated the commitment to net zero by 2050, as well as the pledge to halve emissions from 2005 levels by 2030.

Biden's executive action is not binding, and its durability partly depends on the commitment of future presidential administrations to these goals. However, Biden has also signed substantial climate spending investments into law, which will have a long-term impact regardless of the ideological leanings of his successor. The Inflation Reduction Act of 2022 is the biggest climate infrastructure bill in U.S. history. Experts believe this legislation will bring the United States to lower its carbon footprint by at least 40% of 2005 levels by 2030.

The Biden administration has made various sector-specific climate pledges. It has committed to 100% clean energy by 2035 through substantial investments in solar and wind power. Additionally, the administration has allocated considerable resources to improve the energy efficiency of buildings, modes of transport, and industrial processes. It has also supported investments in electric vehicles by providing subsidies for Americans to purchase electric vehicles and funding to build electric charging infrastructure.

The Biden administration has used federal procurement to promote climate action. The Federal Acquisition Regulation (FAR) contains provisions relating to sustainable purchasing. Government departments are required to consider energy efficiency and sustainability when making procurement decisions. The General Services Administration (GSA), which manages the federal government's vehicle fleet, has been instructed to transition the federal fleet to electric and zero-emissions options. Federal buildings are expected to be constructed sustainably, minimizing energy consumption and environmental impact. Various government departments, such as the Department of Energy and the Department of Defense, have power purchase agreements for solar and wind energy to power federal operations and facilities.

Austria

Score 7

The Austrian government committed itself to achieving climate neutrality by 2040, rather than 2050.

The government's environmental and climate policy budget has been growing steadily in recent years. Several key measures underscore the government's seriousness about tackling climate change. Perhaps the most spectacular measure

was the introduction of an annual "climate ticket" in late 2021, priced at approximately €1,100. This ticket allows holders to use all forms of public transport – trains, buses, trams, and subways – across the country. Around the same time, the government introduced a pricing scheme for CO2 emissions, with fees increasing annually. However, many experts consider these fees insufficient to motivate significant behavioral change among the population. In late 2023, the government ruled out any new gas and oil heating in buildings constructed from 2024 onward.

It is significant that the government has, to date, failed to renew the "Climate Protection Law," which expired in 2020 (Prager 2023). Critics have cited this failure as evidence of the government's lack of commitment to achieving its self-imposed 2040 target. Notably, the coalition parties in the ÖVP-Green government have been unable to agree on permissible emission levels across various sectors, such as traffic, agriculture, and buildings. Even the original 2020 law faced criticism, including from the Austrian Court of Audit, for its vague formulations regarding regulations in different sub-areas.

The hard facts speak clearly: Since 1990, Austria has barely reduced its greenhouse gas emissions. Emissions in the traffic sector have increased significantly. An empirical assessment by the Austrian Environmental Agency found that emissions decreased by 6% in 2022. However, despite this reduction, there are few other European countries with reductions as modest as Austria's (Umweltbundesamt 2022).

One explanation for the notable discrepancy between formal commitment and substantive accomplishment is Austria's early status as a forerunner, which then fell behind many other countries, including even many latecomers (Der Standard 2023). In the early 1990s, Austria was skeptical about joining the European Union, as some feared the country would have to compromise on its comparatively high environmental standards at the time.

Overall, Austria continues to fare in the middle of the international community. In the most recent Climate Change Performance Index, Austria ranks 32nd out of 63 countries (Laufer and Prager 2023), which together are responsible for about 90% of greenhouse gas emissions. This overall score is composed of several sub-scores in different areas. The worst sub-score was in the area of energy consumption, where Austria ranked 51st out of 63. Better scores were achieved in the areas of renewable energies, greenhouse gas emissions, and climate policy, with Austria ranking 19th in each of these areas.

As indicated above, climate change policies are being reviewed by the Austrian Court of Audit. However, as the court's remit is confined to financial issues, some experts have recently called for the creation of a Climate Court of Audit, specifically devoted to reviewing the government's climate change policies.

In a much-noted decision, the Austrian Constitutional Court dismissed a complaint by four Austrian citizens committed to suing the government for disregarding its own pledges and not seriously addressing climate change policies to avoid fatal harm to Austrian citizens. The Court argued that the government had more leeway in pursuing those goals than the plaintiffs contended. Shortly before, the Court had already dismissed a similar complaint by 12 young Austrians for formal reasons (Der Standard 2023a, 2023b).

Citation:

Laufer, Nora, and Alicia Prager. 2023. "Energieverbrauch zu hoch: Österreich stagniert beim Klimaschutz." https://www.derstandard.at/story/3000000198795/energieverbrauch-zu-hoch-oesterreich-stagniert-im-klimaschutz

Der Standard. 2023. "Warum kommt Österreich beim Klimaschutz nicht in die Gänge?" available at https://www.derstandard.at/story/300000180434/standard-zukunftsgespraech-klima-wie-gelingt-die-klimawende

Prager, Alicia. 2023. "Österreich hat seit 1.000 Tagen keinen Plan zum Klimaschutz." https://www.derstandard.at/story/300000188655/oesterreich-hat-seit-1000-tagen-keinen-plan-zum-klimaschutz

https://kurier.at/politik/inland/minischritte-beim-klimaschutz-in-oesterreich-und-beim-klimapgipfel/402215232

https://www.parlament.gv.at/dokument/XXVII/III/292/imfname_945967.pdf

Der~Standard.~2023a.https://www.derstandard.at/story/3000000177929/kinder-klimaklage-vom-vfgh-aus-formalengruenden-zurueckgewiesen

Der Standard. 2023b. "https://www.derstandard.at/story/3000000195830/klimaklage-von-kindern-kommt-erneut-vor-den-verfassungsgerichtshof"

Umweltbundesamt. 2022. "Sustainability Report." https://www.umweltbundesamt.at/fileadmin/site/ueberuns/nachhaltigkeitsbericht_en.pdf

Belgium

Score 7

Belgium adopted a National Energy and Climate Plan (NECP) for 2021-2030 in line with EU Regulation 2018/1999. The plan was updated in 2023 due to a European mandate. The EU's revised climate objectives required Belgium to increase its greenhouse gas reduction target to 47% by 2030, up from 35%. This led to regional disagreements. Brussels and Wallonia accepted the new target, but Flanders capped its commitment at 40%. A partial intra-Belgian agreement was reached in November 2023, enabling the submission of the new plan to the Commission. The Flemish government approved a regional-federal co-responsibility concept, where regions failing to achieve a minimum internal emissions reduction would need to purchase CO2 permits. The federal level would make up for the difference between the fixed threshold and the 47%. Discussions will continue in 2024 but are likely to be limited, as the country is entering a pre-election period (L'echo 2023; Lesoir 2023).

Alongside the NECP, a document outlining Belgium's decarbonization strategy by 2050 was published in 2019. It set clear sectoral objectives and a transversal vision. However, its binding nature is unclear and likely depends on EU constraints. The Buildings, Transport, and Energy sectors aim for complete decarbonization.

However, the Industry, Agriculture, and Waste sectors acknowledge that some emissions may be hard to eliminate entirely. For these sectors, the strategy proposes reducing emissions as much as possible and compensating for the remaining emissions through natural carbon sinks and additional carbon removal technologies (FPS Health, DG Environment, Climate Change Section 2020).

A European advisory scientific committee has existed since 2021. In Belgium, the Federal Council for Sustainable Development brings together civil society players, employee and employer representatives, scientists (all with voting rights), and political representatives (without voting rights). However, it does not solely deal with climate change issues. Civil society, such as the Climate Coalition and the Climate Case, actively participates in the climate debate, with the latter having taken legal actions against Belgian authorities for climate inaction. The ruling ordered Belgian authorities to reduce their greenhouse gas emissions by at least 55% by 2030. Therefore, many plans and positive objectives are made and announced, but implementation is lagging.

Citation:

Website for the National Integrated Energy-Climate Plan: https://www.nationalenergyclimateplan.be/en/

Press articles on the difficulties in reaching a regional agreement for the 2023 PNEC:

https://www.lecho.be/dossiers/climat/la-belgique-en-defaut-vis-a-vis-de-l-europe-sur-son-plan-climat/10503496.html https://www.lesoir.be/551064/article/2023-11-22/enfin-un-accord-intrabelge-sur-lobjectif-climat

Vision and strategic workstreams for a decarbonised Belgium by 2050:

FPS Health, DG Environment, Climate Change Section. 2020. "Vision and Strategic Workstreams for a Decarbonised Belgium by 2050."

https://climat.be/doc/vision and strategic workstreams for a decarbonised belgium by 2050.pdf

Website of the Federal Council for Sustainable Development: https://frdo-cfdd.be/en/

The website of the Climate Coalition: https://klimaatcoalitie.be/fr/accueil/

The website of the Climate Case: https://affaire-climat.be/en

Press article on the ruling of the Climate Case: https://www.lesoir.be/552575/article/2023-11-30/la-belgique-une-nouvelle-fois-condamnee-pour-son-inaction-climatique

Estonia

Score 7

The government formed after March 2023 created a Climate Ministry responsible for climate, transport, energy, mineral resources, environmental awareness, fisheries and hunting policies. One of the first priorities of the new ministry was to prepare and coordinate the process for adopting a Climate Law, a shared responsibility of the expert committee and Climate Law executive groups formed for that purpose. The law will outline the framework and ambitions for Estonia's goals for 2030, 2040 and 2050, as well as sectoral climate contributions.

Climate actions are still following the national development plan for the energy sector, which will run until 2030. It has a long list of goals, the most concrete being to increase the proportion of total energy consumed that is supplied by renewable energy sources to 50%, generate 80% of heat energy from renewable sources and limit vehicular fuel consumption. 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). Estonia 2035, the long-term

action plan for Estonia, also has several climate-specific goals. Among them, the transition to climate-neutral energy production and energy security are emphasized, along with sustainable transportation and public environmental awareness.

The need for more focused action is pressing, as Estonia is one of the most carbon-and energy-intensive economies in the EU. In 2020, its economy's greenhouse gas emissions intensity was twice the EU average, although the trend is decreasing. While the share of renewable sources in electricity generation saw a strong increase – from 29% in 2019 to 41% in 2021 – the share of fossil fuels in the overall energy mix remains high at 71% (EC 2023). These challenges are also indicated by relatively low scores for projected greenhouse gas emissions in 2050, adjusted emissions growth rate for carbon dioxide, adjusted emissions growth rate for methane, and the growth rate in carbon dioxide emissions from land cover. In all of these categories, Estonia ranks among the bottom five of the 30 countries compared. However, Estonia's greenhouse gas (GHG) intensity growth rate – which serves as a signal of a country's progress in decoupling emissions from economic growth – is relatively good.

Estonia's land use, land-use change and forestry (LULUCF) sector has shifted to net emissions, and restoring its absorption capacity is of high importance (EC 2023). This change is mostly due to a significant decline in carbon removal capacity in forests. Therefore, the National Forestry Accounting has been prepared according to the requirements of the LULUCF Regulation.

Estonia needs to improve its collection of packaging waste and increase the recycling of bio-waste, as the country struggles to achieve the 50% target for recycling and preparing for the reuse of municipal waste set out in the EU Waste Framework Directive. Estonia recently adopted new policies, including a white paper and an action plan, to address circular economy challenges, but the country would benefit from targeted measures to improve the circularity of municipal waste. The municipal waste recycling rate was 30.5% in 2021, while the EU average stood at 48.5% (EC 2023).

The country's Climate Change Performance Index (CCPI) ranking indicates that climate change performance is relatively good (5th in comparison), driven mainly by targets for renewables in electricity. The weakest point is shale oil emissions, which the government plans to phase out by 2035 and end by 2040. However, this goal may be halted due to the Russian war on Ukraine.

Citation:

EC. 2023. Country Report – Estonia Accompanying the Document Recommendation for a Council Recommendation on the 2023 National Reform Program of Estonia and Delivering a Council Opinion on the 2023 Stability Program of Estonia. https://economy-finance.ec.europa.eu/system/files/2023-06/ip230_en.pdf

France

Score 7

France's specific energy mix, with its strong reliance on nuclear energy, explains the country's comparatively low levels of CO2 production. France is the 10th biggest greenhouse gas emitter in the OECD in absolute terms, but the sixth-lowest in per capita terms or per unit of GDP.

In 2019, France passed the laws on Energy and Climate with the advertised goals of achieving climate neutrality by 2050 and seeking a 40% reduction in greenhouse gas emissions by 2030. While criticism of climate action is important, there was an effective reduction in CO2 emissions in 2022 following an increase in 2021. This was partly due to the increase in fuel prices in the context of the Ukraine war, as well as to a relatively warm winter; these factors led consumers to use less fuel for transport and heating. Paradoxically, there was an increase in CO2 emissions in the energy sector at the same time, mainly due to technical difficulties encountered in nuclear energy production resulting from aging infrastructure. Emissions in the transport sector have similarly increased without reaching pre-COVID levels for the time being.

The Haut Conseil pour le Climat, an independent executive body, issued a critical opinion in July 2022, arguing that France was falling behind its advertised goals. More specifically, the council argued that out of the 25 goals contained in the national low-carbon strategy, only six have been associated with adequate implementation measures. The council also criticized the share of the national budget devoted to climate measures, and the decreasing support for climate change mitigation policies.

The council called for enhanced planning, improved reduction of greenhouse gases, better support for a transition toward a low-carbon economy, and a stronger mobilization of French diplomatic functions around the issue of climate change. The transformation of private transport patterns was also important, it said.

Regarding adaptation, 2022 showed that France is particularly exposed to the consequences of climate change, but is insufficiently prepared. The country is experiencing a higher-than-average temperature increase (1.9°C compared to 1.15 worldwide).

Citation:

OECD. 2023. Environment at a Glance.

European Environmental Agency. 2020. "France Country Profile - SDGs and the Environment."

CITEPA. 2023. "Gaz à effet de serre et polluants atmosphériques. Bilan des émissions en France de 1990 à 2022." Rapport Secten.

Haut Conseil pour le Climat. 2022. 4e rapport annuel pour le climat.

Haut Conseil pour le Climat. 2023. 5e rapport annuel pour le climat.

Greece

Score 7

Compared to other OECD countries, Greece ranks average in projected GHG emissions by 2050 (Yale Center for Environmental Law and Policy 2019a). Greece also ranks average in the adjusted emissions growth rate for carbon dioxide and methane (Yale Center for Environmental Law and Policy 2019b and 2019c). However, Greece ranks near the bottom of OECD countries in greenhouse gas intensity growth rate during the 2010s (Yale Center for Environmental Law & Policy 2019d) and the carbon dioxide emissions growth rate from land cover in the same decade (Yale Center for Environmental Law & Policy 2019e).

To address these challenges, the Greek government has implemented a national strategy to achieve zero emissions by 2050, outlined in the National Energy and Climate Plan (NECP, Ministry of Energy and Environment 2019). The "Greece 2.0" Recovery and Resilience Plan further supports this goal, dedicating 37.5% of grants and loans to green objectives (OECD 2023: 9, Government of Greece 2021).

The legal framework for these efforts includes Article 24 of the Greek constitution, which guarantees the right to a natural environment and mandates state action to protect it. Following EU environmental legislation, the Greek parliament adopted a national climate law in 2022 to transition to climate neutrality and adapt to climate change. The aforementioned NECP plan was adopted by a decision of the cabinet in 2019. In brief, Greece's strategy on climate change is legally binding.

The NECP plan sets national environmental policy targets for the period 2021 – 2030, along with sector-specific targets for tourism, agriculture, and naval commerce, among other policy sectors (Figure 1 and section 3.7 of the NECP plan). A concrete example is the Greek government's ban on the use of fossil fuels to generate electricity by 2028. Additional targets address greenhouse emissions, buildings, and transport. In other words, the policy is comprehensive.

The Greek government monitors policy implementation by measuring progress against quantitative targets specified in the NECP and Greece 2.0 plans. The Ministry of Environment and Energy leads policy formulation and implementation, while public procurement in this and other areas is overseen by the independent Hellenic Single Public Procurement Authority (EADHSY).

Although Greece lacks an independent climate council, the Special Permanent Committee on Environmental Protection in parliament scrutinizes environmental policy, and the Council of State's Department "E" reviews cases of environmental law violations that are modeled on the French Conseil d'État.

Finally, despite the Greek government's commitment to achieving climate neutrality by 2050, policy implementation may be delegated to the public administrations of Greece's 13 self-governed regions. However, the central government is entitled to –

and frequently does – intervene at lower political levels if effective implementation is endangered.

Citation:

Government of Greece. 2021. "Greece 2.0 - National Recovery and Resilience Plan." https://greece20.gov.gr/en/

Ministry of Energy and Environment. 2019. "National Energy and Climate Plan." https://ypen.gov.gr/wp-content/uploads/2020/11/%CE%A6%CE%95%CE%9A-%CE%92-4893.2019.pdf

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Yale Center for Environmental Law & Policy. 2019b. "Environmental Performance Index (EPI): Adjusted Emissions Growth Rate for Carbon Dioxide." https://epi.yale.edu/downloads

Yale Center for Environmental Law & Policy. 2019c. "Environmental Performance Index (EPI): Adjusted emissions growth rate for methane." https://epi.yale.edu/downloads

Yale Center for Environmental Law & Policy. 2019. "Environmental Performance Index (EPI): Greenhouse Gas Intensity Growth Rate." https://epi.yale.edu/downloads

Yale Center for Environmental Law & Policy. 2019. "Environmental Performance Index (EPI): Growth rate in carbon dioxide emissions from land cover." https://epi.yale.edu/downloads

The national climate law that was adopted in 2022 is Law 4936/2022.

The website of the Hellenic Single Public Procurement Authority (EADHSY) is https://www.eaadhsy.gr/index.php/en/

The website of the parliament providing information on the Special Permanent Committee on Environmental Protection is https://www.hellenicparliament.gr/en/Koinovouleftikes-Epitropes/Katigories

Italy

Score 7

Italy has a complex and detailed strategy for addressing climate change, outlined in the National Plan for Ecological Transition, the National Adaptation Strategy (SNAC), the National Adaptation Plan (PNACC), and the National Energy and Climate Plan (NECP).

It should be noted that the Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA), an autonomous public research institute attached to the Ministry of the Environment, constantly monitors the development of this complex strategy. ISPRA has established a platform to facilitate access to and the sharing of data and information on observed and future climate changes, impacts, institutional agencies working on the issue, adaptation strategies and plans at different administrative levels, possible adaptation actions, and good practices. Furthermore, the procedure for monitoring greenhouse gas emissions is clear and effectively in place.

Italy is legally required to implement green public procurement, and while data shows adequate implementation, significant differences exist across local and regional administrations.

With regard to Italy's ability to reach the zero emissions target by 2050, it is important to recall that in December 2023, the EU Commission noted problems with the Italian NECP. The National Integrated Energy and Climate Plan presented to Brussels by the Meloni government, after having been rejected by major Italian environmental associations in the summer of 2023, was also criticized by the EU Commission. The commission highlighted that the Italian NECP does not meet the continent-wide greenhouse gas emission reduction targets of -55% by 2030 compared to 1990. Specifically, greenhouse gas emissions in the ETS sectors would be reduced by 35 – 37% compared to 2005 levels, falling short of the -43.7% target set by EU legislation. The plan also falls short in reducing emissions in the ETS sectors and the target for greenhouse gas absorption related to land use and forests (LULUCF). Thus, the Italian NECP would not be able to reverse the already poor trend in emission reductions: by the end of 2022, Italy will have reduced its greenhouse gas emissions by 25% compared to 1990, while the EU average is already at -32%.

The NECP anticipates an energy efficiency target aligning with European regulations and a goal for renewable energy sources to account for 40.5% of total energy consumption by 2030, slightly above the 39% minimum requirement. However, the RED III directive stipulates a minimum EU average of 42.5% renewables by 2030, with a target of 45%. Achieving this will require doubling the current share of renewables in the European energy mix.

Several European countries, such as Iceland, Norway, Sweden, Finland, and Latvia, are already significantly ahead in renewable energy use (85.8%, 74.1%, 62.6%, 43.1%42.1%, respectively). The Meloni government is concerned about the socioeconomic impact of the climate change strategy, particularly the 2050 target. Prime Minister Meloni emphasized at COP28 that Italy supports an "ecological and not ideological transition." The 2024 budget law includes many subsidies or incentives for fossil fuels, despite allocating about 40% of NRPP resources to environmental transition.

The Italian NRPP allocates about 40% of its financial resources to the environmental transition. This is a significant investment, but its environmental effectiveness may be limited because, as in many other EU countries, the socioeconomic impact of the transition could be very costly from a political perspective.

Citation:

Ministero per l'ambiente e la sicurezza energetica. 2023. "Strategia Nazionale per il cambiamento climatico." https://www.mase.gov.it/sites/default/files/archivio/allegati/clima/documento_SNAC.pdf

- Ministero per l'ambiente e la sicurezza energetica. 2023. "Piano Naztionale per l'Adattamento al cambiamento climatico." https://climadat.isprambiente.it/pnacc/

Ministero per l'ambiente e la sicurezza energetica. 2023. "National Energy and Climate Plan (2023)." https://www.mase.gov.it/sites/default/files/PNIEC_2023.pdf

ISPRA. "Platform on climate change." https://climadat.isprambiente.it

European Commission. 2023. "Assessment of EU Member States' draft National Energy and Climate Plans (NECPs) and issued recommendations." https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A796%3AFIN&pk_campaign=preparatory&pk_source=EURLEX&pk_medium=TW&pk_keyword=EUGreenDeal&pk_content=Communication&pk_cid=EURLEX_todaysOJ

Latvia

Score 7

In 2019, Latvia approved its plans for climate action by 2030, outlining approximately 80 activities across all main spheres of climate change. The plan is structured around five strategic goals: protection of health and well-being from the effects of climate change, adaptability of the economy, climate-resilient infrastructure and buildings, protection of cultural and historical values from the impact of climate change, and evidence-based monitoring and forecasting of climate change. The specific actions in the plan are risk-based, and no clear road map to climate neutrality is identified. However, the plan does not foresee additional budget allocation or a lack of monitoring indicators.

In the Environmental Performance Index (EPI) 2023, Latvia ranks 15th in the world, indicating that the country is performing well in achieving its environmental goals. With almost half of its territory covered by forests, Latvia excels in ecosystem vitality and biodiversity. However, in climate policy, the Environmental Performance Index 2023 places Latvia only at the 25th position. According to EPI 2023, Latvia has increased its greenhouse gas emissions per capita over the last ten years, resulting in a ranking of 124th. Overall, in the past decade, Latvia has increased its adjusted emissions growth rate for methane (78th) while successfully decreasing its adjusted emissions growth rate for carbon dioxide (19th) (EPI, 2023). The Climate Change Performance Index (CCPI) 2024 ranks Latvia 25th in 2023 and 33rd in 2024, indicating that Latvia still needs to increase its investment in green energy and design more sector-driven climate change mitigation activities.

Latvia has a centralized governance system for environmental protection. EU acquis plays a vital role, with two important agencies at the heart – the Ministry of Regional Development and Environmental Protection and the Nature Conservation Agency. Public procurement procedures have adopted green procurement as part of the action to fight climate change.

Citation:

Ministru kabinets. 2019. Par Latvijas pielāgošanās klimata pārmaiņām plānu laika posmam līdz 2030. gadam. https://likumi.lv/ta/id/308330-par-latvijas-pielagosanas-klimata-parmainam-planu-laika-posmam-lidz-2030-gadam Wolf, M. J., Emerson, J. W., Esty, D. C., de Sherbinin, A., Wendling, Z. A., et al. 2022. 2022 Environmental Performance Index. New Haven: Yale Center for Environmental Law & Policy. https://epi.yale.edu/epiresults/2022/component/epi

CCPI 2024: Ranking and Results. https://ccpi.org/

Lithuania

Score 7

The government is committed to achieving climate neutrality by 2050. In 2016, Lithuania signed the Paris Agreement with other EU members and committed to reducing greenhouse emissions by 40% compared to 1990 levels. By 2030, Lithuania aims to reduce emissions by 9% compared to 2005, excluding sectors participating in the EU Emissions Trading System.

In 2022, the European Union (EU) set more ambitious emissions reduction targets as part of the European Green Deal, aiming to reduce emissions by 55% by 2030 – up from 40% – and reach net-zero emissions by 2050. Meeting these targets will require Lithuania and other EU members to review their climate policies to accelerate their decarbonization efforts. The European Commission has proposed a "Fit for 55" policy package intended to increase member states' domestic climate policy ambitions to meet the EU's 2030 emissions reduction target. The package, introduced in 2021, includes proposals to increase emissions reductions under the Emissions Trading Scheme (EU ETS), widen the scope of the program overall and increase member-state commitments in non-ETS sectors under the Effort Sharing Regulation (ESR).

The coalition government formed in late 2020 has expanded Lithuania's domestic climate policy ambitions. The National Climate Change Management Agenda (NCCMA) adopted in June 2021 sets ambitious emission reduction targets with a view to reaching net-zero emissions by 2050. Lithuania aims to reduce emissions by 30% by 2030 compared with 2005 levels, targeting a 50% reduction in the EU ETS sectors and a further 25% reduction in non-ETS sectors. As noted by the OECD (2023), this represents a significant increase from the previous target of a 9% emissions reduction in non-ETS sectors and even surpasses the 21% reduction proposed by the European Commission under the Fit for 55 package.

In 2023 the government began preparing an updated version of the National Energy and Climate Plan 2021 - 2030 (NECP). The draft plan examines the situation in Lithuania with reference to the common EU goals and the government's own national ambitions. It presents proposed measures broken down into different sectors.

According to the draft NECP, the vision for 2050 is "an energy system that generates added value for the state and the consumer, uses smart low-greenhouse-gas technologies and zero-emission energy sources, and is resilient to cyber threats and climate change, providing reliable and competitive energy." In line with the objectives set out in the United Nations 2030 Agenda for Sustainable Development, the Paris Agreement, and the EU's 2030 climate and energy policy goals, the goal is to enable Lithuania's energy sector to produce 80% of its energy from zero-emission sources (low GHG and ambient air pollutants) by 2050. It is to provide energy to

consumers safely and at a competitive price while contributing to the country's modern economy, competitiveness and investment. Energy production is to use renewable energy sources and technologies that ensure energy is produced in a nonpolluting way. Consumers are also to have the capability to produce the energy they need to meet their needs.

The plan was updated and presented for public consultation in 2023. The Lithuanian government also benefited from policy recommendations provided by the OECD and the European Commission. It was slated to be finalized in the first half of 2024 and should provide a good basis for further policy actions and the monitoring of progress toward achieving the sectoral targets. It integrates a number of other strategic documents of Lithuania in the fields of energy, environment and other related areas.

Recent progress in this field is reflected in the Climate Change Performance Index 2024, in which Lithuania improved its ranking to reach 19th place. Lithuania fell into the middle ranks in the GHG emissions, renewable energy, and energy use categories, but was ranked low in the area of climate policy. The authors of the index report highlighted the gap between the country's ambitious targets and poor record of implementation. They noted that while there are targets for reducing fossil fuel dependence, minimal action has been taken to achieve these goals. For example, the retention of oil refinery factories and gas pipe infrastructure as national strategic goals are concerning.

The authors also pointed out that, although the import of biomass from Belarus stopped after the Russian invasion of Ukraine, these imports have been replaced by increased local production and imports from other countries. They saw this as a missed opportunity to shift away from fossil fuels toward renewable, with a significant risk of missing reduction targets. Additionally, they emphasized the need for better collaboration between policymakers and utility companies, the development of short-term strategies aligned with the 1.5°C target, and the termination of biomass use.

In its draft updated National Energy and Climate Plan, the government highlighted the strengths of the country's situation and acknowledged gaps in its policies. While noting the positive record in terms of greenhouse gas emissions and their absorption by forests, it observed that the country was lagging behind other EU members in the area of environmental taxation, particularly with transport taxes being among the EU's lowest. External criticisms of the continued reliance on fossil fuels and the retention of environmentally harmful subsidies were also noted.

Overall, the NECP 2021 – 2030 provides a solid foundation for planning new policy measures and monitoring progress toward achieving them. However, it is unclear whether implementation efforts will stick to the plan, especially in light of recent protests by farmers against some environmental policy measures, and the potential impact of these policies on energy and transport prices for vulnerable households. The European Commission will continue to monitor progress, particularly in areas

where Recovery and Resilience Fund money will be invested to advance the green transition.

According to the New Generation Lithuania plan, more than €800 million, or 37.8% of the funds from this EU funding source, are earmarked for climate projects. These projects include investments in solar and wind projects, the promotion of electric vehicles, renovations of buildings, and peatland restoration efforts.

Citation:

European Commission. 2023. "Lithuania – draft updated NECP 2021-2030." https://commission.europa.eu/publications/lithuania-draft-updated-necp-2021-2030_en OECD. 2023. Reform Options for Lithuanian Climate Neutrality by 2050. Paris: OECD Publishing. https://doi.org/10.1787/0d570e99-en

Climate Change Performance Index. 2024. "Lithuania." https://ccpi.org/country/ltu/

Lithuanian Ministry of Environment. "National energy and climate action plan 2021-2030 (in Lithuanian)." https://am.lrv.lt/lt/veiklos-sritys-1/klimato-politika/klimato-kaita/nacionalinis-energetikos-ir-klimato-srities-veiksmu-planas-2021-2030-m/

Netherlands

Score 7 The minister

The minister for climate and energy in the Rutte IV cabinet, D66's Rob Jetten, was deeply committed to effective climate action, encompassing adaptation, mitigation and financing mechanisms for addressing losses and damages. The Supreme Court's 20 December 2019 validation of the Urgenda judgment marked a definitive step by climate policy to the political forefront. Prior to 2021, climate policy had been formulated through the "poldering" process. In 2019, five "climate tables" comprising representatives from business, government and civil society were established to address specific areas such as traffic, agriculture, industry, electricity and the built environment.

However, there was considerable ambiguity regarding the roles and responsibilities of these tables. Minister Jetten expressed the government's intention to take a more assertive role, stating, "In recent years we as politicians have really thrown a lot of climate policy over the fence at others. ... My message now is: This is the coalition agreement (of the Rutte IV government) and we are not going to negotiate about it." From 2022 onward, departments have been tasked with implementation responsibilities, while the consultative tables have been tasked with practical elaboration.

Despite this sharpening of policy, private sector business plans have not aligned with the government objectives. None of the 29 industrial companies recently surveyed by Milieudefensie regarding their climate plans were on track to meet climate goals. These companies, collectively the recipients of millions of euros in subsidies in order to support an environmental transition, often lack comprehensive data on their CO2 emissions and are not transparent about their environmental impacts. They have complained about slow licensing procedures and labor shortages, and have resisted the implementation of emissions measurement requirements that would hold them accountable for emissions throughout their entire business chains.

In agriculture, there is resistance among major nitrogen emitters to a rapid transition toward sustainability and circular economy practices. Farmer protests and highway blockades with tractors have garnered public sympathy and contributed to the success of the newly established political party Farmer-Citizen Movement (Boeren Burger Beweging, or BBB) in provincial elections (see "Effective Ecosystem and Biodiversity Preservation")

Despite confusion and transparency issues regarding government climate plans, and amidst growing social and political resistance, the government has reaffirmed its commitment to climate policy. In March 2023, Minister Jetten launched a nine-member Scientific Climate Council to provide advice on long-term policy. Monitoring and evaluation tasks continue to be managed by the Netherlands Environmental Assessment Agency (Planbureau voor de Leefomgeving, PBL) and the National Institute for Public Health and Environment (Rijksinstituut voor Volksgezondheid en Milieu).

By the end of 2022, the PBL estimated that current implementation policies could potentially halve CO2 emissions by 2030 in the best-case scenario, with a reduction of only 39% in the worst-case scenario. Particularly in the areas of traffic, agriculture and the built environment (including homes, offices and public buildings), achieving government climate goals remains challenging. Minister Jetten has proposed 120 additional climate measures that would cost €28 billion, to be funded from the Climate Fund, as approved in the coalition agreement.

Jetten emphasized that these plans involve standardization, pricing mechanisms and incentives. The €28 billion Climate Fund aims to facilitate widespread participation in the transition, focusing on expanding wind and solar energy parks. He acknowledged that the transition would be challenging and would provoke resistance at times, but stressed that now is the time to accelerate climate policy, saying, "The time of noncommitment is over."

Nevertheless, the government's firm stance on climate policies has sparked considerable political and social opposition, not only from industrial firms, agricultural sectors and farmers, but also from citizens concerned about perceived financial burdens and lifestyle changes. This opposition was reflected in the outcome of the 22 November 2023 national elections, where climate skeptics and deniers (PVV, NSC, and BBB) emerged as significant winners. As a result, commitment to climate policies is expected to diminish in the foreseeable future.

Citation:

PBL. 2022. Climate and Energy Outlook of the Netherlands: English summary of the full Dutch report 'Klimaat- en Energieverkenning 2022 (KEV).

Climate Adapt, The Netherlands, Information on national adaptation actions reported under the Governance Regulation Reporting updated until: 2023-03-11 https://climate-adapt.eea.europa.eu/en/countries-regions/countries/netherlands

Ministerie van Buitenlandse Zaken en Ministerie van Economische Zaken en Klimaat. October 2022. Internationale Klimaatstrategie. Van ambitie naar transitie.

Wikipedia. "Wetenschappelijke Klimaatraad." https://en.wikipedia.org/wiki/Wetenschappelijke_Klimaatraad (consulted 10 December 2023)

NRC-H. 2022. "Jetten gaat het klimaatbeleid 'ongehoord strak sturen'." van de Walle, May 24.

NRC, Stellinga, Bart, and Eddy van de Walle. 2023. "Kabinet trekt 28 miljard uit voor 120 klimaatmaatregelen: 'Zal af en toe knellen'." NRC, April 26.

NRC. 2023. "De eerste echte klimaatverkiezingen." Kruk March 23.

Algemene Rekenkamer. 2023. "Inzicht in uitgaven klimaatbeleid, naar aanleiding van Onderzoek Uitgaven Klimaatbeleid." 22 January.

Norway

Score 7

The Norwegian Climate Act from 2017 states that Norway shall be a low-emission society by 2050 and that greenhouse gas emissions in 2030 shall be 55% lower than in 1990. The national climate targets shall be achieved in cooperation with the European Union. Norway is part of the EU Emissions Trading System, and national targets are therefore set for non-ETS sectors (transport, agriculture, waste, and other).

The Norwegian CO2 tax, first introduced in 1991, will gradually increase to NOK 2.000/tco2e.

The Climate Act mandates an annual update from the government to parliament, including a national plan and sectoral plans for emission reductions. Additionally, there are specific emission reduction plans for various sectors. For instance, in the transport sector, central policy instruments are electrification and increased use of biofuel.

Norway is an early adopter of electric vehicles (EVs). In 2022, more than 80% of new passenger cars were electric, constituting 21% of the total number of vehicles. Electrification of larger vehicles has progressed more slowly but is beginning to gain momentum. In 2022, 4% of vans were electric.

For the energy sector, CCS remains a central part of the solution.

Norway has had a Climate Act since 2017, which legislates that Norway shall be a "low-emission society" by 2050. "Low-emission society" means that national emissions shall be consistent with the target in the Paris Agreement. The target is for emissions to be 90% - 95% lower in 2050 than in 1990.

The Climate Act mandates that emissions in 2030 be 55% lower than in 1990. Norway will fulfill its climate policy in cooperation with the EU. Approximately half of Norwegian emissions are covered by the EU ETS. For emissions reduction in the

remaining sectors, mainly transport, construction, waste, and agriculture/forestry, the Effort Sharing Regulation and the LULUCF Regulation are included in the EEA agreement, giving Norway binding targets for national non-ETS emissions until 2030.

The polluter-pays principle remains a cornerstone of Norwegian climate strategy, with carbon taxes and the EU ETS placing a price on emissions across various sectors. The government has expressed its ambition to gradually and linearly increase the CO2 levy to NOK 2,000 per metric ton by 2030. This general levy covers most non-ETS emissions, with a few exceptions such as fisheries and greenhouses, which pay a lower levy. The petroleum sector is also included under this general levy.

The Climate Act requires the government to report annually on progress and future plans. This "Green Book" contains sector-specific targets for various sectors: transport, agriculture, waste and f-gases, industry and energy production, petroleum, and forestry and area use.

The transport sector, which constitutes the largest portion of non-ETS emissions, has well-developed action plans. Goals include halving emissions from both land-based and marine (domestic) transport by 2030, relative to 2005 levels. Although these goals have been discussed by parliament, they have not yet been formally adopted. Targets include the transition to zero-emission vehicles – all new small cars should be zero-emission by 2025, and larger vehicles/lorries by 2030 – and an increase in biofuel usage from the current 13% to up to 32% by 2030. Additionally, policies aim to reduce the need for transport through area planning and urbanization, and shift transport to less polluting forms by improving public transport. Decisions on public transport improvements often reside with local authorities; the government plans to support schemes and pilot projects for "urban development" (byvekstavtaler).

For the agriculture sector, the action plan includes a "letter of intent" (intensjonsavtale) between the government and the "agriculture organizations." The track record of Norwegian climate policies shows that, despite being a front-runner internationally with CO2 taxes in the 1990s and a strong advocate for international agreements, Norwegian emissions have not significantly reduced since 1990. While the carbon intensity of the economy has declined, increased consumption in goods, transport, and other services has resulted in emissions being only 4.6% lower in 2022 than in 1990. The cornerstone of the national policy has always been to work for a global price on emissions. With the CBD agreement from 2023, there has been increased focus on nature protection; however, Norway is far from the goal of protecting 30% of representative areas, currently at 17.4%.

The Law on Public Procurement of 2017 requires public procurers to use climate and environmental criteria "where relevant." Five years after the law was adopted, the resulting contribution to a green shift was unimpressive, according to the Office of

the Auditor General. Therefore, the government introduced a regulatory change to require weighing climate and environmental criteria at a minimum of 30% in all procurements, effective January 1, 2024.

Examples of effective green public procurement can be found in Norway, such as the procurement of ferry services and emission-free construction sites. In 2014, parliament required the government to mandate zero-emission technology for all national ferry services. Similarly, the Oslo municipality first demanded fossil-free, then emission-free operations for construction sites. These ambitious tenders have facilitated technological development through market dialogue between procurers and bidders, while also creating risk-reducing conditions for progressive suppliers. The Oslo example has been challenged in courts, but there are now plans to legislate so that all municipalities have the right to make similar demands.

The Anskaffelsesutvalget published its first report in November 2023 and proposed to change the act's mission statement to incorporate sustainability into its purpose. They also suggested using the terminology "green transition" to emphasize public procurers' role in transforming the economy.

There are very few cases of climate litigation brought before courts in Norway. Two environmental NGOs, Greenpeace and Natur og Ungdom, initiated a case against the state in 2016, claiming that granting petroleum licenses in the North Sea was unconstitutional, particularly breaching Para 112. The supreme court issued its final verdict in 2020, ruling in favor of the state. The NGOs launched a second court case in the autumn of 2023, with a ruling expected from Oslo County Court in January 2024.

Citation:

 $Ministry\ of\ Climate\ and\ Environment.\ 2023.\ Climate\ Change\ Act\ https://lovdata.no/dokument/NLE/lov/2017-06-16-60$

https://www.efta.int/media/documents/legal-texts/eea/other-legal-documents/adopted-joint-committee-decisions/2019%20-%20English/269-2019.pdf

Klima – og miljødepartementet. 2023. "Regjeringas klimastatus og plan." https://www.regjeringen.no/no/dokumenter/regjeringas-klimastatus-og-plan/id2997247/

Statistics Norway. 2023. "Fire av fem nye biler i 2022 var elbiler." https://www.ssb.no/transport-og-reiseliv/landtransport/statistikk/bilparken/artikler/fire-av-fem-nye-biler-i-2022-var-elbiler

Slovenia

Score 7

Over the last two decades, Slovenia has developed comprehensive environmental legislation, largely by incorporating numerous EU directives into a series of legal documents. The umbrella Law on Environmental Protection, first enacted in 2004, has been amended multiple times, with a new version adopted in 2022. This law incorporates principles of sustainable development and the circular economy and

aligns with the country's 2030 Development Strategy, adopted by the government in December 2017.

Several other environmental regulations, mostly decrees and resolutions, address issues such as waste management, air quality, the use of fluorinated greenhouse gases and ozone-depleting substances, and activities requiring an environmental impact assessment. Slovenia has also adopted the EU Emissions Trading System and the goal of climate neutrality.

In 2020, the government adopted the Integrated National Energy and Climate Plan, with a new draft submitted to the EU in 2023. This strategic document sets ambitious targets for the period up to 2030, with a view to 2040. These targets include a 36% reduction in total greenhouse gas emissions, a 20% reduction in the non-ETS sector (five percentage points higher than Slovenia's previous commitment), and an improvement in energy efficiency of at least 35%, exceeding the EU target.

Despite the robust legal framework, many non-governmental organizations in Slovenia acknowledge that its implementation has been poor and point to a lack of ambition in various sectors. Consequently, at the end of 2023, the government organized a public discussion on the draft Climate Law. This law aims to provide solutions for meeting international treaty objectives, including those of the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement. The responsible ministry stated that the proposed law would offer a comprehensive framework for more effective climate policy implementation, aiming to achieve climate neutrality by 2050 at the latest.

Various data indicate that despite the comprehensive legal framework, Slovenia needs to improve the implementation of these legal documents to ensure greater efficiency. The Youth for Climate Justice movement, which carried out a series of actions in 2022 and 2023, has also called for this improvement. According to the Climate Change Performance Index, Slovenia ranked 41st in the 2023 assessment, with a score of 53.57, compared to the EU average of 64.71, placing Slovenia among the low-performing countries.

Slovenia ranks very low in terms of its overall level of greenhouse gas emissions. However, at the same time, it also ranks very low in terms of establishing an operational national climate policy, meeting the 2030 renewable energy targets (including hydropower), the 2030 greenhouse gas emissions target, and reducing its per capita energy consumption . The difficulty of achieving the targets set for the coming years is underscored by several protest actions against planned government activities. For example, farmers have protested, arguing that the environmental legislation was prepared by radical environmental groups disconnected from farmers' realities.

G. C., La. Da., and B. R. 2023. "Predsednik sindikata kmetov Medved: Ko kmet protestira, država že krvavi." RTVSLO. https://www.rtvslo.si/slovenija/predsednik-sindikata-kmetov-medved-ko-kmet-protestira-drzava-ze-krvavi/666065

Focus. 2024. "Focus." https://focus.si

Umanotera. 2024. "https://www.umanotera.org/"

Youth for Climate Justice: https://mzpp.si/o-mzpp/

United Kingdom

Score 7

The 2008 Climate Change Act set binding targets for achieving net zero emissions by 2050. Recent government decisions, such as delaying targets for electric vehicles and heat pumps, have been rationalized as efforts to mitigate the impact on households while maintaining the overall strategy. Despite these rationalizations, green interests have criticized the changes. The first national expert nevertheless disagrees with the score attributed in the calibration process, as the UK record in moving towards net zero up to the assessment period of this report was very good.

The Climate Change Committee (CCC) is responsible for advising the UK and devolved governments on emissions targets and reporting to Parliament on progress in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change. The CCC comments on all aspects of the net zero strategy and monitors progress in cutting emissions and adapting to climate change. The committee has already begun analytical work on the methodology it will propose for the seventh cycle of carbon budgets, covering the period from 2038 to 2043. These quinquennial budgets were mandated by the 2008 Act.

Canada

Score 6

There is considerable rhetoric from Canadian governments about climate neutrality. Climate change has become a priority for the Liberal government, especially with widespread fires and flooding in Canada during 2021 – 23. Coastal regions often bear the brunt of these impacts. Moreover, Canada faces increasing risks from climate change, affecting Indigenous and Northern communities, human health, physical infrastructure, ecosystems, and fisheries.

Since taking office in 2015, the Liberal government's environmental record has been mixed. On climate change, the government ratified the Paris Agreement in 2016 and has since established a new national target of reducing greenhouse gas emissions by 40 to 45% below 2005 levels by 2030. Additionally, it has set a legally binding target of net-zero emissions by 2050. The Pan-Canadian Framework on Clean Growth and Climate Change is a collaborative effort to ensure the target is met through carbon pricing, investments in energy efficiency, and renewable energy strategies.

Successive federal budgets have also provided funding for clean technologies, with clean tech becoming an important new hub for investment and innovation. More recently, Canada signed on to the Glasgow Climate Pact, reaffirming the country's commitment to the Paris Agreement, which involves reducing greenhouse gas emissions and, more recently, to begin phasing out coal.

However, these industries and renewable energy policies are largely the responsibility of the provinces. While several provinces have made efforts to address climate change, others have not, and Alberta and Saskatchewan have actively opposed these efforts.

As a result, a recent report by the Commissioner of the Environment and Sustainable Development found that emissions have continued to increase and, since 1990, have grown by 20%.

Moreover, following investor uncertainty, the government nationalized the highly controversial Kinder Morgan pipeline expansion at a cost of CAD 4.5 billion, bringing Alberta heavy oil to West Coast ports for export. This project was tied to 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 were largely seen as insincere, however, and the pipeline decision raised serious questions about the Trudeau government's commitment to fighting climate change and protecting Indigenous rights.

Citation:

https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework.html

https://unfccc.int/process-and-meetings/the-paris-agreement/the-glasgow-climate-pact-key-outcomes-from-cop26

Czechia

Score 6

Czech environmental policy is shaped by the country's obligations to implement EU legislation. The National Energy and Climate Plan (NECP) from November 2019 outlines the main targets and policies in all five dimensions of the Energy Union for 2021–2030. The Czech Republic's primary goal is to reduce greenhouse gas emissions by 30% by 2030.

The updated NECP from 2023 shows some progress toward fulfilling international commitments under the Paris Agreement and presents an ostensibly comprehensive strategy. However, the adequacy of the policies has faced criticism both internally and externally. Within the government, this is evidenced by the Pirate Party's proposal for a law with binding commitments. Externally, the European Commission criticized the plan in December 2023.

The updated plan reaffirms the intention to phase out coal for energy and heat generation by 2033 but lacks a precise timeline for eliminating existing fossil fuel subsidies. It does not analyze relevant vulnerabilities and risks and fails to specify how adaptation policies align with Energy Union objectives and policies. Additionally, the NECP lacks clarity on the scope, timing, and expected impacts of adaptation efforts, including ensuring adequate water resources for cooling nuclear power plants.

The document outlines ambitious renovation plans for buildings but lacks specific quantification of their energy-saving impact. In terms of energy security, the NECP emphasizes diversification away from Russian imports but lacks clarity on gas demand reduction strategies. While it mentions key electricity infrastructure projects, cross-border initiatives are overlooked.

Regarding energy poverty, the NECP lacks a clear definition and specific policies. The plan also falls short in setting quantified targets for research and innovation and does not comprehensively address just transition aspects. Furthermore, the NECP lacks quantification of investment needs and funding sources, and some analytical aspects remain outdated or insufficiently explained.

Overall, the updated plan indicates a formal acceptance of EU requirements but does not demonstrate a deeper commitment to or understanding of the changes needed to achieve carbon neutrality.

Citation:

 $https://commission.europa.eu/system/files/2023-12/SWD_Assessment_draft_updated_NECP_Czechia_2023.pdf$

Ireland

Score 6

Ireland has made progress in legislation, reduction targets, policy implementation and oversight, and commitments to phasing out fossil fuels. However, actual performance in reducing emissions remains poor. Ireland is one of the highest emitters of GHG per capita in the world, with increases in carbon dioxide, methane, F-gases and emissions from land use since 1990, reinforcing its laggard status often associated in policy analysis (Torney and O'Mahony 2023). Improvements in economic intensity can be attributed to known distortions in GDP data (O'Mahony et al. 2023).

Over the decades, the default policy choice has been to rely on improving technology and end-of-pipe efficiency rather than addressing underlying systems and structures, thereby missing the policy win-wins available from doing so (O'Mahony and Torney, 2023). Policy challenges are not related to insufficient policy implementation, as often proposed nationally, but to a distinct lack of policy coherence. This is evident in two key factors: development policy that drives emissions and inadequate conceptions of emissions reduction policy. Development policy has supported the growth and lock-in of high-carbon and emissions-intensive

systems. Efficiency-dominated mitigation has evolved due to policy silos (Torney and O'Mahony,2023), limitations in the modeling used to inform policy discussions (O'Mahony and Torney 2023), and the influence of vested interests on policy processes.

Some progress is evident in power generation through increased renewables and in residential energy demand through efficiency measures such as insulation. However, more complex themes such as transport, agriculture and material consumption have received inadequate policy responses. Transport emissions have grown due to urban sprawl and a priority on roads and private cars, with mitigation focused on engine size, biofuels and electric vehicles rather than compact development and active and public transport (O'Mahony/EPA 2020). In agriculture, livestock numbers have increased in line with decades of agriculture policy to maximize production of animal products for export. Policy has focused on efficiencies such as manure management and fertilizer use, satisfying powerful vested interests that seek to continue business as usual (Murphy et al. 2022), rather than seeking to diversify activity to support the 57% of farms that are not economically viable (Teagasc 2023) and reduce excessive environmental burdens.

Ireland has a binding legislative commitment (Climate Act 2021) for a 51% reduction in GHG emissions, including land use, from 2018 to 2030, with 5-year budgets, and a long-term objective of climate neutrality by 2050. International commitments include the EU Effort Sharing – 42% by 2030 (McGookin et al. 2023) – with binding annual limits to 2030 and access to flexibilities. Implementation is supported by an annual process of action planning with sector-specific actions. However, while legislative and policy review structures are in place – including the semi-independent Climate Council established in 2015 – actual outcomes are not in line with emissions reduction goals.

A key component of national long-term planning is the National Energy and Climate Plans (NECP) and the associated Long-Term Strategy (LTS) to 2050. Ireland's Climate Assessment considered the first strategy (DECC, 2023) and found that it is dominated by a narrower, technology-based approach – existing, emerging, and speculative technologies – and circular and bioeconomy goals (O'Mahony and Torney, 2023). The assessment noted that these narrower conceptions of climate action will continue to act as a barrier to transformational systems change, slowing mitigation, forgoing synergies and rendering climate neutrality unlikely (O'Mahony and Torney 2023).

A legal strategy related to the climate action plan was successfully pursued by Friends of the Irish Environment in 2020, suing the government on the grounds that the 2018 plan violated the Climate Act of 2015. The current government, with the Green Party Minister for Environment and Climate, has begun to make progress in addressing gaps in knowledge and policy, evidenced in the evolution in climate action toward systems change (DECC 2022). Inertia from lock-in to a high emissions path will limit the impact on short-term emissions trends, but long-term progress can

be enabled. There are fears that the next general election may introduce a political dynamic contesting the use of carbon budgets. There is also a significant risk that populist and far-right politics will seek to make gains by attacking environment and climate policy to exploit the fears and vulnerabilities of rural communities.

Citation:

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O'Mahony, Mary, and Diarmaid Torney. 2023. Transforming Development: Economy, Innovation and Finance. Volume 4 of Irish Climate Change Assessment. https://www.epa.ie/publications/monitoring-assessment/climate-change/ICCA_Volume-4.pdf

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New Zealand

Score 6 New Zealand aims to achieve climate neutrality by 2050 and has set targets and strategies to work toward this goal. The key framework guiding this ambition is the Zero Carbon Act, which became law in November 2019.

The Zero Carbon Act establishes a framework for long-term emissions reduction, aiming for net zero emissions of long-lived greenhouse gases by 2050. It sets separate targets for biogenic methane emissions from agriculture and all other greenhouse gas emissions. Specifically, the act requires successive governments to set emissions budgets every five years and aim for greenhouse gas reduction targets that are consistent with limiting global warming to 1.5 degrees Celsius above pre-industrial levels.

The independent Climate Change Commission was established following the enactment of the Zero Carbon Act in 2019. The Commission monitors and reports on New Zealand's progress toward meeting climate targets, assessing the effectiveness of policies and actions taken to reduce emissions. Based on its monitoring and assessments, the Commission makes recommendations to the government, Parliament and relevant sectors on strategies and policies to achieve emissions reduction goals.

However, several policies and measures may undermine climate action efforts.

To begin with, the Zero Carbon Act itself has been criticized for not being legally enforceable and for setting separate targets for agriculture, which contributes 48% of New Zealand's total greenhouse gas emissions (McLachlan 2019). Moreover, the newly elected National government has announced that it will revisit the legislated emission targets in 2024 and possibly set even lower targets for the farming sector (Wannan 2023).

Other policy proposals made by the National-led coalition that may conflict with climate action goals include reversing the ban on at-sea oil and gas exploration, scrapping the Clean Car Discount, and promoting road infrastructure over alternative modes of transport. This underscores the lack of political consensus on the need for drastic, collective action and the lack of institutional capacity to ensure initiatives are legally binding beyond the political cycle.

Overall, New Zealand's strategies to mitigate climate change have received rather negative reviews from experts. The Climate Change Performance Index, for example, ranks New Zealand 34th out of 67 countries (Climate Change Performance Index 2023). Similarly, the Climate Action Tracker rates New Zealand's policies and actions as "highly insufficient," noting they are "not at all consistent" with limiting global warming to 1.5 degrees Celsius (Climate Action Tracker 2023).

Citation:

Climate Action Tracker. 2023. "New Zealand." https://climateactiontracker.org/countries/new-zealand/

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Switzerland

Score 6

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 climate-change adaptation (Ingold/Balsiger 2015) and forest management (Wilkes-Allemann et al. 2020).

In 2011, the federal government decided to phase out the use of nuclear power over the course of the next several decades, following the Fukushima accident. 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 improve national energy efficiency, and to exploit the potential of hydropower as well as other renewable energies (e.g., solar, wind, geothermal and biomass). There will be no permits granted for the construction of new nuclear power stations or for 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 of the five nuclear power plants would have been closed down by 2017.

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.

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 was expected to produce a reduction in emissions by 20 percentage points by 2020 – a goal which was not reached (NZZ 13 April 2021).

The country has committed to reducing its greenhouse gas emissions by 50% by 2030 (measured against 1990 levels). This would include the purchase of international credits associated with the reduction of emissions elsewhere. The targeted domestic reduction amounts to 30%. In 2019, the Federal Council also announced a goal of reaching net-zero emissions by 2050 (including international credits) (BAFU 2022).

In the 2019 national election, the green parties recorded a major increase in votes received. The Green Party increased its share of votes by six percentage points, while the Green Liberal Party increased by three percentage points, while the two largest parties respectively suffered losses of four (Swiss People's Party) and two percentage points (Social Democrats) respectively. By Swiss standards, this was considered a tectonic change, indicating much better prospects for the enactment of environmental policies. However, this enthusiasm had receded by the time of the 2023 federal elections, when the Green Party lost five seats (out of a total of 246 seats in parliament) perhaps driven by the fact that after four years, changes were not really visible. This may in part be due to the pandemic and war in Europe having crowded out policy activity in other fields. For an analysis of the changing climate discourse and its actors, see Kammerer and Ingold (2021). A major challenge for

environmental policies in Switzerland remains the adequate and bona fide implementation of federal rules by cantonal and municipal institutions.

A major setback for environmental policies occurred in 2021, when the CO2 law was rejected in a popular vote. This ambitious law combined various comprehensive measures that paired levies with subsidies. It targeted and mobilized various groups, including homeowners, airplane passengers and car drivers, who opposed the new law. In December 2021, the Federal Council opted for a new draft law, which was much less ambitious and avoided any new levies. The rejection of the CO2 law by the majority of citizens emphasizes an important aspect of direct democracy, namely that it is very hard to realize innovative and encompassing policies – even when there is a pressing need for such a policy – given the reform-averse institutional effects. These effects had already been visible in the case of the expansion of the welfare state or women's suffrage, to name a few important examples of delayed responses to societal or external developments (Kriesi 2005; Linder 1999; Vatter 2018: Chapter 8). Further initiatives aimed at fostering Switzerland's participation in the global effort against climate change have failed in popular votes, like the initiative on multinationals bearing responsibility for emissions that would have strengthened the ecological and social responsibility of Swiss companies abroad. It was narrowly rejected by the population in 2020. Altogether, the gap between the country's intentions on paper and concrete actions has been considerable, and the mobilization of Switzerland to fight climate change remains limited.

Citation

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Australia

Score 5 Australia has made commitments to achieve net zero (climate neutrality) by 2050 (DCCEEW 2023). This plan is supported by sector-specific strategies in high-emission areas.

Australia has committed to achieving net-zero emissions by 2050, supported by sector-specific

strategies in high-emission areas (DCCEEW 2023). For example, the transport sector, responsible for approximately 19% of emissions (with passenger cars and light Commercial vehicles Accounting for 60% of this figure), is projected to become the largest source of emissions by 2030. Electric vehicles (EVs) have emerged as the major solution to this problem – more EVs will reduce emissions if Australia is able to generate a large proportion of its energy from renewable sources (the target is 82% by 2030). However, EVs only made up about 8% of the market in 2023. To accelerate the uptake of EVs, the government has introduced a National Electric Vehicle Strategy, which includes discounts to make EVs cheaper and a fund to support transformation of infrastructure to roll out chargers at regular intervals on major highways.

Agriculture, contributing around 13% of emissions mainly from methane and fertilizers, receives government funding for research into new livestock feed and farming techniques. The government also created a new Net Zero Economy agency to coordinate economic transformation and maximize benefits (PMC 2023).

Despite these commitments and some progress, Australia has faced criticism for insufficient ambition and actions to ensure it achieves its climate goals. The commitments often lack detailed plans and rely heavily on unpredictable technological innovations.

Perhaps most significantly, as researchers for the Climate Change Performance Index (CCPI) observe, Australia continues to develop significant fossil fuel projects and infrastructure, with no plans to phase out fossil fuel extraction industries (CCPI 2023). The Climate Change Performance Index report notes that Australia remains one of nine countries responsible for 90% of global coal production and plans to increase coal and gas production by over 5% by 2030, incompatible with the global 1.5C target.

Citation:

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PMC. 2023. "Net Zero Economy Agency." Australian Government Department of the Prime Minister and Cabinet. https://www.pmc.gov.au/netzero

Israel

Score 5

In 2018, the Ministry of Environmental Protection introduced a detailed plan addressing how Israel should handle climate change. The plan outlined climate change risks in the area and the programs various ministries should implement to address these risks. The national strategy had five goals: decrease costs and promote the economy, improve the sustainability of natural systems, strengthen and empower existing scientific knowledge, advance public education, and promote technologies that address climate change problems.

The Ministry of Environmental Protection is responsible for collaborating with various ministries to develop specific, detailed plans for each goal. The designed plans are intended to be flexible, subject to re-evaluation and modification every few years based on accumulated scientific knowledge. The final program comprises 31 specific initiatives addressing different aspects and departments.

In September 2023, the Ministry of Environmental Protection introduced the Climate Law, formally codifying the 2018 plans. The law sets a national goal of reducing greenhouse gas emissions by 30% by 2030 compared to 2015 levels (the base year) and achieving net-zero emissions by 2050. The law includes roadblocks, measures and monitoring procedures to ensure implementation and progress. It lays out a five-year plan for all government departments to address climate change, and establishes an independent expert committee to monitor the law's implementation and guide various authorities. According to the law, the ministry must report to the Knesset on progress.

The law aimed not only to reduce existing climate change risks but also to make climate change a key policymaking consideration for all government departments. Therefore, the law states that every relevant program has to submit a climate risk evaluation to ensure that climate change considerations are taken into account when new policies are introduced. Moreover, each local authority will have to submit a program detailing how it plans to address climate change (Ministry Environment, 2023). While this law is an important step toward addressing the dangers of climate change, due to Israel's war with Hamas, which that broke out on October 7, the Knesset is yet to pass the law. At present, it is unknown when it will be placed on the Knesset's agenda.

Because the law has not been passed, the program has not been divided based on sectors and areas. There are no specific measures, only a general strategy. Moreover, the implementation of the law falls under the jurisdiction of the Ministry of Environmental Protection. While staff within the ministry and the Ministry of Energy are committed to environmental causes, the Ministry of Environmental Protection has historically been weak. It has a small budget, low prestige and its ministers are usually not politically powerful. Therefore, even if the law passes, it is

questionable whether the ministry will be able to oversee its implementation effectively.

While an encompassing strategy has not yet been codified into law, Israel addresses climate change and promotes the net-zero emissions goal through various specific efforts. These efforts include the gradual electrification of cars and buses, the shift from coal to natural gas in power plants, the enhancement of sustainable energy production and the promotion of greater energy efficiency in economic activity. According to the Heschel Center, an environmental NGO, the goal of reaching netzero emissions by 2050 is achievable but depends on government action, which so far has been lacking.

Citation:

Ministry of Environmental Protection, Climate Law https://www.gov.il/he/departments/legalInfo/climate-law-draft

Heschel Center, NZO project, https://www.nzo.org.il/blank-1

Slovakia

The Ministry of Environment of Slovakia, in close cooperation with other departments, will be responsible for managing, coordinating, and updating the Low-Carbon Development Strategy of the Slovak Republic until 2030 with a Low-Carbon Development Strategy of the Slovak Republic by 2030, with a view to 2050 iew to 2050 (referred to as NuS, 2020) every five years.

> The Strategy (NuS, 2020) is broken down into sector-specific action plans, including energy, industrial processes, transport, agriculture, land use and land-use change, forestry, and waste management. For example, in 2016, the energy sector was the main contributor to total greenhouse gas emissions, accounting for 67.04% and 27,543.77 Gg CO2 equivalent. Total fossil fuel consumption is decreasing due to higher energy efficiency, with biomass consumption in 2015 being 3.6 times higher than in 1990.

> The primary sources of greenhouse gas emissions are metal production (52%), the mineral industry (23%), the chemical industry (16%), and substitutes for ozonedepleting substances (7%). Nitric acid production is the most significant source of N2O emissions.

> The level of transit traffic has increased. Total aggregate GHG emissions in the transport sector increased by 12% in 2017 compared to the 1990 base year, while road transport emissions increased by 58% compared to the base year. The long-term trend in this sector is rising emissions, representing a substantial risk to achieving climate neutrality.

> In agriculture, the primary source of N2O emissions is agricultural soil, accounting for 90%, followed by manure processing, which contributes 10% of total N2O

Score 5

emissions. Enhancements in agricultural practices, crop production regeneration, and the use of mineral fertilizers have led to a slight increase in emissions in recent years.

Overall CO2 removals in the land-use sector are expected to range from -6,642.32 (2017) to -4,206.56 (2035) Gg CO2. Projections for 2017–2035 show a decreasing trend in CO2 removals, mainly due to reductions in forest land, cropland, and grassland removals, and increased emissions from settlements and other land categories (NuS, 2020).

The Waste Management Program of the Slovak Republic for 2016–2020 revealed that most original targets were not achieved. Emission projections in the waste sector, according to WEM and WAM scenarios until 2040, are decreasing and depend on meeting practical targets (NuS, 2020).

Internal estimates by the Ministry of Finance, in cooperation with the Permanent Representation of the Slovak Republic to the EU, suggest that between 2027 and 2050, Slovakia will have €42 billion to €45 billion available for climate change measures from the EU budget alone (excluding other national and European funds). It remains questionable whether the government and public authorities are prepared to utilize such significant financial resources intended for decarbonization projects aligned with achieving climate neutrality by 2050 (NuS, 2020: 93).

The Strategy (NuS, 2020) proposes additional measures, titled NEUTRAL, aimed at moving closer to achieving climate neutrality. The impact of these NEUTRAL measures has not yet been modeled in the strategy. Addressing this modeling will be necessary for future updates, with an updated version set to be adopted no later than 2025, including an assessment of socioeconomic impacts, such as decreases in real income.

Energy efficiency action plans served as the primary tools for implementing energy efficiency measures until 2020. These plans evaluated existing measures and established new ones to achieve energy savings goals. After 2020, responsibility shifted to the integrated National Energy and Climate Plan (NECP) and biennial progress reports in the energy sector (Dokupilová et al., 2022: 47).

Slovakia has a structured mechanism for managing, planning, monitoring, and evaluating energy efficiency, based on European and national strategic documents and legislative requirements. However, the independent Climate Council was not established because the Climate Law was not passed in 2023. The Ministry of Economy serves as the general coordinator of the energy efficiency agenda, focusing primarily on energy savings across all sectors of the national economy. An interdepartmental working group, including all relevant central state administration bodies, was formed for this purpose.

The Ministry of Economy evaluates applications for issuing certificates for constructing energy facilities to ensure compliance with the NECP. This assessment

can only be conducted based on applications that meet all prescribed requirements according to the Act on Energy. The Ministry of the Interior determines whether the request aligns with the priorities of the energy policy and NECP (INEKP, 2019).

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Hungary

Environmental sustainability in Hungary has been on the decline for some time, with a current score of -19 for 2015 – 2022 in the European Innovation Scoreboard 2022. Hungary eventually committed to becoming climate neutral by 2050, but this decision was driven more by external pressures than by a recognition of climate-change-induced problems. The government has complied with European and OECD requirements. In 2020, Hungary passed Law No. XLIV, which sets up measures to tackle climate change, and developed a strategy to achieve the National Energy and Climate Plan (NECP) objectives. These objectives were updated in 2023 to be more ambitious, including a 50% emissions reduction by 2030 compared to the 40% reduction in the original NECP. New legislation, such as the CO2 tax, was also introduced.

While these objectives sound good, there are issues with commitment beyond mere lip service. Hungary's government has also regularly tried to undermine EU climate action. The rather lukewarm commitment is evident in the relevant data.

Both CO2 emissions from fossil fuel combustion and cement production, as well as CO2 emissions embodied in imports, have shown unsatisfactory and declining numbers. In the 2023 sustainability report (Sachs et al. 2023), Hungary scored 79.4, down from 80.2 in 2021. This marks the first slight decline since the turn of the century (74.4 in 2000). The 2024 Climate Change Performance Index places Hungary at 49th place, an improvement of four spots, but still among the poor performers. The carbon pricing score has increased slightly over the last decade. Concerning projected greenhouse gas emissions in 2050, Hungary ranks in the middle, at 16th out of 30. In the adjusted emissions growth rate for carbon dioxide indicator, Hungary ranks 22nd out of 30. However, regarding methane gas emissions, Hungary performs very well. Although the NECP emphasizes decarbonization by promoting the use of renewable energy, the government imposes administrative hurdles on wind turbine installation. It restricts grid access for solar energy providers and private households, often citing grid bottlenecks. Still, the solar

sector is somewhat taking off. The Hungarian energy strategy strongly emphasizes nuclear energy, and the modernization of the power plant in Paks also serves foreign policy goals, as it strengthens ties with Russia. Hungary's degree of dependency on Russian oil and gas is among the highest in the EU.

Consequently, decoupling from Russia is among the government's objectives, and decarbonization may play a role here. Given the strong foreign policy ties with Putin's Russia, however, the ambition is driven more by the West than by the conviction of major political players. For the government, energy security and decreasing energy dependency are likely more important than reaching climate goals (Csernus 2023:11). Establishing a Ministry for Energy in 2022 shows this preference, as there is still no environment ministry. Additionally, the government temporarily ran a campaign against "climate hysteria," making Hungary's reticent position clear. During the energy crisis of 2022 – 2023, the Hungarian government put a price cap on gasoline, boosting consumption to record levels. The government also opposes bike-friendly urban transport reforms in Budapest, where it has portrayed progressive Mayor Gergely Karácsony as an "anti-motorist" who sabotages smooth traffic (Magyar Nemzet 2023). Such a discourse is hardly compatible with a genuine commitment to decarbonization.

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Japan

Score 4

Despite some progress in formulating policies against global warming in recent years, Japan's commitment to achieving climate neutrality by 2050 remains weak. In 2023, Japan ranked 58th out of 67 countries in the 2024 Climate Change Performance Index, eight positions lower than before. In 2021, then-Prime Minister Suga Yoshihide declared the aim to reduce greenhouse gas emissions by 46% by 2030 compared to 2013 levels and to achieve carbon neutrality by 2050 – a considerable increase from Japan's previous target of a 26% reduction by 2030. During the G7 Summit in Hiroshima in May 2023, Japan agreed to refrain from constructing new coal power plants.

The Global Warming Countermeasure Plan, issued in October 2021 by the governmental Global Warming Prevention Headquarters, is supplemented by a long list of indicators and timelines that run up to 2030. Targets, divided among different

ministries, include indicators such as the proportion of next-generation vehicles in new car sales or the number of LED road lights on national highways. The strategy is based mainly on reducing energy consumption, technological innovation and decarbonization. Monitoring of progress in reducing greenhouse gas emissions is conducted annually by the government, without much involvement by independent climate councils. Lawsuits filed by climate activists, such as those against coal-fired power plants, are relatively rare and judges tend to treat climate problems as policy matters.

In February 2023, the Kishida cabinet published the Basic Policy for Realizing the GX: Green Transformation Policy. The document, containing 14 action plans, stipulates a 10-year strategic decarbonization roadmap, which includes a voluntary baseline-and-credit system, a mandatory emissions trading system and a carbon levy. The newly created GX Promotion Agency will be responsible for the management of a JPY 150 trillion decarbonization fund. However, the strategy focuses on promoting economic growth rather than countering global warming. The carbon levy is expected to be set at a low level and introduced as late as 2028. No clear criteria related to reduction of greenhouse gas emissions were formulated for distribution of public funds for decarbonization. Moreover, some "clean coal" technologies promoted by the government, such as the use of hydrogen and ammonia derived from fossil fuels, may even lead to an increase in greenhouse gas emissions.

The environmental performance criterion for procuring goods and services, including impact on climate, is obligatory for national government agencies and institutions, while local governments only have to make efforts to implement ecological solutions.

According to Climate Action Tracker rating from November 2023, Japan's policy is insufficient to achieve the goals of the Paris Agreement. Moreover, Japan has blocked discussions on decarbonized transport and power systems in international fora such as the G7 or the U.N. Framework Convention on Climate Change. Such behavior calls into doubt Japan's sincerity in tackling global warming.

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Poland

Score 3

Poland's 2030 National Environmental Policy (Ministry of Climate 2019) identifies climate change as a pivotal factor impacting socioeconomic development. Despite this, the country lacks a set deadline for its climate neutrality goal in national strategic documents. The energy policy looking ahead to 2040 aims for a long-term low-emissions path and climate neutrality based on national possibilities, specifically citing the current energy mix structure and high social costs.

The key strategy guiding Poland's climate policy is the 2021 – 2030 National Energy and Climate Plan. This plan targets a 7% reduction in greenhouse gas emissions in sectors outside the EU Emissions Trading System from 2005 levels, a 21% to 23% share of renewable energy sources in gross final energy consumption, and a 23% reduction in final energy consumption. Unfortunately, because of a lack of time overlap, most 2019 national sectoral strategies do not align with these goals. Additionally, sector-specific strategies like the 2022 Long-Term Building Renovation and Productivity Strategies document provide general directions without including specific climate targets.

Instrat's 2021 report forecasts that by 2030, Poland's potential CO2 emissions may exceed targets by 529 million tons without intervention (Wrona 2021). Policy shortcomings contribute to this projection, including continued subsidization of coal, constraints on renewable energy development, the failure to phase out high-emission vehicles and ineffective transportation electrification.

Poland is obligated to follow EU climate protection legislation, but since 2015, it has opposed key regulations primarily due to perceived flaws in legislative procedures. Under the EU's binding climate and energy legislation, Poland submitted its National Energy and Climate Plan (NECP) for the 2021 – 2030 period in December 2019. In 2020, the European Commission assessed each NECP, including Poland's final version from December 2019.

In July 2023, Poland contested three major EU climate policies, claiming that they would create social inequalities. These policies included a ban on new CO2-emitting car sales in the EU from 2035, national emissions-cutting targets and the reform of the EU carbon market (Jones 2023).

Poland's public procurement aligns with EU standards with regard to environmental and climate impacts. The cost criterion incorporates methods like life-cycle cost accounting, encompassing all relevant costs, including those associated with environmental effects, provided their monetary value is determinable. Despite EU obligations, no independent bodies oversee climate policy progress in Poland. Advisory bodies such as the State Council for Environmental Protection and the Youth Climate Council exist, but courts do not review progress toward meeting climate targets. Citizens have limited recourse in this regard, as the constitution lacks explicit provisions granting everyone the right to a clean environment and enabling them to demand that authorities implement environmental protection measures, and does not impose sanctions for inaction.

Citation:

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