G7 Stocktake on Energy, Environment, and Climate Change

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Contents

Introduction

Since its inception in 1975, the G7 has shaped international leadership and catalyzed action on energy, environment, and climate issues. Representing close to 40% of the global economy,[1] the G7 has the capacity to mobilize significant investments to drive energy, biodiversity, environment, and climate action at scale. G7 members are also well positioned to lead changes in related sectors such as transportation, manufacturing, agriculture, finance, and digital technologies. Together, they possess unparalleled technological expertise and research and financial capacity, enabling them to develop and deploy solutions to complex energy and environmental challenges.

The year 2025 presents a critical opportunity for G7 members to reflect on their collective progress in advancing global efforts to address energy security, independence, and transitions, to protect the natural environment, and to take action to mitigate and adapt to climate change. Since 2015, G7 leaders have made 34 G7 commitments to be delivered by 2025, including ten on the environment, nine on climate change, and four on energy.[2]

The year 2025 also marks the 50th anniversary of the G7 and serves as the midpoint of this pivotal decade, as the world advances towards 2030 to fulfill major international commitments under the Paris Agreement on climate change, the Kunming-Montreal Global Biodiversity Framework, and the United Nations Sustainable Development Goals (SDGs).

G7 leaders and ministers have made many commitments on energy, climate, and environment that align with these timelines and goals in key areas related to renewable capacity, energy storage, decarbonized power systems, ocean governance, and climate finance.[3] This year thus represents a key opportunity to take stock of the G7's progress on these goals, supporting a vision for G7 cooperation to deliver on its 2030 commitments and beyond.

This report provides a Stocktake of G7 actions on energy, the environment, and climate change ("G7 Stocktake") for Canada's 2025 G7 Presidency. It reviews G7 cooperation in these areas, highlighting concrete progress and notable contributions.

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[1] IMF: GDP, current prices (2025): https://www.imf.org/external/datamapper/NGDPD@WEO/OEMDC/ADVEC/WEOWORLD

[2] G7 Pledges to Accelerate SDGs, Transition from Fossil Fuels This Decade, International Institute on Sustainable Development (2024): https://sdg.iisd.org/news/g7-pledges-to-accelerate-sdgs-transition-from-fossil-fuels-this-decade/

[3] Numerous G7 commitments have defined 2030 as their target deadline:

- decarbonizing G7 power systems by the mid-2030s (UK 2021)
- collectively reducing greenhouse gas emissions by approximately 43% by 2030 relative to 2019 levels, to limit global warming to 1.5°C (Germany 2022)
- implementing the "30x30" initiative of protecting at least 30% of the world's land and oceans by 2030 (Germany 2022)
- enhancing ocean governance, marine biodiversity, and environmental standards in deep-sea mining, under the "G7 Oceans Deal" (Germany 2022)
- increasing energy storage in the power sector, contributing to a global goal of 1,500 GW—a six-fold increase from 2022 (Italy 2024)
- reducing global methane emissions by 75% from fossil fuels by 2030 (Italy 2024)
- implementing the global goal of tripling installed renewable capacity by 2030 to at least 11 TW, as part of the UAE Consensus (COP 28)
- contributing to the $300 billion a year in climate finance to developing countries (COP29)

G7 Energy, Environment, and Climate Leadership, 1975–2025

Over the past five decades, the G7's contributions on energy, the environment, and climate change have evolved from managing short-term energy security responses in the 1970s to developing coordinated approaches that integrate these complex challenges. The cases below illustrate how leaders and ministers have fostered both joint and independent efforts to expand cooperation and multilateral action, and developed policy frameworks and mechanisms that align energy security with climate, environmental, economic, and other goals, to deliver concrete results. This contribution has evolved over four distinct phases.

1. Energy Security and Early Climate Recognition, 1975–1985

Laying the Foundation of G7 Energy Security: Rambouillet 1975

In the first phase, the G7's inaugural summit in Rambouillet in 1975 produced the initial collective response by major industrialized countries' leaders to the 1973 oil shock and subsequent energy crisis. Leaders emphasized the need for cooperation to reduce reliance on imported energy, calling for "conservation and the development of alternative sources."[4] They stated that "world economic growth is clearly linked to the increasing availability of energy sources" noting that no effort would be spared "to ensure more balanced conditions…in the world energy market."[5]

The Rambouillet Declaration established the foundation for international energy security, setting the tone for decades of coordinated G7 responses to global energy challenges and integrating the environmental component of conservation from the start. By establishing a permanent forum for coordination, the summit positioned the G7 as a central platform for advancing collective strategies on energy security and conservation.

Linking Energy Security and Environmental Protection: Tokyo 1979

At their 1979 Tokyo Summit, G7 leaders linked energy security with the environment more broadly and ambitiously, emphasizing the need to "expand alternative sources of energy, especially those which will help to prevent further pollution, particularly increases of carbon dioxide and sulphur oxides in the atmosphere."[6]

Their target for an "intensive development of alternative energy sources" strengthened the G7's political will for energy alternatives, including nuclear power, early renewable technology, and demand-side management practices.[7] This approach enabled leaders to align their policies through forums including the International Energy Agency (IEA), establishing the template for coordinated energy-climate policy.

Putting Climate on the G7 Agenda: Bonn 1985

G7 leaders made their first explicit "climate change" commitment at Bonn in 1985, by agreeing to "address other concerns such as climatic change, the protection of the ozone layer and the management of toxic chemicals and hazardous wastes."[8] They presented environmental protection and economic growth as mutually reinforcing goals and committed to "develop and apply the polluter pay principles more widely."[9]

Their agenda expanded to include African drought and desertification, putting climate change on par with urgent environmental issues such as ozone layer protection, toxic chemicals management, and hazardous waste control. In support, G7 leaders established expert groups on desertification, tropical forestry, dry-zone agriculture, and environmental monitoring.[10] These were the G7's first significant institutional additions to address environmental issues, linking political commitments with scientific and technical cooperation. This process fed into broader UN processes, including preparations for the 1992 Rio Earth Summit.

2. Global Framework Development, 1992–2012

Steering Global Climate Agreements: Munich and Rio 1992

The onset of the second phase in 1992 marked a defining milestone in G7 climate and environmental leadership, featuring coordinated leader and ministerial action. G7 environment ministers began meeting in Bonn, in May 1992, to prepare for the historic UN Conference on Environment and Development (UNCED) in Rio de Janeiro in June. Their discussions focused on strategies to control climate change and proposals to limit greenhouse gas emissions.[11]

Convening a month later at Rio, G7 leaders steered the UNCED negotiations to success by driving consensus and helping secure agreement on the UN Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), and later the Convention to Combat Desertification (UNCCD).[12]

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[4] Declaration of Rambouillet (1975): https://www.g7.utoronto.ca/summit/1975rambouillet/communique.html
[5] Declaration of Rambouillet (1975): https://www.g7.utoronto.ca/summit/1975rambouillet/communique.html
[6] G7 Tokyo Declaration (1979): https://www.g7.utoronto.ca/summit/1979tokyo/communique.html
[7] G7 Tokyo Declaration (1979): https://www.g7.utoronto.ca/summit/1979tokyo/communique.html
[8] Bonn Economic Declaration: Towards Sustained Growth and Higher Employment (1985): https://www.g7.utoronto.ca/summit/1985bonn/communique.html
[9] Bonn Economic Declaration: Towards Sustained Growth and Higher Employment (1985): https://www.g7.utoronto.ca/summit/1985bonn/communique.html
[10] Bonn Economic Declaration: Towards Sustained Growth and Higher Employment (1985): https://www.g7.utoronto.ca/summit/1985bonn/communique.html
[11] Kirton, John and Ella Kokotsis. *The Global Governance of Climate Change: G7, G20 and UN Leadership*. Ashgate Publishing (2015), pp. 98–103.
[12] UNCCD was adopted in 1994 but emerged from the Rio discussions. Kirton and Kokotsis (2015), pp 98–103.

Meeting in Munich shortly after Rio, G7 leaders played a pivotal role in advancing the UN's landmark conventions through their coordinated diplomacy. The G7's Munich Economic Declaration dedicated a standalone section to UNCED, declaring that "rapid and concrete action is required to follow through on our commitments on climate change, to protect forests and oceans, to preserve marine resources, and to maintain biodiversity"—the main pillars of G7 environment action ever since.[13]

G7 leaders urged other countries to join them in committing to ratify the UNFCCC by the end of 1993, and pledged support for developing countries through Agenda 21.[14] They recognized the high costs of pollution, toxic waste, and greenhouse gas emissions, emphasizing that environmental sustainability must be integrated into all G7 economic, business, and social models.[15]

Aligning Energy and Climate Goals: Detroit and Banff 2002

A decade later, in May 2002, Canada and the US co-chaired the G8 energy ministers meeting (now including Russia) in Detroit, ahead of their leaders' Kananaskis Summit.[16] For the first time, energy ministers embedded climate in energy policy, as their co-chairs' statement framed low-carbon energy—including nuclear, renewables, and efficiency—as central to both energy security and climate mitigation. By prioritizing energy efficiency and renewables, countries could "help address climate change by reducing the greenhouse gas emissions intensity of energy production and use."[17]

Two weeks earlier, G8 environment ministers had met in Banff to prepare for the World Summit on Sustainable Development (WSSD) in Johannesburg. They linked energy conservation, access, efficiency, and renewable deployment and framed climate action within broader development and poverty reduction goals. They further aligned G8 policies with multilateral institutions, noting their intent to "collaborate with the international community and UN bodies…to enhance the coordination of our respective environmental, economic and social objectives."[18]

[13] Economic Declaration: Working Together for Growth and a Safer World (1992): https://www.g7.utoronto.ca/summit/1992munich/communique/index.html#environment.
[14] Agenda 21 laid out strategies for achieving sustainable development in the 21st century by balancing economic growth, environmental protection, and social equity. It was adopted by over 170 countries at UNCED in June 1992: https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf
[15] Economic Declaration: Working Together for Growth and a Safer World (1992): https://www.g7.utoronto.ca/summit/1992munich/communique/index.html#environment; Oberthür, S., & H. E. Ott (1999). *The Kyoto Protocol: International Climate Policy for the 21st Century.* Springer; Chasek, P. S., D. L. Downie & J. W. Brown (2022). *Global Environmental Politics*. Routledge.
[16] Russia formally joined the G7 in 1998, transforming the group into the G8. Russia was suspended from the G8 in 2014 following its annexation of Crimea.
[17] G8 Energy Ministers Meeting, Co-Chairs' Statement, 2002: https://www.g7.utoronto.ca/energy/energy0702.html
[18] Banff Ministerial Statement on the World Summit on Sustainable Development, 2002: https://www.g7.utoronto.ca/environment/020415.html

Linking Energy Security, Affordability, and Climate Action: Camp David 2012

G8 leaders at Camp David in 2012 introduced a unified communiqué section on "Energy and Climate Change," linking energy security, affordability, and the environment. They endorsed, for the first time, phasing out "inefficient fossil fuel subsidies that encourage wasteful consumption" over the medium term, while pledging to "continue voluntary reporting on progress." Leaders committed "to pursue universal access to cleaner, safer, and more affordable energy" by integrating environmental actions with energy security, safety, and sustainability. They acknowledged that "increasing energy efficiency and reliance on renewables and other clean energy technologies" could contribute to both energy security and savings, "while also addressing climate change."[19]

These G7 commitments sent crucial market signals on the need for energy-efficient products to achieve affordability goals. This framing helped justify future policy interventions including efficiency standards, rebates, and procurement preferences that would drive market demand for energy-efficient products.

3. Comprehensive Integration and Global Leadership: 2014–2019

Steering Global Energy Governance: Rome and Brussels 2014

The third phase began in May 2014 in Rome, when energy security re-emerged at the centre of the G7 ministers' discussions. Their commitments emphasized the integration of energy and environmental goals and collaboration with multilateral institutions including the G20, the IEA, and the International Renewable Energy Agency (IRENA).[20] These ministerial commitments directly influenced the G7 Brussels Summit in June, where leaders acknowledged that the crisis in Ukraine required "a step change to our approach to diversifying energy supplies and modernizing our energy infrastructure."[21] Their declaration explicitly referenced the principles agreed at Rome, with much of it reflecting the ministers' statement. By pledging collaboration with other multilateral forums including the G20, IEA, and IRENA, G7 leaders sought to mainstream their energy agenda beyond the G7, thereby steering global energy governance.[22]

[19] Camp David Declaration, 2012: https://www.g7.utoronto.ca/summit/2012campdavid/g8-declaration.html
[20] Rome G7 Energy Initiative for Energy Security (2014): https://www.g7.utoronto.ca/energy/140506-rome.html
[21] Brussels G7 Summit Declaration (2014): https://www.g7.utoronto.ca/summit/2014brussels/declaration.html
[22] Brussels G7 Summit Declaration (2014): https://www.g7.utoronto.ca/summit/2014brussels/declaration.html

Aligning Economic Growth and Energy Transition: Hamburg and Elmau 2015

G7 energy ministers shifted to the integrated concept of sustainable energy security at Hamburg in 2015, emphasizing the economic and social benefits of the energy transition. They affirmed the need for "deep cuts in global greenhouse gas emissions" and the urgency of an energy transition "to further decouple economic growth from carbon emissions."[23] They strongly supported a robust and inclusive outcome at the upcoming COP21 in Paris, reinforcing their engagement with UN Climate, the IEA, IRENA, and international financial institutions.

Convening three weeks later, G7 leaders at Elmau formally endorsed their ministers' communiqué, adopting it almost entirely and reaffirming its core commitments—notably the pledge to eliminate inefficient fossil fuel subsidies and secure a legally binding, ambitious outcome at COP21.[24] Their commitment to keep the rise in global temperatures below 2°C above pre-industrial levels laid the groundwork for the Paris Agreement later that year. This coordinated minister-to-leader approach fostered the achievements of COP21, which remains a cornerstone of global climate governance.

Circular Economy and Fossil Fuel Phase-Out: Toyama and Ise-Shima 2016

G7 environment ministers adopted the Toyama Framework on Material Cycles in May 2016, establishing foundations for future work on critical minerals and sustainable supply chains. Ministers, joined by key multilateral organizations including the Global Environment Facility (GEF), the United Nations Environment Programme (UNEP), and now the Organisation for Economic Co-operation and Development (OECD), aligned efforts to implement the UN's major global frameworks, including the SDGs, the Paris Agreement, and the Sendai Framework for Disaster Risk Reduction.[25] Under the Toyama Framework, the G7 reaffirmed the role of the G7 Alliance on Resource Efficiency (G7 ARE) as a key voluntary platform for knowledge-sharing and cooperation among the G7 and participating countries. In partnership with the OECD, this platform shared best practices from G7 members, advancing cooperation on resource efficiency, sustainable materials management and the 3Rs of reduce, reuse, and recycle.[26]

The Toyama Framework facilitated systems for progress reviews among G7 members and partners—expanding resource efficiency and the 3Rs globally.[27] It recommended holding annual Environment Ministerial Meetings (EMMs), which have taken place every year since, except for a brief pause in 2020 due to Covid-19.

The Toyama Framework also influenced major UN resolutions, with G7 ministers presenting their outcomes to key UN bodies—including at the second session of the UN Environment Assembly (UNEA-2). The UN later that year adopted resolutions reflecting Toyama's themes on the circular economy, resource efficiency, marine litter, and sustainable production and consumption.[28] Meeting 10 days later at Ise-Shima, G7 leaders remained "committed to the

elimination of inefficient fossil fuel subsidies" and encouraged "all countries to do so by 2025." Leaders acknowledged that inefficient fossil fuel subsidies promoted wasteful consumption and "hinder[ed] investments in alternative clean energy sources." They stressed the energy sector's role in addressing climate change, noting that "energy production and use account for around two-thirds of global greenhouse gas emissions."

This commitment led to the creation of systematic tracking and reporting mechanisms through the "G7 Fossil Fuel Subsidy Scorecards," making G7 subsidy policies more transparent by tracking, for the first time, each G7 member's progress in phasing out inefficient fossil fuel subsidies for oil, gas, and coal.[29]

G7 leaders further endorsed their ministers' Toyama Framework on Material Cycles and committed to supporting work under the G7 ARE. The G7 ARE, launched in 2015, had evolved into a monitoring body that produced a comprehensive report tracking implementation of the Toyama Framework and subsequent initiatives on resource efficiency, the circular economy, and 3Rs practices.[30]

Advancing Resource Efficiency and the Circular Economy: Bologna 2017

Building on the Toyama Framework, G7 environment ministers adopted the five-year Bologna Roadmap as an annex to their communiqué in June 2017. It outlined 11 priority areas, including resource efficiency, the circular economy, and sustainable material management particularly through supply chain integration. It offered practical steps for reducing plastic pollution and food waste, while promoting citizen engagement, particularly with youth.[31] Ministers highlighted the critical role of small and medium-sized enterprises, women entrepreneurs, and multilateral development banks in financing the green transition, aligning closely with the G7's priorities.

The Roadmap's five-year action plan set out a clear implementation timeline, enabling governments, businesses, and civil society to track and measure progress more effectively.

[23] G7 Hamburg Initiative for Sustainable Energy Security (2015): https://www.g7.utoronto.ca/energy/150512-hamburg.html
[24] Leaders' Declaration: G7 Summit (2015): https://www.g7.utoronto.ca/summit/2015elmau/2015-G7-declaration-en.html
[25] G7 Toyama Environment Ministers' Meeting (2016): https://www.env.go.jp/earth/g7toyama_emm/english/meeting_overview.html
[26] Policy Guidance on Resource Efficiency, OECD (2016): https://www.oecd.org/content/dam/oecd/en/publications/reports/2016/05/policy-guidance-on-resource-efficiency_g1g68490/9789264257344-en.pdf
[27] Our Actions for a Resource-Efficient Future, IGES (2019): https://www.iges.or.jp/en/publication_documents/pub/policyreport/en/7008/G7REAlliance_ToyamaBologna_followup_fullreport_final.pdf
[28]UN Environment Assembly concludes with 14 resolutions to curb pollution, protect and restore nature worldwide, GEF (2022): https://www.thegef.org/newsroom/news/un-environment-assembly-concludes-14-resolutions-curb-pollution-protect-and-restore
[29] G7 fossil fuel subsidy scorecard, ODI (2018): https://odi.org/en/publications/g7-fossil-fuel-subsidy-scorecard-tracking-the-phase-out-of-fiscal-support-and-public-finance-for-oil-gas-and-coal/
[30] Our Actions for a Resource-Efficient Future, IGES (2019): https://www.iges.or.jp/en/publication_documents/pub/fact/en/6922/201905_G7REAlliance_ToyamaBologna_followup_brochure_final.pdf
[31] Communiqué (2017): https://www.g7.utoronto.ca/environment/2017-environment.html

Environment-Energy-Ocean Integration: Charlevoix and Halifax 2018

G7 leaders prioritized ocean protection at Charlevoix in June 2018, hosting a dedicated session with five global partners and adopting the landmark Ocean Plastics Charter.[32] The Charter elevated marine plastic pollution as a global policy priority, laying the groundwork for circular-economy approaches to ocean conservation and encouraging ambitious domestic initiatives to address plastic pollution. The Charter, now adopted by almost 30 governments and over 70 businesses and organizations, also provided momentum towards the adoption of a resolution to begin negotiations on a legally binding global treaty to end plastic pollution at the UN Environment Assembly in March 2022 (UNEA-5.2).[33]

The integration of energy and environmental policy was further deepened with the first joint meeting of G7 ministers responsible for environment, energy, and oceans in Halifax in September 2018. Joined by seven invited countries plus international organizations, industry representatives, and youth, G7 ministers focused on low-carbon transitions, the circular economy, nature-based solutions, and climate change impacts—particularly on vulnerable Indigenous Peoples as well as Arctic communities.[34] Their joint sessions took a holistic approach to oceans, advancing efforts on marine protection and sustainable fisheries. Ministers also agreed to launch the G7 Initiative on Earth Observation and Integrated Coastal Zone Management, boosting the resilience of vulnerable coastal communities—especially Small Island Developing States—by improving access to advanced Earth observation tools and data systems.[35]

Biodiversity-Climate Nexus: Metz and Biarritz 2019

G7 environment ministers adopted the Metz Charter on Biodiversity in May 2019, recognizing the links between biodiversity loss and climate change and highlighting the need to integrate conservation efforts into economic and development planning. The Charter pushed for bolder and more explicit objectives and metrics, noting the framework should "contain time-bound targets, which are measurable" and have "appropriate indicators and metrics."[36]

Ministers pushed for mainstreaming biodiversity into investment decisions by recognizing "the need to make investments consistent with the achievement of the global biodiversity goals."[37] This approach helped shape the post-2020 G7 global biodiversity finance agenda by signalling the importance of integrating nature-related opportunities and risks in both private and public sector investment decision-making. This framework set the foundation for improved biodiversity reporting, including initiatives such as the Task Force on Nature-related Financial Disclosures.[38]

The Metz ministerial played a key role in shaping the G7 summit in Biarritz in August 2019. By elevating biodiversity to the leaders' level, it was now framed as equal in urgency to climate change. G7 leaders' endorsement offered their negotiators a clear mandate, strengthening their

position in discussions leading up to Kunming-Montreal Global Biodiversity Framework at COP15.

4. Mainstreaming Climate, Nature, and Resource Management, 2021–2025

Tackling Plastic Pollution, Ending Unabated Coal Power Generation, and Protecting Nature: London and Cornwall 2021

To start the fourth phase, G7 environment ministers, meeting in London in May 2021, acted decisively to end support for unabated coal power generation, pledging to stop new direct government funding for such projects overseas by the end of 2021. By 2022, all G7 countries had adopted policies to end public financing for these projects, aligning international financial flows with global climate goals.[39]

The G7 Industrial Decarbonisation Agenda highlighted ministers' efforts to align industrial decarbonization with global climate goals. Successive G7 presidencies have taken this work forward to collaborate on market rules, decarbonization standards, data collection, joint research, and procurement and investment strategies to advance the G7's collective ambitions for net zero.

Convening in Cornwall in June 2021, G7 leaders adopted the landmark 2030 Nature Compact, marking their first-ever commitment to halt and reverse biodiversity loss by 2030—elevating nature as a whole to the same level of urgency for them as climate change.[40] The Compact called for integrating biodiversity considerations into finance, trade, supply chains, and climate action, shifting from treating nature as an isolated issue to integrating it into broader economic strategies. It supported new global targets to conserve or protect at least 30% of land and oceans by 2030, helping build international consensus to adopt the Kunming-Montreal Global Biodiversity Framework in December 2022.

Leaders further adopted the G7 Ocean Decade Navigation Plan as a framework for collaboration on ocean science, observation, and action. The Navigation Plan established a

[32] Ocean Plastics Charter (2018): https://www.g7.utoronto.ca/summit/2018charlevoix/oceans-blueprint.html - annex
[33] Intergovernmental Negotiating Committee on Plastic Pollution: https://www.unep.org/inc-plastic-pollution
[34] Kirton, John and Brittaney Warren, "Making History in Halifax: The Performance of the G7 Environment Ministers' Meeting in 2018". September 27, 2018. https://www.g7.utoronto.ca/evaluations/kirton-warren-making-history-in-halifax.pdf
[35] Chair's Summary: G7 Energy Ministers' Meeting (2018), https://www.g7.utoronto.ca/energy/2018-energy.html
[36] Metz Charter on Biodiversity (2019): https://www.g7.utoronto.ca/environment/2019-metz-charter-on-biodiversity.html
[37] Metz Charter on Biodiversity (2019): https://www.g7.utoronto.ca/environment/2019-metz-charter-on-biodiversity.html
[38] Taskforce on Nature-related Financial Disclosures: https://tnfd.global/
[39] Canada, France, Germany, Italy and the UK have all accelerated the closure of coal-fired power generation, with programs to invest in green jobs being rolled out by all G7 countries in the wake of coal plant closures (2024): https://www.iisd.org/articles/insight/g7-should-lead-transition-away-fossil-fuels-heres-how
[40] G7 2030 Nature Compact (2021): https://www.g7.utoronto.ca/summit/2021cornwall/210613-nature-compact.html

structured approach for G7 cooperation on biodiversity conservation and the protection of marine environments. A key objective of the Navigation Plan was to connect ocean science with policy, ensuring that scientific findings informed effective G7 decision-making.

Comprehensive Integration Framework: Berlin and Elmau 2022

At their Berlin meeting in May 2022, G7 climate, energy, and environment ministers adopted their first integrated policy framework linking energy, environment, climate change, and now critical minerals. Their Berlin Roadmap on Resource Efficiency and Circular Economy pledged to diversify critical mineral supply chains, invest in responsible mining practices, and accelerate innovation in recycling practices.[41] The Berlin Roadmap built on previous initiatives under the Bologna Roadmap and Toyama Framework, and serves as the primary guideline for the G7 ARE.[42]

Ministers recognized the urgent need for enhanced ocean governance and scientific cooperation by endorsing the G7 Ocean Deal. Understanding the link between climate resilience and marine conservation, they outlined concrete actions to protect and restore ocean health. The G7 Ocean Deal supported new Antarctic Marine Protected Areas and promoted environmental safeguards in deep-sea mining through the International Seabed Authority.[43] Ministers committed to end illegal and unregulated fishing through the ratification of the Food and Agriculture Organization (FAO) Agreement on Port State Measures and pledged to combat marine litter from commercial fishing practices through the FAO's Code of Conduct for Responsible Fisheries.[44]

Meeting at Elmau in June 2022, leaders adopted their ministers' G7 Ocean Deal, reaffirming its principles and underscoring the need for coordinated action in addressing ocean-related issues. Their commitments were detailed in the G7 Ocean Deal Progress Report 2022**,** which highlighted ongoing initiatives and collaborative efforts among G7 members in addressing ocean-related challenges.[45]

The G7 also agreed at Elmau to establish "an open and cooperative Climate Club by the end of 2022 as a global response to the climate crisis."[46] The Climate Club marked a significant international cooperative initiative aimed at advancing "climate mitigation policies to reduce the emissions intensities of participating economies on the path toward climate neutrality."[47] It

[41] G7 Berlin Roadmap on Resource Efficiency and Circular Economy (2022): https://www.g7.utoronto.ca/environment/2022-berlin-roadmap.html
[42] Sustainable resource use, resource efficiency and circular economy (2022): https://www.bundesumweltministerium.de/en/topics/international/german-g7-presidency-2022/sustainable-resource-use-and-circular-economy
[43] G7 Ocean Deal (2022): https://www.g7.utoronto.ca/environment/2022-ocean-deal.html
[44] Code of Conduct for Responsible Fisheries: https://www.fao.org/4/v9878e/v9878e00.htm
[45] Ocean Deal: Progress Report 2022 (2022): https://www.g7germany.de/resource/blob/997532/2155408/e4006b808cdf3fbb00f1120637fa989c/2022-12-22-g7-ocean-deal-data.pdf
[46] G7 Leaders' Communiqué (2022): https://www.g7.utoronto.ca/summit/2022elmau/220628-communique.html
[47] G7 Statement on Climate Club (2022): https://www.g7.utoronto.ca/summit/2022elmau/220628-climate-club.html

further called for acceleration in industrial decarbonization, while encouraging cooperation for climate action, particular with emerging and developing countries.

Renewable Energy Targets and Nature-Positive Economies: Sapporo and Hiroshima 2023

At their April 2023 meeting in Sapporo, G7 ministers explicitly framed energy, the environment, and climate in the context of geopolitical crises, tying these issues directly to Russia's war in Ukraine. By stressing the "devastating impacts" of the war on both the environment and energy markets, ministers recognized that fossil fuel dependency is both a climate issue and a geopolitical vulnerability.[48]

Their commitment "to accelerate the phase-out of unabated fossil fuels so as to achieve net zero in energy systems by 2050 at the latest" was the strongest G7 language thus far on moving beyond oil, gas, and coal. Their pledge "to achieving a fully or predominantly decarbonized power sector by 2035" set a firm deadline on power sector transformation—a key driver towards meeting the Paris Agreement's 1.5°C post-industrial temperature increase limit objective.[49]

Building on Sapporo, G7 leaders in Hiroshima in May 2023 recognized the interdependent nature of energy security, the climate crisis, and geopolitical challenges, underscoring the importance of accelerating the clean energy transition. They committed to "holistically address energy security, climate crisis, and geopolitical risk including the expansion of global use of renewable energy in order to achieve net-zero emissions by 2050 at the latest and keep a limit of 1.5 °C temperature rise within reach."[50] Leaders also endorsed the Clean Energy Economy Action Plan, reaffirming their commitment to achieve net-zero greenhouse gas emissions by 2050 at the latest, aiming to phase out unabated coal power generation by the early 2030s, pledging to triple renewable energy capacity and double energy efficiency by 2030 and enhance energy storage capacity six-fold by 2030. They also emphasized the need to fill the investment gap for developing countries in meeting their climate goals. The G7's actions in Hiroshima led to the broader global consensus reached at COP28 in December 2023, where nearly 200 countries agreed to similar targets by the end of the decade.[51]

[48] G7 Climate, Energy and Environment Ministers' Communiqué (2023): https://www.g7.utoronto.ca/environment/2023-communique.html
[49] G7 Climate, Energy and Environment Ministers' Communiqué (2023): https://www.g7.utoronto.ca/environment/2023-communique.html
[50] G7 Hiroshima Leaders' Communiqué (2023): https://www.g7.utoronto.ca/summit/2023hiroshima/230520-communique.html
[51] COP28 Tripling Renewable Capacity Pledge (2024): https://www.iea.org/reports/cop28-tripling-renewable-capacity-pledge

Leadership on Fossil Fuels, Circular Economy, and Oceans: Turin and Apulia 2024

At their joint meeting in Turin in April 2024, G7 climate energy and environment ministers committed to phasing out unabated coal power by the early 2030s.[52] Recognizing that textile emissions exceeded those from global aviation and shipping combined, ministers tasked the G7 ARE with developing the G7 Agenda on Circular Textiles and Fashion**,** reinforcing their cross-cutting commitment to sustainable, circular economy principles.[53] Meeting in Apulia in June, G7 leaders endorsed and operationalized their ministers' initiatives by formally backing the G7 Climate Finance Initiative for Adaptation and Resilience**,** giving it the political weight and resources to become actionable. Its centrepiece, the Adaptation Accelerator Hub, was a key mechanism to provide technical support to countries most at risk from climate impacts. The initiative was a significant step towards translating high-level ministerial commitments into concrete support for adaptation and resilience in vulnerable countries.[54] Similarly, leaders reinforced their ministers' commitments to phase out unabated coal, promote a circular textile sector, and protect regional seas, ensuring that the strategic priorities outlined in Turin were backed by coordinated G7 leadership.

In the context of ocean governance, a Declaration Recognizing and Strengthening the Role of Regional Seas Conventions and Action Plans (RSCAPs) was adopted. With this declaration, the G7 reaffirmed its key role in managing global challenges related to marine pollution and conservation, and the sustainable use of oceans and their resources, and their contribution to SDG 14. The G7 reiterated its commitment to advancing the activities and profile of the RSCAPs, and pledged further support and cooperation with the UNEP Secretariat and Executive Director in pursuit of this objective. They specifically pledged to advance the participation of these bodies in all relevant forums concerning oceans and seas—including preparatory activities and the implementation of related outcomes—particularly considering the forthcoming, ambitious revision of the UNEP Regional Seas Strategic Directions for 2027–2029.

Enhanced Multilateral Cooperation on Wildfires, Critical Minerals, and AI and energy: Kananaskis 2025

At Kananaskis in 2025, G7 leaders agreed to act on wildfire prevention, response, and recovery; critical minerals; artificial intelligence (AI) and energy. The Kananaskis Wildfire Charter marked a pivotal advance in global wildfire cooperation by merging environmental and disaster response policies within a unified framework. It also introduced significant measures to prevent and mitigate wildfires, while establishing a commitment to "rebuild for resilience" in recovery efforts.[55] The Critical Minerals Action Plan committed to securing reliable and diversified supplies of critical minerals—such as lithium, cobalt, and rare earths—needed for clean energy technologies. G7 leaders agreed to develop a roadmap by the end of 2025 to promote critical mineral markets that uphold labour standards, local consultation, and anti-bribery and

corruption measures. They also committed to addressing negative externalities such as pollution and land degradation, while encouraging multilateral development banks and private-sector lenders to fund projects with responsible extraction, processing, and trade.[56] This was a pragmatic shift to energy security, focused on affordability, supply chain diversification, and, for some members, a robust clean energy transition.

G7 leaders also endorsed the AI for Prosperity Statement that recognized the challenges and externalities linked to AI's growing energy and resource demands. They committed to promote the adoption and use of AI to unlock energy innovation and breakthrough discoveries, including optimization of energy use, and to help build more secure, resilient, and affordable energy systems.[57] G7 leaders tasked ministers to deliver a G7 Energy and AI Work Plan before the end of Canada's G7 presidency.

Conclusions

Throughout their first 50 years, G7 leaders and their energy and environment ministers have made significant contributions to shaping both G7 policies and global progress on energy security, environmental sustainability, and climate change.

Leaders first addressed energy and the environment at their inaugural summit in 1975 and have continued to do so at nearly every summit since. Climate change entered their agenda in 1979, initially in the form of carbon dioxide, then explicitly in 1985. Their focus and attention on these issues have expanded in scope and intensity, becoming a central feature of their performance in the twenty-first century. Their work has driven substantial progress within G7 members' domestic policies, extended the G7's influence globally, and contributed to strengthening and shaping key multilateral forums.

G7 leaders' work has been strengthened and advanced by their energy and environment ministers, who began holding separate meetings in 1979 and 1992 respectively. Over time, their meetings have become more frequent, and taken place jointly—first in 1998 and consistently since 2018. The ministers' agendas and agreements have grown steadily in scope and depth. Their influence has affected G7 members, partner countries, and an expanding network of multilateral institutions.

Through the combined efforts of leaders and their energy, environment, and climate ministers, the G7 has delivered a wide range of notable achievements, introducing and advancing new

[52] Climate, Energy and Environment Ministers' Meeting Communiqué (2024): https://www.g7.utoronto.ca/environment/2024-communique.html
[53] Fast Fashion and Emissions: What's the Link? (2024): https://earth.org/fast-fashion-and-emissions-whats-the-link/
[54] The United Nations Development Programme (UNDP) is designated as the support agency for the G7 Adaptation Accelerator Hub (2024): https://www.undp.org/press-releases/un-development-programme-support-g7-adaptation-accelerator-hub-strengthening-adaptation-finance
[55] Kananaskis Wildfire Charter (2025): https://www.g7.utoronto.ca/summit/2025kananaskis/250617-wildfire-charter.html
[56] G7 Critical Minerals Action Plan (2025): https://www.g7.utoronto.ca/summit/2025kananaskis/250617-critical-minerals.html
[57] G7 Leaders' Statement on AI for Prosperity (2025): https://www.g7.utoronto.ca/summit/2025kananaskis/250617-ai.html

concepts, commitments, and institutions for both the G7 and the broader multilateral community.

The G7's 25 most significant achievements show that success stems from:

1. **Consistency**—when energy and environment ministers meet each year, as has occurred consistently since 2016, and in joint format regularly since 2022.

2. **Iteration**—when leaders and ministers revisit and progressively advance the same key, challenging subjects and initiatives over several years until their goals are achieved. This approach accounts for the long timelines often required to overcome complex obstacles, as seen with fossil fuel subsidies (2012, 2015, 2016, 2023), energy efficiency (2012, 2023, 2024), energy security (since 2014), material cycles (since 2016), and the circular economy (since 2016).

3. **Integration**—when leaders and ministers support each other, alternating between initiating or supporting measures, while taking independent, complementary actions. Examples include ministerial leadership at UNCED in 1992, contributions at Elmau in 2015, and work on the Metz Biodiversity Charter, endorsed by leaders at Biarritz in 2019.

4. **Synergy**—when issues are effectively linked. Leaders began this approach with energy and the environment in 1975, reinforced it in 1979, 2012, 2016, 2018, and 2019, while ministers emphasized it in 2002 and 2017. Synergy also extends across sectors, linking energy and the environment to economic policy since 1975, and to AI initiatives in 2025.

5. **Flexibility**—the ability to respond and adapt quickly and effectively to new crises and challenges, from the Middle East oil shocks in 1979 and 2015 to European security challenges in 2014, and more recently to critical minerals disruptions and wildfires in 2025.

6. **Equality**—where each member both leads and follows. All seven countries have contributed to the G7's most notable achievements, as highlighted in this report, especially when serving as the G7 host and presidency.

7. **Inclusiveness**—full participation by all members at summits and ministerials. G7 members recognize that these gatherings are vital for addressing the world's most pressing global challenges and their leaders always attend.

8. **Multilateralism**—G7 leaders have actively shaped and supported key multilateral institutions, including the IEA, IRENA, UNCED, UNEA, UNFCC, GEF, and the Kunming-Montreal Global Biodiversity Framework, while also establishing G7-specific bodies and working groups on desertification, agriculture, and monitoring, as well as the G7 ARE. Ministers have reinforced these efforts, engaging with institutions such as UNCED, the WSSD,

IEA, IRENA, COPs, GEF, OECD and UNEP, and launching initiatives including the G7 Alliance on Nature-Positive Economies, the Adaptation Accelerator Hub, and the G7 Water Coalition.

9 **Unity**—when G7 members are fully aligned on their summit agendas, agreements, and their faithful implementation—with flexibility on specific measures where necessary—demonstrating a shared commitment to the G7 as the centre of democratic global cooperation in a complex and challenging world.

Advancing G7 Effectiveness

This record of achievement suggests opportunities to strengthen the G7 process by identifying how, when, and where the forum has been most effective—offering insights to guide future priorities and inform the work of incoming presidencies. They include:

1 **Stocktakes**—conducting more comprehensive assessments beyond existing partial progress reports, with dedicated reviews on energy, environment, and climate change at regular intervals.

2 **Commitments**—ensuring continuity, by building on previous commitments, while addressing new challenges and opportunities with greater specificity whenever feasible.

3 **Consultation and communication**—expanding the frequency and scope of exchanges among G7 members and with stakeholders, ensuring timely dialogue followed by clear, public decisions, and commitments.

4 **Alignment with multilateral institutions**—strengthening coordination with bodies including the G20 and UN, to reinforce multilateralism and better meet global needs.

Addendum: Contribution of the 2025 G7 Energy and Environment Ministers' Meeting

The G7 Energy and Environment Ministers' Meeting in Toronto on October 30–31, 2025, marked a pivotal moment for international cooperation on energy security and environmental stewardship. At a time of growing global economic and geopolitical challenges, this meeting showcased G7 leadership in advancing multilateral approaches to advancing energy security and environmental sustainability and underscored the group's capacity for agile, integrated responses to real-time global threats. Bringing together the world's leading democratic powers, including G7 guests from Australia, Mexico, Korea, and Ukraine, as well as key multilateral organizations and important business leaders, the meeting produced nine outcome documents charting a course for future cooperation on protecting freshwater resources; advancing a circular and resource-efficient economy; predicting, preparing for, and responding to extreme weather events; promoting standards-based markets for critical minerals; addressing the energy challenges and innovative potential of artificial intelligence (AI); enhancing energy security among like-minded countries, including commitments to support Ukraine's energy security; and meeting rapidly rising energy demands through innovative technologies such as nuclear and fusion energy. Further, ministers mobilized over $6.4 billion in new investments, partnerships, and measures to accelerate and unlock critical minerals projects that are essential in defence, clean energy, and advanced manufacturing supply chains.[58]

The ministers built on their leaders' commitments adopted at the G7's Kananaskis Summit in June, especially those on critical minerals, energy security, AI, and wildfires. In several instances, they furthered numerous Kananaskis commitments by adding new actions and funding to support these commitments.

Ministers advanced the G7 Critical Minerals Action Plan and Critical Minerals Production Alliance, a cornerstone of the Kananaskis Summit, through adopting the Roadmap to Promote Standards-based Markets for Critical Minerals as well as announcing projects under the Production Alliance, structured to safeguard supply chains amid geopolitical disruptions from China and Russia. They committed to diversify production and responsible sourcing, and accelerated investment to limit market manipulation and reduce dependence on non-market and non–like-minded suppliers. Participating states invoked domestic legislation, such as Canada's Defence Production Act, to begin stockpiling and securing critical minerals.[59]

To address broader energy security considerations of the twenty-first century—which have evolved significantly since the G7's founding 50 years ago—ministers issued the G7 Call to Action on Enhancing Energy Security. Beyond condemning any form of coercion, physical or cyber-attacks on energy systems, the Call to Action also advances initiatives to establish more secure, diverse, and resilient critical minerals and energy technology supply chains; deepen domestic efforts and international commitments for collaboration on building resilient

electricity infrastructure; and strengthen natural gas security among like-minded producer and consumer countries by expanding storage capacity, improving infrastructure efficiency, and collaborating with industry to develop differentiated markets for low-emissions natural gas.

The meeting advanced measures to strengthen and decentralize Ukraine's energy system, announcing new joint ventures between Canada and Ukraine, and supporting efforts to replace Russian energy imports with North American alternatives. Canada and the G7 pledged to release crisis funding, including expedited tranches of previous pledges, to strengthen Ukraine's resilience for the coming winter. Ukraine's energy minister participated throughout these meetings, providing updates on Russia's attacks, and collaborating on technical and financial support packages.[60]

Other significant initiatives, some building on recent G7 initiatives, included:

1. **The Toronto Action Plan on Circular Economy and Resource Efficiency**
Building on the Bologna Roadmap (2017–2021) and the Berlin Roadmap (2022–2025), the Toronto Action Plan focuses on high-impact priority sectors including critical minerals, plastics, textiles, and fashion. It further focuses on scaling up circular economy and resource efficiency efforts by hosting technical workshops, mainstreaming circular and resource efficiency efforts, supporting research and development, and complementing existing initiatives within the G7 and beyond.[61]

2. **The G7 Water Coalition Workplan**
Building on the G7 Water Coalition established in 2024, the workplan covers a three-year period (2025–2028) to formalize and strengthen G7 coordination on freshwater issues, including enhancing global cooperation on water security and raising the political profile of water across global forums. The G7 will bolster its collective actions by exploring opportunities to develop shared priorities, commitments, and initiatives in preparation for international water efforts including the 2026 UN Water Conference, with the goal of supporting concrete, action-oriented outcomes. The G7 will also undertake technical exchanges among experts on topics such as technology and innovation, nature, water pollution, and inclusive action.[62]

3. **The Chair's Statement on Extreme Weather Prediction, Preparedness, and Response**
Building on the Kananaskis Wildfire Charter adopted by G7 leaders in June, the statement recommends priority areas for stronger G7 and partner collaboration and action including strengthening community resilience; improving effective and inclusive response protocols; enhancing forecasting and early warning systems through innovative technologies

[58] Chairs' Summary. Toronto, October 31, 2025. https://www.g7.utoronto.ca/environment/2025-chairs-summary.html
[59] Roadmap to Promote Standards-based Markets for Critical Minerals. Toronto, October 31, 2025. https://www.g7.utoronto.ca/energy/2025-roadmap-critical-minierals-standards.html
[60] Statement on Ukraine's Energy Security. Toronto, October 31, 2025. https://www.g7.utoronto.ca/energy/2025-ukraine.html
[61] Toronto Action Plan on Circular Economy and Resource Efficiency. Toronto, October 31, 2025. https://www.g7.utoronto.ca/environment/2025-circular-economy.html
[62] G7 Water Coalition Workplan. Toronto, October 31, 2025. https://www.g7.utoronto.ca/environment/2025-water-plan.html

such as artificial intelligence; and advancing mitigation and adaptation measures—such as nature-based solutions—to address the diverse causes and risks of extreme weather events, including wildfires. Through its annex, the statement also highlights initiatives that G7 members are undertaking to predict, prepare for, and respond to extreme weather events, both domestically and internationally.[63]

4 **G7 Energy and AI Work Plan**

Developed with the support of international institution partners such as the International Energy Agency (IEA) and leading industry partners, the work plan outlines a framework for application to the AI and energy nexus, with the objectives of improving security, efficiency, and reliability of this transformative technology. Ministers committed to increased cooperation on AI standards, data sharing, and the scaling-up of innovative tools across G7 economies.[64]

5 **Statement on Nuclear and Fusion Energy**

For the first time, G7 members issued a statement on nuclear and fusion energy that, for countries choosing to use nuclear power, recognizes it as a key non-emitting baseload source to help meet rising electricity demand driven by electrification and AI. Ministers also committed to strengthening international partnerships on fusion research and development, encouraging both private and public investment and engagement.[65]

The Toronto meetings also embodied effective multilateralism and partnerships, convening major G7 and guest country partners, as well as international organizations including the IEA, the World Resources Institute, and the International Atomic Energy Agency (IAEA)—the latter participating for the first time at a G7 meeting. Key private sector and civil society players were also closely engaged through numerous events on the margins. This included a High-level Roundtable on Mobilizing International Private Finance for Climate and the Environment, which convened representatives from G7 and guest country governments, industry, funds, multilateral banks, and civil society to discuss challenges and opportunities for unlocking scaled-up private investment in clean growth, particularly in emerging markets and developing economies. It also included the 2025 Energy Innovation Forum, co-convened with the IEA, to identify key opportunities and risks facing energy technology innovation, inform senior decision-makers about high-impact actions for prioritization in the near term, and highlight the importance of international cooperation. The strong attendance and support reaffirmed the G7's value as a key forum for collective action, setting ambitious directions for future international action on energy security and innovation, critical minerals, circular economy, resource efficiency, freshwater protection, and AI energy considerations, among other key energy, climate, and environment issues.

[63] G7 Energy and AI Work Plan. Toronto, October 31, 2025. https://www.g7.utoronto.ca/energy/2025-energy-ai.html
[64] G7 Energy and AI Work Plan. Toronto, October 31, 2025. https://www.g7.utoronto.ca/energy/2025-energy-ai.html
[65] Statement on Nuclear and Fusion Energy. Toronto, October 31, 2025. https://www.g7.utoronto.ca/energy/2025-nuclear.html