Circular Economy

Sustainable Governance Indicators 2024





Indicator

Circular Economy Policy Efforts and Commitment

Question

How committed is the government to driving the transition toward a circular economy?

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 transitioning to a circular economy.
- 8-6 = The government is largely committed to transitioning to a circular economy.
- 5-3 = The government is somewhat committed to transitioning to a circular economy.
- 2-1 = The government is not at all committed to transitioning to a circular economy.

Finland

Score 9

In 2016, Finland became the first country globally to develop a national road map to a circular economy, led by the government-backed Sitra Finnish Innovation Fund (Sitra n.d.), a think tank. The updated version, released in March 2019, builds on the original by incorporating essential circular economy measures that various Finnish stakeholders have committed to. These measures span the state administration, municipalities, businesses and the daily lives of the Finnish population. The road map introduces nearly 30 new actions and outlines measures yet to be implemented that do not fall under the responsibility of any specific organization. The publication highlights effective circular economy measures and solutions proposed by Finland to address challenges such as climate change, resource depletion and urbanization. Road Map 2.0 refines the vision and strategic objectives, and updates the solutions based on evolving needs.

With its national road map, Finland aims to lead the way in a global shift where economic competitiveness and well-being no longer rely on the inefficient use of natural resources. Instead of focusing solely on product offerings, the emphasis will be on services, product recycling and intelligence-based digital solutions. Finland sees a significant opportunity to pioneer a transition toward a carbon-neutral circular economy and low-emission solutions.

The road map represents a collaborative effort across the entire nation, capturing key stakeholders' perspectives on necessary changes and actions for transitioning to a circular economy. The strategy and designated policies regarding the goals of reduction, endurance, reuse and recycling are comprehensive. Engagement with the road map involves diverse stakeholders, including government ministries and representatives from the public, private and third sectors. For the second version,

Sitra gathered ideas and comments, organized events and conducted interviews with specialists. A draft of the road map was open for public feedback, with contributions welcomed from all Finnish citizens.

It is important to emphasize that the road map was developed by a think tank, not by the government. It is therefore not binding. Beyond Sitra, existing policies may not fully support efforts to transition to a circular economy. For example, public procurement is not completely aligned with the circular economy strategy. However, since the publication of the original road map, Finland has seen the circular economy gain prominence in public discourse, and the proposals have been translated into practical actions.

Sitra is not a government agency and does not have the capacity to effectively coordinate or facilitate interministerial policy collaboration.

Finnish Innovation Fund Sitra. n.d. "Finnish Road Map to a Circular Economy 2016-2025." https://www.sitra.fi/en/projects/leading-the-cycle-finnish-road-map-to-a-circular-economy-2016-2025/#what-is-itabout

Sweden

Score 9 Sweden continues the work it initiated at the beginning of the decade, outlining a vision for a transition to a circular economy. Though some policy instruments are legally binding, most are voluntary at this point.

> Sweden is a party to the EU's Green Deal and the action plan for a circular economy issued in 2020. The action plan targets over 30 measures and includes a framework for sustainable production design, increasing consumer power, targeting key sectors, and decreasing waste (Europeiska Rådet, 2024).

> In 2021, the government published a strategy for the transition toward a circular economy. The overarching target of the strategy was to contribute to reaching the environmental – and global – targets in the Agenda 2030. The strategy's vision is "a society where resources are used efficiently in toxin-free circular flows that replace virgin materials" (Regeringskansliet, 2021a).

> Four areas are highlighted: (i) circular economy through sustainable production and product design; (ii) circular economy through sustainable consumption and use of materials, products, and services; (iii) circular economy through toxin-free and circular cycles; and (iv) circular economy that incentivizes the business sector and other actors through measures that encourage innovation and circular business models (Government Offices of Sweden, 2021a).

> The government has developed a comprehensive action plan based on the strategy's four focus areas, employing several regulatory instruments, some of which have already been adopted (Government Offices of Sweden, 2021b). The strategy and

action plan are divided into specific strategies targeting different themes: plastic, textiles, food, renewable and biobased raw materials, construction, the real estate sector, and innovation in critical metals and minerals (Geerken, Manoochehri & Di Francesco, 2022). The government has also drafted a specific strategy for plastic, comprising 55 measures designed to mitigate the environmental and climate effects (Government Offices of Sweden, 2021c).

The strategy and action plans are developed in accordance with the national environmental interim targets, which serve as indicators to measure progress (see section P17 Effective Climate Action for information about the interim targets).

The strategy and action plans are not binding but are reviewed in the budget proposition in the same way as national environmental targets. Involved stakeholders, such as agencies, regions, and municipalities, have been commissioned to follow the development. However, legally binding measures are being taken for the different themes in the action plan. In relation to waste management, for example, seven new rules concerning municipal waste management were implemented in 2024, with measures such as mandatory sorting of non-liquefied food waste and liquefied grease and separating the content from the packing (Avfall Sverige, 2024).

The central actors in the transition are the government and the Riksdag, the EU, the business sector, the public sector and civil society. The Ministry of Climate and Enterprise is the lead unit responsible for matters concerning climate and the environment, but numerous actors are involved in the transition toward a circular environment. These include the Swedish Environmental Protection Agency, the Swedish Agency for Economic and Regional Growth, the Swedish Consumer Agency, Vinnova, the state research council Formas, universities and research institutes, municipalities, and regions.

Avfall Sverige. 2024. "Ny lagstiftning 2024." https://www.avfallsverige.se/aktuellt/nyheter/ny-lagstiftning-2024/

Europeiska rådet. 2024. "Den cirkulära ekonomin." https://www.consilium.europa.eu/sv/policies/circular-economy/#ceap

Geerken, T., Manoochehri, S., and Di Francesco, E. 2022. "Circular Economy Policy Innovation and Good Practice in the Member States." European Environment Agency, European Topic Centre, Circular Economy and Resource Use https://www.eionet.europa.eu/etcs/etc-ce/products/draft-report-for-dg-env_final.pdf

Government Offices of Sweden. 2021a. Cirkulär ekonomi – strategi för omställningen i Sverige. Stockholm: Miljödepartementet.

Government Offices of Sweden. 2021b. Cirkulär ekonomi – handlingsplan för omställningen av Sverige. Stockholm: Miljödepartementet.

Government Offices of Sweden. 2021c. Sveriges handlingsplan för plast – En del av den cirkulära ekonomin. Stockholm: Miljödepartementet.

Belgium

Score 8

Belgium is a leader in the transition to a circular economy, achieving high recovery and recycling rates for various waste types. The Brussels-Capital and Flanders regions are recognized as leaders among OECD regions for their circular economy initiatives (OECD 2019). Despite these accomplishments, increased efforts are necessary to enhance recycling and composting. The country has initiated innovative measures in sectors like construction and food to advance the circular economy.

Eurostat data reveals that Belgium has the highest recycling rate of all waste in the EU (87% in 2020) and the second-highest circular material use rate (23.7% in 2021). Although the country's resource productivity significantly exceeds the EU average, its per capita waste generation is slightly above the EU average. However, per capita packaging waste generation is below the EU average. Private investment in the circular economy, as a percentage of GDP, is the highest in the EU. Nevertheless, the gross added value related to the circular economy and the employment rate in circular economy sectors are both below the EU average.

Belgium has implemented ambitious circular economy strategies across all three regions, integrating these with economic development plans. The Brussels-Capital Region adopted a Program for the Circular Economy in 2016, promoting resource circularity, reducing food waste, and supporting urban farming. Flanders launched the Materials Program in 2011, aiming for an economic model with closed material cycles, and introduced the Circular Flanders program in 2017. Wallonia prioritized the development of a circular economy and resource efficiency in its 2015-19 Regional Development Plan. In February 2021, the Walloon Government adopted Circular Wallonia, the region's first circular economy deployment strategy (OECD 2021).

At the federal level, a federal action plan for a circular economy was adopted at the end of 2021. One of the recently approved measures under this plan is the introduction of a reparability and durability index for goods, allowing consumers to understand a product's reparability and estimated lifespan (see press article). Several inter-regional and inter-departmental bodies support circular economy work, exchanging information and establishing working groups on indicators, requirements for recycled content in products, and legal barriers to circular initiatives through an inter-regional platform.

Initially, Belgium's circular economy indicators focused on program results, such as the number of enterprises receiving financial support and legislative barriers reformed. More recently, broader economic indicators have been considered, with a focus on consumption rather than production. The Intra-Belgian Circular Economy Platform, together with the Federal Planning Bureau, is in charge of developing a strategy for monitoring the transition to a circular economy using concrete indicators (FAP 2021).

Citation:

OECD. 2019. "The Circular Economy in Cities and Regions: Key Lessons Learnt." CFE/RDPC/URB(2019)16. Paris: OECD.

https://ec.europa.eu/eurostat/databrowser/explore/all/tb_eu?lang=en&subtheme=cei&display=list&sort=category OCDE. 2021. OECD Environmental Performance Reviews: Belgium 2021. Paris: Éditions OCDE. https://doi.org/10.1787/738553c5-en

Press article on the reparability and durability index for goods: https://www.dhnet.be/dernieres-depeches/2023/12/22/le-federal-instaure-un-indice-de-reparabilite-et-de-durabilite-des-biens-

HTPB24UON5AM3DJG73GAASFRGI/

Federal Action Plan for a Circular Economy (FAP). https://www.health.belgium.be/fr/plan-daction-federal-pour-une-economie-circulaire-2021-2024

Estonia

Score 8

On the initiative of the Ministry of Environment, the Circular Economy White Paper was drafted in 2022. It sets out the vision and development goals for the circular economy, and supports various stakeholders – the state, municipalities, entrepreneurs and individuals – in integrating the principles of circularity in the areas of production, consumption, lifestyle, culture and values. The white paper is nonbinding and relies on the creation of an enabling environment, environmental awareness, widespread cooperation and the involvement of all stakeholders. There is also a circular economy roadmap that breaks the policy down into specific areas of action such as waste and packaging. Binding regulations and target indicators in waste and packaging management come from EU directives. The National Circular Economy Action Plan is at a very early stage, with only one of six programs (website development) in the implementation phase.

The Principles of Green Public Procurement initially began as nonbinding recommendations but have gradually evolved into binding requirements established by the decree of the minister of climate. Starting in 2022, environmental criteria will be applied to the purchase of furniture, cleaning services, office IT equipment and copy paper. In 2023, these requirements will extend to motor vehicles.

Public procurement is managed by the Ministry of Finance, which coordinates green economy principles with the Ministry of Climate (MoC). The MoC is the leading entity in governing the circular economy. Unlike many other policy areas in Estonia, numerous executive agencies are not involved; only the Environmental Board is engaged, administering waste management policy and monitoring municipal compliance with existing regulations.

Citation:

Keskkonnaministeerium. 2022. "Ringmajanduse valge raamat." https://ringmajandus.envir.ee/sites/default/files/2022-10/Ringmajandus%20valge%20raamat%20%282%29.pdf

Italy

Score 8

Italy is one of the leading EU countries in the circular economy. However, the national average conceals a significant gap between Central-Northern Italy, which performs very well, and southern Italy, which has improved but still lags behind.

In 2022, following a public consultation under the Draghi government, the new National Strategy for the Circular Economy was published. This detailed document outlines sector-specific action plans, including consumer roles, green public procurement models, waste management, job creation, the establishment of new material supply chains, the circular use of natural resources, the role of digitalization, and environmental finance and taxation. The macro-objectives are well-defined and slated for achievement by 2035, with clear indicators and data sources monitored annually.

The National Recovery and Resilience Plan (NRRP) includes the "Green Revolution and Eco-transition" mission and the "Circular Economy and Sustainable Agriculture" mission. The latter allocates 1.5 billion euros to municipalities and local governments for constructing new treatment and recycling plants, upgrading existing ones, expanding separate waste collection, and innovatively treating and recycling absorbent materials, sewage sludge, and leather and textile waste. Additionally, 600 million euros are allocated to companies for innovative circular economy projects in strategic supply chains such as WEEE, paper, plastics, and textiles.

The governance of the strategy is based on the "Observatory on the Implementation of the National Strategy for Circular Economy," chaired and coordinated by the Ministry of Environment with support from ISPRA and ENEA (two public research institutes). The observatory includes representatives from the Ministry of Economic Development, Ministry of Finance, Ministry of Agriculture, Ministry of Infrastructure, Ministry of Education, Ministry of Health, Regions and Autonomous Provinces, and the Association of Municipalities.

Italy's performance in the circular economy strategy is among the best in the EU, though it ranks poorly in transitioning to fossil-free energy. The Draghi government demonstrated strong commitment by renaming the ministry to the "Ministry for Ecological Transition" and appointing a highly respected scientist to lead it. Conversely, the Meloni government reverted the name to the "Ministry for the Environment" and added "Energy Security," reflecting a shift in policy objectives and potentially lower commitment to the circular economy strategy.

Ministero per l'Ambiente e la Sicurezza Energetica. "La strategia nazionale per l'economia cirocolare." https://www.mase.gov.it/sites/default/files/archivio/allegati/PNRR/SEC_21.06.22.pdf

⁻ Circualr Economic Network. 2023. "5^ rapporto sull'economia circoalre in Italia." https://circulareconomynetwork.it/wp-content/uploads/2023/05/Rapporto-sulleconomia-circolare-in-Italia-2023-2.pdf

Score 8

According to Eurostat, Latvia's material footprint, or raw material consumption, is increasing, reaching 20.03 metric tons per capita, above the EU27 average. Meanwhile, the circular material use rate was about 5.4% in 2022 and has been relatively stable over the last three years. The recycling rate of all waste is reported to be around 70% in 2020 and has substantially increased since 2018.

Latvia adopted the Action Plan for Transition Towards Circular Economy 2020 – 2027 in 2020. The Action Plan has clearly defined goals and serves as a medium-term planning document for Latvia. The Action Plan is structured around seven measures: (1) transition to resource management; (2) resource productivity; (3) reuse of goods; (4) transition to services instead of goods; (5) improved management of materials and processes; (6) strengthened municipalities; and (7) an informed and engaged population.

The intermediate results on implementation progress have yet to be reported. Even though the Action Plan is comprehensive and linked with planning documents in other sectors (e.g., waste management, industrial policy), it requires the involvement of numerous public agencies, which could pose a risk for incomplete implementation or poor coordination. To ensure local-level implementation, the government has allocated grants for municipalities. The Action Plan includes specific indicators for measuring progress in 2027 – resource productivity, material use rate and public engagement reported and measured by Eurostat.

In addition to the Action Plan, several other initiatives support circular economy policy efforts, such as a tax on natural resources designed to minimize their use. In green public procurement and producer accountability schemes, participants are exempted from this tax.

Citation:

parejai-uz-aprites-ekonomiku-20202027-gadam

European Environment Agency. 2022. "Circular Economy Country Profile – Latvia." ETC CE Report 2022/5 – Latvia. https://www.eionet.europa.eu/etcs/etc-ce/products/etc-ce-products/etc-ce-report-5-2022-country-profiles-on-circular-economy/latvia-ce-country-profile-2022_for-publication.pdf

2.	Eurostat.	2023.	"Material		Footprin	ts –	Main		ndicators."	
https://ec.europa.eu/eurostat/databrowser/view/env_ac_rme/default/table?lang=en										
Eurostat			material			use		rate.		
https://ec.europa.eu/eurostat/databrowser/view/env_ac_cur/default/table?lang=en										
Eurostat.	2023.	"Recycling	Rate	of	All	Waste,	Excluding	Major	Mineral	Waste."
https://ec.europa.eu/eurostat/databrowser/view/cei_wm010/default/table?lang=en										
Par Rīcības plānu pārejai uz aprites ekonomiku 20202027. Gadam. https://likumi.lv/ta/id/317168-par-ricibas-planu-										

United Kingdom

Score 8

In July 2020, the UK government and the devolved administrations of Northern Ireland, Scotland, and Wales issued a joint statement affirming their commitment to the principles of the EU Circular Economy Package. The statement emphasized that leaving the EU had not diminished the UK's environmental ambitions, and that there was no intention to weaken current environmental protections after the end of the Transition Period. It explained that the measures proposed in the Circular Economy Package would be transposed into UK law, citing specific initiatives such as Scotland's "Making Things Last" strategy and Wales's target of zero waste by 2050.

The UK's approach to the circular economy is covered in various specific strategies. In England, the "Environmental Improvement Plan 2023," published on February 7, 2023, updates the 2018 25-year environment plan. The plan acknowledges that the pandemic had slowed progress towards environmental goals but outlines revised plans for moving towards a truly circular and sustainable economy.

There have been several actions taken or planned to implement these policies. For example, England banned single-use plastic plates, bowls, trays, containers, cutlery, and balloon sticks starting on October 1, 2023. A deposit return scheme for single-use drinks containers is scheduled to be introduced by 2025. This scheme was initially planned for Scotland in the summer of 2023 but was postponed due to objections from some companies and disagreements between Edinburgh and Westminster over including glass containers. Additionally, the implementation of Extended Producer Responsibility, a scheme to shift the costs of managing packaging waste to producers, has been delayed by 12 months. An October 2023 report by Zero Waste Scotland cites examples of businesses adapting well but also notes that "businesses still face significant challenges and cannot drive the transition to a circular economy alone."

Overall, commitments to a circular economy are firm, and there are sector-specific strategies to achieve the goal, but implementation challenges are proving tricky.

Citation:

https://www.gov.uk/government/publications/circular-economy-package-policy-statement/circular-economy-package-policy-statement

https://www.gov.uk/government/publications/environmental-improvement-plan/environmental-improvement-plan-2023-executive-summary

https://cdn.zerowastescotland.org.uk/managed-downloads/mf-omrmmdte-1698850972d

Austria

Score 7

Recent Austrian governments have made efforts to gradually transition toward a circular economy. The official "Austrian Circular Economy Strategy" was developed and is being led by the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK). The ministry closely collaborates with numerous actors from economics, science, administration, and civil society. The content creation was overseen by the Federal Environmental Agency and the Austrian Society for Environment and Technology. Activities began with an online survey involving more than 400 participants, followed by a vision workshop and over a dozen in-depth interviews with selected early adopters from various sectors. A series of online workshops provided comprehensive input on the transformation focal points selected for Austria.

The circular economy strategy is based on existing national strategies and programs, such as reports on resource use in Austria, the bio-economic strategy for the switch to renewable resources in the waste prevention program, the federal waste management plan in the area of efficient use of resources, and others. Further, there are important synergies with the energy research and innovation strategy, the national energy and climate plan (NEKP), and the mobility master plan 2030. This underscores the dominant view among Austrian decision-makers that a circular economy is essential for achieving climate goals.

Austria's resource consumption remains high by European standards. However, economic performance – as measured by resource productivity, or GDP per ton of material consumed domestically – has consistently improved over the past 15 years. This improvement is largely due to the country's efforts to decouple economic growth from resource consumption.

According to Eurostat, Austria's circularity rate was 12% in 2020. By 2030, it is projected that 18% of the material resources used in the economy will come from the circular-oriented return and reuse of materials. Despite some stabilization between 2010 and 2018, Austria's resource consumption levels remain elevated. In 2018, domestic material consumption reached 167 million tons, or 19 tons per capita per year – 5 tons above the European average.

Austria's material footprint is significantly higher than its domestic material consumption. In 2017, the per capita footprint was 33 tons, far exceeding the European average of 23 tons. One area where Austria performs well is in the recycling rate of all waste (excluding major mineral waste). In a recent comparative assessment, Austria ranked within the top third of more than twenty European countries.

The need to develop an effective monitoring regime to ensure reasonable progress across various areas has been recognized, leading to the creation of programmatic agendas. However, the effective monitoring of these complex processes remains in its early stages. In October 2023, a new "Task-Force Kreislaufwirtschaft" (circular economy), composed of scientific experts nominated by the federal government, held its constituent meeting. The task force is designed to survey and evaluate the implementation of a circular economy in Austria. Its tasks include reporting to the cabinet, allowing the government to assess progress in implementation and decide on additional measures deemed necessary based on these reports.

Citation:

https://www.bmk.gv.at/en/topics/climate-environment/waste-resource-management/ces.html

https://boku.ac.at/news/newsitem/76168

Czechia

Score 7

Czechia has the second-highest share of industrial output in its gross value added (GVA) among EU member states. The steel, metal, automotive, petrochemical, and construction sectors contribute significantly. The material footprint per capita - a measure of raw material use in final consumption - score (6.47) is higher than the OECD average (5.55), reflecting the weight of basic industries in the economy.

Following the EU action plan on the circular economy adopted in March 2020, the country has developed a national circular economy strategy, roadmap, and action plan. In December 2021, the government adopted the document "Strategic Framework of the Circular Economy of the Czech Republic 2040," abbreviated as Circular Czech Republic 2040. To implement this long-term strategy, the Circular Czech Republic 2022 – 2027 Action Plan was adopted, which sets ten strategic objectives: Products and Design; Industry, Raw Materials, Construction, Energy; Bio-economy and Food; Consumption and Consumer; Waste Management; Water; Research, Development and Innovation; Education and Knowledge; Economic Resources; and Circular Cities and Infrastructure.

On some of these topics, there were indications of specific government policies that could be adopted, while others remained vague. For example, firms using secondary materials where possible were to be favored for government contracts, waste composting was to be supported, means to give a second life to products were to be encouraged, and financial resources from the EU were to be used to support infrastructure in circular cities.

The Ministry of the Environment is the strategy coordinator. The implementation of the objectives involves the Ministry of the Environment, the Ministry of Industry and Trade, the Ministry of Finance, the Ministry of Education, Youth and Sports, the Ministry of Agriculture, and the Ministry of Local Development.

Waste management is central to the circular economy. The recycling score in Czechia is higher than the OECD average (6.1). However, more support is needed to develop recycling technologies and invest in new methods for recycling waste and individual components of municipal waste. An example is plastic waste collection, which is high in Czechia. Still, the main obstacles remain the high landfilling rate, the weak recycling infrastructure, and the long-discussed but yet-to-be-implemented deposit return system for PET bottles.

Citation:

https://www.mzp.cz/C1257458002F0DC7/cz/cirkularni_cesko_predstaveni/\$FILE/OODP-Predstaveni_Cirkularni_Cesko-20220507.pdf

Denmark

Score 7

The Danish government has an ambitious plan to reduce emissions by 70% from 1990 levels by 2030, as codified in the Climate Law. According to the European Commission, Denmark is a leader in the circular economy in the category of eco-innovation, but the country is relatively weak with regard to changing societal behaviors.

Danish governments have increasingly focused on circular economy initiatives. In 2021, the government published a national plan aiming at the development of a more circular economy (Handlingsplan for cirkulær økonomi). While the plan primarily outlines visions and aims for transforming the Danish economy, some political agreements have been reached. The European Commission notes that most plans are voluntary and suggests that this approach might be insufficient to meet the targets set in the 2021 strategy (European Commission 2022).

The plan has resulted in two political agreements with broad support in the Danish parliament. The first plan concerns waste. According to the plan, 80% of all plastic is to be removed from waste that is burned by 2030 (Political Agreement for Waste Sector). The second plan makes producers of goods economically responsible for their packaging when it is turned into waste. This law is a consequence of EU-initiated regulations and therefore cannot be attributed solely to the Danish government.

Plans are currently being negotiated for the transportation sector and agriculture, but the country has yet to pass a plan that sets clear targets for these sectors.

Citation:

Climate law:

https://www.retsinformation.dk/eli/lta/2021/2580

European Commission. 2022. "European Innovation Scoreboard 2023 Country Profile Denmark." https://ec.europa.eu/assets/rtd/eis/2023/ec_rtd_eis-country-profile-dk.pdf

Plan for Circular Economy in Demark

https://edit.mst.dk/media/s0rpgnej/handlingsplan-for-cirkulaer-oekonomi.pdf

Political Agreement for greening of waste sector:

https://edit.mst.dk/media/ouwjnpp5/aftaletekst-ofoelgning-paa-aftale-om-klimaplan-for-en-groen-affaldssektor.pdf

Political Agreement on producer responsibility on packaging:

https://edit.mst.dk/media/rwddqwbv/aftale-om-udvidet-producentansvar-for-emballage-og-engangsprodukter.pdf

France

Score 7

France adopted a Roadmap for the Circular Economy in 2018, which includes 50 measures designed to move the country toward a 100% circular economy (Ministry for an Ecological and Solidary Transition 2018). Transitioning toward a circular economy has been clearly set as a target since the 2015 passage of a law dealing with the energy transition and green growth. This law set a target in which 65% of domestic waste was to be recycled by 2025. The law especially focuses on households. Mandatory recycling for businesses and the third sector is also in place. In this case, recycling aligns with the principle that emitters are to pay directly for the price of their waste. The construction and the food processing sectors are also subject to specific regulations. These regulations support the development of specific industries for recycling construction materials (concrete, wood, glass, etc.). The general outlook of these policies is coherent and in line with the general objectives. Yet, specific sectors such as returnable recipients have successfully resisted regulation.

The 2015 law also officially forbids the use of built-in obsolescence for products. However, this has had only limited success.

In international comparison, France is ranked in the best group for circular material use rate, whereas it is placed in the middle rank with regard to its overall recycling rate.

The transition toward a circular economy is driven by the Ministry of Ecological Transition and its different agencies. However, coordination has not been effective, with other ministries having paid little attention to the issue, or acting to slow down the process to protect the interests of their sectors.

Monitoring of the transition is limited. The last publication of key indicators dates back to 2017, for instance (MEE 2017).

Citation:

MEE-SOeS. 2017. "10 indicateurs clés pour le suivi de l'économie circulaire." https://www.statistiques.developpement-durable.gouv.fr/10-indicateurs-cles-pour-le-suivi-de-leconomie-circulaire-edition-2017

Ministry for an Ecological and Solidary Transition. 2018. "Roadmap for the Circular Economy." https://www.ecologie.gouv.fr/sites/default/files/FREC%20anglais.pdf

Germany

Score 7

In general, the ministry responsible for circular economy policies is the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV). Germany does not yet have a circular economy strategy. However, as of April 2024, the government – particularly the BMUV – is developing a National Circular Economy Strategy (NKWS). The foundation for this strategy was published in April 2023. The strategy will be based on the EU Circular Economy Action Plan and is intended to serve as a framework for combining existing strategies relevant to raw material policy. Nevertheless, the strategies contributing to the goals of the NKWS, such as the National Bioeconomy Strategy and the National Lightweighting Strategy, are to remain independent.

The overall goal of the strategy is to reduce the consumption of primary raw materials. While no concrete measures to achieve this goal exist yet, they are supposed to improve market conditions for secondary raw materials (materials obtained through recycling) to increase their share in the use of raw materials. Additionally, the measures aim to promote resource efficiency and product design focused on long service life, circularity, and reparability (BMUV, 2023).

As the full strategy does not yet exist, there are no sector-specific action plans in the strategy so far. However, the strategy will focus on eight fields of action, such as plastic, metals, and textiles. The BMUV plans to monitor progress regarding the measures and goals through a set of indicators. While it is still unclear what indicators the BMUV intends to use, the plan is to adapt measures in line with the Agenda 2030 for Sustainable Development. Again, as the strategy is still being developed, no statement can be made on its comprehensiveness (BMUV, 2023).

There are, however, a few existing policies supporting the transition to a circular economy. As of 2012, Germany has a Circular Economy Act with the goal of protecting natural resources through a circular economy and promoting environmentally sound waste management to protect the environment and humans. The act was adapted in 2020 following an EU directive (BMUV, 2022).

An important area of German waste management policy is the product responsibility of manufacturers, which ensures environmentally sound waste prevention at the production level. This contributes to resource efficiency through various acts, such as the Packaging Act and the Waste Oil Ordinance (BMUV, 2020a).

Additionally, Germany introduced the German Resource Efficiency Program III in 2020, which includes 118 measures to improve efficiency and indicators to monitor set targets. Specifically, the program includes four goals for a circular economy, such

as promoting and preparing reuse. One priority measure is to facilitate donations by retailers to avoid the destruction of unusable products from returns, for instance (BMUV, 2020b).

The Circular Economy Act, after its adjustment in 2020, obligated federal institutions and agencies to give preference to the purchase of resource-friendly, low-waste, repairable, low-pollutant, and recyclable products as long as no unreasonable additional costs occur based on that purchase (BMUV, 2022). Public procurement will also be a field of action included in the NKWS. Whether current public procurement policy aligns with that strategy will be seen once the NKWS is published.

Overall, Germany had a resource productivity, defined as the GDP divided by domestic material consumption, of 2.8 compared to the EU27 average of 2.1 in 2022 (Eurostat, 2024a). Additionally, the country had a circular material use rate – the share of material recycled and fed back into the economy – of 13% in 2022, whereas the EU27 average was 11.5%, indicating an increase since 2010 (Eurostat, 2024b).

Lastly, market surveillance, aimed at ensuring the effective implementation of waste regulations within the context of a circular economy, is conducted by the states while considering regional conditions. The supreme state authorities responsible for waste law collaborate in the Federation/Länder Working Group on Waste (LAGA) to promote the exchange of information and experiences. Additionally, LAGA maintains relationships with relevant associations and works on the development of statutory provisions (BMUV, 2021).

Citation:

BMUV. 2020. "Product Responsibility." https://www.bmuv.de/en/topics/water-management/circular-economyoverview/overview-waste-policy/product-responsibility BMUV. 2020. "Deutsches Ressourceneffizienzprogramm III – 2020 bis 2023 Programm zur nachhaltigen Nutzung zum Schutz der natürlichen $https://www.bmuv.de/fileadmin/Daten_BMU/Pools/Broschueren/ressourceneffizienz_programm_2020_2023.pdf$ BMUV. 2021. "Marktüberwachung." https://www.bmuv.de/themen/kreislaufwirtschaft/marktueberwachung BMUV. 2022. "Kreislaufwirtschaftsgesetz." https://www.bmuv.de/gesetz/kreislaufwirtschaftsgesetz BMUV. 2023. "Die Nationale Kreislaufwirtschaftsstrategie (NKWS), Grundlagen für einen Prozess zur Transformation hin zu einer zirkulären Wirtschaft." https://www.bmuv.de/fileadmin/Daten_BMU/Download_PDF/Abfallwirtschaft/nkws_grundlagen_bf.pdf Eurostat. 2024a. "Resource Productivity." https://ec.europa.eu/eurostat/databrowser/view/CEI_PC030/default/table?lang=en 2024b. "Circular Material Use Rate." https://ec.europa.eu/eurostat/databrowser/view/cei_srm030/default/bar?lang=en

Japan

Japan was one of the first countries to adopt circular economy policies. It passed the Basic Act for Establishing a Sound Material-Cycle Society in 2000. The act obliges business operators to prevent or reduce waste from raw materials, improve cyclical usage and enhance the durability of products.

As a country that heavily relies on the import of resources, Japan has a natural interest in recycling. Local governments have developed relatively well-managed waste management and recycling systems. However, 80% of waste is still incinerated and much of the plastic waste is exported to non-OECD countries. The Fundamental Plan for Establishing a Sound Material-Cycle Society is reviewed every five years and supervised by the Ministry of the Environment. The fourth plan in 2018 examined three indicators: resource productivity, cyclical use rate and final amount disposed. In the first decade of the 21st century, Japan made considerable progress in all these fields, but there has been almost no improvement over the last decade. Numerical targets for 2025 include increasing resource productivity to JPY 490,000 per ton, cyclical use rate at inlet to 18%, cyclical use rate at outlet to 47% and reducing the final amount disposed to 1.3 million tons. In addition, new indicators have been added, such as the number of local governments working toward developing a regional circular and ecological systems, and reducing household food loss.

The Ministry of Economy, Trade and Industry (METI) has been promoting the circular economy initiative. Unlike the Ministry of Environment, METI is primarily concerned with promoting economic growth. The Circular Economy Vision 2020 treats environmentally friendly materials produced in Japan, such as marine biodegradable plastics, as a potential business opportunity. Cooperation between the Ministry of the Environment and METI has led to some ecological initiatives, such as the Resource Circulation Strategy for Plastics from 2019. The report also stresses that a circular economy relies on voluntary activities, with the government focusing on encouraging the adoption of appropriate measures. The concept of a circular economy as a business opportunity is also reflected in the fact that the government aims to help Japanese companies engage in the circular economy in order to make themselves more attractive to international investors by disseminating appropriate information.

Japan has promoted a circular economy in public procurement according to the 2000 Act on Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities, and the 2007 Green Contract Law. The criterion of environmental performance in procuring goods and services is obligatory for national government agencies and institutions, while local governments only have to make an effort at implementing ecological solutions. All government entities publish green procurement policies on a yearly basis.

Citation:

Arai, Risa, Martin Calisto Friant, and Walter J. V. Vermeulen. 2023. "The Japanese Circular Economy and Sound Material-Cycle Society Policies: Discourse and Policy Analysis." Circular Economy and Sustainability. https://doi.org/10.1007/s43615-023-00298-7

EU-Japan Centre for Industrial Cooperation. "Government Procurement and Circular Economy." https://www.eu-japan.eu/government-procurement-circular-economy

Ministry of Economy, Trade and Industry. 2020. "Circular Economy Vision 2020." https://www.meti.go.jp/shingikai/energy_environment/junkai_keizai/pdf/20200522_03.pdf

Ministry of the Environment. 2000. "The Basic Act for Establishing a Sound Material-Cycle Society." https://www.env.go.jp/content/900452892.pdf

Ministry of the Environment. 2018. "Fundamental Plan for Establishing a Sound Material-Cycle Society." https://www.env.go.jp/content/900453386.pdf

Slovenia

Score 7

In 2018, various stakeholders thoroughly examined the roadmap toward a circular economy in Slovenia before its adoption. Like other nations such as Denmark and Luxembourg, Slovenia introduced a national circular economy policy in 2018, identifying the food system, forest-based value chains, manufacturing, and mobility as key sectors and priority policy areas. In recent years, Slovenian governments have collaborated with EIT Climate-KIC on Deep Demonstrations, a model designed to facilitate a systemic transition to a circular economy. According to the Deep Demonstrations methodology, the first two phases of this transition were completed after 2018.

Further phases of the Deep Action Plan Demonstration are scheduled for implementation up to 2025, involving active participation from various stakeholders, including local communities, businesses, and policymakers. At the end of 2021, the Slovenian government adopted an implementation plan for a comprehensive strategic project aimed at decarbonizing Slovenia through the transition to a circular economy, encompassing the activities of 14 distinct programs. Different ministries oversee the implementation activities corresponding to their respective programs. Additionally, a single ministry or government agency has been designated as the coordinator to ensure the comprehensive and coordinated execution of the plan. By the end of 2022, the government had completed the Comprehensive Strategic Project's first phase and commenced the action plan's second phase.

The initiation of the second phase of the action plan coincides with Slovenia being selected to host the Circular Economy Hotspot 2025. This selection underscores the country's dedication to the principles of a circular economy and its commitment to sustainable development. Furthermore, the activities of the Strategic Research and Innovation Partnership – Networks for the Transition to a Circular Economy (SRIP – Circular Economy), which unites Slovenian economic entities, educational and research institutions, non-governmental organizations, and other interested parties, highlight the significance of the circular economy for both the state and society.

Nevertheless, a 2023 report by the European Court of Auditors presents a critical assessment of the sector, indicating that the transition within EU member states remains sluggish despite EU measures. These findings suggest that Slovenia made notable progress between 2015 and 2021, as reflected by its circular economy rates relative to other EU member states. Like many EU member states, Slovenia also acknowledged that it would develop a national strategic document on the circular economy by 2022.

Citation:

EIT Climate-Kic Deep Demonstrations. Decarbonising Slovenia. https://www.climate-kic.org/wp-content/uploads/2023/09/Climate-KIC_brochure_Decarbonising-Slovenia_FINAL-1.pdf

EIT Climate-Kic Deep Demonstrations. "Krožno, regenerativno gospodarstvo." https://www.gov.si/assets/ministrstva/MOP/Sporocilo-za-javnost/2022/01_Januar_2022/06_KIC/22_01_06_SJ_Krozno_brezogljicno_KIC_Deep-Demonstration-Slovenija-brosura.pdf

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European Environment Agency. 2022. "Circular Economy Policy Innovation and Good Practice in Member States." https://www.eionet.europa.eu/etcs/etc-ce/products/draft-report-for-dg-env_final.pdf

SRIP – Krožno gospodarstvo. 2024. "The European Circular Economy Hotspot 2025 Bo v Sloveniji." https://srip-krozno-gospodarstvo.si/the-european-circular-economy-hotspot-2025-bo-v-sloveniji

Spain

Score 7

The Spanish government recognizes the importance of incorporating the circular economy to promote the shift toward a sustainable development model. In June 2020, the Council of Ministers approved the Spanish Circular Economy Strategy 2030. The strategy aligns with the objectives of the two EU Circular Economy Action Plans, the European Green Pact, and the 2030 Agenda for Sustainable Development. The strategy sets several comprehensive quantitative objectives to be achieved by 2030, including reducing domestic material consumption by 30% relative to national GDP, using 2010 as a reference, and reducing waste by 15% compared to 2010 waste levels.

Three-year action plans outline the administration's measures for promoting the circular economy across different sectoral policies. The first action plan includes 116 measures to be implemented by 11 ministries.

The Circular Economy Council is responsible for monitoring the implementation and drafting of annual improvement proposals. The Interministerial Commission for Circular Economy comprises representatives from ministries whose policies directly impact the transition toward a circular economy. This commission must hold a plenary session at least once a year to coordinate line ministries and their sector policies in efforts to foster a circular economy.

The RRP includes a specific priority area (Component 12) titled "Spain's Industrial Policy 2030." Adopted in March 2022, this component comprises a series of reforms and investments intended to lay the foundation for implementing the Circular Economy Strategy and waste regulations (Government of Spain 2022).

By 2021, Spain ranked among the European countries with a lower circular material use rate. The electoral context has slowed down the implementation of the plans set forth in the government's commitment.

Citation

ambiental/temas/economia-circular/perte-en-ec.html

European Court of Audit. 2023. "Circular Economy."

United States

Score 7

The Biden administration has demonstrated a clear commitment to advancing a transition toward a circular economy. It is resolute in its efforts to tackle climate change, promote clean energy, and adhere to principles of environmental justice. The National Climate Strategy includes elements related to the circular economy, such as the promotion of sustainable practices and waste reduction (Mildenberger 2021).

The administration has issued executive orders related to environmental sustainability and climate action. Executive Order 14008, titled "Tackling the Climate Crisis at Home and Abroad," reaffirms the U.S. federal government's commitment to taking immediate action to reduce greenhouse gas emissions (Nussdorf 2021). It establishes a National Task Force, chaired by the National Climate Advisor and consisting of representatives from various federal agencies, to coordinate the federal government's response to the climate crisis (Brush and Bailey 2021). It directs the State Department to generate a strategy for integrating climate considerations into U.S. foreign policy and international relations.

One of the weaknesses of these executive branch-driven initiatives is their uncertain durability. Should Donald Trump win the next election, it would be quite easy for him to pass new executive orders overturning these plans.

In contrast, Biden's landmark "Inflation Reduction Act of 2022" was actually a major green industrial strategy bill (Bistline 2023). It includes billions of dollars in funding for clean energy, climate resilience, and sustainable infrastructure.

Citation

Laura Brush and Amy Bailey. 2021. "A Federal Policy Action Plan to Accelerate Local Climate Resilience." Center for Climate and Energy Solutions.

John Bistline. 2023. "Emissions and Energy Impacts of the Inflation Reduction Act." Science.

Benjamin Nussdorf. 2021. "Complications Combating the Climate Crisis in the Biden Administration." Trends.

Matto Mildenberger. 2021. "The Development of Climate Institutions in the United States." Environmental Politics.

Greece

Score 6

Since 2018, Greece has pursued a policy aimed at reducing the consumption of scarce resources, cutting emissions of climate-damaging substances, and minimizing waste production. In 2022, the government introduced the National Circular Economy Action Plan (National CEAP) for the 2021–2025 period to further these efforts.

Greece has identified key sectors for focused policy attention, including electronics, information and communications technology (ICT), batteries, vehicles, packaging, plastics, textiles, construction, buildings, food, and water and nutrients (European Environmental Agency 2022: 6 and 9). In 2023, the Life Integrated Project was

launched to monitor the implementation of the National CEAP Plan (CircularGreece 2023).

The Ministry of Environment and Energy has adopted a circular economy model (YPEN 2024). However, the concept remains relatively new to the Greek public. While the material footprint of Greeks has decreased over time, it is still among the highest in the OECD (OECD 2019). A 2021 public survey revealed that administrative hurdles and consumer behavior are the most significant barriers to transitioning to a circular economy (European Environmental Agency 2022: 37).

Regarding green public procurement, Greece has implemented a Green Public Procurement Action Plan for 2021–2023, setting targets for 15 product and service categories, with goals ranging from 20% to 80% of public procurements depending on the category (European Environmental Agency 2022: 20).

Greece's industrial production of durable goods is limited compared to larger EU economies, leading to reliance on imports. Although the government has not yet fostered a market for used and refurbished products, NGOs and private companies in various cities have begun to take initiatives.

Recycling, managed by municipalities, has shown uneven results, and Greece ranks among the worst performers in the EU for recycling rates of all waste except major mineral waste (Eurostat 2022). However, 15 Greek municipalities have installed marine litter collection stations that collect plastic waste from the seabed, sea, and coasts. The collected materials are then distributed to companies involved in upcycling, with the aim of producing new plastic products (European Environmental Agency 2022: 31).

Greece's National Recovery and Resilience Plan includes measures for waste management reform, energy renovation of buildings, and support for e-mobility (Greek Government 2024).

Citation:

CircularGreece. 2023. "CircularGreece." https://circulargreece.gr/

European Environmental Agency. 2022. "Circular Economy Policy Innovation and Good Practice in Member States." https://www.eionet.europa.eu/etcs/etc-ce/products/draft-report-for-dg-env_final.pdf

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YPEN. 2024. "Circular Economy." https://ypen.gov.gr/perivallon/kykliki-oikonomia/#:~:text=%CE%97%20%CE%BA%CF%85%CE%BA%CE%BB%CE%BB%CE%BA%CE%BA%CE%AE%20%CE%BF%CE%B9%CE%BA%CE%BF%CE%BD%CE%BF%CE%BC%CE%AF%CE%B1%20%CE%B5%CE%AF%CE%BD%CE%BD%CE%B1%CE%B9%20%CF%80%CE%BD%CE%B1,%CE%BA%CE%B1%CE%B9%20%CF%80%CE%B9%CE%BF%CF%83%CE%B9%CE%BD%CE%BF%CF%85%CF%82%20%CF%80%CF%81%CE%BF%CF%85%CF%82%C2%BB

Lithuania

Score 6

The government is largely committed to transitioning to a circular economy. In its program, the coalition government formed in late 2020 committed to bringing recycling rates up to the EU average by 2024, and to shift completely to a circular economy by 2050. Concrete measures leading the way to a circular economy were included among the priorities in the government program. In 2023, the government adopted guidelines for transitioning to the circular economy by 2035.

In its annual report on activities for 2022, the government noted that in 2021, product utilization rates remained three times lower than the EU average and acknowledged that it would not achieve the recycling goal set for 2024 (The Government Annual Report for 2022, 2023). This is also suggested by the circular material use rate (circularity index), which was the seventh-lowest in the EU and less than half the EU average, and which has not shown any significant progress since 2015.

Citation:

The Seimas. 2020. The Resolution on The Program of the Eighteenth Government of Lithuania, December 11. No. XIV-72.

The Government Annual Report for 2022. 2023. "17 May." https://epilietis.lrv.lt/lt/naujienos/seimui-teikiama-vyriausybes-2022-metu-veiklos-ataskaita

Lithuanian Ministry of the Environment. "The Guidelines of Lithuania's Transition to Circular Economy by 2035 (in Lithuanian)." https://am.lrv.lt/lt/veiklos-sritys-1/tarsos-prevencija/strateginis-pasekmiu-aplinkai-vertinimas/aplinkos-ministerijos-inicijuoti-spav/lietuvos-perejimo-prie-ziedines-ekonomikos-iki-2035-m-gairiu-strateginis-pasekmiu-aplinkai-vertinimas/

Eurostat. "Circular material use rate." https://doi.org/10.2908/SDG_12_41

New Zealand

Score 6

While New Zealand is actively exploring and developing strategies to transition toward a more circular economy, there is no single, comprehensive national strategy or roadmap with fully defined and binding goals for this transition.

Several notable initiatives aim to foster a more circular economy. For instance, in early 2023, the Labour-Green coalition announced a new recycling project that will prevent approximately 45,000 tons of carbon emissions by 2035. As Environment Minister David Parker said, the new recycling strategy "commits us to becoming a low-emissions, low-waste circular economy by 2050" (RNZ 2023). Simultaneously, the government took steps to integrate circular economy principles into public procurement – for example, by developing sustainable procurement guidelines encouraging public agencies to consider environmental and social impacts when purchasing goods and services (New Zealand Government Procurement n.d.).

While these efforts indicate a growing interest in and commitment to transitioning to a circular economy, the absence of a singular, fully articulated strategy is problematic. For example, the Labour-Green coalition committed to building new waste-to-energy plants, which have been criticized by environmental researchers for not creating incentives to reduce waste (Srinivasa 2023). Similarly, a 2022 report by the Sustainable Businesses Network argues that encouraging the growth of circular business models requires more fundamental reforms, as "current regulation, taxation and accounting practices don't provide the necessary carrots and sticks to support a circular economy" (RNZ 2022).

Citation:

New Zealand Government Procurement. n.d. "Reducing Emissions and Waste." https://www.procurement.govt.nz/broader-outcomes/reducing-emissions-and-waste/

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Norway

Score 6

The 2021 Norwegian Circular Economy Strategy identifies seven central value chains: electronics/ICT, batteries and vehicles, packaging, textiles, plastics, construction, and food, mirroring EU initiatives. The current government has signaled a new national strategy, but this has not materialized as of December 2023. Generally, the current government uses the term "the green transition" rather than the circular economy.

Several sectoral strategies have been developed by interest associations and various coordinating networks, sometimes involving representatives from public sector authorities, such as Statistics Norway and the Environmental Agency. The most important driver for regulatory change regarding the circular economy in Norway is the EEA agreement, which integrates Norway into the internal market. Most legislative changes related to the Commission's Circular Economy Action Plan are likely relevant to the EEA, making all related regulations applicable to Norway. The formal Norwegian reactions to proposed policy changes have been mostly positive.

There are binding legislated targets for material recycling in household waste: for organic waste, 55% by 2025, increasing to 70% by 2035; and for plastics that can be materially recycled, 50% by 2028, increasing to 70% by 2035. The Tax Reform Commission (Skattelovutvalget) of 2022 mentioned tax reform for a circular economy, but as of December 2023, this has not produced any observable consequences.

The EU Court of Auditors Special Report 17/2023 concludes that achieving circularity targets in EU member states will be challenging given the current pace of

transition. This is likely also true for Norway, which starts from a very low level of circularity in its economy.

Citation:

European Court of Auditors. 2023. "Special Report 17/2023: Circular Economy – Slow Transition by Member States Despite EU Action." https://www.eca.europa.eu/ECAPublications/SR-2023-17/SR-2023-17_EN.pdf

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Miljødirektoratet. 2023. "Sirkulær økonomi." https://www.miljodirektoratet.no/ansvarsomrader/avfall/sirkular-okonomi/

Ireland

Score 5

Ireland's Circular Economy Programme for 2021 to 2027 (EPA 2021) is supported by the Circular Economy Act of July 2022, which incorporates the previous statutory National Waste Prevention Programme. The Act established a dedicated cross-government circular economy unit within the Department of the Environment, Climate and Communications to oversee its implementation. This unit collaborates with a Circular Economy Working Group that includes relevant departments, the EPA and local governments. Additional cross-government committees and working groups are also in place. The Bioeconomy Action Plan 2023-2025, released in October 2023, proposes both vertical and horizontal governance arrangements to ensure cross-government cooperation. It includes the formation of a high-level Bioeconomy Implementation and Development Group composed of senior public servants, a National Bioeconomy Forum, and an Expert Advisory Group.

Specific actions under the Circular Economy Programme include adopting food waste prevention programs, promoting eco-design, conducting awareness programs, providing funding supports, encouraging reuse and repair, and integrating waste prevention criteria into public and private procurement. The program focuses more on improving efficiency through measures rather than avoiding and shifting systems and structures. It follows an information deficit model of behavior change rather than aiming for systemic shifts that would transform the structural inertias embedding high consumption practices in institutions, markets and society. Consequently, the program aligns with the first wave of circularity programs reviewed by the EEA (2022). Indicators are not reported in the national strategy and policy and research do not appear to focus directly on reducing material consumption. Considerable evolution will be required to align with the state of the art in sustainable consumption and production, if the policy is to deliver absolute reductions in an equitable manner.

Citation:

Environmental Protection Agency. 2021. "The Circular Economy Programme 2021-2027." https://www.epa.ie/publications/circular-economy/resources/the-circular-economy-programme-2021-2027.php Government of Ireland. 2023. "Bioeconomy Action Plan 2023-2025." https://www.gov.ie/en/publication/a1bb6-bioeconomy-policy/#

EEA. 2022. "Circular Economy Policy Innovation and Good Practice in Member States." https://ec.europa.eu/docsroom/documents/2631/attachments/1/translations/en/renditions/pdf

Netherlands

Score 5

The Netherlands has had a circular economy (CE) strategy since 2016. Its goals include a 50% reduction in raw material consumption by 2030 and a full-fledged CE by 2050. The strategy has been updated several times. The National Circular Economy Program (NCPE) 2023 – 2030 is the most recent such update. It aims for four general subgoals: 1) reducing raw material usage, for example via a significant increase in circular procurement (see Manifest Maatschappelijk Verantwoord Opdrachtgeven en Inkopen (MVOI) 2022 – 2025); 2) substituting raw material, for example by mandating a percentage of recycled content; 3) extending product lifetimes, especially through a registry for repairers of electric and electronic goods; and 4) transitioning to high-grade processing, for example by reducing waste incineration by subnational governments and firms, and improving waste separation by residents.

Subgoals are directed to the overall most impactful product groups: consumer goods (electronics, textiles, packaging), plastics (in packaging, industry and agriculture), construction (housing, concrete viaducts and bridges, road surfaces) and manufacturing (wind farms, solar PV systems, climate control systems).

The NCPE 2023 is the national policy response to continuous progress monitoring and policy evaluation, most recently the second Integrated Circular Economy Report 2023, published by the National Environmental Assessment Agency (Planbureau voor de Leefbaarheid, PBL). This is the coordinating body of a consortium of knowledge institutes permanently engaged in improving and expanding CE indicators and their observation and measurement. The findings of monitoring run counter to the image of the Netherlands as a frontrunner in the CE transition. This image is based merely on its 2022 top score in the EU in the category of circular material use rate. The overall realistic conclusion is that limited progress is visible in parts of the transition process, and that there are no clear signs of transition acceleration. This suggests that accelerating the transition process is crucial, given the significant level of ambition. Carrying out an acceleration and intensification of CE policy will require a cabinet-wide approach and intensive involvement of all ministries. Ensuring that raw materials are handled significantly more efficiently will require changes in the rules of the game, tax incentives and international trade that affects the policy areas of different ministries.

In the Rutte IV government, the secretary of state (a cabinet member ranked beneath a minister) for infrastructure and water management was responsible for coordinating the transition. This means that she was tasked with implementing initiatives to accelerate the transition throughout the Netherlands and in all sectors, working together with all policy partners in the area of the circular economy. The current product chains involve the Ministry of the Interior and Kingdom Relations

(construction, plus coordinating ministry for spatial planning), the Ministry of Economic Affairs and Climate (industry, plus coordinating ministry for climate), the Ministry of Agriculture, Nature and Food Quality (agriculture), the Ministry of Infrastructure and Water Management itself, and the Department of Foreign Trade and Development Cooperation (in Dutch: Buitenlandse Handel en Ontwikkelingssamenwerking or BHOS). Once every two years, the secretary of state holds bilateral meetings with the ministers of these ministries on the progress made to see whether any adjustments are needed.

In typical Dutch collaborative governance, or the poldering style, the secretary of state chairs a National Administrative Consultation Platform (in Dutch: Bestuurlijk Overleg). All parties involved are represented in this group, including the Association of Netherlands Municipalities, the Association of Provinces of the Netherlands, the Association of Water Authorities, VNO-NCW, MKB-Nederland, MVO Nederland, FNV, VCP, Natuur & Milieu, and De Jonge Klimaatbeweging, as well as the ministries involved in implementation and the chairpersons of the transition teams. It is still being investigated how knowledge institutes, financial institutions and consumer organizations can be part of the National Administrative Consultation Platform.

All in all, it looks like everything is "Dutch normal." From the content perspective, circular economy policy, governance procedures and monitoring look fine at first glance; but a look inside the implementation practices and collaborative arrangements, along with an evaluation of policy outputs to date, reveals a policy of delay, procrastination and deliberate blind spots. Judging by deeds rather than words, the government's real commitment to transitioning to a circular economy is hesitant and questionable.

Citation:

PBL. 2023. "Integrated Circular Economy Report."

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RIVM, Circulaire economie: wat we willen weten en kunnen meten

Systeem en nulmeting voor monitoring van de voortgang van de circulaire economie in Nederland, Den Haag, 2018

Provincie Noord-Brabant. 2021-2023. "Meerwaarde met Kringlopen, Uitvoeringsagenda. Circulaire Economie."

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 $Rijksoverheid.nl. "Overheden \ maken \ impact \ met \ Maatschappelijk \ Verantwoord \ Opdrachtgeven \ en \ Inkopen." \ URL \ Nieuwsbericht \ | \ 24-11-2022$

Poland

Score 5

Poland's approach to the circular economy remains in its early stages, primarily aligning with basic regulations set by the EU. However, data from 2015 – 2021 revealed a regression in Poland's circularity rate by 1.8% and a notable 9.1% increase in waste generation (European Court of Auditors 2023). Eurostat indicates that Poland's consumption footprint surged by 20% in 2021 compared to 2010, with the country having the second-largest footprint in the EU after Malta. This was well above the EU average, which saw a mere 4% increase. Furthermore, Poland's material footprint exceeded the EU average, with 19.9 tons of raw material consumption per capita in 2022. Poland also fell below the EU average in terms of its circular material usage rate, at just 8.4% (Eurostat 2023).

The Circular Economy Roadmap of 2019 outlined initiatives targeting the design and production phases, emphasizing goals including innovation, industry-research collaboration, creation of a European market for secondary raw materials, and the promotion of high-quality sustainable production processes. Though the roadmap was spearheaded by the Ministry of Economic Development and Technology, its nonbinding nature and vague legal framework led to challenges in overseeing the program's implementation. The roadmap emphasized that the concept's effectiveness should be assessed based on the outcomes of these initiatives.

In July 2022, Poland adopted a new Productivity Strategy 2030 to guide its transition to a circular economy. The strategy introduced unique indicators like "resource productivity," deviating from those used by the European Commission. Additionally, it acknowledged specific regional features by outlining programs and goals at the voivodship level. While Poland included measures to support the circular economy transition in its National Recovery and Resilience Plan, funding was suspended amid conflicts over the rule of law.

European Court of Auditors. 2023. "Circular Economy. Special Report 17/2023. Slow Transition by Member States Despite EU Action." https://www.eca.europa.eu/ECAPublications/SR-2023-17/SR-2023-17_EN.pdf

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Ministry of Economic Development and Technology. 2022. "Strategia Produktywności 2030." https://www.gov.pl/web/rozwoj-technologia/strategia-produktywności-2031

Portugal

Score 5

Portugal has made significant progress in its legislative and planning framework, particularly following the introduction of Circular Economy Action Plans (CEAPs) since 2017. The country has effectively implemented national policies promoting the circular economy, ensuring alignment with European Commission guidelines and overarching climate policies (Geerken et al., 2022). These national policies are

underpinned by green taxation, voluntary agreements, and frameworks such as the Portugal 2020 environmental network. They extend their influence to regional and sectoral levels. Support mechanisms include the Environmental Fund, the Fund for Technological Innovation and Circular Economy, and the Portugal 2020 framework.

This policy direction is encapsulated in a comprehensive strategy devised for the 2017 – 2020 period (not yet updated as of 2024) known as the Action Plan for Circular Economy (APCE). As outlined by the Ministry of Environment in 2017, the APCE strategy sets forth clear goals, indicators, and targets for the years 2030 and 2050. It is further detailed in sector-specific plans such as the strategic plan for urban waste management for 2030 (see Presidência do Conselho de Ministros, 2030).

A critical shortcoming is the monitoring of the strategy and the lack of effective interministerial coordination. Although the circular economy strategy falls within the purview of the Ministry of Environment, specifically under the Portuguese Environment Agency (Agência Portuguesa do Ambiente), it inherently requires collaboration across various government departments. To bolster interministerial coordination, governance of the APCE was envisaged to be overseen by an Interministerial Committee for Air and Climate Change (CIAAC, now known as the Climate Action Commission) and an APCE coordination group that includes representatives from 12 ministries and local authorities. Despite this structure, these coordinating bodies have not been effective in monitoring the progress of the APCE.

Furthermore, an examination of recent data uncovers some concerning trends in the domain of the circular economy. A comprehensive study on environmental performance by the OECD in 2023 indicates that Portugal is trailing in terms of circular economy implementation (OECD, 2023). This shortfall is partly due to the fact that municipal waste generation increased at a faster pace than GDP until 2019 – stabilizing in 2020 – resulting in Portugal having one of the highest landfilling rates. Additionally, data from the European Environment Agency positions Portugal among the European countries with the lowest municipal recycling rates.

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Slovakia

Score 5

The Slovak Republic lags behind both EU and global averages in circular economy (CE) practices, with only 5% of secondary materials reintroduced into the economy. Key weaknesses include low public and private research support and an inconsistent institutional framework for eco-innovations (FinReport, 2023).

The Ministry of Environment has identified CE as a priority in its Envirostrategy 2030, dedicating a chapter titled "A Greener Slovakia." Initially, key stakeholders began responding to global developments and assessing progress toward CE.

The government follows indicators set by the European Commission, but the most recent evaluation report (2021) still relied on OECD indicators. According to the OECD (2022), current CE policies in Slovakia are relatively advanced in waste management. However, there remains a significant implementation gap.

The Circular Slovakia Initiative, which emphasizes the need for environmental action and a climate crisis response, has become an association of legal entities. One of its founding partners is the Ministry of the Environment, and it brings together private, public, and nonprofit sectors. The Ministry of Economy and the Ministry of the Environment are responsible for CE, with the main unit being the CE Section at the Ministry of Economy. However, a determined and well-coordinated approach to CE development is lacking, as governance and implementation of CE initiatives are relatively weak in Slovakia (Beckmann et al., 2021: 23).

A framework for transitioning to a CE exists within Envirostrategy 2030, outlining clear goals that include cooperation among ministries, the private sector, and municipalities. Key challenges for Slovakia include reusing, recycling, waste reduction, and fostering eco-innovations (Liebscherová & Tóthová, 2019). A national strategic document is under preparation. According to the OECD (2022), a national CE roadmap is essential to guide the direction of change and identify key areas for focus. Despite positive trends, future materials consumption in Slovakia will increase by more than 50% by 2050 compared to 2017 if no additional policy measures are introduced. The Slovak CE roadmap should emphasize using economic instruments to promote sustainable consumption and production, focusing on the construction sector and food and bio-waste value chains as areas with substantial potential for resource efficiency and circularity (OECD, 2022).

The Third National Action Plan, adopted in 2016, focuses on green public procurement. However, its effectiveness remains influenced by the "price" criterion. By 2030, green public procurement should constitute at least 70% of the total value of public procurement in Slovakia. Additionally, supermarkets will be prohibited from disposing of food waste (European Court of Auditors, 2023).

Citation:

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Switzerland

- Score 5 In 2010, the federal government signaled the move to a green economy. It decided to take action in the following areas (FOEN 2013):
 - 1) A cleantech master plan (i.e., a master plan for using more clean technologies (cleantech), meaning technologies that do not use a large quantity of energy or environmental resources);
 - 2) Resource-efficient information and communication technologies (ICTs);
 - 3) Information on the environmental impact of products;
 - 4) Greening the tax system;
 - 5) Creating a global indicator of welfare; and
 - 6) Drafting legislation on the issues of resource-efficiency and sustainability.

In 2020, the Federal Office for the Environment concluded: "Despite efficiency gains, Switzerland is currently far from achieving the sustainable use of resources... Switzerland is contributing to [the limits of the resilience of climate stability and ecosystems] through its high consumption of resources per capita. Additional measures are essential so that future-proof, resource-conserving consumption and production models can be strengthened....There remains much to be done to realize [the vision of a green economy and the resource-conserving economy]. Two-thirds of total environmental pollution occurs in the food and agriculture, housing and construction and mobility sectors. Resource-conserving consumption and production models can only be achieved by commitment from government, including cantons and municipalities, and all sectoral policy areas, the private sector, science and the whole of society. Along with consumers, business has to play a central role. A reliable and advantageous underlying government framework also has a major part to play" (FOEN 2020).

The European Environmental Agency concluded in its 2022 country report on Switzerland: Currently, "Switzerland ... does not have a dedicated national or regional circular economy (CE) vision, strategy, action plan or roadmap. ... In 2020, a parliamentary initiative to strengthen the Swiss circular economy has been initiated... This would be implemented as a change of the Environmental Protection Act. The political decision and, in the case of a referendum, a popular vote are expected for 2024" (EEA 2022).

In a similar vein, the OECD reports in its recent country survey: "Switzerland has successfully decoupled economic growth from domestic greenhouse gas emissions and material use, but environmental pressures remain. A high standard of living together with a relative lack of domestic raw materials and energy resources necessitate high imports. As a result, the material footprint per capita is significant and a large share of the associated environmental damage occurs abroad. Municipal waste per capita is among the highest in the OECD and municipal waste generation has not been decoupled from consumption, despite a number of policy instruments. Switzerland has set a net-zero greenhouse gas emissions target by 2050, but sufficient measures to achieve it remain to be adopted. Switzerland prices its CO2 emissions at high rates, but various exemptions to the carbon tax reduce its effectiveness. In addition, plans to further raise the carbon tax and introduce an airticket levy have recently been halted. Environmentally harmful subsidies and tax exemptions in agriculture, forestry and public transportation give rise to a pricing and incentive system that distorts the link between market signals and costs of environmental damage across sectors."

There is room for improvement when it comes to aligning investment portfolios with climate goals and promoting eco-innovation (OECD 2022: 12). However, this does not mean that Swiss environmental policy is lacking (see the list of policies and their limitations in Ingold/Nahrath 2021: 850 - 851). Rather, the various policies are not integrated in such a way so as to deliberately target a circular economy. There are several reasons for this lack, including the following:

- 1) The competencies for environmental and economic policy are distributed across municipalities, the cantons and the federation. The federal agency for the environment is relatively weak in resources, and it cannot closely steer and monitor the implementation of eco-environmental policies on the ground.
- 2) Switzerland has eschewed the idea of an explicit and deliberate national industrial policy. Rather, policymaking takes place at various levels, with federal economic policy being very heterodox, pragmatic and poorly integrated. It is a policy of muddling through (Emmenegger 2021).
- 3) The Federal Office of the Environment adds also other political reasons such as: "In the past, there were no majorities for a political breakthrough in the field of green economy / circular economy," as well as the lack of a "sense of urgency in the economy and among citizens" (EEA 2022: 9).
- 4) Finally, according to the Federal Office of the Environment, there are several

economic reasons, including:

- a. "Comparatively low prices for unsustainable products and primary resources (externalities are not internalized); there is no incentive, and businesses underestimate the potential for cost-cutting."
- b. The slow diffusion of resource-efficient technologies.
- c. Low levels of acceptance of secondary raw materials on the marketplace.
- d. Insufficient transparency in supply chains (EEA 2022: 9).

Citation:

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Australia

Score 4

The government has developed framework documents expressing Australia's commitment to developing a circular economy (CE) (DCCEW 2023). It has also led discussions with the private sector to support this objective. Thus, the official position and contributions are consistent with a strong commitment to transitioning to a CE. However, progress toward this goal has been slow, falling short of the aspirations outlined in the framework documents. A recent report (Ghafoor et al. 2023) provides evidence that the uptake of CE principles has been low. This can be attributed to a lack of incentives, specific regulations, and knowledge. These shortcomings highlight weaknesses not only in the dissemination of CE policies and ideas but also in the tools and mechanisms (i.e., incentives) introduced to support CE.

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Canada

Score 4

Canada is a resource-based nation, and circular thinking does not work well in the context of bulk exports of often carbon-intensive and difficult-to-recycle resources such as coal or heavy oil. The federal government would like to see a "North American" effort, believing this can be achieved through the deployment of economic policy instruments that can help "tilt the playing field" in favor of non-virgin materials and incentivize circular business models.

The policy instruments available to promote the circular economy include taxes and fees for waste disposal at both landfills and incineration facilities. These measures incentivize waste prevention and increased waste recovery. Additionally, different pricing for various materials going to landfills can be implemented, often varying prices based on the volume of waste. For example, higher prices may be set for materials that are more costly to manage or have high recycling potential.

Product taxes and fees to discourage the exclusive use of virgin materials and products such as single-use plastics are also possible, as are tax incentives on secondary and recycled materials to encourage more repair, reuse, refurbishment, remanufacturing, and recycling activities.

Government "green" procurement efforts are also expected to help drive consumer shifts and create demand for circular products and solutions. In Canada alone, CAD 200 billion is spent annually through public procurement.

The federal government argues that several models consider circular procurement criteria and eco-design requirements. These models can increase the potential for durability, resource efficiency, reuse, recyclability, refurbishment/remanufacturing, and the potential to buy recycled. The models differ at the product, supplier, and system levels.

At the system level, they include public-private partnerships and cooperation with other organizations on sharing, as well as rent/lease, supplier take-back systems, including reuse, recycling, refurbishment, and remanufacturing. At the supplier level, in addition to take-back systems, they include designing for disassembly, reparability of standard products, external reuse/sale of products, and internal reuse of products.

At the product level, they include clearly identifying product materials, ensuring products can be disassembled after use, using recyclable materials, maximizing resource use efficiency, and pricing that reflects the total cost of ownership.

Several federal grant programs are available for companies, academics, and innovators to develop new technologies that enable circular resource flows.

However, the 2022 Federal Budget contained only a few mentions of the circular economy, allocating just \$31.9 million toward plastics innovation and \$70.6 million toward standards, data, and research initiatives related to plastics waste reduction. Thus, only minor initial investments have been made.

Citation:

https://www.canada.ca/en/services/environment/conservation/sustainability/circular-economy/circular-north-america/discussion-paper.html #toc11

Hungary

Score 4

Hungary's circularity rate of 8.7% is well below the EU average of 12.8% (ETC 2022:5), indicating that the circular economy is still in its early stages of development (Gulyas 2022:4). Hungary's circular economy strategy is embedded in the Environmental and Energy Efficiency Operational Program Plus within the European structural funds. This strategy predominantly targets small- and mediumsized enterprises, focusing on key sectors like biomass, food, construction and plastics. The goals for 2040 include doubling resource productivity, increasing circular material use and boosting cyclical jobs by 30%. The Circular Economy Platform, established in 2018 and initiated by the Business Council for Sustainable Development, which comprises 130 leading companies operating in Hungary, facilitates collaboration between businesses, government and researchers. In 2023, a Circular Economy Academy was founded. Additionally, a new waste management authority was set up in 2021, aimed at transforming the waste management market by introducing a concession system (Gulyas 2022: 3). The national concession was awarded to the partially state-owned oil and energy company MOL, effective as of 2023 (MOL Group 2022). An institutional upgrade includes a new unit in the newly established Ministry of the Economy, with a state secretary exclusively responsible for the circular economy. Single-use plastic was banned in 2021, and a new depositbased collection system was announced for most recyclable plastic food packaging in 2023, effective from January 2024 (Hungary Today 2023). Challenges remain with regard to policy implementation, with leading international organizations recommending that Hungary strengthen its framework for waste management. Among the topics of criticism have been the recentralization of waste-related governance, financial problems especially at the local level, and suboptimal crossministerial collaboration. There is a need to consolidate the relevant plans and documents into a national strategy for the circular economy (OECD 2023:12), as they are currently dispersed across various policy fields and legal and operational sources. The implementation of the policies and measures mentioned in these documents is relatively weak, and better involvement of stakeholders, such as NGOs and academic institutions, is necessary. Although several steps in this direction have been taken, the reform process in this field has only just begun.

Moreover, the government's commitment to the circular economy is questioned by Prime Minister Orbán's rhetoric, as he recently expressed support for "green energy" but rejected "green ideology" at a party congress (Magyar Nemzet 2023).

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Israel

Score 3 There is no circular economy strategy or roadmap, and the development of such a roadmap is only in its very early stages within the Ministry of Economy. However, there is a strategic waste disposal plan. The main goal of the plan is to reduce the amount of waste buried from 80% at present to 20% by 2030. The plan has a detailed roadmap and clearly defined goals. The action plans are geographically rather than sector specific, and encompass plans for waste disposal within municipal borders and between municipalities.

> The overall plan does not address all aspects in detail and cannot be seen as comprehensive. A more detailed plan was supposed to be developed in 2021; however, this did not take place. The last report by the Ministry of Environmental Protection on the subject was published in March 2022. Most efforts and funding were targeted toward building and improving waste disposal facilities and recycling centers. No progress has been made regarding new regulations. Since the change in government in December 2022, the strategic plan has not been discussed.

> There are sporadic projects promoted by the Ministry of Environmental Protection. For instance, the Ministry of Environmental Protection and the Ministry of Economy have a joint project involving industrial partners, which aims to repurpose waste from one factory as material for use in another factory. The ministries help coordinate between the various industrial partners. The project began in 2021 and has resulted in 140 deals being signed so far.

Address | Contact

Bertelsmann Stiftung

Carl-Bertelsmann-Straße 256 33311 Gütersloh Germany Phone +49 5241 81-0

Dr. Christof Schiller

Phone +49 30 275788-138 christof.schiller@bertelsmann-stiftung.de

Dr. Thorsten Hellmann

Phone +49 5241 81-81236 thorsten.hellmann@bertelsmann-stiftung.de

www.bertelsmann-stiftung.de www.sgi-network.org

