

UC Riverside

UCR Honors Capstones 2023-2024

Title

CROSS-COMPARING OECD COUNTRIES ON CARBON EMISSION POLICY IMPLEMENTATION
GAP

Permalink

<https://escholarship.org/uc/item/73s7s88t>

Author

Nguyen, Emily T

Publication Date

2024-07-24

CROSS-COMPARING OECD COUNTRIES ON CARBON EMISSION POLICY
IMPLEMENTATION GAP

By

Emily Thanh Chau Nguyen

A capstone project submitted for Graduation with University Honors

May 10, 2024

University Honors

University of California, Riverside

APPROVED

Dr. Yasemin Irepoglu Carreras

Department of Political Science

Dr. Richard Cardullo, Howard H Hays Jr. Chair

University Honors

ABSTRACT

The world is facing devastation from climate change as countries are not implementing effective and efficient carbon emission policies quickly enough to decrease the effects of climate change. Countries have supposedly tried to decrease their contribution to worsening climate change but are not meeting their climate goals set by the Paris Climate Change Agreement. This paper examines the factors leading to the policy implementation gap in carbon emissions and their policy implications. It looks at how the policies implemented based on international organizations fall short of meeting their carbon emission reduction goals. I assess this policy implementation gap in four Organization for Economic Co-operation and Development (OECD) countries: Australia, Canada, Norway, and Türkiye. I argue that varying levels of political willingness to meet climate goals, the differing types of multilevel governance, and varying resources devoted to climate issues significantly impact the level of policy implementation gap in carbon emissions. The first type of cross-comparison is to compare each country to each other individually in their efforts to decrease the policy implementation gap in carbon emissions. The second cross-comparison is between the two federal systems (Australia and Canada) and two unitary systems (Norway and Türkiye), which may provide patterns of behavior based on the governance system. These layers of cross-comparison showcase how political willingness, differing multilevel governance, and varying resources devoted to climate issues affect the policy implementation gap in carbon emissions.

ACKNOWLEDGEMENTS

Thank you to my Faculty Mentor, the University Honors Program, family, partner, friends, and community for supporting me during my college career.

TABLE OF CONTENTS

<u>ABSTRACT</u>	<u>2</u>
<u>ACKNOWLEDGEMENTS</u>	<u>3</u>
<u>TABLE OF CONTENTS</u>	<u>4</u>
<u>INTRODUCTION</u>	<u>5</u>
<u>CASE SELECTION FOR COUNTRY CROSS-COMPARISONS</u>	<u>13</u>
<u>COUNTRY CASES</u>	<u>14</u>
<u>CASE 1: NORWAY</u>	<u>14</u>
<u>CASE 2: TÜRKIYE</u>	<u>22</u>
<u>CASE 3: AUSTRALIA</u>	<u>27</u>
<u>CASE 4: CANADA</u>	<u>35</u>
<u>NORWAY AND TÜRKIYE COMPARISON (UNITARY)</u>	<u>41</u>
<u>AUSTRALIA AND CANADA COMPARISON (FEDERAL)</u>	<u>42</u>
<u>CONCLUSION</u>	<u>44</u>

INTRODUCTION

Climate change engulfs the world in record-breaking heat, cold waves, and disasters. Without immediate change in policy, the world can suffer economically, politically, and socially. Countries have adaptation and mitigation efforts to implement climate change policies. Adaptation efforts are when policies are focused on adjusting to the severity of climate change, whereas mitigation efforts are when policies are attentive to decreasing the country's contributions to worsening climate change. Adaptation and mitigation efforts are both necessary for climate change policies. However, oftentimes, countries fall short of their goals and desired outcomes, which is conceptualized by the "policy implementation gap." The policy implementation gap is when any policy's desired outcome or goal(s) does not come to fruition. The gap is a problem across all levels of governance, and how those effects could affect other nations is not often discussed, resulting in unsubstantial research to discuss if there is a strong correlation. The policy implementation gap can negatively affect cost-effective policies, their efficiency and urgency, and the length of a policy transition period.

Several factors contribute to the policy implementation gap, including the complex nature of multi-level governance and the diverse approaches to policymaking. Multi-level governance, a common factor contributing to the gap, varies across regions within countries, with each town, province, city, or country approaching policy based on its unique geographical, economic, and sociopolitical contexts. This distribution of authority within and outside national states, known as multi-level governance, is a crucial aspect of policymaking and the gaps in implementation. It contextualizes the severity of the gap and can lead to increased subnational efforts, policy diversification, and coordination capacity (Hooghe et al., 2019). However, the very nature of

multi-level governance also makes it challenging to pinpoint the origin of the policy implementation gap due to the distribution and overlap of authority.

This paper will specifically explore the policy implementation gap in carbon emissions because carbon emissions are one of the top pollution contributors to climate change, as carbon emissions account for 76% of total greenhouse gas emissions (“Global Emissions,” 2022). Carbon emission reduction policies are necessary to reach any goals regarding greening policies and making sustainability a reality. Since the Organization for Economic Cooperation and Development (OECD) works on environmental challenges, carbon emission policies contribute to the intersection between the economy and climate change. Carbon emissions affect socioeconomic mobility, economic growth, and sustainable development, such as building efficiency, agriculture, transportation, and more, making its impact greater and providing more evidence to the policy implementation gap in climate change. The paper looks at carbon emissions policies in four OECD countries to showcase how implementation varies in different contexts and the overall global importance of climate change. The paper will examine each country’s top carbon emissions contributors and cross-compare the efficiency and effectiveness of their reduction.

This paper proceeds as follows. First, the theory and argument will explain why I am looking at the policy implementation gap in these four countries from the perspective of political willingness, multilevel governance, and devoted resources. The next section gives my detailed case studies of four countries that use this framework. In my case studies, I elaborate on the country’s governance type and analyze the policy implementation gap regarding the top carbon-emitting sector. After analyzing the efforts towards the top carbon-emitting sector, I explain how those case studies exemplify how political willingness, multilevel governance, and

devoted resources impact the policy implementation gap. The following section will cross-compare Norway and Türkiye as both countries are constitutionally unitary. The two federal countries, Australia and Canada, will be the next section of the cross-comparison analysis. I finish with a conclusion and policy implications.

Theory and Argument

In this paper, I argue that a) varying levels of political willingness to meet climate goals, b) the differing types of multilevel governance, and c) varying resources devoted to climate issues significantly impact the level of policy implementation gap in carbon emissions. This section explains my theory in detail and presents the overarching arguments. The reason I am using this framework will be described in detail, followed by policy implications and overarching findings of each country in relation to these reasons.

A. Political Willingness

Political willingness is a type of commitment and inclination to take action on an issue. Political willingness can be defined as “the commitment of actors to undertake actions to achieve a set of objectives and to sustain the costs of those actions over time” (Marquette, 2020). Due to the urgency and necessary action for climate change, political will is extremely necessary for individuals, communities, and institutions for sustainable development and institutional change as legislative progress, infrastructural change, and coordination capacity can improve the situation. Political willingness to tackle climate issues can be seen through constitutional laws, initiatives, economic reform, budgetary priorities, and coordination capacity for climate action – to name a few. Even though climate change has been linked to adverse health impacts, serious and organized crime, environmental disasters, and even assassinations, political willingness is still not prevalent and consistent in policy implementation and political governance (Marquette,

2020). Hence, the importance of consistent, effective, efficient, and urgent political willingness as it propels climate policies into the political spotlight to ensure a safer world.

B. Types of Multilevel Governance

Different types of government structures influence the severity of the policy implementation gap and the government's approach to societal issues, such as climate change. Federal governments like Australia and Canada have decentralized governance powers that constitutionally divide and share power between national and subnational governance. A decentralized government allows for policy experimentation and citizen contribution but also decreases government accountability and efficiency (Cheng and Li, 2019). Due to great policy divergence in a decentralized government, there is a lot of leeway for bureaucratic obscurity. There are publications, such as Martinez-Vazquez (2021) and Smoke and Cook (2022), on how decentralization impacts climate change policy because many argue that the more decentralized governance there is, the more substantial the opportunity for sustainable development. However, recent articles argue that many countries have not “effectively engaged their [subnational governments] in their climate change policy frameworks” as there is a lack of explicit accountability to the subnational governments (Martinez-Vazquez 59, 2021). Decentralized governance provides constitutional protection to local governments that may improve local policies into greener ones.

A unitary government is when a single central government constitutionally governs the country over all other political subdivisions, such as Norway and Türkiye. A unitary government is beneficial for urgent issues where collective action is quickly needed, which may make it more efficient. Although local authority can be more limited in unitary government, local issues can be better represented in unitary governance as there is less recourse to regional political institutions

(O’Neil, 2021). There is not as much policy divergence in unitary governance as there are fewer political divisions at the local/regional/state level.

These few characteristics are essential to how unitary and federal governments make and implement policies. Both political governance types have benefits and drawbacks to their policy-making impact on fiscal and administrative policies for climate change. Since climate change is a continuously evolving situation (e.g., new technology to fight against climate change, etc.), cross-comparing types of governance can serve as a real-time measurement of policy-making capabilities. This can highlight if there is a strong empirical correlation between the type of governance impacting the policy implementation gap in carbon emissions or if more sociopolitical factors impact sustainable development. I chose these countries because they are comparable, as these countries have joined several international organizations, providing a baseline for cross-comparing different types of government structures for four different geographical locations.

Even though there is a lack of accountability between governments, both internally and internationally, for climate change issues, there is the most potential for policy interdependence growth with centralized governance. Policy interdependence is when “authority over specific policy issues is fully regionalized,” but subnational levels cannot treat climate change in isolation (Garritzmann et al., 2021). Policy interdependence growth has the most potential with centralized governance as there is space for regionalized authority while allowing for collaboration and communication nationally and internationally. For example, fiscal centralization creates incentives, while fiscal decentralization creates rising regional disparities (Garritzmann et al. 2021). This can parallel climate change policymaking as centralized governments can use different methods to incentivize greener carbon emissions through grants,

subsidies, and other programs due to the inherent power shifted more in national governments (Garritzmann et al., 2021). The power asymmetry can be best rectified through centralized governance. Centralized power can support subnational governance in greener policies by prioritizing tailored policies, increasing coordination capacity, and decreasing information asymmetry, ultimately reducing the implementation gap. Naturally, there are risks with centralized governance, as centralized governance can impede subnational units, which will be highlighted later in this paper. Therefore, governance structure influences the policy implementation gap.

C. Varying Resources Devoted to Climate Issues

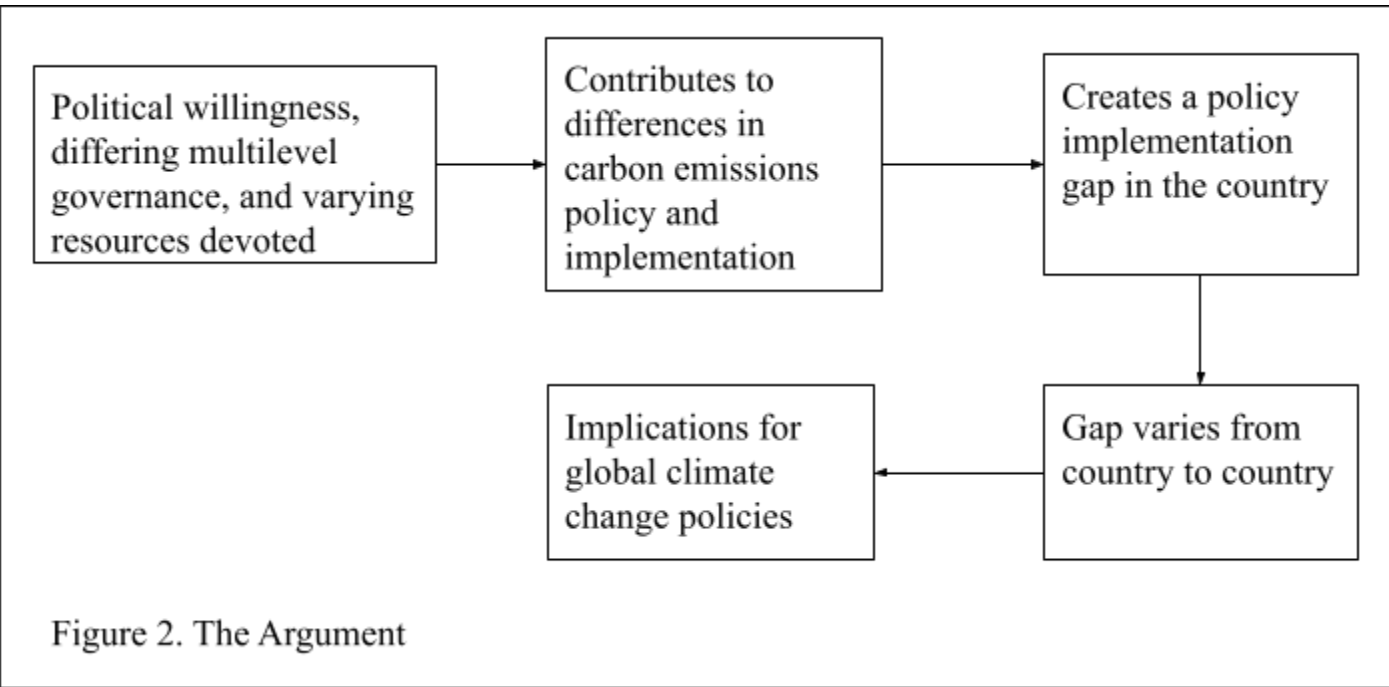
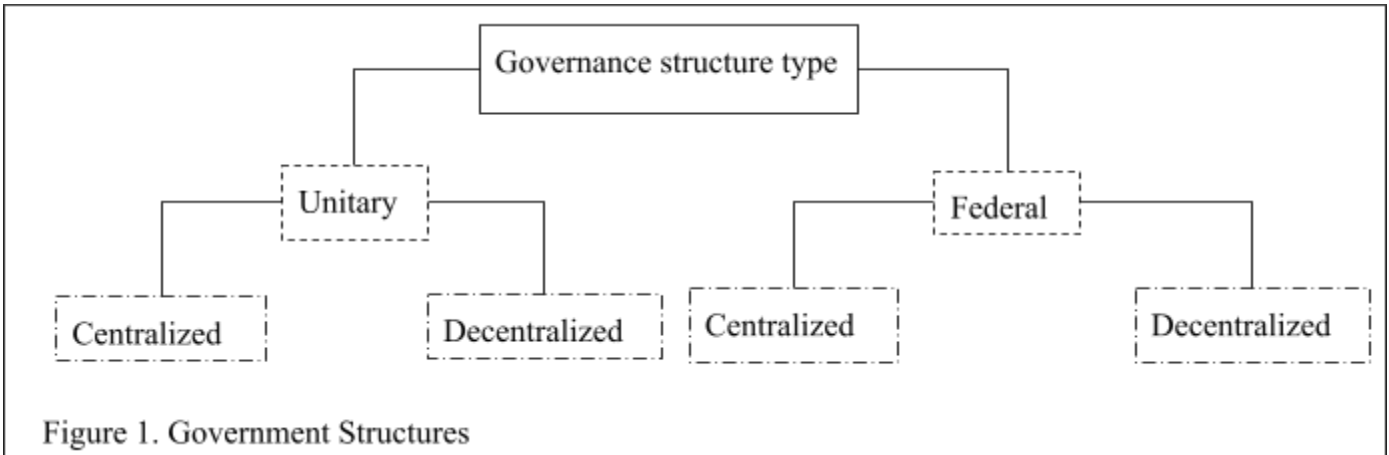
Various resources devoted to climate issues include all government and non-government resources at different levels of political influence, and it can also include existing advocacy efforts. For this paper, the focus will be on all government resources devoted to climate issues. The paper examines several resources such as initiatives, policy implementation effectiveness, budgeting, and more involving the resources devoted to climate issues. Political culture and economic context can influence these government-funded resources' availability, productivity, and quality in policymaking, implementation, and enforcement (Harring et al., 2019), which will be highlighted in my country case studies. Other factors that can affect these governmental resources include globalization and different power actors. Globalization can hinder government-funded resources as economic interests are a priority when considering policy advocacy, making, and implementation. Globalized markets and resources can impede domestic use and climate change priority due to the global competitive market (Raftowicz, 2021). Power actors can include institutions, government officials, and political thought (i.e., colonization,

imperialism, etc.). Globalization and different power actors are highlighted as factors that affect efforts regarding climate policies and efforts.

All three factors impact the level of the policy implementation gap in carbon emissions, which illustrates the complexity of closing the policy implementation gap. Although the policy implementation gap can fall under information asymmetry, information asymmetry is a small contributing factor and undermines the gravity of the situation. The policy implementation gap can be solved with multiple power actors (institutions, communities, and individual people). Hence, it is important to examine the country's political willingness, differing multilevel governance, and varying resources devoted to climate change policies.

Theory and Argument Figures

Below are the figures that provide visual guidance on how general government structures inform today's government structures in the countries cross-compared in the paper and my argument. Figure 1 conceptualizes and demonstrates the variables of the political governance aspect of my argument. Unitary and federal government structures can become centralized or decentralized, which impacts fiscal administration, policymaking, policy implementation, and more. Figure 2 demonstrates how political willingness, multilevel governance, and devoted resources contribute to differences in carbon emissions policy, which can create a policy implementation gap. The policy implementation gap can vary across countries, leading to climate change policy implications.



CASE SELECTION FOR COUNTRY CROSS-COMPARISONS

This research examines Norway, Türkiye, Australia, and Canada for two reasons. All four countries are part of the Organization for Economic Cooperation and Development (OECD), providing a knowledge epicenter of evidence-based international standards for intersecting policy solutions, data, and social, economic, and environmental analysis for this paper (*About the OECD - OECD*). One of the priorities of the OECD is climate resilience to transition to net-zero greenhouse gas emissions and continue their commitment to sustainable development with an overall understanding that climate change is concurrent to other issues (“Trust in Global Cooperation - the Vision for the OECD for the Next Decade” 4-5, 2021). Being part of the OECD allows a degree of intersectionality within policies, contributing to the paper’s capability to cross-compare countries and demonstrating political willingness, multilevel governance, and varying resources devoted. An example of intersectionality within policies is Canada’s National Adaptation Strategy, which prioritizes proactive mitigation policies while striving for fair, inclusive, and equitable ways for diverse communities, highlighting the intersectional work of climate change and social equity (Environment and Climate Change Canada). Geographical variation is the second reason. Geographical location impacts climate policies and approaches, so that geographical variation can provide insight into similarities and differences in policy approaches to their top contributing polluters. These two reasons are why Australia, Canada, Norway, and Türkiye were chosen for this research.

The paper investigates each government’s approach to greener policies regarding reducing carbon emissions from their top contributing sector and how the country is attempting to decrease carbon emissions. The case will first discuss the government structure to provide context on multilevel governance. After discussing the government structure, policies and

approaches regarding the top contributing sector will be examined. Success for the country will be measured by efforts to decrease the magnitude of the policy implementation gap in the top carbon-emitting sector. Success will also be determined based on efficiency and effectiveness in their urgency and if carbon emissions reductions are improving. If the country is not urgently producing efficient and effective policies, then it is behind its sustainability goals. These factors determine if the country is urgently working towards greener policies to curb climate change.

There will be two different types of cross-comparison. The first subsection will provide information and progress reports on their carbon emissions reduction efforts to their top carbon contributing sector and then do individual cross-comparisons (e.g., Norway being cross-compared to Türkiye, Australia, and Canada). The second cross-comparison will be based on the type of government: unitary versus unitary and federal versus federal. These comparisons will illustrate if there are any overlapping issues or approaches between countries with the same type of governance. These comparisons will highlight how the three factors (political willingness, multilevel governance, and resources) significantly influence the effectiveness and efficiency of carbon emissions reductions and how they relate to the “policy implementation gap.”

COUNTRY CASES

CASE 1: NORWAY

The paper will analyze the Norway case by looking at these three aspects of my argument: a) varying levels of political willingness to meet climate goals, b) the differing types of multilevel governance, and c) varying resources devoted to climate issues. There will be a government structure context to highlight the political willingness, political culture, and

multilevel governance to national governance operations followed by the top carbon-polluting sector, and then climate action will be analyzed in relation to the three aspects.

Norway is a unitary system that is a parliamentary constitutional monarchy, where there is a legislative branch (the Storting), the executive branch (the government), and the judicial branch (the courts). The Prime Minister is appointed by the monarch, who can choose cabinet members, command the support of their parliamentary party, and control the legislature and executive during their term of 4 years (no term limits). The Storting is the legislative body where the cabinet members (4-year terms) are “elected through an open-list proportional representation system,” where the cabinet supports the prime minister’s policy agenda (“Norway: Government”). The courts’ judges are appointed by the monarch “upon the recommendation of the Judicial Appointments Board with a mandatory retirement at the age of 70” (“Norway: Government”). This government structure is responsible for climate change policy-making and implementation as it impacts multilevel governance and varying resources devoted to climate policies.

Norway’s top polluting carbon emissions sector is fossil fuels for energy production, while flaring (occurrence during the oil extraction) and cement for industrial production are the next most contributing carbon emissions (Ritchie et al.). According to the International Energy Agency (IEA), Norway’s top polluting carbon emissions are fossil fuels for energy production because Norway is a reliable producer in the world’s oil and gas supply, especially for Europe, as Norway supplies “3% of global gas consumption” and accounts for “2.3% of global oil production in 2020” (“Norway 2022: Executive Summary”). In 2020, Norway exported 87% of its energy production as the seventh-largest natural gas producer in the world (“Norway 2022: Executive Summary”). Yet, Norway’s “extensive hydropower resources covered 92% of

electricity generation, supporting an almost completely renewables-based power sector,” already making all of their domestic carbon emitters achieve low emissions (“Norway 2022: Executive Summary”). However, it should be noted that Norway must tread carefully with hydropower as it has its own disadvantages, such as damaging ecosystems downstream or creating water scarcity with communities below hydropower. Norway uses hydropower for its domestic energy production and exports fossil fuels for energy production.

C. Varying Resources Devoted to Climate Issues

Norway has focused its carbon emissions policies on carbon capture and storage (CCS) (Schenuit et al. 8, 2021). Norway utilizes cost-benefit analysis (CBA) to make informed climate change¹-related policies, especially carbon emissions reduction policies. CBA converts future costs and benefits by projecting estimates based on maintaining the current level of consumption and considering the range of uncertainties and possible individual investment for the future environment or generation (“Adapting Transport Policy to Climate Change Carbon Valuation, Risk and Uncertainty,” 2015). However, this may indicate that they are trying to maintain their economic dependency on exporting crude oil, as CBAs can be used to know which policies to avoid changing to maintain economic profit (Harring et al. 640, 2019). CCS stems from more reactive than proactive preventative measures, meaning Norway may be implementing climate change policies to reduce the record of carbon emissions rather than decrease the output production. Such policies make sense to meet climate goals while maintaining the amount of exportation the fossil fuel industry produces. These various resources provide cost-effective information locally, nationally, and internationally and a foundation for mitigation work. The aforementioned information elaborates on the varying resources devoted to decreasing carbon emissions and overall efforts to mitigate climate change.

¹ Climate change and global warming will be used synonymously.

Another example of resources devoted to climate change policies is carbon taxation. Norway was one of the first countries to implement a carbon tax over the combustion of fossil fuels and the petroleum sector as they tax on “mineral oil (including auto diesel), petrol, natural gas, and LPG [liquefied petroleum gas]” and petroleum emissions based on the amount of oil and gas combusted or emitted directly to air on platforms, installations or facilities (“CO2 Tax on Offshore Oil and Gas” 2020). Now, Norway has been making efforts to ensure profit from exportation by increasing the carbon tax by continuing to be one of the leading countries in CCS deployment as Norway has two large-scale CCS projects currently operating and one under development (“Norway 2022: Executive Summary”). The impact of carbon taxes explains why the country practices CCS frequently, as CCS allows perpetrators to avoid paying taxes. This ultimately exemplifies the limitations to Norway’s resources devoted to climate policies.

Despite the fact that Norway is only one of the few countries globally to have carbon price rates higher than 25%, carbon taxes were able to pass in Norway due to the carbon price gaps that would still allow significant profit in fossil fuels (Finch and Bergh 5, 2022). Price gaps are the difference between what is taxed and what should be taxed based on scientific studies to ensure we are decreasing or maintaining current levels of climate change (Finch and Bergh 2, 2022). Therefore, carbon tax should not be at the forefront of mitigation efforts due to its modest impacts as it only heavily impacts the oil and gas sector, and carbon tax does not change the process to cleaner energy production (Bruvoll and Larsen 16, 2002). Additionally, existing carbon prices in carbon taxes are different from authentic carbon prices necessary to decrease the impact of climate change (Finch and Bergh 2-3, 2022). Current carbon taxation highlights moderate to progressive political willingness and the varying resources devoted to climate policies.

A. & B. Political Willingness and Multilevel Governance

Norway is an example of how the globalization of resources worsens climate change. Even though Norway has made as much domestic progress in policy implementation as possible in energy production, Norway is the world's third-largest gas exporter, making the fossil fuel sector contribute to the high rates of carbon emissions (Voigt, 2021). Domestic progress in policy implementation for Norway regarding the overall climate-conscious policy for domestic energy production. Norway's exportation of fossil fuels negates the domestic progress in reducing carbon emissions. Although Norway is constitutionally bound (with limited circumstances) to protect its natural habitats, making it a different study compared to other countries, there is a disconnect between exportation impacts and how it impacts Norway's green spaces (Voigt, 2021). The Norwegian Constitution states:

“Every person has the right to an environment that is conducive to health and to a natural environment whose productivity and diversity are maintained. Natural resources shall be managed on the basis of comprehensive long-term considerations which will safeguard the right for future generations as well” (Voigt, 2021).

Although the Supreme Court, on December 22, 2020, ruled that the government's constitutional protection of the environment is circumstantially limited, this still places political willingness high in Norway as this law on environmental protection was implemented in 2014 and remains constitutionally binding even if it is based on circumstances (Voigt, 2021).

Environmental organizations appealed twice that the two courts' interpretation was too restrictive, but the Norwegian Supreme Court denied the appeal as they found the government did not violate the Constitution as the government took the necessary steps before providing the licenses (Voigt, 2021). The Supreme Court stated that “Article 112 of the Constitution protects

citizens from environmental and climate harms,” yet admitted the challenges of climate change, indicating their understanding of how allowing oil and gas production negatively affects the environment (Voigt, 2021). This ruling of circumstantial environmental protection by the Supreme Court highlights the heavy relations with oil and gas production, resulting in mixed policies of Norway’s climate action and policy implementation and reinforcement. Norway’s increasing economic dependence on exporting fossil fuels has increased “political consensus and polarization among political parties” on global warming, explaining the mixed climate action of domestic climate efforts and fossil fuel exportation (Harring et al. 640, 2019). This also provides context to the level of political willingness and types of multilevel governance that impact climate policy in Norway and showcases the national government’s devotion to climate issues. Norway is more politically willing than Türkiye, Australia, and Canada to implement climate-conscious policies.

Norway has made domestic energy efforts to decrease its impact on climate change, but Norway does not have a specific net zero target (Schenuit et al. 8, 2021). The lack of a net zero target implies a shift to focusing on other sectors and energy expansion, as Norway wants to expand hydropower and increase carbon taxation. However, it could also indicate a plateau of political willingness and varying resources. Globalization brings economic gain from exporting fossil fuels, and the Supreme Court case creates political polarization and tension in political willingness to expand outside of preexisting climate-conscious sectors or policies. Due to Norway’s strong foundation in energy infrastructure, Norway has the capacity to focus on different sectors to ensure diverse climate mitigation (preventing or reducing the impact of global warming) policies because focusing only on energy infrastructure thus far has exhausted resources and is increasing pressure on the environment (biodiversity threatened) (“OECD

Environmental Performance Reviews: Norway 2022”). If Norway continues to over-exert carbon taxes and hydropower, Norway will become unsustainable and not better than Australia, Canada, and Türkiye. According to the Climate Action Tracker, Norway has an overall rating of almost sufficient as the government is excellent with policies and action and nationally determined contributions (NDC) targets when compared to the modeled domestic pathways but is insufficient with climate finance (“Policies & Action: Norway”). Although Norway has made great strides and prioritized climate mitigation, much work still needs to be done in divesting fossil fuels regarding energy production and investing in the diversification of renewable energy. For instance, Oslo, Norway, is transitioning to wind power on the shores for their ports. Oslo, Norway, became a case study on its energy transition, where political willingness contributed to the city’s policymaking and implementation (Bjerkan and Seter, 2021). The Port of Oslo already had a goal to remove 85% of its carbon emissions within 2030, thereby incentivizing its energy transition to shore power (Bjerkan and Seter 2, 2021). This case study highlights Norway’s multilevel governance and political willingness as subnational efforts are striving to reduce the severity of climate change.

As mentioned earlier, success for the country in this paper is measured by efforts to decrease the magnitude of the policy implementation gap in the top carbon-emitting sector, whether carbon emissions reductions were improving, and the level of effectiveness and efficiency in their climate urgency. Norway’s overall effectiveness and efficiency in climate urgency are the most present compared to the other countries. According to the Climate Action Tracker, Norway is the only country to be almost sufficient among the cases of this paper since Türkiye, Australia, and Canada largely struggle to reach their goals (“Policies & Action: Norway”). The magnitude of the policy implementation gap is closing as political willingness

remains prevalent, differing multilevel governance is increasing and improving climate-conscious policies, and varying resources devoted to climate issues persist.

Norway is the only country that has implemented the carbon tax for more than a decade compared to the other nations. Australia and Türkiye currently need to have carbon tax policies (Türkiye only recently decided to look into carbon tax policy), implicating the lack of comprehensive and multifaceted solution-making to climate change (Kucukgocmen 2022). Although Canada recently implemented the carbon tax, Canada's carbon tax implementation was only introduced in 2019, making it not as effective compared to Norway based on its length of enforcement (Fournier et al. 10, 2024). Carbon tax is not the best solution, but it is a solution to help mitigate carbon emissions. Norway has taken multiple steps to reduce carbon emissions and the policy implementation gap.

Norway has the strongest political willingness to implement climate change policies. According to Haring et al. 2019, Norway's Scandinavian political culture bases its values on "altruism, responsibility and cooperation, and acceptance of political steering," allowing for a consensus-driven policy process (Haring et al. 640, 2019). Haring et al.'s research also finds Australia to have a more adversarial system, causing climate politics and policies to be less successful, and explains why carbon pricing policy implementation is not in the climate policy practice (Haring et al. 640, 2019). Norway has put in much effort across differing types of multilevel governance. Norway has varying resources, such as CBA, CCS, carbon tax, and renewable energy policies, devoted to climate issues that significantly impact the policy implementation gap in carbon emissions as they continue to lead in renewable energy usage.

CASE 2: TÜRKIYE

Türkiye is constitutionally a unitary centralized state with a former republican parliamentary democracy government structure that has become a presidential government (Kirişci and Toygür, 2019). Türkiye's President has control over the executive branch, where the head of state can issue decrees, appoint his own cabinet, form the budget, dissolve parliament early, and fill the courts with his own appointees, whereas the Prime Minister and his cabinet were abolished and transferred to the President ("Turkey Government"). This shift in power and government structure in 2018 still allows for three branches of government to exist: the executive branch is handled by the President, the legislative branch is managed by the Grand National Assembly of Türkiye (4-year term of proportional representation), and the judicial branch (Constitutional Court of the Republic of Türkiye) is appointed by the President ("Turkey: Government"). Türkiye's institution structure is responsible for climate change policies as it adds to some of the ineffective and inefficient climate initiatives on the national level.

A. Political Willingness

Some factors that make Türkiye a different case compared to Norway, Australia, and Canada could be the level of Türkiye's relative political instability, economic crises, and human rights violations, which might make climate goals difficult to meet, as environmental sustainability may not be the priority. The Council of Europe Commissioner for Human Rights has released several publications² regarding hostile environments for freedom of expression and human rights advocacy, such as the prolonged detention of Osman Kavala³ and perpetuating

²"Türkiye - Country Work." *Commissioner for Human Rights*, www.coe.int/en/web/commissioner/country-work/turkiye.

³"Turkey: Prolongation of Detention of Osman Kavala Displays Contempt for Human Rights and the Rule of Law." *Commissioner for Human Rights*, Council of Europe, 2 Sept. 2021,

stigmatization of LGBTI people⁴. These publications indicate that gaining sociopolitical stability and control is a more urgent matter despite Türkiye facing a water crisis that, in turn, impacts socioeconomic and sociopolitical development and stability. The water crisis highlights how interconnected these issues are because instability is exacerbated by climate change.

Some argue that, in spite of these issues, Türkiye's President, Recep Tayyip Erdoğan, is focusing on economic development at the "expense of the environment," increasing energy consumption, thereby increasing carbon emissions in their top polluting sector (Hockenos, 2021). The President's economic plan involves encouraging population growth, large-scale building construction, investment in agriculture, manufacturing, and tourism, as well as investing in coal and hydroelectric projects to support energy output for these investments (Hockenos, 2021). These compounded and interconnected issues impact climate mitigation and adaptation policies as all crises and instability impede quality of life and the ability to take action on any issue.

Türkiye's top polluting carbon emission is energy, as it takes 71% of total emissions, which breaks down to the power sector (30%), industry (25%), transport (21%), building (17%), energy (own use is 4%), and agriculture (3%) ("Turkey," 2022). After energy carbon emissions, agriculture (13%), industrial processes (12%), and waste (3%) trail behind. Currently, energy primarily derives from fossil fuels (85%), while renewable energy has declined from 16% to 14% (2019-2021) ("Turkey," 2022). Such decline indicates a failure to adopt mitigation strategies and has shown intentions to maintain adaptation policies. According to the International Energy Agency, about 36% of total energy-related carbon emissions come from

www.coe.int/en/web/commissioner/-/turkey-decision-to-prolong-the-detention-of-osman-kavala-displays-contempt-for-human-rights-and-the-rule-of-law.

⁴ "Turkish Authorities Should Stop the Stigmatisation of LGBTI People." *Commissioner for Human Rights*, Council of Europe, 24 June 2021, <https://www.coe.int/en/web/commissioner/-/turkish-authorities-should-stop-the-stigmatisation-of-lgbti-people>.

electricity and heat producers, as power plants generate electricity and heat by burning fossil fuels (“Türkiye - Countries & Regions”). This percentage will continue to increase if policies promoting population growth and economic development without sustainable policies are implemented and enforced.

A. & B. Political Willingness and Multilevel Governance

Although the national government is not prioritizing global warming, subnational governments are implementing more climate-conscious initiatives and have been doing important and impactful climate work for years. For instance, Istanbul Metropolitan Municipality (IMM) created Istanbul’s 2018 Climate Change Action Plan to work with a transnational municipal network through participatory planning and policy models for mitigation and adaptation (Yazar and York 6, 2021). Another example is how environmental engineers, who are public officers from the IMM’s Directorate of Environmental Protection, prepared an air quality report for Istanbul in 2013 and a climate action plan (Yazar and York 6, 2021). Scholars critiqued Türkiye’s National Climate Change Adaptation Strategy and Action Plan for 2011-2023 because it refused to “acknowledge the existence of maladaptive policies, facilitate much needed institutional coordination, increase technical capacity, or provide comprehensive analyses,” indicating lacking national regulations to guide local governance on climate actions (Yazar and York 7, 2021). However, it is still notable that an important strategy plan was published, and in the year to come, it might pave the way for more efforts. Compared to the other country cases of this work, less political willingness on the national level has forced local governance to play major roles in the fight against climate action, also by being part of international efforts such as networks of cities. Political willingness on the local level has grown and intensified over the

years. The multilevel governance has impacted climate policy, activism, and initiatives as they solidify local and international efforts.

Another example of multilevel governance at work is how national and subnational efforts are being made towards energy efficiency in buildings. A study on the city of Eskisehir found indications that Türkiye is becoming more attentive to creating advantageous building energy codes from their performance-based compliance pathway on the local/regional level (Evans et al. 131, 2018). Since Türkiye is aware that buildings are about one-third of the total global energy demand, Türkiye appears to be placing greater emphasis on their building energy policies to decrease contributions (Evans et al. 127, 2018). Poor building energy efficiency in Türkiye can be the contributing factor to Türkiye's electricity and heat producers taking 36% of the total energy-related carbon emissions ("Türkiye - Countries & Regions"). Türkiye is still improving building energy efficiency. Current regulations require certain building sizes to have a specific classification of energy efficiency, and 5% of energy consumption from these buildings must be from renewable energy, resulting in an expected 25% decline in energy consumption and a decrease in the energy import bill by 5 billion Turkish Liras ("New Era Begins in Energy Efficiency for Buildings"). Türkiye also has a projected plan for 2025 and 2030 to ensure that all buildings are energy efficient and is currently drafting a tax plan to make businesses more carbon conscious ("New Era Begins in Energy Efficiency for Buildings"). Therefore, this effort is important to Türkiye's carbon emission reduction. Their building energy efficiency efforts indicate that there is some political willingness in Türkiye and multilevel governance working towards a greener country. This example illustrates the level of political willingness on the local level and multilevel governance efforts to decrease carbon emissions.

B. Varying Resources Devoted to Climate Issues

Although Türkiye has set a renewable power generation goal after pressure from not having climate target goals, this is below Türkiye's overall capabilities (i.e., financial, sustainable, infrastructure, etc.) (Tramullas, 2022). Türkiye can easily reduce carbon emissions by 35% by 2030, thereby achieving the 2053 net zero target, especially in absolute terms with hard deadlines. However, it should be noted that the persistence of economic-driven policy without holistic, climate-conscientious policies might lead to drastic sociopolitical problems. Moreover, according to Evrendilek and Ertekin (2003), Türkiye's growth in population and urbanization is creating a perceived need for fossil fuel-based energy systems, ultimately delaying economically feasible energy transition. The country has been lagging behind in sustainable growth (Başak et al., 2022), which could also be problematic in meeting the implementation goals.

Türkiye has not been very successful in decreasing the severity of the policy implementation gap in the energy sector, placing them last compared to Norway, Australia, and Canada. Comparatively, all three countries have made more than one type of effort to decrease carbon emissions. Türkiye is lagging behind compared to Norway, Australia, and Canada in their efficiency and effectiveness in climate urgency. Carbon emission reductions have not improved, and the effectiveness and efficiency of its climate urgency are not present. It appears that Türkiye is experiencing an implementation deficit, where the government is showing "little interest in addressing certain issues" or "adopting non-binding policy instruments that are ineffective" (Yazar and York 4, 2021). This severity of the implementation deficit in Türkiye's carbon emission policies has led the policy implementation gap in carbon emissions to expand and worsen. According to the Climate Action Tracker, Türkiye's overall rating is critically

insufficient as it cannot meet NDC targets without drastic policy change, but policies and actions are not set to change to meet climate goals drastically (“Türkiye”).

By itself, subnational political willingness would not be completely sufficient to decrease the severity of the policy implementation gap unless national political willingness also catches up to subnational political willingness. If resources devoted to climate policies increase and Türkiye makes good use of its newly established Climate Council, this would help close the existing implementation gap and change Türkiye’s standing in terms of overall climate action efforts.

CASE 3: AUSTRALIA

Australia is a federal parliamentary democracy with a commonwealth government. The federation of six states each has its own constitution, and no one can impede the sovereignty of the other constitutional states. There are three levels of government in Australia, where citizens vote to elect representatives at the federal, state, or territory level and local levels. Constitutionally, certain powers are given to the federal government, and the states and territories have shared powers with the federal government and separate powers that are only with the states and territories (“Protocol Guidelines”). The federal government (Commonwealth Government) consists of the King (represented by the governor-general), the House of Representatives (elected by the citizens), and the Senate (represents state or territory through a proportional representation system) (“Australia: Government”). The judicial branch handles any disputes between the Commonwealth and states or among the states regarding specific functions and reviews laws passed by the Commonwealth and states’ parliaments (“Australia: Government”). The legislative branch is between the House of Representatives and Senate, which review, debate, and vote on proposed laws on intrastate relations (e.g., foreign affairs,

trade, defense, currency, social security, etc.) (“The Three Levels of Government”). These political actors handle federal policy-making and implementation, including climate change policies.

Representatives of state and territory go by different names depending on the state and territory. State and territory government responsibilities primarily lie in localized benefits, such as education, public transit, justice, and health (“The Three Levels of Government”). Local governments can be called the city council or shire council (established by state governments), where they are responsible for looking after the needs of a city or local community (e.g., local road maintenance, building and land regulations, public health and recreation facilities, etc.) (“The Three Levels of Government”). This complex structure of governance is responsible for climate change policies across the types of multilevel governance and varying resources devoted to decreasing carbon emissions.

Australia’s top contributor to carbon emissions is energy production. Burning fossil fuels are used to produce electricity (which contributes to about 33.6% of the total emissions), stationary energy (i.e., manufacturing, mining, residential, and commercial fuel use) is about 20.4%, with transport (17.6%), agriculture (14.6%), fugitive emissions (10%), industrial processes (6.2%), and waste (2.7%) following behind energy production (“What are the Sources of Carbon Dioxide in the Atmosphere?”). According to the International Energy Agency, 63% of domestic energy production derives from coal, followed by natural gas (30.2%), crude oil (4.4%), and hydropower (less than 1%) for domestic energy production (“Australia - Countries & Regions”). To combat carbon emissions, Australia has implemented several policies. This paper will look at a few policies to highlight their efforts and elaborate on how their varying resources are lacking.

C. Varying Resources Devoted to Climate Issues

One factor that must be considered in analyzing Australia's efforts to adaptation policies is Australia's decreasing ecosystems and regional natural resources from the worsening global warming. Australia is increasingly affected by "chronic and acute climate hazards," such as fire, flooding, drought, and more, that have impacted infrastructure and liveability in some rural areas, causing limited outdoor physical work and negatively impacting older populations (Lawrence et al., 2022). Chronic and acute climate hazards impact funding and bandwidth to support the population size after a disaster. This also negatively affects the local economy, quality of life, and socioeconomic status. This has resulted in state and local governments leading and facilitating climate adaptation policies to combat the urban heat island effect through spatial planning, expanding greenery and shade, and building heat-resistant and energy-efficient buildings (Lawrence et al., 2022). The urban heat island effect is when heat is absorbed and re-released from cemented buildings and streets with little to no greenery, which can worsen heat waves and air quality. This affects resources devoted to climate issues as funds for adaptation policies to combat the urban heat island effect. This situation will progressively decline in Australia due to current urban redevelopment, which will lead to the removal of green space, increasing the urban heat island effect and delaying progress in climate adaptation (Lawrence et al., 2022). The varying resources devoted to climate issues impact multilevel governance focus, funding, and resources because of these factors.

Australia has varying resources dedicated to decreasing carbon emissions in the energy sector. For example, Australia recently implemented the Emissions Reduction Fund (ERF) as their main method to reduce greenhouse gas emissions after the repeal of carbon prices to decrease emissions, increase energy productivity, and increase renewable energy usage (Hanna,

2017). Australia showcases little improvement through its carbon dioxide removal (CDR) policy as it sets low goals and partakes in reverse auctions for carbon abatement from the ERF (Schenuit et al. 10, 2021). The ERF has funded several projects, such as implementing energy-efficient bulbs in public spaces, native forest and vegetation regrowth projects, and waste used to create energy (Hanna, 2017). However, various political actors and environmentalists are questioning the effectiveness of the ERF and whether it can achieve the 2030 target, as it does not have sufficient funding (Schenuit et al. 10, 2021). The ERF has also been criticized for inefficient ways to reduce emissions as such projects mentioned earlier were necessary to implement decades ago to advance climate policies further (Hanna, 2017). Australia's ERF was created in 2022 for the 2030 target, and two-thirds of the Australian ERF's \$2.5 billion fund has been spent, highlighting the lack of efficiency and sufficient funds to solve a huge issue that heavily impacts Australia (Hanna, 2017). According to the Climate Action Tracker, ERF leaves a significant emissions gap between its planned reductions and the next zero target in 2050 without presenting new policies and specific outlined plans on how to achieve its goal, resulting in a "poor" rating. Although this resource is devoted to climate policy, it is not cost-effective, and it does not showcase urgency within the issue. The political willingness is indicated as suboptimal and not truly dedicated to climate urgency from this insufficient resource.

Another example of reducing carbon emissions in the energy sector is the Powering Australia plan to reduce pressure on electricity prices and contribute to their emission reduction goal of 43% by 2030 ("Energy Supply," 2024). The Powering Australia plan has several plans for national climate leadership, energy, industry, agriculture and carbon farming, and transport, but the paper will focus on energy. Even though there are several policies on investing in energy through the electricity grid and helping households and businesses improve their energy

efficiency and decrease costs, Australia is still supporting the domestic wholesale gas market in the energy plan of Powering Australia (“Powering Australia,” 2024). This policy solidifies the relationship with the fossil fuel and gas industries, making it more difficult to decrease carbon emissions. There are a variety of resources available to decrease carbon emissions, yet it is superficial as the government explicitly continues to have fossil fuels and gas related to politics.

Australia is also attempting to make strides in international efforts by partnering with its Indo-Pacific neighbors to reduce emissions called the Indo-Pacific Carbon Offsets Scheme, which has an approximately \$100 million budget to run for a decade (“Supporting Climate Action in the Indo-Pacific Region”). The scheme is to create a carbon market for offset trading under the Paris Agreement rules as it aims to offset Australian businesses’ emissions, boost public and private investment in practical climate action, provide climate adaptation and livelihood benefits, and strengthen partner countries’ role in setting global standards (“Supporting Climate Action in the Indo-Pacific Region”). The effectiveness and efficiency of this scheme have yet to be released, but this brief example of international efforts highlights the varying resources due to climate issues.

These examples of climate policies in Australia highlight the numerous resources devoted to decreasing carbon emissions but not providing qualitative resources as these policies struggle to meet deadlines and strengthen the fossil fuel and gas industries’ foothold. The government continues to expand fossil fuel use through fracking permits, approving new coal mines, and more offshore and international efforts that increase carbon emissions (“Australia”). According to the Climate Action Tracker, Australia’s overall rating is insufficient as their policies and actions NDC targets against modeled domestic pathways are almost sufficient but with critical insufficiency in climate finance.

A. & B. Political Willingness and Multilevel Governance

Another national policy that was implemented was the National Energy Productivity Plan (NEPP) in 2015 to increase energy productivity by 40% by 2030 by charging the now Energy and Climate Change Ministerial Council (“National Energy Productivity Plan,” 2023). The NEPP is supposed to provide a framework and economy-wide plan to coordinate efforts and accelerate energy productivity improvement with annual reprioritizing effort planning for states and territories across Australia that streamlines all information to the federal government (“National Energy Productivity Plan,” 2023). According to a 2019 study, Australia would not achieve the 40% increase goal in energy productivity before 2030 without significant changes to its fuel mix and industry structure (Bhattacharya et al., 2019). However, that is difficult when thousands of people heavily rely on fossil fuel/oil and gas production for their livelihood. This disincentivizes subnational governments and citizens to shift how energy is produced, affecting political willingness. The study examined state and territorial energy productivity dynamics and found they only achieved a 20% increase in energy productivity, highlighting that Victoria and Western Australia will achieve 22% by 2030, Queensland (20%), New South Wales, Northern Territory (16%), and Tasmania (14%) (“Australia Lags in Achieving Energy Benchmarks by 2030,” 2020). This study showcases the multilevel governance and varying resources dedicated to climate policy, ultimately highlighting a degree of political willingness across Australia’s states and territories. Political willingness needs to urgently emerge as Australia’s energy consumption and carbon emissions are higher than the OECD average (Bhattacharya et al. 11, 2019). States and territories have implemented their own renewable energy targets, while national targets for renewable energy adoption and carbon emissions reduction are not seen to

the same degree (Bhattacharya et al. 11, 2019). The national and subnational levels of governance need to improve their political willingness so there can be more diverse climate policies.

Australia also has a Renewable Energy Target (RET) scheme to reduce emissions from the electricity sector through two schemes (large-scale and small-scale). The large-scale RET (LRET) incentivizes investments in renewable energy power stations (i.e., wind and solar farms and hydroelectric power stations) where this part of the scheme plans to deliver 33,000-gigawatt hours of extra renewable electricity per year (“Renewable Energy Target Scheme”). The small-scale RET Scheme (SRES) incentivizes households and businesses to install renewable energy systems (i.e., rooftop solar panels, solar water heaters, and small-scale wind or hydro systems) (“Renewable Energy Target Scheme”). RET was implemented in 2001 and has made improvements to Australia’s renewable energy as it has accounted for more than half of Australia’s greenhouse gas abatement (equivalent to retiring two very large coal-fired power stations every year) (Nelson et al., 2023). The RET scheme has increased investment in renewable energy due to efforts made on the national and subnational levels. This policy showcases a history of degree in political willingness in national and subnational efforts to support resources devoted to climate policies.

However, it should be mentioned that the Parliament of Australia released a report stating that major policy changes to RET are needed for future climate goals and cost-effective benefits. Despite the fact that numerous economic studies and commissioned modeling by the government have proven the RET policy’s success (Pears et al., 2014). Experts in the climate change and sustainability field assert that the report by the Parliament of Australia will disrupt and prevent sustainable development and expansion in renewable energy. The director of the Centre for

Sustainable Energy Systems at the Australian National University, Andrew Blakers, stated that “The RET review is deeply flawed because it does not accept the fundamental purpose for the RET - to increase the supply of renewable energy - which is doing in a highly effective manner” (Pears et al. 2014). The Sustainable Energy & Climate Researcher at RMIT University, Alan Pears, noted that the severe political polarization has undermined evidence-based climate policy (Pears et al. 2014). The Energy Program Director at the Grattan Institute, Tony Wood, stated that the review is trying to change the RET because “it will not contribute towards the government’s emissions reduction target in a cost-effective manner,” but this expectation is not realistic to the situation, as there should be varying resources dedicated to decreasing carbon emissions and increase climate-forward policies. These expert opinions of the RET contextualize the level of political willingness in Australia and showcase how multilevel governance is utilizing their time, funding, and resources, impeding growth to varying resources devoted to climate issues. It is possible that the Parliament of Australia is trying to make RET ineffective due to its relations with the oil and gas industry, implying that political willingness within the government is superficial and limited.

Australia’s impact on the policy implementation gap in carbon emission reductions in the energy production sector is slowly improving. The political willingness in Australia is present but is struggling to make drastic climate policy changes. All levels of governance are engaged with climate politics yet disengaging with carbon emissions with varying degrees of efficiency and effectiveness in climate urgency. The varying resources devoted to climate policies exist, and there are various types of carbon emission focus policies, but the quality of these policies comes into question.

Overall, Australia has reactionary policies and lags in implementing and preventing more economic damage from climate change effects. There is almost no cost and benefit information on mitigation and adaptation policies, causing an adaptation investment deficit (Lawrence et al., 2022). As mentioned before, Australia has a more adversarial system due to its Anglo-Saxon roots, creating a foundation for greater emphasis on the values of hierarchy, mastery, and self-assertion (Harring et al. 640, 2019). These cultural differences result in Australia's political willingness to be low and impact multilevel governance's overall capabilities and communication skills. Türkiye and Australia are similar in that climate change negatively impacts climate policies and adaptation capabilities, but Türkiye's situation is worse compared to Australia. Canada and Australia are extremely similar in their policy approaches and face similar policy implementation gaps in carbon emissions. Australia still has much to improve on to decrease the policy implementation gap in carbon emissions.

CASE 4: CANADA

Canada is a bicameral parliamentary democracy with the Senate, and the House of Commons. It is part of the British Commonwealth. The main executive is the Prime Minister. The Governor General appoints the Senate for provincial and territorial representation, while the House of Commons is elected by the public by a simple-plurality system ("Parliamentary Institutions," 2017). The House of Commons (5-year term limit) is more dominant than the Senate (no term limits but age limit), but legislative approval is required from both houses ("Canada: Government"). The judicial branch's priority is to protect the freedom and rights of the citizens ("Canada: Government"). This government structure is responsible for the varying resources devoted to climate policy.

Canada has four sectors that it focuses on to mitigate carbon emissions: oil and gas, transport, agriculture, and electricity. Since 2021, the oil and gas sector has increased by 88% as Canada has doubled its total crude oil production, conventional oil production has increased by 24%, and emissions from oil sand production have increased by 463%, ultimately accounting for 28% of overall emissions (“Greenhouse Gas Emissions”). For the purposes of this paper, the analysis of Canada will focus on the oil and gas sector as they contribute to the continual growth of carbon emissions to support other sectors. According to the Climate Action Tracker, The Commissioner of the Environment and Sustainable Development issued a report “outlining 30 years of the government’s failure to meet its targets and reduce greenhouse gas emissions,” and the Commissioner called for stronger leadership and coordination within the government (“Canada”). Moreover, the fact that oil and gas heavily impact other major sectors indicates lacking mitigation policies to decrease ties to other sectors.

According to a Reuters article published in 2023, Canada has increased oil production by 8% in the span of two years. Oil sand producers are changing operations to increase efficiency by going to new areas with existing plants to “speed up development and lower costs” to increase profit and oil production, resulting in decreasing impactfulness of carbon emission reduction and climate policies (Williams, 2023). Canada is another example of their oil and gas production being exploited by globalization. For example, Canada promised European allies to boost crude output in 2022 due to Russia’s invasion of Ukraine (Williams, 2023). Additionally, most of Canada’s oil and natural gas exportation goes to the United States, and Canada’s investment in the Trans Mountain Expansion Project pipeline and liquefied natural gas facilities will allow for more exportation to other nations, such as China, India, and other Asia-Pacific nations (“Oil and Natural Gas 101”). These external factors contribute to the continual domestic use of oil and gas.

Since this brings economic profit to Canada, political willingness decreases and the varying resources devoted to climate change may subsequently weaken.

A. Political Willingness

There are no indications of reducing dependency on the oil and gas sector to meet climate goals as Canada is the world's fourth-largest oil producer, and provinces are resisting policy change to decrease emissions (Williams, 2023, and Haig, 2024). The political willingness across the levels of governance indicates tension between governments, affecting multilevel governance capability. For instance, Alberta's premier did not understand the need for strict 2030 regulations when they set a net zero 2050 target, indicating a lackluster effort in multilevel governance (Haig, 2024). As of 2023, an oil and gas emissions cap with a focus on methane emissions is a key part of Canada's pledge to cut carbon emissions 40-45% below 2005 levels by 2030 because it could cut a third of the emissions, but this is only a draft (Williams, 2023). Canada is not taking adequate measures to decrease carbon emissions as they are continuing relations with the oil and gas sector by heavily relying on carbon capture and storage to maintain the current rate of emissions.

C. Varying Resources Devoted to Climate Issues

Canada has been trying to curb greenhouse gasses through various policies. Canada uses National Pollutant Release Inventory (NPRI), a management tool in the industry that self-reports emissions data determined by the federal agency Environment and Climate Change Canada (Walker, 2022). NPRI has shown successful results in decreasing greenhouse gas emissions but does not indicate consistent downward progress to indicate that the management tool has a beneficial impact. Even though there is evidence of success, there are concerns about the limitations of NPRI since it is a self-reporting tool with a high probability of skewed data

(Walker 291, 2022). The indicated limitations demonstrate the tool's lack of versatility, and its inconsistent progress exhibits needed growth despite NPRI being implemented since 1992.

Although Canada is trying to be on a similar track in terms of using systems of measurement (in a broad sense) compared to Norway and Türkiye, Canada does not have a reliable framework to ensure NPRI is beneficial. This resource devoted to climate change information negatively impacts policy-making quality, efficiency, and effectiveness as the government uses it to make informed decisions.

Canada seems more set on producing adaptation climate policies than creating mitigation policies. The federal government is funding two new plans: Canada's National Adaptation Strategy and the 2030 Emissions Reduction Plan (with a reduction emission goal of 40-45% below 2005 emission levels). Since the plan was declared in 2022, overall emissions are at 6.3%, further highlighting that Canada is behind all goals to decrease emissions. This plan showcases the varying resources devoted to decreasing carbon emissions and climate change policies. The National Adaptation Strategy prioritizes proactive mitigation policies while striving for fair, inclusive, and equitable ways to reduce the risk of climate-related disasters, improve health outcomes, build and maintain resilient infrastructure, and more (Environment and Climate Change Canada). The federal government is supposed to work with provinces and territories to improve bilateral action plans with a \$2 billion budget to implement the National Adaptation Strategy and support other adaptation-related activities. However, federal investments exceed \$10 billion when disaster relief is included in the adaptation policies. This large investment highlights how the federal government devotes resources that will be used together with the other territorial levels to fight climate change.

The government introduced the 2030 Emissions Reduction Plan: Clean Air, Strong Economy, outlining a sector-by-sector path to meet a 40-45% reduction goal (“Canada’s Climate Plans and Targets”). For the oil and gas sector as of 2023, the government proposed Clean Fuel Regulations to reduce carbon intensity of liquid fossil fuels, launched a \$750 million Emissions Reduction Fund (ERF) - Onshore Program to support oil and gas companies to invest in green solutions, launched the Energy Innovation Program to deploy clean technologies and advance carbon capture utilization and storage stream (CCUS), and are developing investment tax credit for CCUS projects (“2030 Emissions Reduction Plan - Sector-by-Sector Overview”). The government’s next steps will explore capping emissions, advancing CCUS, eliminating subsidies for fossil fuels, and more (“2030 Emissions Reduction Plan - Sector-by-Sector Overview”). A 2023 progress report on the Emissions Reduction Plan indicates that Canada’s pace will exceed the 2026 interim objective of 20% and be on a “solid path” toward the 2030 target (“2023 Progress Report on the 2030 Emissions Reduction Plan: Executive Summary”). Yet, the International Institute for Sustainable Development states that the government’s current measures are insufficient to reach the 40–45% reduction target. A 2030 goal is not feasible when it was only implemented in 2022-2023. This only allows for two more progress reports on the Emissions Reduction Fund, not allowing enough time and feedback to improve the plan and shift gears on how funding, implementation, and enforcement will occur. This impacts the quality of varying resources that set the pace and support for provinces and territories.

B. Multilevel Governance

Due to the structure of the division of powers, provinces and territories are responsible for many of the net zero regulations and policies regarding their contribution to the 2030 Emissions Reduction Plan (“2023 Progress Report on the 2030 Emissions Reduction Plan:

Executive Summary”). The report mentioned that five provinces and one territory have legislated climate targets, four provinces and one territory have non-legislated climate targets, and one province and one territory do not have a climate target (“2023 Progress Report on the 2030 Emissions Reduction Plan: Executive Summary”). The type of climate targets (legislated or non-legislated) or lack thereof can be due to various factors, such as population size, weather, political willingness, employment sources, funding, and more. For example, it is possible Nunavut does not have a climate goal because the mining industry is the largest in Nunavut and Northwest territories, indicating heavy provisions of employment, resulting in lacking or heavily resisted climate-forward policies (“Canadian System of Environmental–Economic Accounts: Energy Use and Greenhouse Gas Emissions, 2020”). These climate targets showcase the multilevel governance and resources devoted to climate change. However, some provinces and territories do not have non-legislated or nonexistent climate targets could be due to the dispute about the federal government’s authority over how natural resources are regulated (Haig, 2024). Altogether, provincial-territorial targets contribute to less than half the national target, creating an “ambition gap,” which contributes to a scattered political willingness within multilevel governance (Linden-Fraser, 2023). Canada’s multilevel governance, in turn, impacts the varying resources devoted to climate change within provincial-territorial efforts, such as the rate of climate action, cost-effectiveness, and effective approaches.

Canada has a major policy implementation gap due to a lack of consideration for a feasible time frame. 2030 goals will not be achievable because of the rate and time of introduction and implementation. The policy implementation gap in the oil and gas sector continues to prevail as the government allows for oil and gas production to persist. Carbon emission reductions are slow to improve as political willingness is scattered, multilevel

governance support differs, and varying resources are impacted by political willingness and multilevel governance. Additionally, the efficiency and effectiveness of Canada's global warming urgency is severely lacking. Based on the paper's parameters of success for a country, Canada is unsuccessful in achieving those parameters.

Overall, Canada is doing worse than Norway but is doing better than Türkiye in terms of meeting the policy goals and closing the policy implementation gap. In this regard, Australia and Canada are very similar in terms of their status for meeting their goals. According to the Climate Action Tracker, Canada has highly insufficient climate finance and policies and actions; yet has almost sufficient NDC targets against modeled domestic pathways. Canada is still funding fossil fuel development locally and abroad, even though Canada has been making ambitious climate policies. This mixed action results in a highly insufficient status as climate progress are being undermined through continual funding of fossil fuels.

NORWAY AND TÜRKIYE COMPARISON (UNITARY)

Norway's unitary governance has better policy-making and implementation compared to Türkiye regarding climate change policy and reducing the severity of the policy implementation gap in carbon emissions. Comparing Norway and Türkiye, Norway is decreasing the policy implementation gap in their top carbon-emitting sector better than Türkiye by drastic margins.

Norway is a parliamentary constitutional monarchy where the top carbon-emitting sector was fossil fuels for energy production. Norway has focused carbon emission policies on CCS and increased carbon taxes, becoming the leading country on CCS and carbon taxation. Norway has invested in hydropower development on a national level and utilizes CBA to make informed policy decisions. Norway is making strides towards decreasing the carbon emission policy implementation gap. Norway's political willingness, multilevel governance, and varying devoted

resources continue to grow. However, Norway's capabilities can extend further than current projects if the country decreases its oil and gas production and exportation.

Türkiye is a presidential system with a quite centralized government, and in Türkiye, the top polluting sector is energy. Türkiye has made suboptimal efforts to decrease the carbon emission policy implementation gap as their renewable power generation goal has been deemed below capabilities by the Climate Action Network Europe. Türkiye has made some strides in increasing building energy efficiency, and subnational governance is trying to ensure climate mitigation efforts and facilitate international relations. Both countries have subnational efforts focused on sectors and types of climate mitigation policies where national efforts are lagging behind. It would not be the best strategy for Türkiye to look to Norway for carbon emission advice as Türkiye's geographical location and water status differ vastly from Norway's. With the current water crisis, it would be hard for Türkiye to achieve Norway's strategy of decreasing its impact on global warming using a strategy such as Norway's expansion of hydropower.

Inversely, it is recommended that Norway considers the policy suggestion of expanding carbon emission reduction and mitigation of the exportation of fossil fuels and search for alternative economic gains. Norway has the political willingness, multilevel governance support, and varying resources devoted to climate issues that significantly impact the level of policy implementation gap in carbon emissions. It was found that Norway was the closest to decreasing the magnitude of the policy implementation gap in the top carbon emitter sector, and carbon emission reductions were enhanced.

AUSTRALIA AND CANADA COMPARISON (FEDERAL)

Australia and Canada are behind in changing infrastructure to decrease carbon emissions due to their continual reliance on the oil and gas/burning fossil fuels sector. Canada and Australia

are not gaining headway in dividing attention to reduction policies and relying on CDR and CCS policies. Both countries are funding adaptation policies and are similar in their lack of urgency and mitigation policies, as they poorly incentivize and punish companies and organizations that emit large amounts of carbon emissions. For instance, Australia and Canada are setting unrealistic budgetary targets and unrealistic time frames for new plans. Additionally, both are similar in that the government continues to solidify its relationship with the oil and gas industry. It is not in the best interest of both nations to try and do similar tactics as they are both already similar. Canada and Australia should focus on decreasing contractual relations with the fossil fuel industry and improving political willingness.

Comparing the policy implementation gap between Australia and Canada, Australia is more efficient and effective at diminishing the policy implementation gap of its top carbon-emitting sector. There are small differences between Australia and Canada that can explain why Canada is slightly worse than Australia in terms of the policy implementation gap. For example, Australia has a better regulatory and information management tool than Canada's version (NPRI) (Walker, 2022). Additionally, based on the Climate Action Tracker, Australia is doing better as Australia's overall rating is insufficient, while Canada's overall rating is highly insufficient. Australia's varying resources devoted on the subnational level are increasing. Even though Australia's national resources are suboptimal in effectiveness, they are attempting to divest from the oil and gas production for the energy sector by changing the energy sector's infrastructure, which is not seen in Canada's efforts as they continue to invest in oil and gas usage.

CONCLUSION

The policy implementation gap on carbon emissions reflects the lack of urgency for climate change mitigation and enforcement of environmentally sustainable practices. General findings of possible solutions to consider before policy proposals may derive from evidence-based interventions (EBIs), scale-up strategies, capacity-building strategies, implementation processes, integration strategies, and dissemination strategies to reduce the policy implementation gap as well as improve policy framework and guidelines as a stepping stone to better understanding the gap (Leeman, 2017). These general findings can be used for all levels of governance to ensure cost-effective policies and the continuation of climate-forward policies.

Norway has made the most progress in restricting its top carbon-emitting sector and decreasing the policy implementation gap in carbon emissions compared to Australia, Canada, and Türkiye. Türkiye has made the least progress in regulating its top carbon-emitting sector and reducing the policy implementation gap in carbon emissions compared to Australia, Canada, and Norway. Australia and Canada have made slow and contradictory progress toward diminishing their top carbon-emitting sectors and lessening the policy implementation gap in carbon emissions.

Some policy implications found during my research had three overarching themes. The first overarching theme was the diversification of climate-forward policymaking and implementation to ensure long-term sustainable practices. Norway showcased this policy implication through its continual investment in hydropower and increasing carbon taxation, while there was little national effort to explore variation and solidification of renewable energy.

Although there are subnational efforts to expand renewable energy sources, it is important to fund diversification of climate policies.

The second policy implication was that successful climate policies are contingent on the nation's stability. If the nation is not stable from sociopolitical, socioeconomic, and environmental factors, then political willingness, multilevel governance, and varying resources are negatively impacted. Ultimately allowing the policy implementation gap to persist. Türkiye and Australia highlighted this implication. Türkiye is facing a water crisis, economic crises, and sociopolitical issues that have resulted in less national effort on varying resources devoted to climate issues compared to the other three countries in this study. Türkiye's subnational governance is making significant efforts to prioritize climate policies and work to fix the water crisis. Australia's contributing factor to its struggle with carbon emissions reduction policies is due to the decreasing regional natural resources as global warming intensifies. These stability determinants impede infrastructure development and liveability to maintain adaptation capability as it pulls funding to provide disaster relief and adaptation development.

Finally, globalization acts as an obstacle. Norway, Australia, and Canada are prime examples of fossil fuel production continuing due to economic gain from exportation. These countries allow fossil fuel production for exportation. Norway is the world's seventh-largest gas producer and third-largest gas exporter, Australia is the world's fourth-largest gas exporter, and Canada is the fourth-largest oil producer and fifth-largest gas exporter. These economic gains deter stricter carbon emission restrictions by focusing on other sectors' contribution to carbon emissions. Although these efforts in other sectors are important, progress can only be made so much without hindering fossil fuel production when they contribute the most carbon emissions to

these countries outside of energy production. Table 1 below shows a summary of the main findings from the cases.

Table 1. Comparison of Findings

Country	Political Willingness	Multilevel Governance	Varying Resources Devoted to Climate Change Policies	Top Carbon-Emitting Sector	Factors Impacting Efforts	Overall Rating to Decreasing the Gap
Norway	Political willingness	Willing across all levels	National and subnational policy resources	Energy production	Globalization	Most capable
Türkiye	Semi-willing	Subnationally prominent	Subnational resources prominent	Energy	Overall instability	Least capable
Australia	Semi-willing	Mixed	Suboptimal national resources but increasing subnational resources	Energy production	Globalization and climate change effects	Semi-capable
Canada	Semi-willing	Mixed	National resources more consistent than subnational resources	Oil and gas	Subnational resistance and globalization	Semi-capable

In this paper, I argued that varying levels of political willingness to meet climate goals, the differing types of multilevel governance, and varying resources devoted to climate issues significantly impact the level of policy implementation gap in carbon emissions. Local, state/provincial/territory/regional, national, and international efforts are necessary to decrease carbon emissions, climate change effects, and create a safe, liveable, and sustainable world.

Political willingness plays an important role in the capability and coordination capacity of multilevel governance collaboration because, without political willingness, there is no motivation to implement policies. Collaboration between multilevel governments is important to successfully implementing efficient and effective climate-forward policies and decreasing the policy implementation gap. Additionally, varying resources devoted to climate policies are important to ensuring multifaceted policies to mitigate and decrease global warming. My thesis holds that these three reasons impact funding, coordination capacity, and urgency to policy matters.

References

“Adapting Transport Policy to Climate Change Carbon Valuation, Risk and Uncertainty.” OECD Publishing, 2015.

About the OECD - OECD, www.oecd.org/about/.

“Australia.” *Climate Action Tracker*, climateactiontracker.org/countries/australia/.

“Australia - Countries & Regions.” *International Energy Agency*,

www.iea.org/countries/australia/energy-mix.

“Australia: Government.” *globalEDGE: Your Source for Global Business Knowledge*,

globaledge.msu.edu/countries/australia/government.

“Australia Lags in Achieving Energy Benchmarks by 2030,” *Monash University*, 6 May 2020,

www.monash.edu/news/articles/australia-lags-in-achieving-energy-benchmarks-by-2030.

Başak, Esra, et al. “Ecosystem Services Studies in Turkey: A National-Scale Review.” *The*

Science of the Total Environment, vol. 844, 2022,

<https://doi.org/10.1016/j.scitotenv.2022.157068>.

Bhattacharya, Mita, et al. “Convergence of Energy Productivity in Australian States and

Territories: Determinants and Forecasts.” *Energy Economics*, ScienceDirect, 22 Oct.

2019, www.sciencedirect.com/science/article/pii/S0140988319303330.

Bjerkan, Kristin Ystmark and Hanne Seter. “Policy and Politics in Energy Transitions. A Case

- Study on Shore Power in Oslo.” *Energy Policy*, ScienceDirect, 15 Mar. 2021,
<https://doi.org/10.1016/j.enpol.2021.112259>
- Bruvoll, Annegrete, and Bodil Merethe Larsen. “Greenhouse Gas Emissions in Norway: Do Carbon Taxes Work?” ECONSTOR, Statistics Norway Research Department, Discussion Papers, No. 337, Dec. 2002,
<https://www.econstor.eu/bitstream/10419/192319/1/dp337.pdf>
- “Canada.” *Climate Action Tracker*, climateactiontracker.org/countries/canada/.
- “Canada’s Climate Plans and Targets.” Government of Canada, 5 Apr. 2024,
www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview.html#.
- “Canada: Government.” *globalEDGE: Your Source for Global Business Knowledge*,
globaledge.msu.edu/countries/canada/government.
- “Canadian System of Environmental–Economic Accounts: Energy Use and Greenhouse Gas Emissions, 2020.” *Statistics Canada*, 16 Feb. 2023,
www150.statcan.gc.ca/n1/daily-quotidien/230216/dq230216f-eng.htm#.
- Cheng, Chen, and Christopher Li. “Laboratories of Democracy: Policy Experimentation under Decentralization.” *American Economic Journal: Microeconomics*, Vol. 11, no. 3, pp. 125-54, Aug. 2019, <https://www.jstor.org/stable/26754086?seq=20>.
- “CO2 Tax on Offshore Oil and Gas.” International Energy Agency, *IEA*, July 1, 2020,

www.iea.org/policies/11695-co2-tax-on-offshore-oil-and-gas.

“Energy Supply.” *Department of Climate Change, Energy, the Environment and Water*,

Australian Government, 22 Feb. 2024,

www.dcceew.gov.au/energy/supply#:~:text=Most%20of%20our%20electricity%20is,homes%20for%20heating%20and%20cooking.

Environment and Climate Change Canada. “Plan, Prepare, ACT: Government of Canada

Launches First National Adaptation Strategy.” *Canada.Ca*, Government of Canada, 18

July 2023,

www.canada.ca/en/environment-climate-change/news/2023/06/plan-prepare-act-government-of-canada-launches-first-national-adaptation-strategy.html.

Evans, Meredydd, et al. “The International Implications of National and Local Coordination on

Building Energy Codes: Case Studies in Six Cities.” *Journal of Cleaner Production*, vol.

191, 2018, <https://doi.org/10.1016/j.jclepro.2018.04.142>.

Evrendilek, F. and C. Ertekin. “Assessing the Potential of Renewable Energy Sources in Turkey.”

ScienceDirect, 16 April 2003.

Finch, Adam, and Jeroen van den Bergh. “Assessing the Authenticity of National Carbon Prices:

A Comparison of 31 Countries.” *Global Environmental Change*, vol. 74, 2022, pp. 1–9,

<https://doi.org/10.1016/j.gloenvcha.2022.102525>.

Fournier, Jean-Marc, et al. “Cross-border Impacts of Climate Policy Packages in North

America.” *International Monetary Fund Working Papers*, Mar. 2024.

Garrizmann, Julian L. et al. “Policy-making in Multi-Level Systems: Ideology, Authority, and

Education.” *Comparative Political Studies*. Vol. 54, Mar. 10, 2021,
<https://journals.sagepub.com/doi/full/10.1177/0010414021997499>.

“Global Emissions.” *Center for Climate and Energy Solutions*, 1 Dec. 2022,

[www.c2es.org/content/international-emissions/#:~:text=CO2%20accounts%20for%20abo
ut%2076,are%20expressed%20in%20CO2%2Dequivalents](http://www.c2es.org/content/international-emissions/#:~:text=CO2%20accounts%20for%20abo,ut%2076,are%20expressed%20in%20CO2%2Dequivalents).

Canada, Environment and Climate Change. “Greenhouse Gas Emissions.” *Government of*

Canada, 2 May 2024,

[www.canada.ca/en/environment-climate-change/services/environmental-indicators/green
house-gas-emissions.html](http://www.canada.ca/en/environment-climate-change/services/environmental-indicators/green-house-gas-emissions.html).

Haig, Steven. “The Critical Next Step: What You Need to Know about Canada’s 2030 Climate

Target.” *International Institute for Sustainable Development*, 22 Jan. 2024,

[www.iisd.org/articles/insight/critical-next-step-canadas-2030-climate-target#:~:text=Whil
e%20these%20reports%20confirm%20that,%25–45%25%20reduction%20target](http://www.iisd.org/articles/insight/critical-next-step-canadas-2030-climate-target#:~:text=Whil,e%20these%20reports%20confirm%20that,%25–45%25%20reduction%20target).

Hanna, Emily. “Climate Change – Reducing Australia’s Emissions.” *Parliament of Australia*,

Commonwealth of Australia, 11 May 2017,

[www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/p
ubs/BriefingBook45p/EmissionsReduction#:~:text=Of%20the%20%242.55%20billion%
20allocated,be%20considered%20in%20future%20budgets](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook45p/EmissionsReduction#:~:text=Of%20the%20%242.55%20billion%20allocated,be%20considered%20in%20future%20budgets).

Harring, Niklas, et al. “The Significance of Political Culture, Economic Context and Instrument

Type for Climate Policy Support: a Cross-National Study.” *Climate Policy*, vol. 19, no. 5, 2019, <https://doi.org/10.1080/14693062.2018.1547181>.

Hockenos, Paul. “As the Climate Bakes, Turkey Faces a Future Without Water.” *Yale Environment 360*, Yale School of the Environment, 30 Sept. 2021, e360.yale.edu/features/as-the-climate-bakes-turkey-faces-a-future-without-water.

Hooghe, Liesbet, et al. *Multilevel Governance*, 10 Dec. 2019, hooghe.web.unc.edu/wp-content/uploads/sites/11492/2020/11/2020_hooghe-marks-schakel_multilevel-governance_reduced-size-Caramani.pdf.

John, Alex St. “Review of the Renewable Energy Target Released.” Parliament of Australia, 29 Aug. 2014, https://www.aph.gov.au/about_parliament/parliamentary_departments/parliamentary_library/flagpost/2014/august/ret-review.

Kucukgocmen, Ali, “Turkey Raises Greenhouse Gas Emission Reduction Target for 2030.” Reuters, Nov. 15, 2022, <https://www.reuters.com/business/cop/turkey-boosts-greenhouse-gas-emission-reduction-target-2030-2022-11-15/>

Kirişçi, Kemal, and Ilke Toygür. “Turkey’s New Presidential System and a Changing West.” *Brookings*, Jan. 2019, www.brookings.edu/articles/turkeys-new-presidential-system-and-a-changing-west/.

Lawrence, Judy, et al. “Chapter 11: Australasia.” *Climate Change 2022: Impacts, Adaptation and*

Vulnerability, Cambridge University Press, 2022,
www.ipcc.ch/report/ar6/wg2/chapter/chapter-11/.

Leeman, Jennifer. “Beyond ‘Implementation Strategies:’ Classifying the Full Range of Strategies Used in Implementation Science and Practice.” *Implementation Science*, vol. 12, no. 1, 2017, <https://ucr.on.worldcat.org/oclc/7176261717?databaseList=638>.

Linden-Fraser, Ross. “A Closer Look at the Varying Climate Targets of the Provinces and Territories.” *440 Megatonnes: Tracking Canada’s Path to Net Zero*, 5 Oct. 2024, 440megatonnes.ca/insight/closer-look-varying-climate-targets-provinces-territories/.

Martinez-Vazquez, Jorge. “Adapting Fiscal Decentralization Design to Combat Climate Change.” *Climate Governance Papers Series*. 2021.

Marquette, Heather. “Political Will: What It Is, Why It Matters for Extractives and How on Earth Do You Find It?” *Columbia Center on Sustainable Investment*, 12 Feb. 2020, ccsi.columbia.edu/news/political-will-what-it-why-it-matters-extractives-and-how-earth-do-you-find-it.

“National Energy Productivity Plan.” *Department of Climate Change, Energy, the Environment and Water*, Australian Government, 3 Dec. 2023, www.dcceew.gov.au/energy/publications/national-energy-productivity-plan#:~:text=On%206%20October%202022%2C%20the.and%202050%20emission%20reduction%20targets.

Nelson, Tim, et al. “Ret Is Still the Best: Why It’s Time to Renew Australia’s Renewable Energy

Policy.” *Renew Economy*, 19 Oct. 2023,

reneweconomy.com.au/ret-is-still-the-best-why-its-time-to-renew-australias-renewable-energy-policy/.

“New Era Begins in Energy Efficiency for Buildings.” *Hürriyet Daily News*, 2

Jan. 2023,

www.hurriyetdailynews.com/new-era-begins-in-energy-efficiency-for-buildings-179765.

“Norway: Government.” *globalEDGE*, globaledge.msu.edu/countries/norway/government.

“Norway 2022: Executive Summary.” International Energy Agency, *IEA*,

www.iea.org/reports/norway-2022/executive-summary.

“OECD Environmental Performance Reviews: Norway 2022.” *OECD iLibrary*,

www.oecd-ilibrary.org/sites/59e71c13-en/index.html?itemId=%2Fcontent%2Fpublication%2F59e71c13-en&csp=17d84a085376ad8ff5f0f46d9a7875f2&itemIGO=oecd&itemContentType=book.

“Oil and Natural Gas 101.” *CAPP*, 18 Apr. 2024,

www.capp.ca/en/oil-natural-gas-you/oil-natural-gas-canada/.

O’Neil, Patrick H. “Essentials of Comparative Politics.” W.W. Norton & Company, 2021.

“Parliamentary Institutions.” *Parliamentary Institutions - The Canadian System of Government*,

2017,

www.ourcommons.ca/marleaumontpetit/DocumentViewer.aspx?Sec=Ch01&Seq=2.

Pears, Alan, et al. “Renewable Energy Target Review – Experts Respond.” *The Conversation*, University of Melbourne, 28 Aug. 2014,

<https://findanexpert.unimelb.edu.au/news/4517-renewable-energy-target-review-%E2%80%93-experts-respond>.

“Policies & Action: Norway.” Climate Action Tracker,

climateactiontracker.org/countries/norway/policies-action/.

“Powering Australia.” *Department of Climate Change, Energy, the Environment and Water*,

Australian Government, 1 May 2024,

www.dcceew.gov.au/energy/strategies-and-frameworks/powering-australia.

“Protocol Guidelines.” *Australian Government Department of Foreign Affairs and Trade*,

www.dfat.gov.au/about-us/publications/corporate/protocol-guidelines/1-introduction-to-australia-and-its-system-of-government.

Raftowicz, Magdalena. “The Climate Crisis as a Product of Globalization.” *Globalization and its*

Socio-Political Consequences, SHS Web of Conferences, vol. 91, 13 Jan. 2021,

https://www.shs-conferences.org/articles/shsconf/pdf/2021/03/shsconf_glob20_06029.pdf

“Renewable Energy Target Scheme.” *Department of Climate Change, Energy, the Environment*

and Water, Australian Government, 19 Apr. 2024,
www.dcceew.gov.au/energy/renewable/target-scheme.

Ritchie, Hannah, et al. “Energy.” *Our World in Data*, 27 Oct. 2022,

ourworldindata.org/co2/country/norway#what-share-of-co2-emissions-are-produced-from-different-fuels.

Schenuit, Felix, et al. “Carbon Dioxide Removal Policy in the Making: Assessing Developments in 9 OECD Cases.” *Frontiers in Climate*, vol. 3, 2021,

<https://doi.org/10.3389/fclim.2021.638805>.

“Supporting Climate Action in the Indo-Pacific Region.” *Department of Climate Change*,

Energy, the Environment and Water, Australian Government, 17 Nov. 2023,

www.dcceew.gov.au/climate-change/international-climate-action/indo-pacific-region.

“Trust in Global Cooperation - the Vision for the OECD for the Next Decade” *OECD*,

www.oecd.org/mcm/MCM_2021_Part_2_%5BC-MIN_2021_16-FINAL.en%5D.pdf.

Tramullas, Nina. “Turkey’s New Climate Target Does Not Take the Country’s 2053 Net-Zero

Goal Seriously.” *Climate Action Network Europe*, 15 Nov. 2022,

caneurope.org/turkeys-new-climate-target-does-not-take-the-countrys-2053-net-zero-goal-seriously/.

“The Three Levels of Government.” *Australian Electoral Commission*, 21 Mar. 2024,

www.aec.gov.au/learn/three-levels.htm.

“Türkiye.” *Climate Action Tracker*, climateactiontracker.org/countries/turkey/.

“Turkey.” *Climate Transparency*, 2022,

www.climate-transparency.org/wp-content/uploads/2022/10/CT2022-Turkey-Web.pdf.

“Türkiye - Country Work.” *Commissioner for Human Rights*,

www.coe.int/en/web/commissioner/country-work/turkiye.

“Türkiye - Countries & Regions.” International Energy Agency, *IEA*,

www.iea.org/countries/turkiye/emissions.

“Turkey Government.” *World Population Review*,

worldpopulationreview.com/countries/turkey/government.

“Turkey: Government.” *globalEDGE: Your Source for Global Business Knowledge*,

globaledge.msu.edu/countries/turkey/government.

“Turkey: Prolongation of Detention of Osman Kavala Displays Contempt for Human Rights and

the Rule of Law.” *Commissioner for Human Rights*, Council of Europe, 2 Sept. 2021,

www.coe.int/en/web/commissioner/-/turkey-decision-to-prolong-the-detention-of-osman-kavala-displays-contempt-for-human-rights-and-the-rule-of-law.

“Turkish Authorities Should Stop the Stigmatisation of LGBTI People.” *Commissioner for*

Human Rights, Council of Europe, 24 June 2021,

<https://www.coe.int/en/web/commissioner/-/turkish-authorities-should-stop-the-stigmatisation-of-lgbti-people>.

Voigt, Christina. “The First Climate Judgement Before the Norwegian Supreme Court: Aligning Law with Politics.” *Journal of Environmental Law*, vol. 3, no. 3, pp. 697-710, Nov. 2021, <https://doi.org/10.1093/jel/eqab019>.

Walker, Tony R. “Effectiveness of the National Pollutant Release Inventory as a Policy Tool to Curb Atmospheric Industrial Emissions in Canada.” *Pollutants*, vol. 2, no. 3, 2022, <https://doi.org/10.3390/pollutants2030019>.

“What are the Sources of Carbon Dioxide in the Atmosphere?.” CSIRO.

<https://www.csiro.au/en/research/environmental-impacts/climate-change/climate-change-ga/sources-of-co2>.

Williams, Nia. “Canada Steps up Pace of Oil Production Growth, Seen Rising 8% in Two Years.”

Reuters, 23 Aug. 2023,

www.reuters.com/markets/commodities/canada-steps-up-pace-oil-production-growth-seen-rising-8-two-years-2023-08-23/.

Yazar, Mahir and Abigail York. “Urban Climate Governance Under the National Government Shadow: Evidence from Istanbul.” *Journal of Urban Affairs*, 25 May 2021.

<https://www.tandfonline.com/doi/citedby/10.1080/07352166.2021.1915151?scroll=top&needAccess=true>.

“2030 Emissions Reduction Plan - Sector-by-Sector Overview.” Government of Canada, 8 May

2023,

www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/emissions-reduction-2030/sector-overview.html#sector5.

“2023 Progress Report on the 2030 Emissions Reduction Plan: Executive Summary.”

Government of Canada, 26 Mar. 2024,

www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/emissions-reduction-2030/2023-progress-report/executive-summary.html#toc

[1](#).