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Sustainability Ecosystem

2023 Update to White Paper

ALIGNING CANADIAN FINANCE WITH CLIMATE COMMITMENTS





The summer of 2023 was the hottest in recorded history, leading the UN Secretary-General to conclude that “Climate breakdown has begun” (see box 1).

Financial institutions are awakening to the fact that they are on the front lines of climate risk (see box 2 and 5) and that the cost of inaction can no longer be ignored.

Around the world, advanced economies are implementing initiatives arising from central banks, financial regulators and private actors.

In the last 18 months since releasing our initial White Paper on Aligning Canadian Finance with Climate Commitments, the pace of global

developments has only accelerated. In addition to bold action in Europe and the U.S. (see box 3), the International Sustainability Standards Board (ISSB) released its first two standards, including one specifically for climate-related disclosures.

In June 2023, ten Multilateral Development Banks announced common methodological principles of how they will ensure **alignment** of their new operations with the mitigation and adaptation goals of the Paris Agreement. **Canada must follow suit and move faster if it wants to be part of the emerging low-carbon knowledge economy** (see box 4 and 6).

Box 1: Mounting costs of inaction in addressing the climate crisis

- Extreme heat has been shown to cause **increased food prices** of 0.67% and future warming could amplify the impacts by 50% by 2035. Future warming is likewise projected to cause **global food price increases** of up to 3.23% annually by 2035. Applying these findings to Canada’s average food inflation rate of 2.7% over the last 20 years could boost average food inflation by **33% to 117% by 2035**.
- The **damages** to the global economy could reach **US\$178 trillion** over the next 50 years. In **Canada**, the cost of inaction could reach **CAD\$5.5 trillion** by the end of the century.
- The three worst years of insured catastrophic losses from extreme weather in Canada occurred in the last decade, excluding 2023 which is likely to break records nationally and internationally.
- Canadian home insurance rates are on the rise, and **up to 10% of all Canadian homes are or will soon become uninsurable as a result of climate change**.

Box 2: Mounting reputational and litigation risk of greenwashing in the absence of strong regulation

- The global banking and financial services industry saw a **70% increase in the number of climate-related greenwashing** incidents in the last year, with more than half involving fossil fuels or linking a financial institution to an oil and gas company.
- The Global trends in **climate change litigation report shows an explosion of 'climate-washing' court cases** over the last few years, with 53 cases filed in 2021 and 2022 including in the financial sector.
- To reduce greenwashing risk, asset managers **voluntarily downgraded** reported ESG investments, resulting in a \$8.7 trillion restatement of U.S. sustainable investment Assets Under Management in 2022 compared to 2020.
- At least **three climate-related greenwashing complaints** have been filed with the Competition Bureau in Canada, including against oil sands producers' Pathways Alliance and RBC.
- According to the UN High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities, **regulated requirements are necessary to tackle greenwashing.**



In contrast, Canada has at best adopted a wait and see approach. The Canadian Securities Administrators (CSA) will eventually consult on adopting disclosure standards based on ISSB standards (single materiality). Where 40 countries and regions have adopted or developed taxonomies, the federal government has still not responded to the Sustainable Finance Action Council's taxonomy report, more than a year after receiving it.

Box 3: Recent developments on climate & finance nexus from Canada's major trading partners

United States of America

- Passed Inflation Reduction Act
- Passed Infrastructure Investment and Jobs Act
- U.S. Securities and Exchange Commission proposed climate disclosure rule
- U.S. financial regulators issued interagency principles for climate-related financial risk management for large financial institutions
- U.S. Department of the Treasury issued principles for net-zero financing & investment
- California passed SB 253 - Climate Corporate Data Accountability Act and SB 261 - Climate-Related Financial Risk Act

European Union

- Adopted Corporate Sustainability Reporting Directive (CSRD) and accompanying European Sustainability Reporting Standards (ESRD) (double materiality)
- Taxonomy for Sustainable Activities in force with technical screening criteria defined through democratic, open and transparent process
- All legislation proposals under European Climate Law's 'Fit for 55' package adopted, including a revised Emissions Trading System Directive, a Carbon Border Adjustment Mechanism, and a Social Climate Fund
- European Banking Authority issued world's first ESG add-on to capital requirement rules, including climate

Months after the Basel Committee on Banking Supervision (BCBS) released principles for the management and supervision of climate-related financial risks, Canada's Office of the Superintendent of Financial Institutions (OSFI) published Guideline B-15: Climate Risk Management, a subject of criticism by the Commissioner of the Environment and Sustainable Development with respect to timing and ambition relative to international peers. We are lagging more than ever, while the need for climate-aligned finance has never been more urgent.

Hidden risks within the financial system can rattle the global economy and threaten livelihoods and investments. It is imperative that Canada's financial system confront and better manage its exposure to climate risks, especially with regard to how the financial system itself contributes to amplifying the climate risks it should instead mitigate by aligning with climate commitments. The best way to minimize the risks that climate change poses to the financial system is to limit the risks that financial institutions pose to the climate system.

Box 4: Independent assessments of Canada's recent actions: lagging behind

"OSFI's strategy to tackle climate-related financial risks aims to improve the resilience of federally regulated financial institutions but will remain short of incentivizing the transition to a net-zero emissions economy."

– Commissioner of the Environment and Sustainable Development Report on OSFI's supervision of climate-related financial risks

"... a lack of legal clarity about investors' duties and insufficient action by policy makers to encourage and enable responsible investment, rendering Canada a low-regulation jurisdiction by international standards".

– Principles for Responsible Investment (PRI) report on Canada's legal framework for impact

Box 5: Canadian financial institutions overexposed to fossil fuel risks

- A February 2023 report from BloombergNEF on financing the transition tracking 100 banks financing more than \$1 billion in energy supply found that **Canadian banks are lagging international peers** in the bottom third and therefore **leading the race on risky investments**.
- RBC, a Canadian bank, was the world's **#1 financier of fossil fuels** in 2022.
- Recent findings peg stranded assets in the oil and gas sector globally at more than US\$1 trillion, including around **US\$100 billion in stranded assets in Canadian oil and gas fields**.
- California joined over two dozen U.S. local governments **suining fossil fuel companies for the cost of climate change** as a result of decades of misinformation.



Box 6: The Advantages of Future-Proofing the Economy Through Rigorous Decarbonization

- 2.2 million jobs created in the Canadian clean energy sector by 2050.
- The inflation-adjusted GDP of the clean energy sector would increase to become six times larger in a net-zero 2050 compared to 2025.
- A united, systemic net-zero transition could boost global GDP by US\$43 trillion over the next 50 years.

Ambitious and coherent legislation requiring that finance proactively aligns with achieving global climate commitments would create enormous clean sustainable investment opportunities and spur a new era of prosperity (see box 6).

We propose a set of recommendations that define what leap frogging from laggard to leader would look like for Canada in terms of ensuring a climate-aligned stable low-carbon financial system.



Box 7: Parliamentary Action on Climate-Aligned Finance: Bill S-243, the Climate-Aligned Finance Act, and Motion 84

As a first step towards true climate action in Canada's financial industry, the Honourable Senator Rosa Galvez introduced **Bill S-243, Climate-Aligned Finance Act (CAFA)** on March 24, 2022. This legislation would guide Canada's financial sector through an orderly transition to a low-carbon economy while safeguarding the financial system from the systemic risks posed by climate change by increasing coherence, transparency, and accountability. There have since been five petitions calling for CAFA's adoption introduced in the House of Commons. In May 2023, **motion 84** was introduced by (now) Parliamentary Secretary Ryan Turnbull in the House of Commons calling for the government to use "all legislative and regulatory tools at its disposal to align Canada's financial system with the Paris Agreement", an initiative which has received "groundbreaking" cross-party support.

Recommendations

- 1 All entities, including financial institutions, must be aligned with climate commitments.

- 2 Avoidance of carbon lock-in, the entrenchment of our dependence on fossil fuels, must be a consideration in all financial decisions.

- 3 Require responsible target-setting and planning, including compliance with a global carbon budget consistent with the Paris Agreement 1.5°C temperature goal and mandatory consideration of all life cycle emissions.

- 4 Capital requirements must account for systemic climate risks generated by the activities of financial institutions.

- 5 Recognize climate change as a superseding interest relevant to all directors' duties.

- 6 Avoid conflicts of interest and leverage climate expertise, experience and knowledge.

- 7 Respect the rights of Indigenous Peoples as well as environmental and social goals.

- 8 Develop a comprehensive action plan to align all financial products with climate commitments.

Scan to learn more



Preface

Our way of life, our habits and our behaviours have pushed the current system to its limits. The global demand for material resources is expected to double by 2060¹, causing environmental damage, including an increase in greenhouse gas emissions and an increase in the production of waste and associated pollution along the way. Our current linear, extractive economy was not originally designed to include the five R's – reduce, reuse, recycle, repair and restore – so the environment (rivers and oceans, atmosphere, and lands) has long become a dumping ground for waste. The financial system labels this pollution 'externalities' without providing efficient means to deal with it to date. So far, the main goal of environmental legislation has been to limit and legalize 'accepted' levels of pollution which unfortunately has not protected us from the health and safety threats posed by waste and pollutants. With climate change, ocean acidification, biodiversity loss, a patch of plastic waste floating in the Pacific equivalent to an area the size of Quebec, and chemical pollution passing the safe limit for humanity it is urgent to implement alternative models of production and consumption while addressing the letdowns of the financial and economic system if we want to preserve quality of life and assure a prosperous future.²

The Canadian government has a critical role to play in bolstering a prosperous sustainable economy. Our economy and social safety nets have been weakened by a global pandemic and are threatened by ongoing ever-increasing intense climate shocks and an acute affordability crisis. Indeed, the two are linked and require strong systemic action to avoid the worst impacts. As such, the climate crisis can't be solved by a single sector approach, rather, it requires treating climate change science and risks in all socio-economic sectors holistically.

“Climate change poses significant risks to the financial system and the economy. These include disruptions from more frequent and severe extreme weather events as well as risks stemming from the transition to a low-carbon, net-zero economy.”
Bank of Canada³

The finance sector is not exempt from the impacts of climate change. Traditional tactics to solve punctual economic problems have not helped the climate crisis; in fact, past, approaches might have advertently or inadvertently worsened the climate crisis by supporting polluting industries. Canadians need the financial sector acting according to this reality. Meridional Canada warms twice as fast than the planet's average and the Arctic three times faster; we must therefore accelerate preparedness. The Bank of Canada, having released the results of its first exercise to understand the risks to the Canadian financial system and its first annual TCFD-aligned report, is falling behind in the race to net-zero. Several national and international organizations and jurisdictions are not only leading this reflection but are proposing policies and legislative tools with some being already implemented. Canada must follow suit if we aim to remain a competitive, prosperous, sustainable economy for this and future generations to come.

I am pleased to present this updated white paper which builds on the [original version](#) published in March 2022. The original publication laid out the causes, mechanisms, and policy pathways that decision-makers should consider when addressing two interconnected issues: how the present financial system fuels the climate crisis, and how climate change poses an increasing risk to financial and economic stability. This updated version remains faithful to the initial set of recommendations and serves to present key developments that have occurred since the introduction of CAFA, both at home and abroad.



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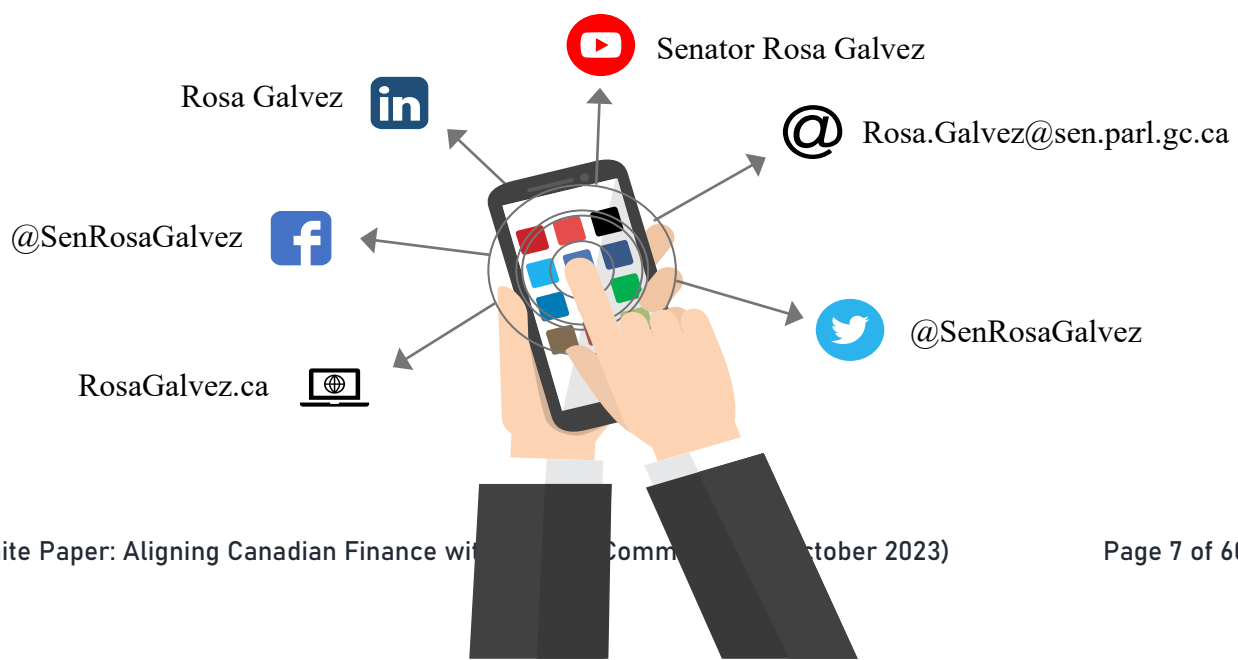
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1.0 Introduction

Politicians and corporations, including financial institutions, are finally paying attention to climate change after decades of warnings from experts. It seems like not a week goes by without a significant number of new global initiatives or publication of ground-breaking reports, and the number of businesses making climate commitments has exploded in the last few years.

In the Sixth IPCC report released in February 2022, scientists warn politicians about the dire and irreversible consequences of inaction, the need for bold action to mitigate and adapt to climate change, but also about the opening for new opportunities for innovation in our societies and economies.⁴ Indeed, a recent report by McKinsey says reaching net-zero is vital to avoiding the most catastrophic impacts of global heating, which would harm billions of people. They found that many low-carbon investments are opportunities for economic growth and would lead to a lower-cost and more efficient economy with transformation becoming more expensive the longer action is delayed.⁵ Sweeping economic transformation has the power to stabilize our climate while reducing long-standing social and economic inequalities; it is the path to follow if we are to avoid catastrophic consequences of inaction at the climate change front.

Well-designed policies can help drive down the costs of reducing emissions and generate finance for other climate actions and broader sustainable development efforts. In fact, over the last decade, decoupling human well-being from resource consumption has been the mission of the International Resource Panel (IRP) and the Green Economy Initiative of UNEP which produced initial reports offering options of policy instruments to attain sustainable finance goals in alignment with climate commitments. Since then, many more organizations (e.g., Task Force on Climate-related Financial Disclosures [TCFD], Taskforce on Nature-related Financial Disclosures [TNFD]), G7 Finance Ministers and Central Bank Governors, Financial Stability Board) and jurisdictions around the world have continued this work, with the most recent initiatives being summarized in [section 3](#).

*“Canada risks being left behind while countries with very different economies set the agenda.” **Commissioner of the Environment and Sustainable Development***⁶

No doubt, our financial regulators must catch up. There is an opportunity to build on the efforts of many countries, most importantly the EU and U.S. This white paper will present policies and sustainable finance legislation proposed and/or implemented in these countries.

It is evident, the financial system needs to align with the latest climate science, which indicates that time is of the essence and that the necessity to significantly reduce greenhouse gas (GHG) emissions is urgent, beginning with the energy sector. In Canada, rather than observe and monitor, federal financial regulators must seize the urgency of this moment. In doing so, they can unleash an economic transformation that will power future prosperity in a sustainable manner that will preserve our country and the planet as we know it.

2.0 Finance in the Era of Climate Change

Financial institutions, whether public or private, are awakening to the fact that they are on the front lines of climate risk. The insurance and investment sectors, which are particularly vulnerable to the impacts of climate change, are already facing growing losses and stranded assets from their risky and carbon-intensive financing activities. A recent example comes from State Farm, the largest provider of auto and home insurance in the US with its affiliates, who announced it was no longer accepting applications for business and personal property and casualty insurance in California as of May 2023, citing “historic increases in construction costs outpacing inflation, rapidly growing catastrophe exposure [from wildfires], and a challenging reinsurance market.”⁷

Climate change is causing severe impacts to the economy and on financial institutions; the cumulative, interconnected, and non-linear nature of these impacts means they pose a risk to the financial system as a whole and, therefore, to national financial stability. The sudden devaluation of fossil-fuel based companies as their assets are rapidly becoming unusable can result in a ‘carbon bubble’. As acknowledged by the Network for Greening the Financial System (NGFS) – a group of central banks and supervisors – climate change is a source of structural change affecting the financial system.⁸

“Near-term actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages related to climate change in human systems and ecosystems, compared to higher warming levels, but cannot eliminate them all (very high confidence).” IPCC⁹

Organizations across the globe are raising serious concerns about the cost of delaying or refusing to take action against climate change, while highlighting expected benefits from an accelerated transition. A recent report from Deloitte found that inaction on climate change could cost the global economy US\$178 trillion by 2070, while united action on a systemic net-zero transition would see a US\$43 trillion boost to global GDP over the same time period.¹⁰ An empirical forecast published in 2022 suggests that there is “likely no cost at all [to decarbonize the energy system to keep warming below 2°C] – the transition is expected to be a net economic benefit, raising future GDP”.¹¹ The advantages of future-proofing the economy can save the economy trillions of dollars and will harness emerging economic opportunities in sectors like clean energy, which is projected to create 2.2 million jobs in Canada by 2050.¹² For the energy sector alone, a rapid transition to green energy could save the global economy up to \$12 trillion, while the inflation-adjusted GDP of the clean energy sector would increase to become six times larger in a net-zero 2050 compared to 2025.^{13,14}

Recent research has also found an empirical link between changes in climate and inflation, concluding that future warming under a 2035 projected climate, in the absence of adaptation, will cause global increases in annual food and headline inflation of 0.92-3.23 and 0.32-1.18 percentage-points per year, respectively.¹⁵ To put those figures in context, Canada’s average headline and food inflation over the last 20 years was 2.1% and 2.7%, respectively. Applying these projections to Canada, the authors

calculate that climate change could make headline and food inflation anywhere from 15% to 56% and 33% to 117% higher, respectively, than the average of the last two decades.

While climate change poses a risk to financial institutions and financial stability, the risky investment of these same institutions poses a risk to the global climate, a concept termed *double materiality*. Companies should have to not only report on how sustainability issues affect their business, but also on their impact on people and the environment; this information could help mitigate risks and improve the decision-making process.

New factors have emerged and are leading to financial tipping points for which financial institutions need to be prepared. These factors relate to environmental conditions (e.g., extreme weather events), long-term physical impacts (e.g., impacts on infrastructure), climate policy (e.g., change in carbon pricing or regulation), or technology (e.g., the development of renewable sources of energy). Possible shocks are related to change in policy (e.g., different levels of carbon taxation or changes to the value of energy-related fixed capital/investment), change in energy and food prices, energy-related available technologies, energy demand, or market confidence. The importance of these risks is subject to intense modelling of how different climate scenarios impact global financial systems, as shown in figure 1.

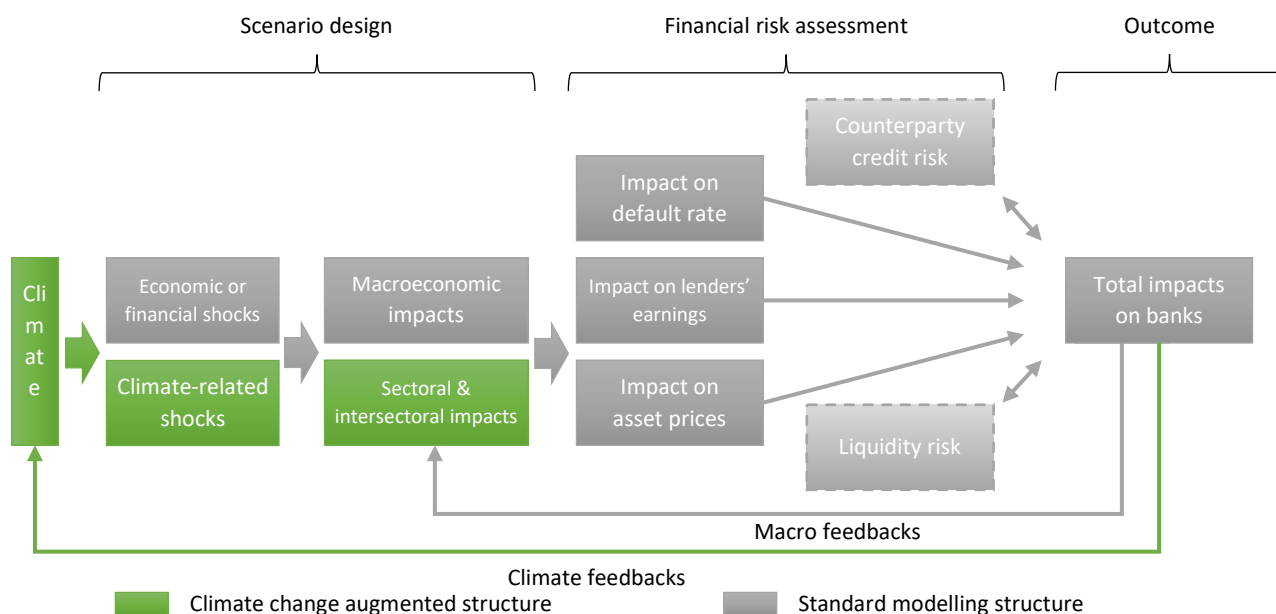


Figure 1. The cycle of finance fueling climate change and climate change threatening financial stability
Adapted from *Climate-Related Scenarios for Financial Stability Assessment: An application to France*
(Thomas, A. et al., 2020)

COP26 – Climate Change, Finance and Fossil Fuels

COP21 in 2015 established the Paris Agreement, which includes the overarching goal to keep global temperature rise below 2°C and pursue efforts to limit warming to 1.5°C and increase countries’ resilience to climate impacts.

COP26, held in November 2021, resulted in the *Glasgow Climate Pact* which, while lacking in ambition, was still the first COP decision to specifically mention fossil fuels. This is important because globally, around 80% of GHG emissions (and 90% of CO₂ emissions) from human sources come from the burning of fossil fuels and industrial processes,ⁱ a fact that had not percolated in international climate agreements until then.

The Glasgow Climate Pact was a unanimous call for a faster phasing down (though not out) of the “unabated” use of coal and for abandoning inefficient fossil fuel subsidies. Also, several countries created coalitions to do their part to eliminate fossil fuels, notably the Beyond Oil & Gas Alliance, which Quebec joined and has since become the first jurisdiction in the world to ban oil and gas exploration.¹⁶

In 2022, COP27 concluded with the *Sharm el-Sheikh Implementation Plan*, which disappointingly repeated the “phasedown of unabated coal power” language from COP26 once it proved impossible to get collective agreement to phase-out all fossil fuels from all Parties.

3.0 International Finance Initiatives

Economists and financial leaders around the world say the scale of the losses from climate change could eclipse the subprime mortgage securities meltdown that triggered bank failures and, ultimately, a deep global recession in 2008.

“Climate change is the Tragedy of the Horizon. We don’t need an army of actuaries to tell us that the catastrophic impacts of climate change will be felt beyond the traditional horizons of most actors – imposing a cost on future generations that the current generation has no direct incentive to fix.

. . . The combination of the weight of scientific evidence and the dynamics of the financial system suggest that, in the fullness of time, climate change will threaten financial resilience and longer-term prosperity.” Mark Carney, then Governor of the Bank of England and Chairman of the Financial Stability Board¹⁷

In contrast to these risks, national and global efforts to mitigate climate change could create enormous clean energy investment opportunities that would translate into economic growth and job creation. Research suggests that transitioning to a low-carbon sustainable economy could deliver direct economic gains of at least \$26 trillion through 2030, compared to business as usual.¹⁸ This section provides an overview of the key initiatives at the international, national, subnational levels as well as non-governmental initiatives.

ⁱ According to Canada’s [2021 National Inventory Report](#), fossil fuel combustion contributed 81% of greenhouse gases in Canada in 2019. The IPCC’s [Climate Change 2014 Synthesis Report](#) found that “CO₂ emissions from fossil fuel combustion and industrial processes contributed about 78% to the total GHG emissions increase from 1970 to 2010”. Finally, the proportion is even greater for exclusively CO₂, with estimates of 89% of global CO₂ emissions came from fossil-fuel combustion in 2018, and 93% in 2020.

3.1 Government and Central Bank Initiatives

3.1.1 The European Union

Disclosure Policies

Building off their 2018 action plan on financing sustainable growth, the EU adopted, in 2019, Regulation 2019/2088 on sustainability-related disclosures in the financial services sector, known as the *Sustainable Finance Disclosure Regulation (SFDR)*. This legislation sets out disclosure requirements for how financial market participants must communicate sustainability information to investors, including “how they consider the sustainability risks that can affect the value of and return on their investments (‘outside-in’ effect) and the adverse impacts that such investments have on the environment and society (‘inside-out’).”¹⁹ Its aim is to limit possible greenwashing, i.e., where financial products marketed as sustainable or climate-friendly, or overall business claims of such, “do not in practice satisfy those standards.”²⁰

Since the introduction of the finance-centric SFDR, the EU has launched multiple policy initiatives, employing a democratic and open process, to tackle both sustainability disclosures and behaviours by corporates more broadly. In November 2022, the EU adopted the Corporate Sustainability Reporting Directive (CSRD) which applies to large EU companies (including banks), companies listed on EU regulated markets, and non-EU companies operating in the EU that meet certain revenue thresholds.²¹ Companies subject to the CSRD are obliged to report according to European Sustainability Reporting Standards (ESRS), which take a ‘double materiality’ perspective, requiring companies to report “both on their impacts on people and the environment, and on how social and environmental issues create financial risks and opportunities for the company”.²² The EU has also proposed a Corporate Sustainability Due Diligence Directive (CSDDD) which establishes a duty for companies to identify and take actions on adverse human rights and environmental impacts in their operations and across their value chains. The proposed CSDDD has revenue criteria to catch larger non-EU companies, but its indirect reach will extend to businesses around the globe that are part of the value chain of in-scope companies. Non-EU companies are also set to be impacted by the EU’s new Carbon Border Adjustment Mechanism (CBAM), which came into effect on October 1, 2023 and imposes a charge on the embedded carbon content of imported good that are particularly carbon-intensive.²³

Taxonomy Legislation

Further, the EU Taxonomy, which is a classification system used to determine whether an economic activity is environmentally sustainable, entered into force on July 12, 2020 and is set out in EU Regulation 2020/852. The *Taxonomy Regulation* establishes six environmental objectives:

1. Climate change mitigation
2. Climate change adaptation
3. The sustainable use and protection of water and marine resources
4. The transition to a circular economy
5. Pollution prevention and control; and
6. The protection and restoration of biodiversity and ecosystems.

Two key conditions for an economic activity to qualify as environmentally sustainable under the taxonomy are the necessity for it to make a substantial contribution to one or more of the environmental objectives set out in the regulation while *doing no significant harm* to any of the others, coined the ‘DNSH’ principle. To establish the actual list of environmentally sustainable activities covered by the EU taxonomy, the European Commission defined technical screening criteria for each environmental objective through delegated acts. The technical screening criteria are set out in *Commission Delegated Regulation (EU) .../...of 4.6.2021*.

The EU's Technical Expert Group

The European Commission set up a Technical Expert Group on Sustainable Finance (TEG) to assist in developing the EU Taxonomy. The TEG consisted of 35 members from civil society, academia, business and the finance sector, as well as additional members and observers from EU and international public bodies. The TEG members were responsible for “determining a (first) list of environmentally sustainable economic activities and developing the technical screening criteria that determine under which conditions these activities are considered environmentally sustainable.”²⁴ They collected feedback on the first proposed activities that contribute substantially to climate change mitigation between December 2018 and February 2019.ⁱⁱ

The *Climate Delegated Act* has been applicable since January 1, 2022 and lists sustainable activities for the climate change mitigation and adaptation objectives of the taxonomy.

As part of preparing the *Climate Delegated Act*, the European Commission conducted a public consultation where many stakeholders in the energy sector suggested that natural gas should be recognized for its role as a transition fuel.²⁵ In a similar vein, the TEG acknowledged that nuclear represents a low-carbon energy source, but questioned whether its other environmental impacts were compatible with the “do no significant harm (DNSH)” criterion. In response, the European Commission set up a process on nuclear energy and tasked the Joint Research Centre (JRC) to conduct a technical assessment. The JRC’s report was then reviewed by Member States’ experts on radiation protection and waste management and experts from the Scientific Committee on Health, Environmental and Emerging Risks. The resulting report and reviews thereof led to a *Complementary Climate Delegated Act (CDA)*, with application as of January 2023. This CDA adds, under strict conditions, specific nuclear and gas energy transition activities in the list of economic activities covered by the EU taxonomy as a means to “accelerate the shift from more polluting activities, such as coal generation, towards a climate-neutral future, mostly based on renewable energy sources.”²⁶

“The technical screening criteria should facilitate an accelerated phase-out from more emissions-intensive energy sources, including solid fossil fuels. In addition, . . . the technical screening criteria for the use of fossil gas should also ensure that robust evidence is available to demonstrate that the same energy capacity cannot be generated with renewable sources, and that effective plans are put in place for each facility, in line with the best performance in the sector, to switch entirely to renewables or low carbon gases by a specific date.”²⁷

ⁱⁱ More information on how the TEG collected feedback and developed its list of activities is found in the TEG’s Overview of Outreach Plans Document and in its Final Report, which was published in March 2020.

On June 27, 2023, the European Commission adopted the *Environmental Delegated Act*, including a new set of EU taxonomy criteria for economic activities making a substantial contribution to one or more of the remaining four environmental objectives. This Delegated Act also amended the previously published *Disclosures Delegated Act*, which specifies the content, methodology, and presentation of required disclosures under the taxonomy. It sets out disclosure obligations for specific sustainability-related KPIs for banks (credit institutions), asset managers, investment firms, insurance and reinsurance firms “in order to enable investors and other stakeholders to assess the proportion of taxonomy-aligned economic activities performed by the respective financial institution.”²⁸

European Central Bank Initiatives

In September 2023, the European Central Bank (ECB) published the results of its second economy-wide climate stress-test, complementing the ECB Banking Supervision climate stress test, which analyzed risks for individual banks from a bottom-up perspective in July 2022. The top-down approach analyzed the resilience of firms, households, and the banking sector to three transition scenarios: an “accelerated transition” that frontloads green policies and investments, a “late-push transition” that speeds up in 2026, and a “delayed transition” which only starts in 2026 and does not reach the Paris Agreement goals by 2030.²⁹

“The results of this exercise reveal that an accelerated transition would provide significant benefits for firms, households, and the financial system, compared with a late-push transition scenario. Credit risk would increase during the transition under all scenarios, and particularly in the event of late and abrupt actions as envisaged under the late-push transition scenario. While the accelerated transition would lead to greater costs for households and firms in the short term, due to rapid and severe increases in energy prices, it would lower the financial risks in the medium term thanks to more rapidly reducing energy expenses and to large investments in renewable energy capacity. At the same time, an early start of the transition would allow banks to benefit from both lower credit risk and larger investment needs, thereby improving their income positions.”³⁰

“The results show that – all other things being equal – the earlier the transition happens, the smaller the financial risk, and consequently the less policy support is required to mitigate the costs. [...] A late-push transition might lead to energy prices similar to those experienced at the onset of the Russian invasion of Ukraine. Such energy price shocks would result in a severe deterioration in the profitability of energy-intensive firms. At the same time, the investment required to transition within a shorter time period would significantly increase their indebtedness. The two elements combined would, in turn, increase firms’ financial vulnerability and therefore their credit risk.”³¹

The ECB has also begun to study the link between extreme weather events and price stability, finding that more frequent and more severe weather shocks may increase the volatility and heterogeneity of inflation and that hotter summers may result in more frequent and persistent upward inflationary pressures.³² Indeed, a working paper published by the ECB found that Europe’s 2022 summer’s extreme heat increased food inflation by 0.67 percentage-points and that future warming projected for 2035 would amplify the impacts of such extremes by 50%.³³

3.1.2 The United Kingdom

Climate-related risk disclosure in line with the TCFD recommendations for the 1300+ largest companies in the United Kingdom became a legal obligation in 2022, extending fully across the economy by 2025.³⁴ In October 2023, the UK's Transition Plan Taskforce (TPT) produced its *Disclosure Framework* for transition plans for finance and the real economy.

In March 2023, the UK government released its updated *2023 Green Finance Strategy* which, among other aspects, reaffirmed the government's commitment to deliver a UK Green Taxonomy – “a tool to provide investors with definitions of which economic activities should be labelled as green”. The government will continue to work through the Green Technical Advisory Group (GTAG) and expects to consult on the Taxonomy in Autumn 2023. In a similar approach to that taken by the EU, the UK government has proposed, subject to consultation, that nuclear will be included within the taxonomy, “as a key technology within our pathways to reach net zero”.

The UK's *Pensions Schemes Act 2021* introduces new duties for those involved in administering workplace pension plans, referred to as “schemes” in the UK. *Part 5: Further provision relating to pension schemes of the Act* includes requirements for the management and governance of climate-related risks and opportunities, including section 41A(4) on assessing the assets of the pension plan:

- (4) Regulations under subsection (3)(b) may, in particular, require—
 - (a) that assets are assessed by reference to their exposure to risks of a prescribed description, and
 - (b) that an assessment includes determining the contribution of the assets of the scheme to climate change.

Therefore, under section 41A(4)(b), regulations will require that trustees responsible for administering pension plans assess how their assets contribute to climate change. The requirements are set out in *The Occupational Pension Schemes (Climate Change Governance and Reporting) Regulations 2021*, which came into force on October 1, 2021.

In line with the TCFD recommendations, *Schedule Part 1* of the Regulations sets out climate change governance requirements for in-scope pension trustees to identify, assess, and manage climate-related risks and opportunities relevant to the scheme. Trustees are expected to undertake scenario analysis and select at least one absolute emissions metric, one emissions intensity metric, one portfolio alignment metric, and one additional climate change metric to calculate in relation to the scheme's assets. Subsequent provisions require trustees – “as far as they are able” – to obtain the scope 1, scope 2 and scope 3 greenhouse gas emissions attributable to the scheme's assets, which are to be used in calculating their absolute and intensity emissions metrics.³⁵ Trustees must also set a target for the scheme in relation to one of the metrics they have selected and measure performance against it. *Schedule Part 2* specifies the climate change reporting obligations under the Regulations, which again follow the broad pillars of the TCFD recommendations.

The legislative initiatives progressing in the UK have the advantages of using public institutions' democratic process for development, providing transparency and openness to input from all interested.

In March 2021, the Bank of England had its mandate changed to explicitly include compatibility with net-zero and environmental sustainability. Reclaim Finance expects the change to speed up the bank's divestment from fossil fuels, result in the inclusion of climate-related risks in financial regulation, and increase the bank's contributions to funding the transition to a net-zero economy.³⁶

3.1.3 *The United States*

Climate-related finance risks are being explored at the federal, supervisory, and state level in the United States.

The Financial Stability Oversight Council (FSOC), created after the 2008 financial crisis, issued a report in October 2021 concluding that climate change is an “emerging threat” to U.S. financial stability and providing a roadmap of recommendations for improving system resilience to climate risks. Its recommendations include filling in climate-related data gaps, enhancing climate-related disclosures, and the incorporation of climate-related risks to regulatory and supervisory programs.³⁷ This is consistent with August 2021 modelling by Federal Reserve researchers which concluded that “climate change may make economic contractions more likely and severe and thereby significantly impact economic and financial stability and welfare.”³⁸

The White House issued an executive order in May 2021 which, along with recognizing the risks to the stability of the financial system caused by climate change, establishes a policy “to advance consistent, clear, intelligible, comparable, and accurate disclosure of climate-related financial risk.”³⁹

Two major bills have recently been passed to address the issue. In November 2021, the Bipartisan *Infrastructure Deal (Infrastructure Investment and Jobs Act)* was signed to “rebuild America’s roads, bridges and rails, expand access to clean drinking water, ensure every American has access to high-speed internet, tackle the climate crisis, advance environmental justice, and invest in communities that have too often been left behind.”⁴⁰ Less than a year later, on August 16, 2022, the *Inflation Reduction Act (IRA)* was signed into law by President Biden, representing the largest federal response to climate change to date.⁴¹ In modeling conducted by Rhodium Group, the IRA package drives U.S. net GHG emissions down to 32-42% below 2005 levels in 2030, compared to 24-35% without it.⁴² It also crucially provides a period of policy certainty, and in combination with the Infrastructure Deal, only adds pressure for Canada to step up its efforts or risk losing investors and project developers to the U.S.

The *Fossil Free Finance Act of 2023* was reintroduced to the Senate by Senators Markey and Sanders on March 30, 2023, demonstrating a recurring, concerted effort to enact policy restricting finance for fossil fuel activities. It amends the *Bank Holding Company Act of 1956* by adding a section on *Alignment of Financed Emissions with Science-Based Targets* that requires major banks to stop financing new or expanded fossil fuel projects and to submit a biennial plan to the Federal Reserve that provides how the bank will reduce financed emissions by 50% by 2030 and reach zero financed emissions by 2050. This plan must include the bank's approach to discontinue thermal coal financing by 2025 and to discontinue all fossil fuel financing by 2030 and may not include carbon offsets.

The Office of the Comptroller of the Currency (OCC), the U.S. financial sector regulator, started a consultation in December 2021 on draft principles to support the regulation of climate-related

financial risks focused on disclosure and risk management for banks with over US \$100 billion in total consolidated assets. In December 2022, the Board of Governors of the Federal Reserve invited public comment on proposed principles for large banking which are “substantially similar to proposals issued by the Office of the Comptroller of the Currency and the Federal Deposit Insurance Corporation.”⁴³ Since then, the OCC has stated that it will not tell bankers what they may or may not bank; rather, that the OCC’s supervisory role is to ensure that national banks and federal savings associations identify, measure, monitor and control their climate-related financial risks.⁴⁴ In October 2023, the three banking regulators came together to issue interagency *Principles for Climate-Related Financial Risk Management for Large Financial Institutions*, again stressing that the Fed is not a “climate policymaker” and “[d]ecisions about policies to address climate change must be made by the elected branches of government”.⁴⁵

In March 2022, the U.S. Securities and Exchange Commission (SEC) proposed new rules under the *Securities Act of 1933* and *Securities Exchange Act of 1934* to enhance and standardize climate-related disclosures for investors. At a high-level, the proposed rules would require listed companies to provide certain climate-related information in their regulatory filings, notably any climate-related risks that are reasonably likely to have a material impact on a registrants’ business, results of operations, or financial condition, along with externally assured disclosure of a registrants’ direct and indirect greenhouse gas emissions.⁴⁶ The original October 2022 target deadline for final rules has been pushed back, but an analysis of comment letters of 320 institutional investors conducted by Ceres in fall 2022 shows that investors are strongly in favour of the proposed disclosure rule⁴⁷ and many expect the rules to be finalized in 2023.⁴⁸

In September 2023, the U.S. Department of the Treasury published *Principles for Net-Zero Financing & Investment* to support financial institutions in implementing their net-zero commitments. The voluntary principles focus on scope 3 financed and facilitated GHG emissions, which are typically the largest type of emission for financial institutions, and reflect input from stakeholder engagement with financial market participants, research organizations, and civil society organizations.⁴⁹

“The Principles draw on the emerging best practices that we are seeing in the financial sector. They establish that financial institution net-zero commitments should be in line with limiting the increase in the global average temperature to 1.5 degrees Celsius. They affirm that financial institutions that have made these commitments should develop transition plans with clear practices, targets, and metrics. And that they should support their clients and portfolio companies in adopting their own transition plans.” Janet L. Yellen, Secretary of the Treasury⁵⁰

With the largest economy of any U.S. state, and the 5th largest in the world, California often leads the U.S. in climate policy. In 2015, legislation passed in California required the two largest public pension funds to divest from companies that receive at least half of their revenue from thermal coal mining by July 1, 2017.⁵¹ Despite this legislative action, the same two pension funds hold a combined \$14.8 billion in fossil fuel companies in 2023 and are under pressure from climate activists and pensioners to divest.⁵²

More recently, the California State Assembly passed two climate-related bills with implications for both public and private companies doing business in the state.⁵³ *SB 253 Climate Corporate Data Accountability Act* requires companies with annual revenues greater than \$1 billion that do business in the state to disclose their Scope 1, Scope 2, and Scope 3 greenhouse gas emissions, and to have such disclosures externally assured.⁵⁴ *SB-261 Greenhouse Gases: Climate-Related Financial Risk* requires companies with more than \$500 million in annual revenues and doing business in California to prepare and publicly disclose a climate-related financial risk report in line with the TCFD recommendations, including any risk mitigation and adaptation measures.⁵⁵ It is worth noting that companies can't afford to ringfence their operations in California in response to this legislation since many US companies doing business in the EU will be subject to EU policy.

3.1.4 Others

The New Zealand government has been studying the potential implications for financial soundness and efficiency when considering the impacts of climate change and concluded in 2018 that the country will face both physical and regulatory impacts on their economy and financial systems.⁵⁶ In October 2021, New Zealand passed a law requiring climate-related risk disclosures for large Crown corporations, insurers, banks and asset managers.⁵⁷ The reporting, which began in 2023, follows a standard developed in line with the recommendations made by the TCFD.⁵⁸ Notably, as per the recommendation of the Economic Development, Science and Innovation Committee of the New Zealand Parliament in their August 16, 2021 report, entities which are not materially affected by climate change are no longer exempt from the reporting requirements.⁵⁹

Hong Kong ran stress tests in early 2021, concluding “[c]limate risks can give rise to significant adverse impacts on the banks’ profitability, capital positions and operations.” The exercise “substantially enhanced their capabilities for measuring climate risks”.⁶⁰

“Climate policy is now a factor in trade and economic agendas... Exporters around the world are more likely to face a carbon price in the coming years, regardless of action in their home countries.” Canadian Climate Institute⁶¹

3.1.5 Collaboration Among Central Banks

While research on climate-related financial risk is still relatively new, prominent global financial institutions and organizations are starting to pay greater attention. The Financial Stability Board, which reports to the G20, was among the first major international organizations to recognize the links between climate change and financial instability. The U.S. Commodity Futures Trading Commission and the U.S. Federal Reserve have also released papers that assess how climate-related events can threaten financial stability.

The Network for Greening the Financial System (NGFS) is a group of central banks and supervisors that publishes and shares resources relating to sustainable finance which launched in December 2017. The Network’s purpose is to help strengthen the global response required to meet the goals of the Paris Agreement and to enhance the role of the financial system to manage risks and to mobilize

capital for green and low-carbon investments in the broader context of environmentally sustainable development. Their contributions include exploring transition scenarios, reporting on data gaps, and flagging opportunities for central banks to contribute to meeting climate targets. In December 2021, they published their *Guide on climate-related disclosure for central banks* which sets out instructions for central banks to disclose information on how climate-related risks and opportunities are governed internally, planned around, measured, and managed.

“Central banks have wide discretion to determine how they invest their non-policy portfolios and can easily adopt criteria to align with the Paris Agreement, notably by excluding companies that develop new fossil fuel production projects... However, only a quarter of G20 central banks are nominally committed to investing responsibly, all of them from Europe. In the Eurosystem, eight central banks are still to disclose any kind of SRI approach.” Reclaim Finance⁶²

3.2 Other Global Initiatives

3.2.1 Disclosure Frameworks and Standards

The Task Force on Climate-related Financial Disclosures (TCFD) was established in 2015 by the Financial Stability Board (FSB), an international body composed of government and central bank officials. The TCFD is composed of industry professionals including asset managers, banks, insurers, and other large multi-national corporations. The Task Force’s 2017 widely endorsed report and recommendations on disclosing climate-related information focused on climate change’s physical and transition risks on an organization’s finances.⁶³ In October 2023, the TCFD published its sixth and final status report, finding that although companies have made progress in their disclosures, more needs to be done around reporting “decision-useful climate-related financial information – especially as it relates to the impact of climate change on their businesses, strategies, and financial planning”.⁶⁴

The Taskforce on Nature-related Financial Disclosures (TNFD) was formally launched in June 2021, and consists of 40 senior executives spanning 18 countries who come from financial institutions, corporates and market service providers and represent sectors with the largest impacts and dependencies on nature.⁶⁵ In December 2022, the historic *Kunming-Montreal Global Biodiversity Framework (GBF)* was adopted at the United Nations Biodiversity Conference (COP15), with a vision of a world of living in harmony with nature where “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.” This agreement sets out 23 targets for 2030 and four goals for 2050, with a commitment from all Parties to set national targets toward reaching the Framework’s global goals and targets. In September 2023, the final TNFD Recommendations were published. The TNFD’s recommended disclosures align with the global policy goals in the GBF and are largely structured around the same four pillars as the TCFD, with the third expanded to capture “risk and impact management.”⁶⁶

The International Sustainability Standards Board (ISSB) was formed at COP26 under the International Financial Reporting Standards (IFRS) Foundation whose standards are already mandatory in 140 jurisdictions. The board, drawing expertise from existing IFRS panels, was established to develop sustainability disclosure standards. In June 2023, the ISSB released its first two standards – one for general sustainability-related information disclosure (IFRS S1) and one specifically for climate-related disclosure (IFRS S2). Both standards are effective for annual reporting periods beginning on or after January 1, 2024 and have been endorsed by the International Organization of Securities Commissions (IOSCO).⁶⁷ In contrast to the double materiality lens adopted by the European Sustainability Reporting Standards, the ISSB standards take a single financial materiality perspective. As explained by the ISSB, “IFRS Sustainability Disclosure Standards use the same definition of material as IFRS Accounting Standards to ensure investors understand sustainability risks and opportunities relevant to their investment decisions, and there is strong linkage with the financial statements: *‘Information is material if omitting, misstating or obscuring it could reasonable be expected to influence investor decisions’*.”⁶⁸

The Partnership for Carbon Accounting Financials (PCAF) is an industry-led partnership of 431 financial institution signatories in 71 countries, holding more than US \$93 trillion in assets. Beginning in the Netherlands in 2015, it aims to facilitate transparency and accountability of the financial industry to the Paris Agreement. A group of 22 member organizations volunteered to develop their standard, *The Global GHG Accounting and Reporting Standard for the Financial Industry*, which was originally published in November 2020 and updated in December 2022. The standard provides detailed methodological guidance to measure, disclose, and allocate GHG emissions (including scope 3 emissions) associated with equity, bonds, loans, project finance, real estate, mortgages, motor vehicle loans, and sovereign debt.

Life Cycle Emissions Accounting – Scope 1, 2 and 3

The GHG Protocol Corporate Standard classifies a company’s GHG emissions into three *scopes*⁶⁹: Scope 1 emissions are direct emissions from owned or controlled sources, scope 2 emissions are indirect emissions from the generation of purchased energy, and scope 3 emissions are all other indirect emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions.

The cradle-to-grave emissions associated with a product are referred to as its life cycle emissions and include emissions from raw materials, manufacturing, transportation, storage, sale, use, and disposal. Most of the world's largest corporations now track and report on emissions from their direct operations (scopes 1 and 2). Emissions along the value chain, scope 3 emissions, often represent a company's largest greenhouse gas impacts, implying that companies have been missing out on significant opportunities for improvement, particularly in the energy industry, but also in the financial sector. Figure 2 depicts the importance of scope 3 emissions for all sectors, but particularly so for the energy and financial sectors.

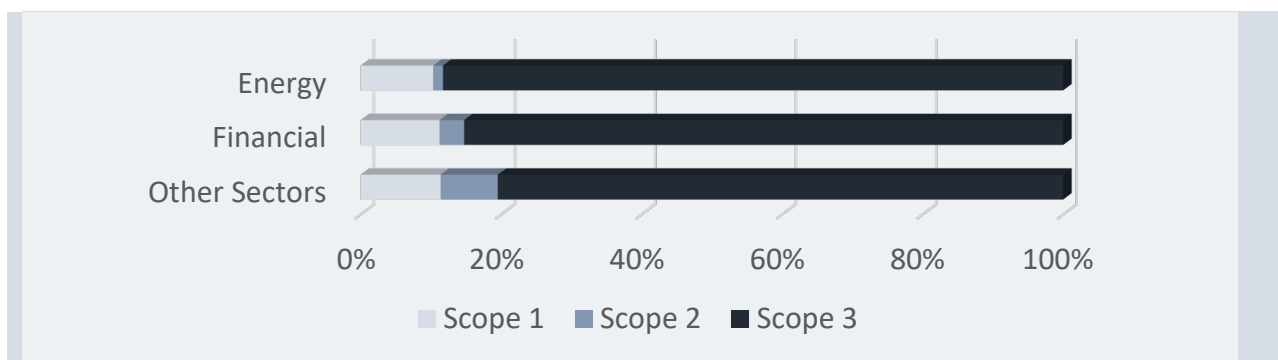


Figure 2. Emissions breakdown of companies in S&P Global 1200 index by sector. Using data from S&P Global’s *Trucost Environmental Dashboard*.

3.2.2 Banking Supervision of Climate-Related Risks

In April 2020, the Bank for International Settlements’ (BIS) Basel Committee on Banking Supervision (BCBS), a forum for central bank and bank supervisor cooperation, conducted a survey on current initiatives related to climate-related financial risks in its member countries. According to its findings, approximately two-fifths of the 27 participating countries had issued or were in the process of issuing more principles-based guidance regarding climate-related financial risks. However, the majority had not yet factored such risks into their prudential capital frameworks.⁷⁰

In April 2021, the BCBS published two analytical reports on climate-related financial risks: *Climate-related risk drivers and their transmission channels* and *Climate-related financial risks – measurement methodologies*. Following a consultation with diverse stakeholders, the BCBS released its *Principles for the effective management and supervision of climate-related financial risks* in June 2022. This document sets out 18 principles spanning corporate governance, internal controls, risk assessment, management and reporting to improve banks’ risk management and supervisors’ practices related to climate-related financial risks. The accompanying press release stated that “[the principles] seek to achieve a balance in improving practices and providing a common baseline for internationally active banks and supervisors, while retaining sufficient flexibility given the degree of heterogeneity and evolving practices in this area.”⁷¹

It is also worth noting that activists are increasingly focusing on banking regulation, as evidenced by *The Basel Manifesto* agreed upon at the Peoples’ Forum for Climate Justice and Financial Regulation, the first event of its kind held during the BCBS meeting in 2023. This call to action to end financing fossil fuel extractivism demands from financial institutions and their multilateral governance bodies (i.e., the BIS, the BCBS, the FSB of the G7 and the G20) “reparations, the guarantee of the Right to Say No, Free, Prior and Informed Consent and binding prior consultation for the financing of all extractive projects, and the application of the ‘one for one’ prudential rule to fossil industry investments and loans.”⁷²



3.2.3 Collaboration Among Multilateral Development Banks

In 2017, multilateral development banks (MDBs) committed to align their new financial flows with the objectives of the Paris Agreement. Since then, a group of the world's largest MDBs have been collaborating through the Paris Alignment Working Group to develop a common alignment approach that could be applied by each MDB, and other development partners, according to their unique circumstances and characteristics.⁷³ In June 2023, ten MDBs announced common methodological principles of how they will ensure alignment of their new operations with the mitigation and adaptation goals of the Paris Agreement, in the context of their individual climate programs.⁷⁴ The Principles cover direct investment lending operations, intermediated financing, general corporate purpose financing, and policy-based lending operations. The working group has also published a list of activities considered *universally aligned* and *universally not aligned* with the Paris Agreement's mitigation goals; the latter comprising thermal coal, electricity generation from coal or peat, and extraction of peat.

3.2.4 Net Zero Initiatives

In May 2021, the International Energy Agency (IEA) released its *Net-Zero by 2050* report which set out a roadmap to limiting the global temperature rise to 1.5°C. This report by a historically conservative organization of fossil fuel suppliers marked a major shift in the global attitude to the energy transition, making it clear, according to Climate Action Network Canada, that “the best-case scenario for oil and gas means an immediate halt to expansion and a managed decline of existing production.”⁷⁵ The report draws the important conclusion that there should be no investment in new fossil fuel operations. Instead, those investments should be redirected towards research and development for clean energy technologies. In September 2023, the IEA published a comprehensive update to its net zero roadmap, *A Global Pathway to Keep the 1.5°C Goal in Reach*, concluding that driving GHG emissions from the world's energy sector to net zero remains possible due to the record growth of key clean energy technologies, but caveats that an equitable pathway means almost all countries need to bring forward their targeted net zero dates.⁷⁶

“Removing carbon from the atmosphere is very costly. We must do everything possible to stop putting it there in the first place. The pathway to 1.5°C has narrowed in the past two years, but clean energy technologies are keeping it open. With international momentum building behind key global targets such as tripling renewable capacity and doubling energy efficiency by 2030, which would together lead to a stronger decline in fossil fuel demand this decade, the COP28 climate summit in Dubai is a vital opportunity to commit to stronger ambition and implementation in the remaining years of this critical decade.” IEA Executive Director Fatih Birol⁷⁷

The Organisation for Economic Co-operation and Development (OECD) is also active in providing observations and exploring policy implications for financial markets as our economies transition. Its 2021 report, *Financial Markets and Climate Transition*, concludes that indeed the market is not

sufficiently pricing in climate risks and they note the role of central banks in encouraging the use of science-based targets and transparent transition plans.

The Science Based Targets Initiative (SBTi) is a partnership of international organizations which guides companies and financial institutions in science-based target setting by providing technical expertise, expert resources, and an independent assessment and validation of targets. Targets are considered ‘science-based’ if they are in line with what climate science says is necessary to limit global warming to 1.5°C above pre-industrial levels, to meet the goals of the Paris Agreement.⁷⁸ The organization released version 5.1 of their criteria and recommendations for near-term targets, and version 1.1 of their corporate net-zero standard in April 2023.^{79,80}

In November 2021 during COP26, Mark Carney launched the Glasgow Financial Alliance for Net Zero (GFANZ) gathering nearly 300 financial institutions around a commitment of over US \$130 trillion of private capital to transform the economy towards net-zero. In November 2022, GFANZ published its final report *Financial Institution Net-zero Transition Plans – Fundamentals, Recommendations, and Guidance*. Since its release, membership in GFANZ’s sub-alliances has been dropping under pressure from the anti-ESG movement in the U.S., highlighting a key shortcoming of voluntary net zero initiatives relative to regulated requirements.⁸¹

Despite its popularity, however, there remains little agreement on what “net-zero” means. According to SBTi technical director Cynthia Cummis, the inconsistency around what net-zero even means “allows for financial institutions to claim they are doing more than they are and makes verification of any claims impossible.”⁸² Toward addressing this issue, the SBTi released version 1.0 of their *Foundations for Science-Based Net-Zero Target Setting in the Financial Sector* in April 2022, updating the earlier draft with revisions based on public consultant results. This foundations paper serves as the basis for the SBTi’s ongoing process to develop the first science-based global Standard for financial sector net-zero targets, to “enable financial institutions to set net-zero targets that are consistent with achieving a net-zero world by 2050.”⁸³

Perils of Greenwashing

In 2022, the United Nations established a High-Level Expert Group (Expert Group) on the Net Zero Emissions Commitments of Non-State Entities. This group, chaired by The Honourable Catherine McKenna, former Canadian Minister of Environment and Climate Change, was tasked with addressing net zero pledges and commitments from non-state actors. The Expert Group’s [report](#) recognized that greenwashing has emerged as a major risk factor in voluntary net zero pledges, and to effectively tackle greenwashing, recommended the need for non-state actors to move from voluntary initiatives to regulated requirements for net zero.⁸⁴

Research published in October 2023 found that the global banking and financial services industry saw a 70% increase in the number of climate-related greenwashing incidents in the last year, with more than half of such incidents involving fossil fuels or linking a financial institution to an oil and gas company.⁸⁵ The RepRisk report noted an accelerated risk for European firms, with the number of entities with at least one ESG risk incident linked to misleading environmental communication more than doubling from 2020 to 2022.⁸⁶ Unsurprisingly, the European Commission has asked EU

banking, insurance, and securities authorities to investigate greenwashing in the sector, with final reports and recommendations for potential EU rules changes expected in May 2024.⁸⁷

These results echo findings from Grantham Research Institute's 2023 report, *Global trends in climate change litigation*, which shows an explosion of 'climate-washing' cases over the last few years.⁸⁸ The authors observe that "laws and standards, such as the now updated OECD Guidelines, EU Directive on Green Claims, and initiatives by regulatory bodies, are becoming more common. This could lead to further litigation and discourage climate-washing behaviour."⁸⁹

To reduce greenwashing risk, asset managers in Europe and the U.S. are voluntarily downgrading the ESG investments on their books. For example, over the four months ending January 2023, €270 billion of Article 9 funds were voluntarily reclassified to Article 8 to under the EU's SFDR rules.⁹⁰ Likewise, in 2022, U.S. asset managers ratcheted down reported ESG AUM and the US SIF Foundation took a more conservative classification approach, combining for a massive restatement of U.S. sustainable investment AUM to \$8.4 trillion in 2022, compared to \$17.1 trillion in 2020.⁹¹

4.0 Canadian Context

As one of the highest per capita GHG emitters⁹² and major fossil fuel exporter, achieving the goals of the Paris Agreement in Canada will require a deep transformation in the ways we produce, use, and finance energy across all sectors of the economy for which the country is far from ready. Canada has one of the most emissions-intensive oil and gas sectors in the world⁹³ despite promises of increased sustainability contributing to growing disinterest by international investors. In contrast, the sector seems to glean unreserved support from the Canadian financial sector with which it is intimately intertwined.⁹⁴

Further, as the world implements new policies to limit warming, a growing fraction of the global fossil fuel industry's assets will become stranded. With its current dependence on high emissions intensity fossil fuels, Canada is poised to be at higher risk in a low-carbon world, even among fossil fuel producers, bearing a disproportionate macroeconomic impact from the stranding of assets.⁹⁵ Meanwhile, modelling has established that inaction will damage the credit ratings of countries, including Canada, while stringent climate policy consistent with the Paris Agreement will result in minimal changes to current ratings profiles. Early action can and will improve long-term fiscal sustainability, reduce corporate costs of debt thereby enhancing competitiveness, and reduce future interest rates on sovereign debt thereby reducing future tax burdens.⁹⁶

At COP26, Canada along with 23 other countries committed to ending support for the "international unabated fossil fuel sector" by the end of 2022,⁹⁷ and the Minister of Natural Resources, Jonathan Wilkinson, has since reiterated the Liberal Party campaign promise of ending public financing for domestic fossil fuel projects.⁹⁸ At COP27, the Sharm el-Sheikh Implementation Plan was adopted, which repeated the "phasedown of unabated coal power" language from COP26 once it proved impossible to get collective agreement to phase-out all fossil fuels from all Parties.

Canada's Formal climate commitments

On May 9, 1992 in New York, Canada ratified the *United Nations Framework Convention on Climate Change*. This Convention came into force in 1994 with the objective of stabilizing GHG concentrations in the atmosphere at a level that would “prevent dangerous anthropogenic interference with the climate system” and included the principle of “common but differentiated responsibilities and respective capabilities.”⁹⁹

On December 12, 2015, during COP21, Canada ratified the *Paris Agreement*, which came in force in 2016. This landmark – and legally binding – international treaty on climate change aims to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue “efforts to limit the temperature increase to 1.5°C above pre-industrial levels.”¹⁰⁰

As part of its commitments under the Paris Agreement the Parliament of Canada adopted the *Canadian Net-Zero Emissions Accountability Act* in 2021. This Act set the national GHG emissions target of net-zero emissions by 2050 at the latest and requires a Government of Canada plan to achieve a “prosperous net-zero-emissions future” in Canada.¹⁰¹

4.1 Fueling the Climate Crisis

As a result of decades of regulatory paralysis and occasional roll-back, Canada now ranks as the fourth-largest emitter of GHGs among the OECD nations¹⁰² despite being the eleventh-largest economy. In per capita emissions, Canada trails only the U.S. and Australia, with per capita emissions in 2021 coming in at 17.5 tonnes of carbon dioxide (CO₂) equivalent compared with the OECD average of 10.9 tonnes. Canada’s single largest GHG contributor is the oil and gas industry, which accounts for 27% of annual CO₂ emissions while its contribution to national GDP ranged from only 2.7% to 4% during 2015-2018.^{103,104}

Unsurprisingly, the sector benefits from strong financial support; direct annual subsidies to the industry routinely exceed \$1 billion per year and other types of financial services provided through Export Development Canada ranged between \$8 billion and \$12.4 billion per year from 2015 to 2020.¹⁰⁵ Canada now provides the most public financial support for fossil fuels per capita among G20 countries.¹⁰⁶ The United Nations Environmental Program’s *Production Gap Reports* continue to point out the incoherence of Canada’s approach:

“Though many governments plan to decrease their emissions, they are signalling the opposite when it comes to fossil fuel production, with plans and projections for expansion. This hinders the collective ability of countries to meet global climate goals, and it further widens not just the production gap, but the emissions gap as well.”¹⁰⁷

In November 2021, Canada’s Commissioner for the Environment and Sustainable Development reported that Canadian emissions have “increased since the Paris Agreement was signed, making it the worst performing of all G7 nations since the 2015 Conference of the Parties in Paris, France.” The report also reiterates findings from previous reports that fossil fuel subsidies continue to undermine the achievement of fossil fuel actions.¹⁰⁸ The Parliamentary Budget Officer recently calculated lost federal revenue due to tax incentives for the sector to be an average of \$1.9 billion per year between 2015 and 2021.¹⁰⁹

In a 2021 report, Oil Change International released a list of central banks around the world and assessed how they were tackling the climate crisis using a 10-point criteria.¹¹⁰ Central banks from

Europe, Asia and North America were found to be, in general, ‘grossly insufficient’ and no bank was close to alignment with all the evaluation criteria. The performance of the Bank of Canada was *grossly insufficient* for 7 out of 10 criteria, underlining the fact that there is a long way to go before matching the progress made by its peers.

Unfortunately, it is not only the Bank of Canada fueling the climate crisis in Canada. The Crown corporation Export Development Canada (EDC) is providing oil and gas companies with an average of more than \$9 billion in financing, loan guarantees, and insurance each year.¹¹¹ Because of this support, today Canada ranks second highest among G20 countries in total public financing for fossil fuels, and highest on a per-capita basis.¹¹² Indeed, being world leader in subsidizing the fossil fuel industry and also purchasing fossil fuel assets (e.g. pipelines) while at the same time wanting to be recognized as a world leader in climate action is a big conundrum for Canadian politicians.

Even more dramatic is the about-face taking place in Canada during the COVID-19 pandemic recovery; notwithstanding the government’s climate commitments, financial assistance to the oil and gas sector has increased. In 2020, the federal government provided \$1.7 billion to the governments of Alberta, Saskatchewan and British Columbia to fund the clean-up of inactive oil and gas wells as part of the COVID-19 Economic Response.¹¹³ This assistance is in contradiction with the ‘*polluter pays*’ principle to which Canada adheres.

Fossil Fuels’ Conflicts of Interest and Undue Influence

The oil sands, for example, were not directly subjected to any federal climate legislation before 2016. One of the rare studies on the influence of the petroleum industry revealed it had more than 1,000 communications per year with the federal government between 2011 and 2018, an average of more than six contacts per working day.¹¹⁴ Between 2000 and 2016, six major areas of environmental legislation, from water protection to carbon regulation, were weakened, delayed or eliminated with a concurrent 75% increase in Canadian oil production, while royalties and related corporate taxes decreased by 63% and 50% respectively.¹¹⁵ This has continued if not increased since: fossil fuel industries and associations met with government officials 1,224 times during the first year of the COVID-19 pandemic.¹¹⁶ This is the result of a form of capture where corporations and individuals subject to regulation become the clients of the public institution and see their private interests take precedence over the public interests. It is prevalent in complex fields largely because of the advantage of technical expertise that the industry enjoys over government¹¹⁷ and is especially the case with the fossil fuel sector in Canada whose interest are at odds with achieving climate commitments.¹¹⁸

This issue is also present on the international stage; COP26 saw more representatives of the fossil fuel industry than delegates from any country.¹¹⁹ Developing countries have been asking – unsuccessfully – to adopt “a clear, legal, policy framework to protect the objective, purpose and principles of the Convention and the Paris Agreement from conflicts of interest” since 2016 facing opposition from countries like Canada.¹²⁰

4.2 Over-Exposure of the Financial System

BloombergNEF analysis found that Canadian banks ranked in the bottom third in financing clean energy relative to their international peers but lead in fossil fuel investment.¹²¹ The six biggest Canadian banks have invested \$125 billion and provided \$694 billion in financing to fossil fuel companies since 2015. RBC is writing the most cheques, followed by Scotiabank, TD, BMO, CIBC and then Desjardins Group. In 2022, RBC topped the charts as #1 financier of fossil fuels among the world's 60 largest banks, providing more than \$42 billion to fossil fuel companies that year and bringing its cumulative financing to \$253.9 billion since 2016.¹²² Worryingly, the independent analysis of the banks' exposure losses under a 1.5°C world reveals it could be more than twice what they self-report (130 vs 57 basis points).¹²³ Five of these banks have steadily increased their fossil fuel financing since the signing of the Paris Agreement and three rank among the top 10 lenders to the industry over the period since its adoption.¹²⁴ As a result, Canada's biggest banks are among the top fossil fuel financiers in the world, representing 17.5% of all lending to the oil and gas sector.¹²⁵

This situation is effectively summarized in the 2023 Canadian Banks Net Zero Policy Report Card (see table 1) produced by Investors for Paris Compliance, who concluded that:

*“In general, the story this year is one of inertia. Some banks expanded the scope of their emissions reporting and set interim targets for additional carbon-intensive sectors. However, they generally did not improve their grades related to oil and gas and power from last year, nor did they disclose much new net zero policy outlining how they are going to decarbonize and reach their targets. **Canada's banks lack net zero urgency**”.*¹²⁶ (author's emphasis)

	 RBC	 SCOTIABANK	 TD	 BMO	 CIBC	 NATIONAL
Financed emissions reporting	?	C	B-	C	C	D
Interim oil & gas target	D	D	C	C-	C	D
Interim power target	D	C	B-	D	C	C
Transition plan	C-	C-	C-	C+	C	C-
2022 fossil fuel lending & underwriting (CAD) ¹	\$54.8 billion	\$38.3 billion	\$37.7 billion	\$25.1 billion	\$23.2 billion	Data unavailable
Percent change from 2021	+4%	-7%	+34%	-2%	-25%	Data unavailable
Low carbon energy vs. fossil fuel financing ²	0.37:1	0.51:1	0.74:1	0.49:1	0.37:1	0.77:1

LEGEND
A : best practice B : good coverage C : minimal coverage D : insufficient coverage I : incomplete

Table 1. Net Zero Policy Report Card 2023. Reproduced from *Canadian Banks Net Zero Policy Report Card 2023* (Investors for Paris Compliance, 2023, p.2)

Canadian pension funds also hold significant portions of the emissions-intensive oil and gas sector. Collectively, the Canada and Quebec pension plan investment boards (CPPIB and CDPQ) hold nearly \$1 trillion in total investments on behalf of over 26 million Canadians.^{127,128} A report from the Canadian Centre for Policy Alternatives' Corporate Mapping project found that the two pension funds were heavily invested in fossil fuel companies such as ExxonMobil, TC Energy, Enbridge, and other members of the Canadian Association of Petroleum Producers (CAPP), which has long obstructed climate action. At the end of 2020, CPPIB and CDPQ had public equity shares in oil and gas totaling \$3.68 billion and \$5.1 billion respectively.¹²⁹

The *Canadian Pensions Dashboard for Responsible Investing*, a collaboration between several non-governmental organizations, found that the 10-year cumulative return had CPPIB and CDPQ divested from fossil fuels would be 10% and 18% greater respectively.¹³⁰



Canadian Banks Target of Shareholder Climate Activism

In 2021, Canadian banks loaned Enbridge, a fossil fuel pipeline company, \$1.5 billion with \$1.1 billion in “sustainability linked” bonds. However, Enbridge disclosed in their financing agreement that “[t]he (corporation) does not intend to allocate the net proceeds specifically to projects or business activities meeting environmental or sustainability criteria” meaning the money could be used for general or any corporate purpose such as expanding Enbridge’s pipeline network, further entrenching fossil fuels into Canadian society and economy.¹³¹

As a result of its role in the transaction, RBC faced a shareholder proposal at its 2022 AGM to “update its criteria for ‘sustainable finance’ to preclude fossil fuel activity and projects facing significant opposition from Indigenous Peoples” which received 9% shareholder support.¹³² Its 2023 meeting saw another shareholder proposal on the ballot, this time asking the board to “adopt a policy for a time-bound phase-out of the RBC’s lending and underwriting to projects and companies engaging in new fossil fuel exploration, development and transportation.”¹³³ The proposal received 12.98% votes in favour. All told, RBC faced a vote on five climate-related shareholder proposals in 2023 as activists increasingly focus on banks as key intermediaries in the climate fight.¹³⁴

4.3 Systemic Climate Risks in Canada

Finding efficient solutions to complex problems starts with recognizing, identifying, and assessing the extent of the problem. Similar to other G7 countries, Canada needs to recognize the systemic nature of climate risk. It is critical to recognize that we are vulnerable to both physical risks from harmful climate change and weather extremes, as well as transition risk, from the potential economic consequences of a rapid transition to a low-carbon economy

Increasing Climate-Related Litigation Risk

The number and variety of climate-related court cases is ever increasing, adding the less often considered litigation and reputational risk to transitional and physical risks.¹³⁵ The Grantham Research Institute's 2023 [report](#) on global trends in climate change litigation highlights more cases being filed against corporate actors – with a more complex range of legal arguments - as well as more challenges to the climate policy response of governments and companies outside the U.S. The report also finds that high-emitting activities are now more likely to be challenged at different points in their lifecycle, from initial financing to final project approval. Further, the IPCC's 6th assessment report credits climate litigation as having an impact on “the outcome and ambition of climate governance”.¹³⁶

For example, in a landmark May 2021 case, a Dutch court ordered fossil fuel giant Shell “both directly and via the companies and legal entities it commonly includes in its consolidated annual accounts and with which it jointly forms the Shell group, to limit or cause to be limited the aggregate annual volume of all CO₂ emissions into the atmosphere (Scope 1, 2 and 3) due to the business operations and sold energy-carrying products of the Shell group to such an extent that this volume will have reduced by at least net 45% at end 2030, relative to 2019 levels.”¹³⁷

More recently, in an August 2023 historic decision on climate change, a Montana judge ruled in favour of a group of young people who alleged the state violated their right to a “clean and healthful environment” by promoting the use of fossil fuels.¹³⁸ Judge Seeley found the plaintiffs have a “fundamental constitutional right to a clean and healthful environment, which includes climate as part of the environmental life-support system.”¹³⁹ As the first youth-led climate suit to go to trial in the United States, it is worth noting the judge's finding that children are disproportionately harmed by fossil fuel pollution and climate impacts and that “every additional ton of GHG emissions exacerbates Plaintiffs' injuries and risks locking in irreversible climate injuries.”

In California, a false advertising case is making climate headlines.¹⁴⁰ On September 15, 2023, California's Attorney General filed a [complaint](#) against major oil producers and their main trade group, alleging that the defendants knew about the dangers of climate change as early the 1950s, but rather than warn consumers, instead “mounted a disinformation campaign beginning at least as early as the 1970s to discredit the burgeoning scientific consensus on climate change.”

At least three climate-related greenwashing complaints have been filed with the Competition Bureau in Canada, including official investigations into the Sustainable Forestry Initiative's (SFI) forest certification standard, a ‘false and misleading’ ad campaign by oil sands producers' Pathways Alliance, and RBC's ‘misleading’ advertising on climate action, while continuing to finance fossil fuel development.^{141, 142, 143}

4.3.1 Physical Risks

Frequent extreme weather events are leading to escalating economic losses

According to scientists at NASA’s Goddard Institute of Space Studies, summer of 2023 was the hottest since global records began in 1880.¹⁴⁴ Physical risks from rising global temperatures – up 1.1°C since the mid-19th century – are an immediate threat to the Canadian and world economies.¹⁴⁵ Since its first edition in 2006¹⁴⁶, the World Economic Forum classifies climate change as a major global risk; its 2023 report identifies failure to mitigate climate change and failure of climate-change adaptation as the two “most severe risks on a global scale” over the next decade, followed by natural disasters and extreme weather events and biodiversity loss and ecosystem collapse.”¹⁴⁷ Indeed, catastrophic flooding, droughts, wildfires, and storms are becoming more frequent and extreme and have caused billions of dollars in financial losses. As global GHG emissions and temperatures continue to rise, deeper economic losses are projected for the years ahead. These economic losses are not always readily absorbed and can result in real impacts to Canadians. For example, over the past eight years, catastrophic flooding in communities resulted in an average 8.2% reduction in the final sale price of houses and a 44.3% reduction in the number of houses listed for sale.¹⁴⁸ The Weather Network estimates that up to 10% of all homes in Canada are or will soon become uninsurable as a result of climate change, meaning that “premiums are so high that the average homeowner simply can’t afford it”.¹⁴⁹

In 2022, insured damage for severe weather events across Canada reached \$3.1 billion, making it the third highest year for insured losses since 1983.¹⁵⁰ This means the three worst years of insured catastrophic losses from extreme weather in Canada occurred in the last decade, excluding 2023 which is likely to break records nationally and internationally (see figure 3). Canada’s highest loss year on record occurred in 2016, due in large part to the Fort McMurray wildfire in Alberta, yet 2022 saw disasters from coast to coast with no single catastrophic event accounting for the majority of losses.¹⁵¹ Further, it has been suggested that insured losses are less than 50% of the total costs of extreme weather event destruction. The combined public and private losses per weather-related disaster have also ballooned, rising from an average of \$8.3 million per event in the 1970s to an average of \$112 million between 2010 and 2019.

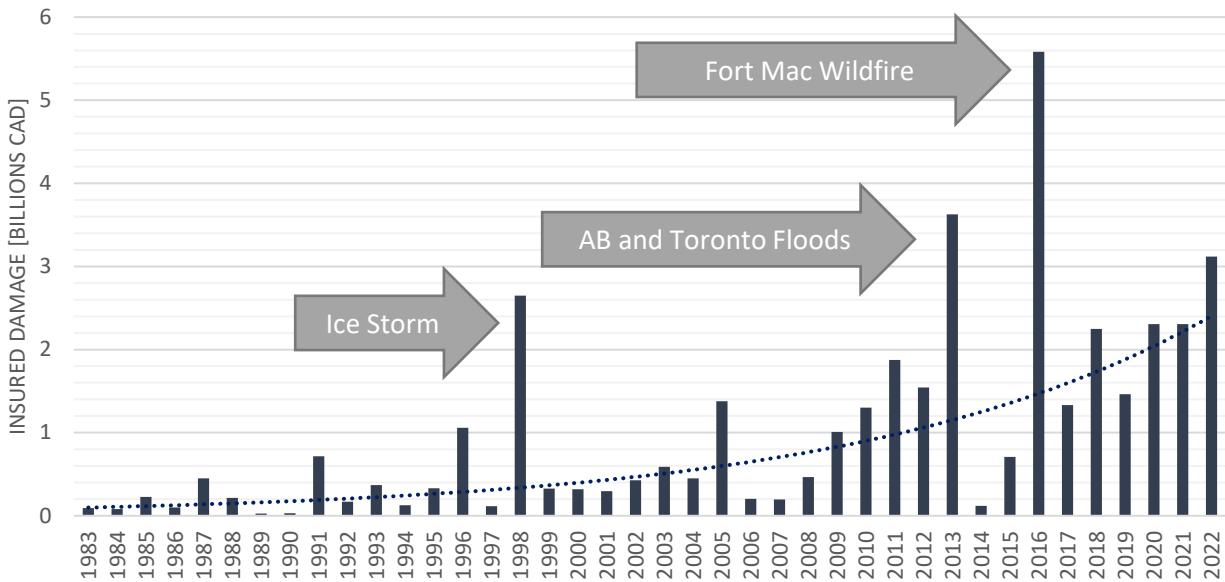


Figure 3. Insured catastrophic losses and loss adjustment expenses for events costing \$25 million or more in insured damages with estimated trend line for Canada, 1983 to 2022.¹⁵²

In 2023, Canada experienced the most destructive wildfire season ever recorded, with more than 6,132 fires leaving 16.5 million hectares of land scorched stretching from the West Coast to Atlantic Canada.¹⁵³ On August 23, 2023, with nearly six weeks remaining in the third quarter, DBRS Morningstar had already estimated Canada’s wildfire-related insured losses for Q3 to amount to between \$700 million and \$1.5 billion.¹⁵⁴

“The word ‘unprecedented’ doesn’t do justice to the severity of the wildfires in Canada this year. From a scientific perspective, the doubling of the previous burned area record is shocking.” Yan Boulanger, Natural Resources Canada¹⁵⁵

From June 1 to 25, 2023 more land burned in southern Quebec than in the previous 20 years combined. According to Jonathan Boucher, a Canadian Forest Services scientist, “[t]here’s no question, extreme weather, record high temperatures and dry conditions caused by climate change intensified this year’s wildfire crisis.”¹⁵⁶ The Canadian Climate Institute warns that the costs of climate change for Canada are massive and mounting and recommends substantial increases in adaptation investment and enhanced climate risk disclosure to build resilience and limit damages.¹⁵⁷ In fact, the cost of climate inaction in Canada is set to outpace the required transition spend by a wide margin. In a report titled *The Physical Costs of Climate Change: A Canadian Perspective*, researchers quantified this difference, finding the associated costs of physical damage to be up to \$45.4 billion larger, in present value terms, than the investments required to reduce GHG emissions by the year 2100 under a 2°C scenario, without considering the potential economic benefits of transitioning to a low-carbon economy.¹⁵⁸

Social and environmental factors are exacerbating the economic impacts

Unmitigated climate change and extreme weather events have significant impacts on human safety and health, including accidental deaths, impacts to mental health, injuries, loss of work capacity, respiratory conditions, the spread of diseases and premature deaths.^{159,160} According to a 2022 IISD report, nearly 25% of global deaths are attributed to economic decisions affecting the environment, a fact of which stakeholders, including those from the health community, are mostly unaware.¹⁶¹

Climate change and extreme weather events also create major productivity losses, particularly in industries that require workers to be outside. Climate change is a cumulative threat; a single extreme weather event does not threaten national order or security, but increasingly intense and frequent events do. Climate change impacts such as sea level rise and forced migration can have multiplier effects, accelerating traditional security threats. The risks go far beyond those that may result from disaster response: resource competition, habitat and livelihood losses, population displacements (including of species other than human), societal disruptions and political tensions — all can lead to human insecurity and conflict.¹⁶² As we have seen with the COVID-19 pandemic, poor and marginalized communities are especially vulnerable. The rapid loss of forests and other ecosystems is impacting ecosystem-dependent industries such as agriculture, tourism and the provision of drinking water.

Climate impacts are manifesting in all Canadian province and territories

The rate of surface warming for Canada is more than twice the rate of surface warming for the globe. The rate of warming for the Canadian Arctic is about three times the global rate.¹⁶³ The *Canada in a changing climate: National Issues report* found that communities of all sizes across the country are experiencing the impacts of climate change on their infrastructure, health and well-being, cultures, and economies. Changes in climate are threatening the vital services that Canada's ecosystems provide and are negatively impacting water resources. While climate change will bring some potential benefits, overall, it will impose increasing economic costs on Canada. In Canada, extreme weather events have affected critical basic infrastructure systems such as water supply, energy and transport which are increasingly compromised and left more vulnerable after each event.¹⁶⁴ In urban areas, service disruptions almost always result in disruptions in one or more other infrastructure systems because they are interconnected.¹⁶⁵ Rising sea levels will continue to increase the risk of major impacts on transport and energy infrastructure including temporary and permanent flooding of airports, ports, roads, railways, tunnels and bridges. Climate change will continue to impact the stability of soil and road structures and it will increase the frequency, duration and severity of thermal cracking, rutting, and freeze-thaw cycles.

The erosion of Canada's coastline, the longest in the world, is a major impact that is already being observed around Prince Edward Island and sea levels are rising in Nova Scotia. The provinces of British Columbia and Alberta have been hit multiple times by concomitant extreme weather events implicating forest fires and floods. Canada's most important commercial artery, the Trans-Canada Highway, was closed in fall 2021 due to extreme weather events in British Columbia and Newfoundland and Labrador, both extremes of our immense nation. The full cost of flooding in B.C. is still being assessed, but the federal government estimated in 2022 that it could ultimately cost more than \$5 billion to rebuild the province after a string of extreme weather events in 2021 that included a heat wave and wildfires in the summer and flooding in November.¹⁶⁶ Research from global

professional services company GHD reveals that the total GDP losses due to water risk in Canada could reach \$139 billion by 2050, while the total cost of climate change inaction could reach \$5.5 trillion by the end of the century according to ISF.^{167,168} The nature and cost of insured damages for catastrophic losses across Canada in 2022 are illustrated in figure 4, below. It is worth noting that Canada does not have a special federal, provincial, or municipal fund from which to draw when extreme weather events happen.

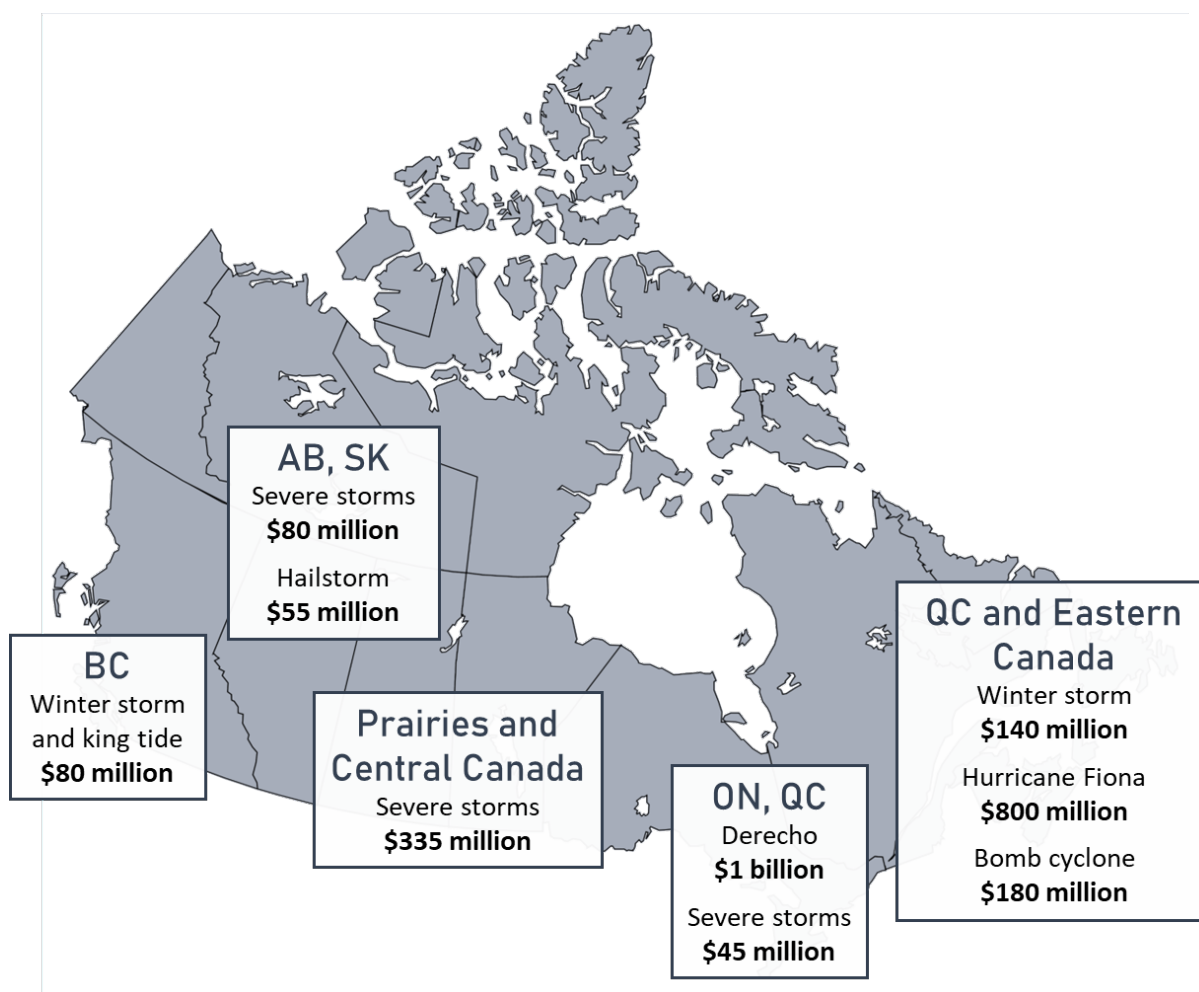


Figure 4. Insured damage for severe weather events across Canada in 2022. Adapted from the Insurance Bureau of Canada's *Severe Weather in 2022 Caused \$3.1 Billion in Insured Damage -- making it the 3rd Worst Year for Insured Damage in Canadian History* (IBC, 2023).

4.3.2 Transition Risks

An unplanned transition to a low-or-zero-carbon economy could endanger emissions-intensive industries. Transition risks arise due to the structural changes through which an economy must undergo as it reduces its reliance on fossil fuels and moves towards low-carbon energy sources. Figure 5 shows how these transition and physical risks interact. It also combines two important dimensions: the level of climate change mitigation efforts and the degree of uncertainty of the transition towards a low-carbon economy. The transition to a low-carbon economy may occur in an “orderly” way, resulting in manageable transition and physical risks, or at the other end of the spectrum, in a

disorderly manner, resulting in an insufficient transition which fails to both meet climate objectives and prevent physical risks. Currently, Canada is on the path of the ‘hot house world’, that is, not meeting our climate targets in a disorderly manner, a situation that calls for a swift and intentional step forward towards emissions reductions.

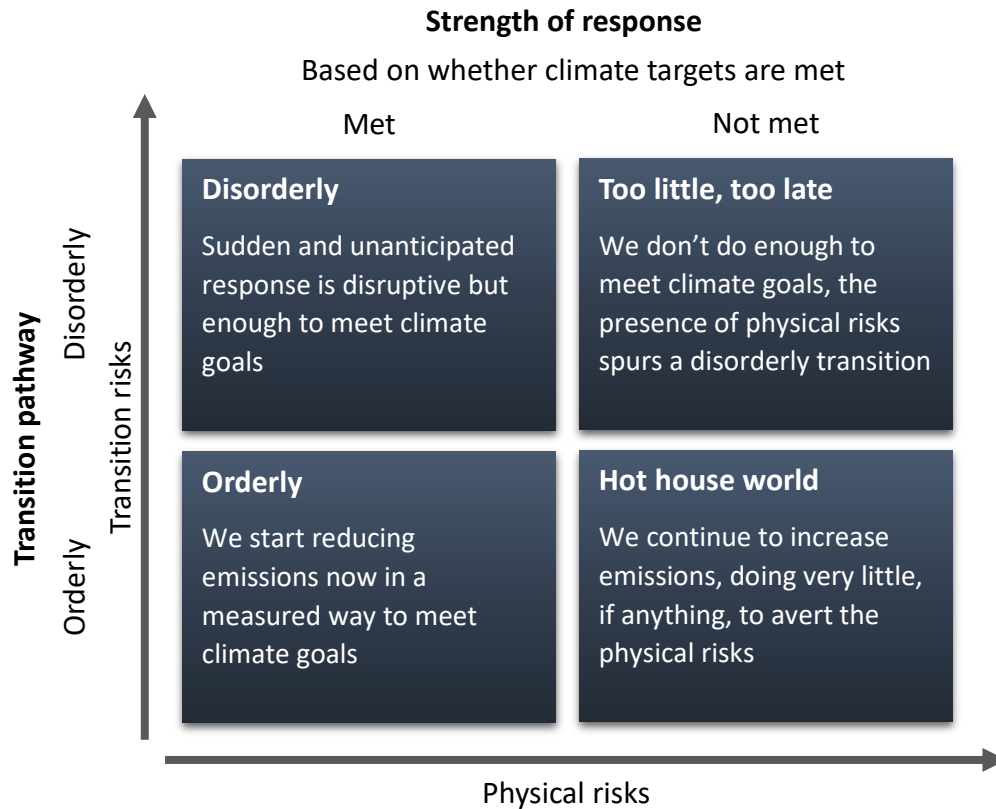


Figure 5. *The two dimensions in the climate-finance loop: the level of mitigation effort and the degree of uncertainty of the transition. Adapted from Macroeconomic and financial stability Implications of climate change (NGFS, 2019).*

The Canadian Climate Institute’s October 2021 report, *Sink or Swim: Transforming Canada’s economy for a global low-carbon future*, reflects on the risks to the economy of overexposure and continuing to delay the transition. The report explores the profitability of different sectors and concludes that several sectors are not yet transition-ready (figure 6). The authors conclude that “[i]nvestor and insurer actions to reduce climate-related risk in their portfolios will affect the cost of capital, likelihood of divestment, and the ability to underwrite assets in the coal, oil, and gas sectors.”¹⁶⁹ Their recommendations include collaboration among all levels of government to develop clear and detailed transition plans and rebalancing of public investment and tax incentives away from activities like oil production that are certain to face declining demand.¹⁷⁰

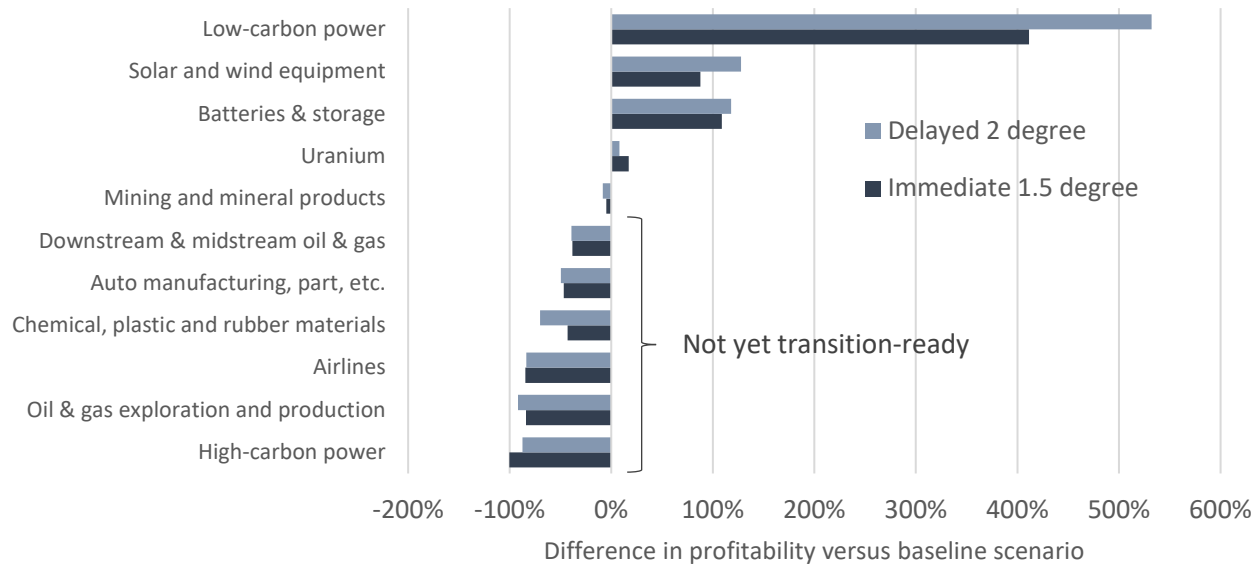


Figure 6. Net present value of the difference in weighted average market capitalization for Canadian Companies 2021-2050. Reproduced from *Sink or Swim: Transforming Canada’s economy for a global low-carbon future* (Canadian Climate Institute, 2021, p.18)

Transition risks and technological innovations could cause significant losses for high-carbon industry sectors with soon-to-be stranded assets, and those that rely on them. Given the size of these industries, these cumulative losses could have ripple effects for the major financial institutions that invested in them. This couldn’t be truer for the oil and gas sector, which is an important sector for several provincial economies, notably Alberta, Newfoundland and Labrador, and Saskatchewan. A recent report finds that the value of stranded assets in the oil and gas sector exceeds US\$1 trillion globally, including around US\$100 billion in stranded assets in Canadian oil and gas fields.¹⁷¹ The associated rapid depreciation and replacement of fossil-fuels would entail a profound reorganization of industry value chains, international trade, and geopolitics.

“When it comes to the global transition, the major concern is that long-term transition risks are not fully reflected in market prices, tilting capital flows toward riskier, emissions-intensive assets and away from low-carbon assets.” **Canadian Climate Institute**¹⁷²

A key aim of climate policy is to progressively diversify energy sources by substituting renewables and energy efficiency for fossil fuel use. The transformation of energy systems is well under way, and its economic implications could be detrimental to stakeholders pursuing fossil fuel businesses with no decarbonization plans or strategic approach who risk exposure to stranded assets.¹⁷³ Addressing climate change as a systemic financial risk is of the essence. In that sense, integrating climate science in the development of scenarios, operations and products in the financial system is not only useful but unavoidable to mitigate risk.

4.4 Sustainable Finance Initiatives

Efforts to start following the global momentum and to advance the recommendations of the TCFD, among other objectives, started in earnest in 2018 when the federal government struck the Expert Panel on Sustainable Finance (Expert Panel). The Expert Panel's [final report](#), published in 2019, issued 15 recommendations. While acknowledging that finance “has a critical role to play in supporting the real economy through the transition” and endorsing the TCFD disclosure standards, the report fails to recognize the profound impact that finance and government support have on perpetuating fossil fuel dependence and delaying the necessary transition notably by recommending more export pipelines (recommendation 12.3).

The federal government supported the TCFD disclosure standards in their 2019 budget¹⁷⁴ and again in their 2021 budget by requiring Crown corporations to abide by them by 2024¹⁷⁵ but no legislative efforts have occurred so far. As of September 2023, there are 162 Canadian TCFD supporters, 83 of which are financial institutions.¹⁷⁶

The Institute for Sustainable Finance (ISF) released in September 2021 a report, [Changing Gears: Sustainable Finance Progress in Canada](#), providing an update on the implementation progress of the Expert Panel's 15 recommendations and highlighted the need for “additional and accelerated actions”. Their approach included an overview of the recommendations and engagement with 34 interviewees, including three of the four members of the Expert Panel. They report that there has been significant progress on only one recommendation with the remaining recommendations seeing minimal to moderate progress. They remark that Canada has fallen behind on sustainable finance:

“Our financial ecosystem needs to embrace change. There was strong support for the need to shift the approach and behaviours of Canada’s investment industry and financial institutions.”¹⁷⁷

The Canadian government [established](#) the Sustainable Finance Action Council (SFAC) in May 2021 to provide input and advice to the government on sustainable finance. While the Expert Panel recommended an Action Council composed of ‘prominent industry, financial, academic and civil society representatives’, only financial industry representatives were appointed to the council, many from institutions that invest in the fossil fuel industry. In setting up the SFAC, the government failed to lead an open, democratic and transparent process calling on multiple expertise and perspectives, as seen in Europe to resolve complicated questions, resulting in an opaque process conducted behind closed doors.

An early focus for the SFAC was to define a green and transition taxonomy, stemming from a recommendation of the Expert Panel encouraging the development of a “‘transition-oriented’ taxonomy category that captures environmentally beneficial projects that do not meet international green criteria.”¹⁷⁸ To deliver on this mandate item, the SFAC convened a Taxonomy Technical Experts Group (TTEG) comprising a subset of its members. The TTEG, with contributions from the Institute for Sustainable Finance and the Canadian Climate Institute, prepared the [Taxonomy Roadmap Report](#), which was endorsed by the SFAC and shared with the government in September 2022. The Roadmap lays out the *Canadian Green and Transitional Financial Taxonomy Framework* to “establish standardized and science-based definitions of climate-compatible investments.”¹⁷⁹

The taxonomy's 'transition' label has received pushback for including carbon capture, utilization and storage (CCUS) and blue hydrogen,¹⁸⁰ against the global trend of excluding them, yet the proposed taxonomy reinforces key elements of the draft *Climate-Aligned Finance Act (CAFA)* by adopting a DNSH criterion, a carbon lock-in principle, and an explicit reference to a 1.5°C pathway, albeit lacking in specification. More than a year later, the federal government has not yet formally responded to the SFAC report nor provided a timeline to move forward on drafting technical specifications.

Does Fossil Gas have a Place in Green Taxonomies?

According to Climate Bonds, as of 2023, more than 40 countries and regions have a taxonomy or are in the process of developing one. The majority globally are purely green taxonomies, which generally do not include hydrocarbon-related activities. Mixed taxonomies, which include both green and transitional components, generally include fossil gas power generation, but with significant limits on the level of emissions and a cut-off date for when the activity is no longer considered compatible with the taxonomy.¹⁸¹

In its October 2023 whitepaper on the role of fossil fuels in taxonomies, Climate Bonds concludes that “[t]he main global taxonomies are unambiguous about the incompatibility of meeting the goals of the Paris Agreement with the development and use of hydrocarbons, especially the construction of new fossil fuel plants”.¹⁸² All of the taxonomies it assessed ban new fossil gas-fired generation capacity beyond 2030-2035 (2040 for Thailand) and none of the science-based taxonomies, whether green or transitional, include new fossil fuels exploration projects.¹⁸³

However, the report goes on to highlight disagreement in the use of fossil gas, “which in some cases is seen as an intermediate/transitional fuel that can be used to replace other fuels with worse emissions characteristics”.¹⁸⁴ For example, the final EU taxonomy included two fossil gas-related activities through its *Complementary Climate Delegated Act*, which Reclaim Finance asserts was the result of an intense lobbying campaign by representatives of the oil and gas industry, watering down the scientific approach taken in the rest of the taxonomy.¹⁸⁵ Yet, Climate Bonds finds the criteria for these activities to be so specific and limiting in nature that companies will find it challenging to comply without deploying the most up to date carbon capture and storage (CCS) installations.¹⁸⁶ Further, research conducted by the Institute for Energy Economics and Financial Analysis estimates the levelized cost of electricity (LCOE) for power generation with CCS to be higher than that of ordinary gas power plants and 1.5-2 times above current alternatives such as renewable energy plus storage, resulting in an unsustainable proposition for end consumers.¹⁸⁷

The Canadian Sustainability Standards Board's (CSSB) became operational in June 2023. This group has the mandate of supporting the adoption of ISSB sustainability disclosure standards in Canada and facilitating interoperability between ISSB standards and any forthcoming CSSB standards. The CSSB has been clear that it will “support the adoption of international standards in Canada while considering supplemental requirements tailored to the Canadian market”, which may pave the way for a lower standard in Canada.¹⁸⁸ Likewise, the Canadian Securities Administrators (CSA) announced in July 2023 that its staff “intend to conduct further consultations to adopt disclosure standards based on ISSB Standards, with modifications considered necessary and appropriate in the Canadian context.”¹⁸⁹

The Bank of Canada acts as a bank to the Government of Canada and sets monetary policy but is not responsible for the regulation or supervision of financial institutions; that role is served by the Office of the Superintendent of Financial Institutions (OSFI).ⁱⁱⁱ

In November 2020, the Bank of Canada and the OSFI began plans for a pilot project to incorporate climate change scenario planning into their risk assessment framework.¹⁹⁰ Results of the exercise were released in January 2022 in a report which recognizes that climate change ‘looms’ as a potentially large structural change affecting our economy and financial system. The Bank also issued a set of [climate change commitments for COP26](#) which include continuing its analysis of the impacts of climate change on the Canadian economy, incorporating best practices from other central banks, and promises of more consultations regarding changes to its policies

Despite these initiatives, in Positive Money’s 2022 Green Central Banking Scorecard, Canada received two out of 50, 14 out of 50, and two out of 20 for monetary policy, financial policy, and leading by example, respectively, despite top marks for research and advocacy and an improvement in overall G20 ranking to 10 from 14 in 2021 (see table 2).¹⁹¹

Rank (2021 rank)	Country	Research and Advocacy (out of 50)	Monetary Policy (out of 50)	Financial Policy (out of 50)	Leading by Example (out of 20)	Aggregate Score (out of 130)	Grade (A+ to F)
1 (1)	France	10	12	31	17	70 (52)	B-
2 (6)	Italy	10	12	31	8	61 (45)	C+
3 (7)	Germany	10	12	30	8	60 (44)	C+
4 (4)	European Union	10	12	28	8	58 (47)	C
5 (5)	United Kingdom	10	10	27	9	56 (46)	C
6 (2)	Brazil	10	18	18	7	53 (51)	C
6 (3)	China	10	12	31	0	53 (50)	C
8 (9)	Japan	10	6	14	5	35 (25)	D+
9 (8)	Indonesia	10	1	14	5	30 (26)	D+
10 (14)	Canada	10	2	14	2	28 (15)	D
11 (11)	Mexico	10	4	4	5	23 (17)	D
12 (20)	India	10	0	10	1	21 (18)	D
13 (11)	South Korea	10	1	6	2	19 (17)	D-
14 (16)	Russia	8	0	8	2	18 (12)	D-
15 (13)	Australia	10	0	4	3	17 (16)	D-
16 (14)	United States	10	0	6	0	16 (15)	D-
17 (18)	Turkey	10	0	2	2	14 (4)	D-
18 (17)	South Africa	10	0	2	1	13 (10)	D-
19 (19)	Argentina	6	0	0	0	6 (6)	F
20 (19)	Saudi Arabia	0	0	0	0	0 (0)	F

Table 2. Green Central Banking Scorecard – G20 countries ranked by green monetary and financial policies. Reproduced from *The Green Central Banking Scorecard 2022 Edition* (Positive Money, 2022, p.8)

ⁱⁱⁱ [This infographic](#) is helpful for understanding financial oversight roles and tools in Canada.

In OSFI's *2022-23 Departmental Plan*, the organization plans to become "a global leader in prudential supervision by making policy to ensure operational and financial resilience of its regulated entities" in the face of climate-related and other risks. Recognizing that "climate change and the global response to the threats it poses have the potential to significantly impact the safety and soundness of the Canadian financial system", OSFI published its *Guideline B-15: Climate Risk Management* in March 2023.¹⁹² The new rules require federally regulated finance institutions to disclose key aspects of climate risk (physical and transition), stress test their businesses against different global heating and energy transition scenarios, and report all three scopes of emissions by the end of 2025.¹⁹³ Notably absent from the guidelines are higher risk factors and capital requirements for fossil-fuel lending and investments, notwithstanding "the adequacy of climate-related capital and liquidity requirements" emerging as one of the four key themes from public consultation on the draft guideline.¹⁹⁴ OSFI's strategy received criticism in Report 4 of the Commissioner of the Environment and Sustainable Development, who audited OSFI's supervision of climate-related financial risks and found the regulator to be lagging behind its international peers with respect to timing and ambition of its actions.¹⁹⁵

"OSFI's strategy to tackle climate-related financial risks aims to improve the resilience of federally regulated financial institutions but will remain short of incentivizing the transition to a net-zero emissions economy". Commissioner of the Environment and Sustainable Development¹⁹⁶

Emissions Reduction Accountability in Canada

In June 2021, Canada adopted the *Canadian Net-Zero Emissions Accountability Act* (CNZEAA) which enshrines in legislation Canada's commitment to achieve net-zero greenhouse gas emissions by 2050. To accomplish this, the act provides a framework of accountability and transparency to ensure the federal government sets five-year targets, publishes emissions reductions plans, reports on progress, and consults appropriately. Importantly, The Minister of Finance must prepare and make available to the public an annual report identifying the key measures being taken by the government to manage its financial risks and opportunities related to climate change (s.23). The provision came into force in 2023 but no reporting has occurred yet. To learn more about the CNZEAA, please read our *Short Guide to the CNZEAA*.

Canada's current Nationally Determined Contribution is a 40-45% reduction in emissions from 2005 levels by 2030. Toward achieving this, regulations to cap and cut emissions from Canada's oil and gas sector are being developed and are expected to be published mid-2024.¹⁹⁷ The fact remains that **ongoing efforts are insufficient for Canada to meet its climate commitments**, let alone its *fair share*^{iv} of global emissions reductions.

^{iv} "Fair share" allocations of emissions reductions often include consideration of accounting for cumulative historical emissions, GDP or human development index, and/or population. Read more about this in our publication, *Canada's Fair Share of Emissions Reductions under the Paris Agreement*.

5.0 Discussion of Gaps and Conceptual Limitations of Existing Initiatives

This section explores critical perspectives on international and Canadian initiatives representing the current paradigm of sustainable finance which may need bolstering in certain regards to ensure finance aligns with climate commitments. Most initiatives around disclosure and stress testing described in [sections 3](#) and [4.4](#) still attempt to adapt pre-existing financial tools to the unprecedented life-threatening problem of climate change. This paradigm suits industry because it confirms and reinforces the idea that the only purpose and the only legitimate concern of financial circles is to optimize their risk-return. However, it may be ill-suited to address the challenge of climate change itself.

5.1 Radical Uncertainty Requires for a New Type of Precautionary Approach

The current narrative around climate-related risks is that they can be adequately addressed if sufficient modelling or scenario development is deployed to understand them and how they interact with policy.

Chenet et al. refute this assertion, arguing in particular that transition risks in the short to medium term and physical risk in the long term “are subject to radical or ‘Knightian’ uncertainty whereby the probabilities of different outcomes are impossible to calculate.”¹⁹⁸ In economics, Knightian uncertainty refers to a lack of quantifiable knowledge about some possible occurrence. It is an acknowledgement of “some fundamental degree of ignorance, a limit to knowledge, and an essential unpredictability of future events.”¹⁹⁹ Hence, sufficient ‘intellectual capacity’ for policy action will potentially never be reached in advance and conventional financial risk-management analysis is not well suited to the task:

“Radical uncertainty prevents the generation of reliable (‘efficient’) prices and as such prevents financial system participants from having the deterministic or probabilistic vision of the future that they are looking for.”²⁰⁰

Indeed, the necessary structural transformation of our global socioeconomic system to address the climate crisis are such that no single model or scenario can provide a full picture of the potential macroeconomic, sectoral, and firm-level impacts caused by climate change. Even more fundamentally, climate-related risks will remain largely unhedgeable if system-wide action is not undertaken.

“Scenarios and stress testing are useful tools in the face of uncertainty, but the quantitative modelling they rely upon cannot compensate for the ‘unknown unknowns’ attached to underlying socio-economic phenomena and mechanisms. Therefore, they cannot act as the sole guide for actual decision-making. What is lacking is an alternative intellectual framework that might guide action now under conditions of symmetrical levels of imperfect information.” H. Chenet²⁰¹

In the same vein, economists at the Banque de France coined the expression ‘green swans’ (or ‘climate black swans’) in 2020 due to the fact that, like black swan events (an unpredictable event with

potentially severe consequences), both physical and transition risks are characterised by deep uncertainty and nonlinearity, their chances of occurrence are not reflected in past data, and the possibility of extreme values cannot be ruled out. However, green swans are unique in three respects:

1. Despite climate impacts being highly uncertain, it is certain that a combination of physical and transition risks will materialize, i.e., there is certainty about the need for ambitious actions despite uncertainty about timing and nature of impacts.
2. Climate catastrophes are more serious than most systemic financial crises: they pose an existential threat to humanity
3. The complexity is of a much higher order with complex chain reactions and cascade effects which could generate nonlinear and fundamentally unpredictable environmental, social, economic and geopolitical dynamics that are irreversibly transformed by the growing concentration of greenhouse gases in the atmosphere.²⁰²

A joint report by the Institute and Faculty of Actuaries (IFoA) and Exeter University's Global Systems Institute of Exeter released in July 2023 points to a disconnect "between climate scientists, those building the models, those working with the models, and decision makers in financial services".²⁰³ The authors find that many climate-scenario models used in financial services are significantly underestimating climate risk because "[r]eal-world impacts of climate change, such as the impact of tipping points (both positive and negative, transition and physical-risk related), sea-level rise and involuntary mass migration, are largely excluded from the damage functions of public reference climate-change economic models."²⁰⁴

*"The latest science on tipping points reinforces the need to race to zero and makes decarbonisation scenarios that feature temporary overshoot (ie allowing the temperature to increase beyond 1.5°C before reducing it again) significantly more risky. Tipping points must be included if scenarios are to be realistic. They are no longer high-impact, low-likelihood events but are now high impact, high likelihood, and we need to mitigate and plan for them. Ignoring them in scenarios and modelling significantly understates risk."*²⁰⁵

When it comes to addressing the climate crisis, traditional practices such as disclosure, transparency, scenario analysis and stress testing, are limited, ill-equipped and ultimately flawed as detailed in the next sections. Instead, we must adopt a macroprudential precautionary approach focused on market-shaping legislative innovation: the regulatory framework of our financial system must be fully aligned with our climate commitments.²⁰⁶ There is *radical uncertainty* as to how society will go through this unprecedented transformation. It is ineffectual to try to model and quantify it in the search for certainty before acting against the very certain – and catastrophic – risks of climate change. Indeed, a precautionary approach is most appropriate for problems such as climate change where seemingly small and reasonable risks can accumulate to irreversible harm putting the system at risk of total failure.²⁰⁷

5.2 Beyond Risk Disclosure: The Need to Align with Climate Commitments

There has been much attention on climate-related risk disclosure frameworks recently, but disclosure alone, while indispensable, is insufficient. Meeting the commitments set forth in the Paris Agreement demands that companies be required to set ambitious targets and prepare and submit a credible plan

to meet such targets. Investments need not only to be disclosed but to be directed towards truly sustainable and innovative business models.

Voluntary actions under the leadership of the TCFD have unfortunately not delivered change at the scale and speed we need. The reason why is simple: despite ever expanding data and disclosures, there just isn't enough legal and commercial pressure or incentives for businesses and investors to act. In November 2020, an HSBC survey of 2,000 investors found that only 10% viewed climate disclosures as a relevant source of information.²⁰⁸ Another analysis of corporate climate risk disclosure by 301 firms between 2015 and 2020 showed that the launch of the TCFD recommendations in 2017 resulted in “negligible increase of approximately 1.9 percentage points in information disclosed as required by the TCFD categories” leading authors to conclude that preexisting information was simply re-organized rather than improved. There was hardly any increase in strategy, metrics and targets, the categories which “would provide the most essential and material information to stakeholders”.²⁰⁹ Still, the fact that France, the only country with detailed mandatory climate-risk reporting for large financial institutions under its 2015 Energy Transition and Green Growth Law (Transition énergétique et croissance verte), performed better, especially in those categories, highlights the potential of making disclosure mandatory.

More recently, the Corporate Climate Responsibility Monitor assessed the targets and plans of 24 major multinational companies that have put themselves forward as climate leaders, comprising the largest three global companies from eight major-emitting sectors. They found that only five entities clearly committed to deep decarbonization of their full value chain and all 2030 targets fell short of the ambition required to meet the Paris Agreement goals. The climate pledges analyzed translate to a median absolute emission reduction commitment of just 15% of the full value chain emissions by 2030, far below the required cuts to be in line with limiting the global temperature increase to 1.5°C. The study found that most companies' climate strategies are mired by “ambiguous commitments, offsetting plans that lack credibility and emission scope exclusions”, with climate strategies of 15 of the 24 companies determined to be low or very low integrity.²¹⁰

Beyond the limitations of voluntary disclosure frameworks, the risk management framework itself is questionable in a context of climate crisis. Indeed, Professor Ben Caldecott, director of the Oxford Sustainable Finance Programme, wrote that “[Climate risk management] can make little or no contribution to alignment with climate outcomes”.²¹¹ In other words, don't expect climate-related financial risk disclosures to result in the real-world changes we need. His prescription is straightforward:

“Action has to move beyond disclosure of climate-related financial risks towards proactive interventions, from engaging the world's emitters to set GHG reduction targets that are sufficiently ambitious, credible and science-based to investing in, financing and helping enable the breakthrough technologies and business models of the future. Moreover, a focus on the role of regulators, fiduciary duty and other fiscal incentives is imperative to understand how we might reset the rules to develop a more regenerative and resilient economy.”²¹²

There is a need to move from risk to alignment; “proactive climate response is not only about disclosing risks, but also about investing in green opportunities that can enable the low emissions

societies of the future”.²¹³ Especially relevant to Canada, the authors also note that the energy sector seems to have become “more reluctant to disclose climate information” after the Paris Agreement in 2015 as it has faced higher material risks, also highlighting the need to make disclosure mandatory.²¹⁴

Put simply, the best way to minimize the risks that climate change poses to the financial system is to limit the risks that financial institutions pose to the climate system. This can be done through legislation requiring that finance proactively aligns with achieving global climate commitments.

5.3 Avoidance of Carbon Lock-In

Bernstein and Hoffmann propose the metaphor of the “fractal carbon trap” to illustrate the mutually reinforcing technological, economic, political, and social dynamics underpinning the continuous use and dependence on fossil fuels. They identify *effective action* as any intervention that disrupts the trap and allows a rapid phase out of fossil fuels at multiple scales.²¹⁵

This approach reveals a chain of traps into which we can fall when we unduly focus on GHG reduction targets that incentivize partial improvement. Indeed, certain actions can generate short-term GHG reductions, such as those associated with technological advances leading to GHG reductions at the margin in the fossil fuel sector, while maintaining or amplifying economic and political dynamics that prevent societies from achieving the real decarbonization necessary to avoid dangerous climate change. For example, the promotion of certain GHG reduction technologies, such as carbon sequestration, do not solve the problem of dependence on fossil fuels and bypass genuinely transformative solutions. Should it become available at a competitive cost, it should be the last resort option, dedicated only to high emitters of essential and irreplaceable industrial products. It is therefore important to tackle the dynamics of these traps at all levels.

*“While assessing and supervising climate-related risks is essential, it should be part of a much broader political response aimed at eliminating the economy’s dependence on carbon-intensive activities.” **The Green Swan***²¹⁶

Understanding Carbon Lock-in

Carbon lock-in occurs when fossil fuel-intensive systems “perpetuate, delay or prevent the transition to low-carbon alternatives.”²¹⁷ The magnitude of the risk stems from emissions generated from a given project or asset, its useful life, and whether proven abatement technologies exist; long-life assets with big emissions profiles relying on limited or non-existent abatement options have a greater lock-in risk and face a higher risk of becoming stranded in the future.²¹⁸

Against the backdrop of Canada’s climate commitments, eliminating dependence on and lock-in of emissions-intensive activities and instead planning for a fossil fuel-free future is imperative. To this end, the *Canadian Green and Transitional Financial Taxonomy Framework* outlined in the Taxonomy Roadmap Report renders any projects that create carbon lock-in and path dependency ineligible as a transition or green activity.²¹⁹ The Canadian Climate Institute has also identified carbon lock-in a risk topic, focusing on ‘locking out carbon lock-in’ in 2023 report series.²²⁰

5.4 Responsible Target-Setting, Planning and Reporting

Having general commitments relying on varying voluntary standards at best cannot guarantee a swift alignment with and implementation of climate commitments. Detailed annual reports for commercial and financial institutions must be required with clear and rigorous criteria for setting targets, implementing action plans and reporting on progress. These must cover all key aspects of alignment with climate commitments. The Canada Climate Law Initiative recommends mandatory climate action plans and disclosures for federally regulated companies, Canada's largest banks, insurance companies, and other enterprises important to the stability of the economy as well as Crown corporations.²²¹

5.4.1 Compliance with a global carbon budget consistent with the Paris Agreement

Climate change is a pressing and potentially irreversible threat to human societies and the environment. In recognition of this, most countries signed the Paris Agreement in 2015 with the primary goal of limiting global temperature rise to 1.5°C. In doing so, these countries invited the IPCC, through the UNFCCC, to provide a Special Report on the impacts of 1.5°C global warming and related global GHG emission reduction pathways. Since the IPCC 2018 special report, 1.5°C is the relevant goal and 2°C is no longer acceptable. Further targets and plans must be based on 1.5°C-consistent carbon budgets that do not allow for significant overshoot of the temperature goal nor rely on future mass deployment of not yet scaled negative emission technologies with predictable human rights and food security implications. In its March 2023 AR6 Synthesis Report, the IPCC concludes that “[p]rojected CO₂ emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5°C (50%) (high confidence).”²²²

“If global warming transiently exceeds 1.5°C in the coming decades or later (overshoot), then many human and natural systems will face additional severe risks, compared to remaining below 1.5°C (high confidence). Depending on the magnitude and duration of overshoot, some impacts will cause release of additional greenhouse gases (medium confidence) and some will be irreversible, even if global warming is reduced (high confidence).” IPCC²²³

Climate Scenarios Require Specificity

As highlighted by the IPCC, all modelled pathways that limit warming to 1.5°C with no or limited overshoot require “rapid and deep and, in most cases, immediate greenhouse gas emissions reductions in all sectors this decade.”²²⁴ As such, for climate scenarios to provide realistic, rigorous, and decision-useful results, preparers need to be specific that the analysis is based on a 1.5°C no or limited overshoot scenario. However, this specificity is currently lacking in Canada's regulatory framework. In October 2023, OFSI released a draft *Standardized Climate Scenario Exercise* for consultation where it presents a ‘Net-zero 2050 (1.5°C)’ scenario as one of four transition scenarios, but stops short of specifying no or limited overshoot. Likewise, the proposed *Canadian Green and Transition Finance Taxonomy* is not transparent about the details of the 1.5°C scenario used.

5.4.2 *Consideration of all life cycle emissions, including scope 3*

Scope 3 emissions represent indirect emissions generated by an organization or person that are not associated with the electricity they use. Because scope 3 can include activities such as employee commutes and the emissions associated with combustion or final disposal of a product, they often represent the majority of emissions associated with a given operation. The European Central Bank, for example, performed economy-wide stress tests that pointed to “the need to improve reporting standards for companies around scope 3 emissions as they are a major source of transition risk.”²²⁵ However, they are still too often excluded from attempts to legislate abroad.^v

Scope 3 Emissions in Canada's Oil & Gas Industry

Scope 3 emissions are especially relevant for Canada whose emissions caused by fossil fuels extracted in Canada but combusted abroad have increased by 85% between 2000 and 2015 and are now double the emissions within its borders.²²⁶

Canada's oil and gas industry chooses not to consider the downstream emissions from the combustion of its exported products,²²⁷ which account for the lion's share of the fossil fuel life-cycle.²²⁸ Incidentally, this is also the methodology that makes concepts like “[net zero oil sands](#)” possible. In May 2023, the Competition Bureau launched an investigation Pathways Alliance, a coalition of the six largest oil sands producers, following a greenwashing complaint that the group's net zero claim failed to account for 80% of their emissions by excluding scope 3.²²⁹ This omission of “downstream” or “scope 3” emissions is contrary to the recommendations of SBTi²³⁰ and TCFD, which indicated in summer 2021 that scope 3 disclosures are now appropriate for all sectors, and in particular for companies for which those emissions account for 40% or more of the total emissions of the organization.²³¹

More action is needed on this front in Canada. In 2021, the Canadian Securities Administrators (CSA) released a consultation paper that proposed an approach where disclosure of indirect scope 2 and 3 emissions would be voluntary for publicly traded companies. The consultation garnered 130 comment letters, with critics finding the CSA's proposed approach to be inadequate due to its divergence from the TCFD recommendations.²³² Since then, the CSA appears to have adopted a wait-and-see attitude as it considers the evolution of international developments such as the U.S. SEC proposed climate disclosure rules and ISSB's sustainability disclosure standards, announcing plans in July 2023 to conduct further consultations to adopt disclosure standards based on ISSB standards, “with modifications considered necessary and appropriate in the Canadian context.”^{233,234}

5.5 Climate Change as a Superseding Duty for Directors

The Expert Panel on Sustainable Finance recommended in their 2019 report “that the federal government clarify that fiduciary duty in the context of climate change does not preclude the consideration of relevant climate change factors”.²³⁵ The ISF's September 2021 survey report highlighted the need for “clarifying the scope of fiduciary duty” which, “was widely recognized as a crucial initiative to action in the near term.”²³⁶

^v The UK and New Zealand started legislating the TCFD disclosure framework before the TCFD update included scope 3 for all sectors and therefore the disclosure frameworks of those countries are limited to scope 2.

Despite the government not having provided this clarification to date, society seems to have moved that way. Former Justice McLachlin, the longest serving Chief Justice of the Supreme Court of Canada, similarly seems to hold directors to broader standard:

*“No matter how good a development may be for the bottom line and maximum shareholder return, corporations must take environmental impacts of their activities into account in making a decision... Corporations, public and private, must consider the interests of all their stakeholders. Like all good citizens, corporations **must respect the environment, relations with Indigenous peoples, and the diversity of modern societies.**”²³⁷*

Other legal practitioners in Canada and in other commonwealth jurisdictions have echoed the fact that climate change considerations fit squarely within directors’ duties.^{238,239} The Canada Climate Law Initiative goes further and posits action against climate change as a superseding interest:

*“While clarifying fiduciary duty seems imperative at this point, going further to ensure climate change is no longer considered only as a competing interest to be resolved within the confines of the fiduciary duty, **but as a superseding interest applicable to how all directors and officers’ duties are discharged** would seem preferable.”²⁴⁰ (author’s emphasis)*

Therefore, climate change should be recognized as a superseding interest for directors of companies in order to ensure there is sufficient recognition of the importance of the systems that are so crucial to a thriving and prosperous society. In practice, directors should exercise their powers and functions in a way that enables the entity for which they are responsible to be in alignment with climate commitments; further, that pursuit should have precedence over all other duties and obligations of office, including profit maximization.

5.6 Capital Requirements Must Account for Systematic Climate Risks

When financial institutions invest in non-transition-ready sectors, ripples of financial risk are generated and propagated throughout our financial system. Requiring banks to hold more capital – an amount proportional to their investment in emissions-intensive operations, for example – would cause banks to internalize the costs of those systemic risks that their financial activities generate.²⁴¹

In their article, *Addressing Climate-Related Financial Risk Through Bank Capital Requirements*, Gregg Gelzinis elaborates on the approach:

“Importantly, this capital charge looks beyond just the carbon-intensive exposures held on banks’ balance sheets and accounts for the myriad ways banks facilitate the financing of emissions. It is a macroprudential approach that would mitigate systemic risk and is not primarily focused on the microprudential risk to the bank engaging in the financing activity. The goal is to bolster the overall resilience of the system and require banks to internalize the costs they are placing on other financial institutions, the economy, and the public.”²⁴²

Likewise, the 2010 *Dodd-Frank Wall Street Reform and Consumer Protection Act* in the U.S. makes it clear that financial regulators should care about the risks created by a firm’s activities even if potential losses wouldn’t be borne by the firm itself, and that capital requirements are an appropriate

tool to address those risks. Section 171(b)(7) of *Dodd-Frank* directs banking regulators, subject to an FSOC recommendation, to:

“develop capital requirements applicable to insured depository institutions, depository institution holding companies, and nonbank financial companies supervised by the Board of Governors that address the risks that the activities of such institutions pose, not only to the institution engaging in the activity, but to other public and private stakeholders in the event of adverse performance, disruption, or failure of the institution or the activity.”

Relatedly, Section 165 of *Dodd-Frank* directs the U.S. Federal Reserve to develop macroprudential regulations to:

“prevent or mitigate risks to the financial stability of the United States that could arise from the material financial distress or failure, or ongoing activities, of large, interconnected financial institutions.”

The EU has also been contemplating microprudential tools to address the systemic nature of the risk that climate change represents for financial stability, bringing the concept of risk-based capital requirements under study by an EU committee and inspiring a number of academics to publish on its use case.²⁴³ Further, in October 2023, the European Banking Authority issued the world’s first ESG add-on to capital requirement rules, including climate, putting pressure on European banks to better incorporate climate change risks in their ca.²⁴⁴

There is a need in Canada for a recognition that risks posed by financial institutions do not only threaten the institution engaging in the activity, but also other public and private stakeholders in the event of adverse performance, disruption, or failure of the institution or the activity and for that recognition to extend to transition risks.

We’re seeing an analogy with crypto assets, where banking regulators have recognized that riskier exposures warrant more stringent capital requirements. In December 2022, the Basel Committee on Banking Supervision (BCBS) published a new one-for-one prudential standard for crypto asset exposure, after which OSFI launched a consultation on new draft guidelines for regulatory capital treatment of crypto assets in July 2023.

5.7 Leverage Climate Expertise on Boards and Avoid Conflicts of Interest

Aligning finance with climate commitments requires great climate expertise amongst the key financial institutions to build capacity.

Canada’s five largest banks provided nearly 90% of the \$28 billion in funding that oilsands companies received in 2022.²⁴⁵ This result is unsurprising in light of two investigations that found that Canada, out of 15 countries surveyed, has the highest degree of ties between bank directors and extractive industries and that one in five directors of Canada’s Big 5 banks also serves on the board of a fossil fuel company.^{246,247} Further, a recent CBC investigation that revealed eight out of Canada’s ten largest pension fund managers have at least one high-ranking member, either a board member or an executive, who is actively directing a company in the oil or gas sector.²⁴⁸ This deep interconnection between Canada’s fossil fuel industry and the financial sector is contributing to the persistent inaction of the sector to shift investments in accordance with Canada’s climate commitments.

*“The vast majority of directors at Scotiabank (93 percent), and TD (92 percent) had past or current affiliations to high carbon sectors, while 40 percent of Canadian Imperial Bank of Commerce (CIBC) directors held past or current ties to the fossil fuel sector. Three in 12 directors at the Bank of Montreal (25 percent) had current affiliations to polluting energy sector organisations, as did four of 14 (29 percent) board members at Scotiabank”.*²⁴⁹

The oil industry's outsized influence on government is reminiscent of the strategies used by the tobacco industry, which has tried to prevent public regulation of its products for decades through multiple influence tactics.²⁵⁰ Recognizing this influence, 173 countries and the European Union have signed the World Health Organization Framework Convention on Tobacco Control which came into force in 2005. The convention recognizes that the tobacco industry is in an irreconcilable conflict of interest with public health and that the development and implementation of public health policies on tobacco control “are not influenced by the interests, including commercial interests, of the tobacco industry”.²⁵¹

Ambitious action must therefore restrict the influence of Canada's most polluting industries in shaping the rules to which they must abide and their encouragement of financial flows inconsistent with climate commitments.

Identifying Climate Expertise

The criteria used to identify a person with climate expertise must be broad enough to include a diverse range of backgrounds. The *Climate-Aligned Finance Act (CAFA)* proposes that a *person with climate expertise* is a person with experience in proposing or implementing climate actions, and having expertise, experience, or knowledge in climate change science, physical and social sciences relevant to climate change, climate policy, social innovation and technologies that contribute to decarbonization, science-based energy supply-demand scenarios, and/or Indigenous ways of knowing, being and doing. CAFA likewise proposes that a person who has acute lived experience related to the physical or economic damages of climate change is a *person with climate expertise*.

5.8 Comprehensive Approach to Align All Financial Products with Climate Commitments

Based on the pioneering work in the European Union on a Green Taxonomy, a comprehensive approach must be developed to provide adequate and rigorously designed legislated criteria and incentives to align all financial products with climate commitments.

The federal government has considerable powers and constitutional jurisdiction to act on these matters. It could notably amend the *Income Tax Act*, the *Income Tax Act Regulations*, the *Bankruptcy and Insolvency Act*, the *Companies' Creditors Arrangement Act* and other federal legislation needed to incentivize financial products that support climate commitments, to disincentivize the use of those that are inconsistent with climate commitments, and prevent the proceeds of financial products whose purposes are aligned with climate commitments from being used for activities that are inconsistent with them.

The *Canadian Pensions Dashboard for Responsible Investing* develops this idea further²⁵²:

“In order for this to work, it would be important either to have the tax law refer to a trusted third-party net-zero standard setter or to ensure Canada Revenue Agency capacity to issue, update, and apply common standardized criteria and data analytics to monitor net-zero compliance (a Net-Zero Implementation Standard). There is precedent for using the Income Tax Act to enforce compliance with portfolio exposures. From 1971 to 2005, the Foreign Property Rule in the Income Tax Act placed a ceiling on the proportion of assets that tax-exempt pensions could invest outside of Canada, which was monitored by the Canada Revenue Agency”

The key is to act comprehensively in collaboration with provinces where jurisdiction is shared, so that the whole financial system aligns with climate commitments. Attention must be placed on capital flows as much as capital stocks, and on how capital is raised in primary markets with particular attention given to bonds.²⁵³

Sustainable Finance as a PR Tool

A recent [study](#) from the University of Zurich investigated op-eds in the *Financial Times* by representatives of major global investment banks and asset managers (Black Rock, Goldman Sachs, HSBC, Morgan Stanley, UBS) published in 2018 and 2019 on the topic of sustainable finance. Its authors point to the financial sector being accused of greenwashing when presenting conventional funds and financial products as sustainable, prompting an investigation into what message and framing strategies they use when positioning themselves in the public discourse on this trend.

The analysis found five overarching frames: (1) climate crisis consensus and the urgency to act, (2) sustainable finance as powerful leverage, (3) sustainability in the name of profit and capital growth, (4) need for transparency, quantification, and datafication, and (5) shifting responsibilities. These results imply that, rather than providing alternatives to current financial markets, investment industry players are spinning sustainable finance as “new, lucrative financial activities that fit within the prevailing neoliberal market model”, while shifting responsibility “to deal with climate change” to governments, politics, businesses, and individuals.²⁵⁴ These findings also shed light on the growth in greenwashing claims and climate litigation cases of late.

5.9 The Interdependence of Climate Mitigation and Other Goals

The principle of equity underpinning *common but differentiated obligations* as specified in the Paris Agreement and by the UNFCCC is too often forgotten. The concept implies that entities in developed countries with high historical emissions should do more than those in developing countries which have not contributed as much to the problem and should be part of any effort to mitigate and adapt to climate change.²⁵⁵ Indeed, urgent mitigation must be undertaken with a similarly urgent need to enhance adaptive capacity to the actual and expected impacts of climate change, including by increasing the resilience of socioeconomic, built, and ecological systems. Similarly, preserving biodiversity and restoring natural carbon sinks must be undertaken simultaneously with addressing industrial GHG emissions.

It also means having social and environmental considerations that intersect with but go beyond climate. Climate action must be designed considering equitably vulnerable groups, communities and affected ecosystems, maintaining food security and avoiding exacerbating inequalities in society

otherwise poorly designed solutions can result in social backlash as we have seen with the *yellow vests* in France.

Lastly since the Parliament of Canada adopted the *United Nations Declaration on the Rights of Indigenous Peoples Act* to ensure that the laws of Canada are consistent with the Declaration in 2021, respecting indigenous rights is an incontrovertible aspect of achieving climate commitments.

“This [IPCC AR6 Impacts] report recognizes the interdependence of climate, biodiversity and people and integrates natural, social and economic sciences more strongly than earlier IPCC assessments. It emphasizes the urgency of immediate and more ambitious action to address climate risks. Half measures are no longer an option.” Hoesung Lee, IPCC²⁵⁶



6.0 Conclusions and Recommendations

The international initiatives described [section 3](#) could greatly improve Canada's dire situation if they were to be adapted to the Canadian context and adopted. However, many suffer from the same conceptual limitations of pre-existing financial tools: they are maladapted for the unprecedented problem of climate change.

We must adopt a macroprudential precautionary approach that mitigates climate change risk to the financial system but also mitigates the damage the financial system inflicts on the climate. The proposed precautionary approach means we must now take regulatory risks to stop climate risks. It is not only new developments we must bring a precautionary approach to (as is often the case with the application of the precautionary *principle*), but also and mostly to the existing ways of financing, most notably the fossil fuel sector aggravating the climate crisis. This new precautionary approach is an injunction to act and to try new interventions because continued inaction is the greater peril.

The analysis, conclusions, and recommendation in this white paper constitute the basis for the development of gold standard legislation to align Canada's finance sector with its climate commitments recognizing that minimizing climate related financial risks, be they transition or physical risks, entails minimizing the systemic risks financial actors pose to the climate system. These risks are generated through activities which either facilitate emissions leading to greater climate impacts and/or impede the necessary transition to ensure the avoidance of dangerous climate change.

As explained, most financial reform proposals in recent years have centered on disclosure schemes that aim to identify and quantify the financial risks of climate change for businesses, in the hope that market participants and capital flows evolve accordingly. Because of either the voluntary nature or the failure to account for all life cycle emissions, these initiatives have been largely ineffective, and the market continues to fail to accurately account for climate risk, wasting precious time we do not have. Past experience, industrial accidents and financial crises have shown the limits of self-regulation by profit-seeking enterprises. Until financial actors in Canada face strict requirements to not only disclose their climate risks but to be in alignment with climate commitments, we will not see any significant movement. Ambitious and coherent government intervention is needed to effectively shield finance from climate risks and concomitantly address the risks that finance poses to the climate.

Canada needs to address the gaps identified in [section 5](#) and ensures truly climate-aligned finance going forward. Well-designed policies can drive down the costs of reducing emissions, generate finance for truly clean technologies, contribute to broader sustainable development efforts, and carry co-benefits for other social and governance goals. The multiple potential benefits of climate-aligned finance justify the attempt to not only integrate best international practices but leapfrog them with bold gold standard legislation.

Based on international best practices and leading thinkers in the field, we propose a set of recommendations that define what leapfrogging from laggard to leader would look like for Canada in terms of ensuring a climate-aligned stable low-carbon financial system. These recommendations are translated to policy in [Bill S-243, the Climate-Aligned Finance Act \(CAFA\)](#), a critical tool for true climate action in Canada.

Parliamentary Action on Climate-Aligned Finance: Bill S-243, the Climate-Aligned Finance Act (CAFA) and Motion 84

As a first step towards true climate action in Canada’s financial industry, the Honourable Senator Rosa Galvez introduced *Bill S-243, Climate-Aligned Finance Act (CAFA)* on March 24, 2022. This legislation would guide Canada’s financial sector through an orderly transition to a low-carbon economy while safeguarding the financial system from the systemic risks posed by climate change by increasing coherence, transparency, and accountability. There have since been five petitions calling for CAFA’s adoption introduced in the House of Commons. In May 2023, *motion 84* was introduced by (now) Parliamentary Secretary Ryan Turnbull in the House of Commons calling for the government to use “all legislative and regulatory tools as its disposal to align Canada’s financial system with the Paris Agreement”, an initiative which has received “groundbreaking” cross-party support.²⁵⁷

Recommendations

- 1 All entities, including financial institutions, must be aligned with climate commitments.
- 2 Avoidance of carbon lock-in, the entrenchment of our dependence on fossil fuels, must be a consideration in all financial decisions.
- 3 Require responsible target-setting and planning, including compliance with a global carbon budget consistent with the Paris Agreement and mandatory consideration of all life cycle emissions.
- 4 Capital requirements must account for systemic climate risks generated by the activities of financial institutions.
- 5 Recognize climate change as a superseding interest relevant to all directors’ duties.
- 6 Avoid conflicts of interest and leverage climate expertise, experience and knowledge.
- 7 Respect the rights of Indigenous Peoples and other environmental and social goals.
- 8 Develop a comprehensive action plan to align all financial products with climate commitments.

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