



A precautionary approach to climate risk in financial policy and supervision

Greenpeace Canada submission to the Office of the Superintendent of
Financial Institutions consultation on promoting preparedness and
resilience to climate-related risks

April 2021

Executive Summary

“Faced with sets of events that are complex, subject to radical uncertainty but with the likelihood of a massive future impact, Green Swans call less for improvements in risk modelling and more for decisive and immediate action and coordination”

- Luiz Awazu Pereira da Silva of the Bank for International Settlements¹

Greenpeace Canada² welcomes the initiative of the Office of the Superintendent of Financial Institutions (OSFI) in consulting stakeholders on how it can facilitate federally-regulated financial institutions' (FRFI) and federally-regulated pension funds' (FRPP) preparedness and resilience to climate-related risks. We believe that this requires **the adoption of a precautionary, market-shaping approach to financial policy and supervision rather than a risk-management approach.**

Financial regulators are increasingly recognizing the existential threat posed by climate change to the stability of the global financial system (alongside the similarly existential threat posed to core ecological conditions supporting civilization, as we know it).³

Currently, banks and pension funds are key enablers of oil, coal and gas production. Canadian banks' global role in financing climate destruction is disproportionately large, with the Big 5 banks providing with over CDN \$700 billion in financing since the Paris Agreement was signed in 2015.⁴

Financial institutions can no longer be allowed to fund the climate crisis, the impacts of which are and will continue to be felt most by society's most vulnerable and paid for with taxpayer money. It is the duty of regulators to ensure financial institutions become part of the climate solution rather than funders of the problem.

The scale of investment required to achieve a just transition to a zero GHG economy, and the capital-intensive nature of much of that investment, makes finance policy a key underpinning of

¹ Luiz Awazu Pereira da Silva, “Green Swan 2 – Climate change and Covid-19: reflections on efficiency versus resilience.” Bank of International Settlements. Based on remarks at the OECD Chief Economist Talk Series, Paris, 23 April 2020 and a Research Webinar at the BIS, 13 May 2020. Available at <https://www.bis.org/speeches/sp200514.pdf>.

² Questions about this submission should be addressed to Keith Stewart, senior energy strategist for Greenpeace Canada <kstewart@greenpeace.org>

³ For examples, see the work of the Financial Stability Board's Task Force on Climate-related Financial Disclosure, the Network for Greening the Financial System, as well as Mark Carney, “Breaking the tragedy of the horizon - climate change and financial stability”, speech given at Lloyd's of London, 29 September 2015, a transcript of which is available at <http://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx#>. See also the

⁴ Rainforest Action Network et al., *Banking on Climate Chaos: Fossil Fuel Finance Report 2021*. Available at <https://www.ran.org/wp-content/uploads/2021/03/Banking-on-Climate-Chaos-2021.pdf>.

the transition.⁵ But capturing this opportunity will require a change in the regulatory landscape. That is why we consider this initiative by the OSFI and related work by the Bank of Canada to be so important (an overview of Greenpeace's work on climate change and the financial sector can be found in Appendix A). As Greenpeace Canada is not a federally-regulated financial institution, our comments will focus on questions 1, 2, and 12-15 of the OSFI consultation document.⁶

In this submission, Greenpeace Canada recommends that the OSFI and other financial regulators address this threat through a shift in mindsets and methodologies. This shift must align the efficient allocation of capital (the traditional mandate of financial regulation) with societal goals that are a precondition for the stability of both financial and ecological systems.

These societal goals should, at a minimum, include:

- The Government of Canada's commitment to achieve net-zero greenhouse gas emissions by no later than 2050.
- The commitments under the Paris Agreement to "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels global warming", including via "making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development."
- The commitment to uphold Indigenous rights, including the right under the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) to free, prior and informed consent (FPIC).

This re-alignment requires a change in focus from how to protect financial institutions from climate risk (a doomed effort on its own) to a focus on measures necessary for the resilience, and ultimately the survival, of the system itself. The new mindset and methodologies will involve **the replacement of a market-driven, risk-management approach to financial policy and supervision by a precautionary, market-shaping approach**. This would begin with the adoption of a macroprudential framework that does not just consider an aggregation of individual financial institutions and markets, but the financial system as a whole in the way it shapes the macroeconomy.⁷

⁵ Nick Robins (December 2020). "The road to Net-Zero Finance (Sixth Carbon Budget Advisory Group)." Advisory Group on Finance for the UK's Climate Change Committee. Available at <https://www.theccc.org.uk/publication/the-road-to-net-zero-finance-sixth-carbon-budget-advisory-group/>.

⁶ Office of the Superintendent of Financial Institutions, *Navigating Uncertainty in Climate Change: Promoting Preparedness and Resilience to Climate-Related Risks*, January 2021. Available at <https://www.osfi-bsif.gc.ca/Eng/Docs/clmt-rsk.pdf>.

⁷ For a more detailed elaboration, see Hugues Chenet, Josh Ryan-Collins, Frank van Lerven, "Finance, climate-change and radical uncertainty: Towards a precautionary approach to financial policy", *Ecological Economics*, Volume 183, 2021. Available at <https://doi.org/10.1016/j.ecolecon.2021.106957>.

*A precautionary approach to climate risk in financial policy and supervision:
Greenpeace Canada submission to OSFI consultation on climate-related risks*

In terms of implementation, a shift to a precautionary, macroprudential framework for climate-related risks would involve:

1. The comprehensive integration of climate-related financial risks into capital adequacy requirements by the OSFI.
2. The strengthening of existing measures such as risk disclosures, benchmarks and non/sustainable taxonomies by standardizing them and making them compulsory. This includes making publicly-available 1.5°C stress tests and net-zero plans (including interim targets for each five year period) mandatory for financial institutions, with penalties for non-compliance.
3. Explicit credit guidance policies, such as ceilings and floors on credit allocation and interest rates to discourage lending for carbon-intensive activities and encourage lending to green sectors.
4. Encouraging the Bank of Canada to integrate climate risk into its monetary policy operations, including the exclusion of assets from fossil fuel companies and other high-carbon sectors that do not have a credible plan for alignment with the Paris Agreement from asset purchases by the central bank and accepted collateral. The Bank of Canada should also significantly increase the 'haircuts' for fossil fuels and other high-carbon assets in its collateral framework (i.e. high-carbon assets would have a lower-than-market value when used as collateral).
5. Addressing the intersection of climate risks and Indigenous rights (which is entirely absent from the OSFI consultation paper).
6. Reviewing and revising all OSFI policies and practices to ensure they take appropriate account of climate-related risks (including liability risks), help reduce those risks, and are supporting, not impeding, an orderly transition to a more sustainable, resilient, and equitable economy.

Question 1: What are your views on the characterization of climate-related risks as driver of other risks? How do climate-related risks affect FRFIs and FRPPS? Do you have other views on the characterization of climate-related risks set out in this paper?

In *Navigating Uncertainty in Climate Change*, the OSFI identifies the historical and scientific context for this work. Significantly, the OSFI recognizes that climate-related risks are complex and systemic. They are acknowledged to be complex due to the difficulty predicting physical impacts, long timelines, and interactions between transition and physical risks “make climate-related risks difficult to assess, measure and manage using historical data and traditional approaches to risk analysis.” They are systemic because “while the disruption to some sectors is direct, it can also lead to second-, and potentially third-, order economic disruptions to other sectors, which can create instability and lead to severe knock-on effects.”⁸

Yet the consultation questions begin by asking about the risk appetites of individual firms faced with this complex and systemic problem, rather than starting from a perspective of how to protect the system itself against the threat posed by climate change and exploring how the regulatory structure facing firms should be adapted to deal with this threat.

The emerging global policy framework for dealing with climate-related risks has largely focused on reducing perceived information gaps that prevent the accurate pricing of risk (e.g. disclosure, transparency, scenario analysis and stress testing). Robust disclosure regimes that ensure consistent, comparable and reliable data are important, and Greenpeace Canada has supported mandatory TCFD-style disclosure and scenario analysis (including a scenario compatible with the Paris climate agreement).⁹ Banks and pension funds, for example, should be required to publish their financed emissions using the methodology being developed by the Partnership for Carbon Accounting Financials.

Yet the core challenge isn't a lack of information about specific firms. It is that the regulatory regime is not currently designed to protect against the long-term, complex and systemic risks presented by climate change. As we saw with the 2008 global financial crisis, relying on individual market actors' perception of their own risk can lead to collective tragedy.

A regulatory regime focused solely on disclosure and risk management creates a bias towards concerns around avoiding short-term market disruption at the expense of longer-term, potentially catastrophic and irreversible climate risks. Such an approach will be limited in impact

⁸ Office of the Superintendent of Financial Institutions, *Navigating Uncertainty in Climate Change: Promoting Preparedness and Resilience to Climate-Related Risks*, January 2021. Available at <https://www.osfi-bsif.gc.ca/Eng/Docs/clmt-rsk.pdf>.

⁹ Greenpeace Canada's submission to the Canadian Securities Administrators' risk disclosure review, 4 July 2017, available at <https://www.greenpeace.org/static/planet4-canada-stateless/2018/06/Greenpeace-Canada-Submission-to-CSA-and-OSC-on-climate-disclosure-July2017.pdf>.

because climate-related risks are characterized by radical uncertainty and hence ‘efficient’ price discovery is not possible.¹⁰

The Bank of International Settlements (BIS) has detailed how traditional risk management techniques are inappropriate for dealing with “Green Swan” events connected to climate change (see the table below and the discussion under Question 15 for the BIS’ definition of Green Swans). Instead, the BIS argues that we need to “foster change in methodologies and mindsets to deal with this type of global risk”.¹¹

Table 1: A typology of Swans: similarities and differences

	White Swans	Black Swans	Green Swans
Predictability through	<u>Gaussian</u> , normal distribution	<u>Tail risks</u> , perhaps non-Gaussian. Ex-post rational explanation after occurrence	<u>Highly likely or certain occurrence</u> but uncertain timing of occurrence and materialisation. Too complex to fully understand.
Main explanation by	<u>Statisticians</u> , economists	<u>Economists, financial analysts</u> and risk managers with some disagreement	<u>Scientists</u> , disagreement with many economists and financial analysts
Impacts	Low or moderate	<u>Massive and direct impact mostly material</u> . Possible correction of damages after event (crisis).	<u>Massive and direct impact mostly to human lives</u> (or even civilisational). Irreversibility of damages in most cases.
Policy recommendations	<u>Risk models are fine</u> (can be marginally improved)	<u>Reconceptualise approach to risk</u> . Learn from event to design anti-fragile strategies.	Given severity of effects, even without full understanding, need for <u>immediate action and coordination under radical uncertainty</u>

Greenpeace Canada recommends that the OSFI and other financial regulators shift their mindset and methodologies to support the alignment of efficient capital allocation with socially and environmentally optimal outcomes. This changes the focus from how to protect financial institutions from climate risk (a doomed effort on its own) in favour of a focus on the company’s impact on (and accountability for) the achievement of broader societal and economic goals that are necessary to maintain the stability of the system itself. These societal goals should, at a

¹⁰ Hugues Chenet, Josh Ryan-Collins, Frank van Lerven, “Finance, climate-change and radical uncertainty: Towards a precautionary approach to financial policy”, *Ecological Economics*, Volume 183, 2021. Available at <https://doi.org/10.1016/j.ecolecon.2021.106957>.

¹¹ Luiz Awazu Pereira da Silva, “Green Swan 2 – Climate change and Covid-19: reflections on efficiency versus resilience.” Bank of International Settlements. Based on remarks at the OECD Chief Economist Talk Series, Paris, 23 April 2020 and a Research Webinar at the BIS, 13 May 2020. Available at <https://www.bis.org/speeches/sp200514.pdf>.

minimum, include the Government of Canada's commitment to achieve net-zero greenhouse gas emissions by no later than 2050, the commitment under the Paris Agreement to keep global warming below 2°C and as close to 1.5°C as possible, and the commitment to uphold Indigenous rights, including the right to Free, Prior and Informed Consent.

This requires **the adoption of a precautionary, market-shaping approach to financial policy and supervision rather than a risk-management approach**. It would begin with a shift in mindsets and methodologies towards a macroprudential framework that does not just consider an aggregation of individual financial institutions and markets, but the financial system as a whole in the way it shapes the macroeconomy. In terms of implementation, it would entail the comprehensive integration of climate-related financial risks into capital adequacy requirements, monetary policy operations (including asset purchases and collateral criteria),¹² quantitative credit controls and credit guidance, and the enhancing of financial system resilience. It would also strengthen existing measures such as risk disclosures, benchmarks and non/sustainable taxonomies by standardizing them and making them compulsory.

Such an approach would be consistent with the shift towards macroprudential policy following the 2008 global financial crisis, when central banks and financial regulators developed a set of tools to deal with the newly-recognized systemic and endogenous financial risks from deregulated markets. Instead of regulating the soundness of individual institutions, macroprudential policy focuses on the stability of the system as a whole by mitigating the systemic financial risks to the macroeconomy through pre-emptive interventions and a precautionary approach:

“A key feature of macroprudential policy is that it empowers central banks and supervisory authorities to reduce the likely emergence of instability ex-ante, i.e. before market participants recognize the emergence of risk and adjust their behaviours. The macroprudential policy maker is forward, not backward-looking and has an incentive to behave in a robust fashion, preparing for worst-case scenarios. This approach favours precautionary but active policies that avoid large losses across scenarios regardless of the likelihood of any given scenario (Taleb et al., 2014; Bahaj and Foulis, 2016). It encourages policy-makers to 1) ‘lean against the wind’ and make interventions in the opposite direction of the lending and investment activity of the market to dampen the cycle; 2) ensure that the financial system is resilient enough to withstand and recover from (unforeseen) shocks (e.g. by increasing capital buffers or developing robust resolution procedures); and 3) reduce the contagion or shock propagation by e.g.

¹² Greenpeace Canada provided a submission to the Bank of Canada as part of its ongoing monetary policy framework review process arguing the Bank should include climate change explicitly in its framework agreement with the federal government and update its monetary policy approach to support climate change mitigation. The submission is available at <https://www.greenpeace.org/static/planet4-canada-stateless/2021/03/0e80c322-greenpeace-monetary-policy-review-submission.pdf>.

increasing the diversity or modularity of financial network ([Borio, 2011](#); [Claessens et al., 2013](#); [Altunbas et al., 2018](#)).”¹³

This precautionary, macroprudential approach is best suited to deal with complex, systemic risks such as climate change.

Question 2: What steps can FRFIs and FRPPS take to improve their definition, identification and measurement of climate-related risks and the impacts of these risks?

Corporate climate-related risk disclosure is an important tool. It cannot, however, be the only or even primary financial supervisory response to the threat posed by climate change.

In response to the 2017 Canadian Securities Association review of climate-related financial risks, Greenpeace Canada submitted that the risks of climate change are material to the market price or value of securities and thus disclosure of climate risks should be mandatory. Further, we argued that these risks should be evaluated based on a scenario where warming is kept well below two degrees Celsius, with an aim of keeping temperature increase to 1.5 degrees Celsius (as committed to under the Paris climate agreement). Any disclosure regime needs to ensure that such disclosure is meaningful, substantive and reliable. Finally, the obligation to disclose these risks should be enforced. Rigorous enforcement of disclosure requirements is necessary in order to allow the financial impacts of climate change risks to be better appreciated.¹⁴

With respect to banks and pension funds, it is important that their role as enablers of climate destruction be transparently disclosed. The OSFI should require federally-regulated financial institutions and pension funds to publicly disclose not just their direct (Scope 1 and 2) emissions, but also their financed (Scope 3) emissions, along with scenario-based analyses of their exposure to physical, transition and liability risks. While several Canadian banks have begun conducting climate stress tests and publishing climate risk disclosure reports pursuant to TCFD recommendations, to our knowledge none have actually released the results of the stress tests in a transparent way.¹⁵ These disclosures should be made in accordance with a common, rigorous, transparent methodology that ensures meaningful, reliable and comparable results.

¹³ Hugues Chenet, Josh Ryan-Collins, Frank van Lerven, “Finance, climate-change and radical uncertainty: Towards a precautionary approach to financial policy”, *Ecological Economics*, Volume 183, 2021. Available at <https://doi.org/10.1016/j.ecolecon.2021.106957> .

¹⁴ For details, see Greenpeace Canada’s submission to the Canadian Securities Administrators’ risk disclosure review, 4 July 2017, available at <https://www.greenpeace.org/static/planet4-canada-stateless/2018/06/Greenpeace-Canada-Submission-to-CSA-and-OSC-on-climate-disclosure-July2017.pdf>.

¹⁵ See for example CIBC (2019) Building a sustainable future, CIBC’s TCFD Report - September 2019, available at https://www.cibc.com/content/dam/about_cibc/inside_cibc/environment/building-a-sustainable-future-report-en.pdf; RBC (2019) Task Force on Climate-related Financial Disclosures Report 2019, available at https://www.rbc.com/community-social-impact/_assets-custom/pdf/RBC-TCFD-Report-2019.PDF; BMP (2020) 2020 Climate Report, available at <https://our-impact.bmo.com/wp-content/uploads/2021/01/BMO-2020-Climate-Report.pdf>;

Currently, the best candidate for assessing financed emissions is the methodology being developed by the Partnership for Carbon Accounting Financials (PCAF).

Greenpeace Canada recommends that Canadian financial institutions adopt the recommendation of the UK Committee on Climate Change (a government advisory body) for a mandatory requirement for all financial institutions to introduce net-zero targets and plans for how these are to be achieved. The required plans would include five-yearly interim net-zero goals, matching the UK carbon budgets, with annual reporting of progress.¹⁶

The need for mandatory interim targets (and penalties for non-compliance) is highlighted by the recent rush by Canadian financial institutions (e.g. TD, RBC, and BMO) to announce net-zero by 2050 targets. These announcements have not, however, included short or medium-term targets and there was no discussion of the need to reduce their fossil fuel financing.

The Network for Greening the Financial System (NGFS), of which the Bank of Canada is a member, has provided guidance for financial supervisors on climate stress testing.¹⁷ While helpful, it should be noted that the specific transition scenarios put forward by the NGFS have been criticized as being unrealistically reliant on negative emissions technologies, and as a result stress tests based on these scenarios may significantly underestimate transition risks.¹⁸ In order to properly capture extreme but realistic transition risks, and ensure financial institutions are prepared for and contributing to efforts to keep warming below 1.5 degrees, OSFI should ensure that legally mandated climate-risk disclosures are based on 1.5 degree transition scenarios with minimal use of negative emissions technologies.

Question 12: A challenge OSFI has identified is lack of a universal climate-related risk taxonomy. Please describe the climate-related risk taxonomy, if any, your organization has developed or adopted?

We encourage the OSFI to adopt the precautionary, market-shaping, macroprudential approach identified above.

¹⁶ Nick Robins (December 2020). "The road to Net-Zero Finance (Sixth Carbon Budget Advisory Group)." Advisory Group on Finance for the UK's Climate Change Committee. Available at <https://www.theccc.org.uk/publication/the-road-to-net-zero-finance-sixth-carbon-budget-advisory-group/>

¹⁷ Network for Greening the Financial System (2020). Guide to climate scenario analysis for central banks and supervisors. Available at https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_scenario_analysis_final.pdf

¹⁸ Oil Change International and Reclaim Finance (2021). NGFS Scenarios: Guiding Finance Towards Climate Ambition or Climate Failure?. Available at <http://priceofoil.org/content/uploads/2021/02/NGFS-scenarios-final.pdf>

Question 13: Given OSFI's role as the prudential regulator and supervisor of FRFIs and FRPPs, what other work do you think OSFI should consider in relation to climate-related risks?

The OSFI discussion paper addresses physical and transition risks, but underplays the climate liability risk. This is the risk that – just like tobacco companies – fossil fuel companies (and/or their enablers) might get sued for their past, present and future contributions to climate change and/or efforts to delay a policy response to the dangers climate change creates. In the case of tobacco, governments passed legislation to enable these lawsuits, and academic analysts have argued that fossil fuel companies could face a similar fate.¹⁹

Mark Carney and the Bank of England define liability risk as “the impacts that could arise tomorrow if parties who have suffered loss or damage from the effects of climate change seek compensation from those they hold responsible. Such claims could come decades in the future, but have the potential to hit carbon extractors and emitters – and, if they have liability cover, their insurers – the hardest.”²⁰ The Task Force on Climate-related Disclosure found that these risks are real and growing: “As the value of loss and damage arising from climate change grows, litigation risk is also likely to increase.”²¹

The UN Environment Programme has identified a rapid increase in climate litigation around the world, with the number of cases nearly doubling from 2017 to 2020. An increasingly large number of the claims relate directly to attempts to keep fossil fuels in the ground; the demand for corporate liability and responsibility for climate harms; addressing failures to adapt and the impacts of adaptation and advocate for greater climate disclosures and an end to corporate greenwashing on the subject of climate change and the energy transition.²²

Moreover, there is kind of a ‘virtuous cycle’ wherein affected parties increasingly pursue litigation in response to the materialization of physical and transition risks.²³ Those legal claims, or the credible prospect of them, may then “have material impacts on financial risk/return factors at all levels of the investment supply chain, from valuation to credit ratings and insurances – and thus circle back as a driver of the energy transition.”²⁴

¹⁹ Martin Olszynski, Sharon Mascher and Meinhard Doelle, “From Smokes to Smokestacks: Lessons from Tobacco for the Future of Climate Change Liability” (April 24, 2017). Georgetown Environmental Law Review, 2017. Available at SSRN: <https://ssrn.com/abstract=2957921>

²⁰ Ibid.

²¹ Task Force on Climate-related Financial Disclosures, *Recommendations of the Task Force on Climate-related Financial Disclosure* (14 December 2016), page 5. Available at <https://www.fsb-tcfd.org/publications/recommendations-report/>.

²² United Nations Environment Program, *Global Climate Litigation Report: 2020 Status Review*, page 4. Available at <https://wedocs.unep.org/bitstream/handle/20.500.11822/34818/GCLR.pdf?sequence=1&isAllowed=y>.

²³ Oluwaseun James Oguntuase, “Climate Change, Credit Risk and Financial Stability” in *Banking and Finance* (edited by Razali Haron, Maizaitulaidawati Md Husin and Michael Murg). IntechOpen, 2020. Available at <https://www.intechopen.com/books/banking-and-finance/climate-change-credit-risk-and-financial-stability>.

²⁴ United Nations Environment Program, *Insuring the climate transition: Enhancing the insurance industry's assessment of climate change futures*. The final report on the project of UN Environment Programme's Principles for

There is also a major gap in the OSFI discussion paper with respect to the interplay between climate-related risks and Indigenous rights. In their financing of fossil fuel expansion projects opposed by First Nations such as the Coastal Gaslink Pipeline and the Line 3 pipeline, Canada's big five banks are enabling violations of Free, Prior, and Informed Consent (FPIC) as upheld in the UN Declaration on the Rights of Indigenous Peoples, endorsed in 2016 by the Government of Canada without qualification.

Not only do such projects violate FPIC at their inception, often with military-style force used by authorities to push them through, but the resulting expansion of fossil fuel production also adversely impacts long-term ecosystem health with direct impacts on the exercise of constitutionally-protected Indigenous rights such as fishing and hunting. First Nations have repeatedly and successfully defended these rights in court, and in so doing have expanded the legal understanding of what they entail.²⁵ There is increasing attention on the role of financial actors in enabling these projects, including potential liability for their impacts.

OSFI should also complement the climate stress-testing carried out by federally-regulated financial institutions and pension funds with its own stress testing of individual institutions and the financial system as a whole. The methodology should be rigorous, transparent and regularly updated as methods of scenario-based analysis develop and improve. As the purpose of stress tests are to capture extreme but realistic scenarios, OSFI should incorporate 1.5 degree scenarios which do not assume unsustainable or overly optimistic use of negative emissions technologies.²⁶ The results of these stress tests should also be made public. As recommended by the NGFS, where financial institutions are not found to be properly managing climate-related risks OSFI should take mitigating action to ensure climate risks are being handled appropriately.²⁷ Greenpeace believes 'appropriate handling' of climate-related risks should be understood not solely in microprudential terms, but also in terms of the precautionary, macroprudential, market-shaping framework outlined above.

Question 14: What are your views on the relative importance of using (1) OSFI's capital framework, (2) supervisory review process, and (3) market discipline to promote FRFI preparedness and resilience to

Sustainable Insurance Initiative to pilot the TCFD recommendations (January 2021), page 75. Available at <https://www.unepfi.org/psi/wp-content/uploads/2021/01/PSI-TCFD-final-report.pdf>

²⁵ For an overview, see Jon Hernandez, "We still have title": How a landmark B.C. court case set the stage for Wet'suwet'en protests", CBC News, 13 February 2020. Available at <https://www.cbc.ca/news/canada/british-columbia/delgamuukw-court-ruling-significance-1.5461763>.

²⁶ Oil Change International and Reclaim Finance (2021). NGFS Scenarios: Guiding Finance Towards Climate Ambition or Climate Failure?. Available at <http://priceofoil.org/content/uploads/2021/02/NGFS-scenarios-final.pdf>

²⁷ NGFS (May 2020) "Guide for Supervisors – Integrating climate-related and environmental risks into prudential supervision." Technical document. Page 47
https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf.

climate-related risks? What factors should OSFI consider when making changes to the design and approach to each of these areas?

A precautionary, market-shaping, macroprudential approach to climate-related risks would entail penalising, and ultimately prohibiting, financing and investing in economic activities that are incompatible with a transition to a below 2 °C warming planet. The Network for Greening the Financial System (of which the Bank of Canada is a member) has taken a step in this direction with its recommendation to require financial institutions to “reduce the level of risk, ultimately imposing limitations on carrying out certain categories of transactions or operations or, alternatively, guiding financial institutions towards adjusting their business models before the risk could materialize.”²⁸

The OSFI could play an important role in this regard by integrating climate risk considerations into capital adequacy requirements. A sufficiently high capital requirement (a higher risk weight) for loans carrying carbon risk, or entities that are severely reliant on fossil fuels, would reflect the real and growing systemic risk of investing in carbon-intensive activities and could discourage further investment that contributes to climate change. It would also give banks a greater buffer to withstand losses related to climate-related transition risks and potential sudden value losses due to the repricing of assets.

The NGFS has identified several challenges with incorporating climate-related risks into capital requirements related to quantification of climate risks and definitions of ‘brown’ assets, and raised questions about the prudential relevance of special adjustment factors for high-carbon assets.²⁹ To a significant degree the concerns around risk quantification and relevance become moot once one adopts the market-shaping, precautionary, macroprudential framework we advocate for here. Under this framework the goal is not to capture the ‘value’ of climate-related risks, as it is understood that radical uncertainty regarding climate-related risks renders such quantification effectively impossible, but rather to shape markets to reduce climate-related risks in a precautionary and macroprudential fashion, in particular by supporting rapid decarbonization of the economy.³⁰ Regarding the difficulty of defining ‘brown’ assets to receive higher risk weightings, methods for assessing the carbon intensity of financial assets are being developed by the Partnership for Carbon Accounting Financials, as noted above.

OSFI should not restrict itself to the three areas listed in Question 14 when crafting a market-shaping, precautionary, macroprudential approach. While these areas are all important, OSFI should make use of the full suite of tools it has available, and work to develop new ones, to

²⁸ NGFS (May 2020) “Guide for Supervisors – Integrating climate-related and environmental risks into prudential supervision.” Technical document.

https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf, 51.

²⁹ NGFS (May 2020) “Guide for Supervisors – Integrating climate-related and environmental risks into prudential supervision.” Technical document. Pages 53, 37.

https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf.

³⁰ See Chenet et al (2021) in note 9 above.

ensure lending and capital allocation by financial institutions is aligned with efforts to keep warming below 1.5°C.

There is a growing body of literature describing policies available to financial supervisors to guide financial markets to support climate change mitigation. The IMF and Asian Development Bank Institute have both published reviews of financial and monetary policies to support greening the financial sector.³¹ Explicit credit guidance and control policies in particular would help ensure Canadian financial institutions are not over-allocating capital to high carbon activities or under-allocating capital to the green transition. Such policies include ceilings and floors on credit allocation and interest rates to discourage lending for carbon-intensive activities and encourage lending to green sectors, and mandatory 1.5 degree-aligned net zero plans with interim targets for each five year period and penalties for non-compliance.

The Bank of Canada also has a complementary role to play in shaping the financial sector by integrating climate risk into its monetary policy operations, including asset purchase programs (e.g. excluding high-carbon assets) and collateral frameworks (e.g. significantly increasing 'haircuts' for fossil fuel and other high-carbon assets).³²

Question 15: Are there circumstances where it would be appropriate to factor climate-related considerations in the capital framework beyond what is reflected in existing inputs in the absence of empirical evidence? What are the pros and cons of such an approach?

"Existing inputs" are a poor guide for financial regulators in the face of what the Bank for International Settlements has called "Green Swan" events:

Integrating climate-related risk analysis into financial stability monitoring and prudential supervision is particularly challenging because of the distinctive features of climate change impacts and mitigation strategies. These comprise physical and transition risks that interact with complex, far-reaching, nonlinear, chain reaction effects. Exceeding climate tipping points could lead to catastrophic and irreversible impacts that would make quantifying financial damages impossible. Avoiding this requires immediate and ambitious action towards a structural transformation of our economies, involving

³¹ Krogstrup & Oman (2019) *Macroeconomic and Financial Policies for Climate Change Mitigation: A Review of the Literature*, IMF Working Paper No 19/185, <https://www.imf.org/en/Publications/WP/Issues/2019/09/04/Macroeconomic-and-Financial-Policies-for-Climate-Change-Mitigation-A-Review-of-the-Literature-48612>. Dikau & Volz (2018) *Central Banking, Climate Change and Green Finance*, ADBI Working Paper 867, Asian Development Bank Institute, <https://www.adb.org/publications/central-banking-climate-change-and-green-finance>.

³² See Greenpeace's submission to the Bank of Canada's recent monetary policy framework review process, available at <https://www.greenpeace.org/static/planet4-canada-stateless/2021/03/0e80c322-greenpeace-monetary-policy-review-submission.pdf>.

technological innovations that can be scaled but also major changes in regulations and social norms. Climate change could therefore lead to “green swan” events and be the cause of the next systemic financial crisis.

Climate-related physical and transition risks involve interacting, nonlinear and fundamentally unpredictable environmental, social, economic and geopolitical dynamics that are irreversibly transformed by the growing concentration of greenhouse gases in the atmosphere. In this context of deep uncertainty, traditional backward-looking risk assessment models that merely extrapolate historical trends prevent full appreciation of the future systemic risk posed by climate change. An “epistemological break” (Bachelard (1938)) is beginning to take place in the financial community, with the development of forward-looking approaches grounded in scenario-based analyses. These new approaches have already begun to be included in the financial industry’s risk framework agenda, and reflections on climate-related prudential regulation are also taking place in several jurisdictions.”

Canada’s financial system is over-exposed to climate risk due to its historic role in facilitating fossil fuel investments, so Canadian financial regulators should take a leadership role in modernizing financial regulatory regimes as they adopt a precautionary approach.

As outlined under Question 14, climate-related considerations should be incorporated into the capital framework beyond what is reflected in existing inputs, even in (or even because of) the absence of empirical evidence, in order to effectively implement a market-shaping, precautionary, macroprudential approach to climate risk management in the financial system.

Appendix A: Why this issue matters to Greenpeace Canada

Greenpeace was founded in Vancouver in 1971 when a small boat of volunteers and journalists sailed into Amchitka, an area north of Alaska where the US Government was conducting underground nuclear tests. Today, Greenpeace is made up of separate and independent national and regional offices that operate in more than 40 countries; Greenpeace Canada is one of them. To maintain its independence, Greenpeace (including Greenpeace Canada) does not accept donations from governments or corporations but relies on contributions from individual supporters and foundation grants.

Our mission is to expose environmentally damaging activities and actors and to challenge governments and corporations when they fail to safeguard the environment. In doing so, we promote and encourage open and informed debate about society's environmental choices and use research, lobbying and quiet diplomacy to pursue our goals, as well as high-profile, non-violent conflict to raise the level and quality of public debate.

The financial sector must become a lever for positive change. Greenpeace promotes full and honest disclosure in order to allow for the optimal allocation of assets and an orderly transition to low-carbon global economy, thereby protecting investors and making capital markets more efficient.

You can find out more information about Greenpeace's work on finance and disclosure issues on our website.³³ Examples of Greenpeace's work include:

- In 2014, together with WWF International and the Center for International Environmental Law, Greenpeace International wrote to 35 fossil fuel companies and 45 insurance companies seeking clarity on who bears liability if a claim is successfully brought against the fossil fuel company's directors or officers for funding climate denialism or opposing policies which seek to address climate change.³⁴
- In July 2016, Greenpeace USA and seven other environmental groups called on the U.S. Securities and Exchange Commission ("SEC") to require company disclosure on environmental, social, and governance risks to investors³⁵ in response to the SEC Concept Release on Business and Financial Disclosures;

³³ See: Greenpeace International, "Shifting finance away from dirty, dangerous energy", 1 July 2016, available at <http://www.greenpeace.org/international/en/campaigns/climate-change/Solutions/Climate-friendly-finance/>; Greenpeace International, "About Greenpeace's campaign for climate-friendly finance", 1 July 2016, available at <http://www.greenpeace.org/international/en/campaigns/climate-change/Solutions/Climate-friendly-finance/Greenpeace-follows-the-money/>.

³⁴ See Greenpeace International, "Executives facing climate denial-related claims could be personally liable - NGOs", 28 May 2014, available at: <http://www.greenpeace.org/international/en/press/releases/2014/Executives-facing-climate-denial-related-claims-could-be-personally-liable---NGOs/>.

³⁵ See letter from Center for International Environmental Law et al. to the U.S. Securities Exchange Commission, 21 July 2016, available at: http://www.ciel.org/wp-content/uploads/2016/07/Final_SEC-comment-letter.pdf.

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- Greenpeace has actively worked with financial regulators around the world to ensure companies fully and truthfully disclose risks in their business before an initial public offering. In Hong Kong, for example, this has led to the withdrawal of the listing applications by a company that have failed to comply with existing environmental regulations.³⁶
- In May 2017, Greenpeace Canada made submissions to the Alberta Securities Commission (“ASC”), Ontario Securities Commission (“OSC”) and the CSA stating that Kinder Morgan may have used outdated oil demand projections in its initial public offering prospectus.³⁷ The ASC acknowledged receiving the submissions and advised that it would give them “the consideration we deem appropriate.” Kinder Morgan subsequently changed their prospectus to include additional climate risks, including physical risks from extreme weather and rising seas, as well as transition risks such as negative impacts on its business arising from national and international progress on meeting the Paris decarbonization goal to reduce demand for hydrocarbons.³⁸
- In July 2017, Greenpeace Canada made a submission to the Canadian Securities Association consultation on climate risk disclosure, arguing that such disclosures must be mandatory, meaningful, substantive and reliable. Furthermore, these risks should be evaluated based on a scenario where warming is kept well below two degrees Celsius, with an aim of keeping temperature increase to 1.5 degrees Celsius (as committed to under the Paris climate agreement).³⁹
- In March 2019, Greenpeace Canada worked with Toronto residents to encourage Toronto City Council to explore their legal options for suing fossil fuel companies to recover climate-related costs, highlighting the climate liability aspect of climate-related risks.⁴⁰
- In October 2020, Greenpeace Canada made a submission to the Bank of Canada’s Monetary Policy Framework Review that included, among other recommendations, that the central bank add climate change to its framework agreement with the federal government, and consider climate risks in its monetary policy operations, including asset purchases (e.g. excluding high-carbon assets) and collateral frameworks (e.g. significantly increasing haircuts for fossil fuel and other high-carbon assets).⁴¹

³⁶ See Greenpeace International, “China Tuna Industry officially withdraws Hong Kong IPO application”, 10 December 2014, available at <http://www.greenpeace.org/eastasia/press/releases/oceans/2014/china-tuna-industry-officially-withdraws-hk-ipo-application/>.

³⁷ Greenpeace Canada letter to Alberta Securities Commission regarding the Amended and Restated Preliminary Prospectus of Kinder Morgan Canada Limited’s Initial Public Offering, 17 May 17, 2017, available at <https://drive.google.com/file/d/1GRQyfFpMFbJTlqgrx9rKXMBdW2nclTz/view>.

³⁸ See K. Stewart, “Trans Mountain Pipeline only Profitable in Worst-Case Climate Scenario: Parliamentary Budget Officer”, 8 December 2020, available at <https://www.greenpeace.org/canada/en/story/45002/trans-mountain-pipeline-only-profitable-in-worst-case-climate-scenario-parliamentary-budget-officer/>.

³⁹ Greenpeace Canada’s submission to the Canadian Securities Administrators’ risk disclosure review, 4 July 2017, available at <https://www.greenpeace.org/static/planet4-canada-stateless/2018/06/Greenpeace-Canada-Submission-to-CSA-and-OSC-on-climate-disclosure-July2017.pdf>.

⁴⁰ Jeff Gray, “Toronto should sue oil companies over climate change, councillor says”, *The Globe and Mail*, 24 March 2019. Available at <https://www.theglobeandmail.com/canada/toronto/article-toronto-should-sue-oil-companies-over-climate-change-councillor-says/>.

⁴¹ Greenpeace Canada submission to the Bank of Canada’s Monetary Policy Framework Review, 8 October 2020, available at <https://www.greenpeace.org/static/planet4-canada-stateless/2021/03/0e80c322-greenpeace-monetary-policy-review-submission.pdf>.

Appendix B: Questions posed by OSFI

Question 1: What are your views on the characterization of climate-related risks as driver of other risks? How do climate-related risks affect FRFIs and FRPPS? Do you have other views on the characterization of climate-related risks set out in this paper?

Question 2: What steps can FRFIs and FRPPS take to improve their definition, identification and measurement of climate-related risks and the impacts of these risks?

Question 3: Does your organization have, or plan to develop, a climate-related risk appetite and strategy? How does your organization approach setting its risk appetite and strategy?

Question 4: What new or adapted governance structures, policies or processes should FRFIs consider to effectively manage a FRFI's climate-related risks?

Question 5: What are key considerations and challenges related to embedding climate-related risk management in a FRFI's three lines of defense?

Question 6: Is the description of the data challenges presented by OSFI in this discussion paper complete or are there other data challenges that need to be considered? What is the relative importance you would assign to each of these challenges?

Question 7: If your organization has started to include climate-related considerations in its risk management approaches and tools, please share your experience, including the usefulness and challenges associated with climate-related scenario analysis and stress testing. If not, please describe other processes and controls you have introduced to determine the materiality of climate-related risks and manage exposures to these material risks.

Question 8: What are the key considerations for incorporating climate-related risks into the FRPP's Statement of Investment Policies and Procedures (SIP&P)?

Question 9: For FRPPs where the administrator directly invests in assets, are scenario analysis and stress testing used to assess the pension plan's exposure to climate-related risks? If so, how useful are they? What are some other risk measurement tools that FRPP administrators should consider?

Question 10: For FRPPs where individual investment decisions are delegated to an investment manager, should consideration be given to climate-related risk management when plan administrators select investment managers? If so, what are the key climate-related criteria for selecting investment managers? If not, why not?

Question 11: How does your organization currently disclose climate-related risk information? What are the drivers for any voluntary disclosure?

Question 12: A challenge OSFI has identified is lack of a universal climate-related risk taxonomy. Please describe the climate-related risk taxonomy, if any, your organization has developed or adopted?

Question 13: Given OSFI's role as the prudential regulator and supervisor of FRFIs and FRPPs, what other work do you think OSFI should consider in relation to climate-related risks?

Question 14: What are your views on the relative importance of using (1) OSFI's capital framework, (2) supervisory review process, and (3) market discipline to promote FRFI preparedness and resilience to climate-related risks? What factors should OSFI consider when making changes to the design and approach to each of these areas?

Question 15: Are there circumstances where it would be appropriate to factor climate-related considerations in the capital framework beyond what is reflected in existing inputs in the absence of empirical evidence? What are the pros and cons of such an approach?

Question 16: What factors should OSFI consider in designing its guidance, supervision process and reporting requirements to promote FRPP preparedness and resilience to climate-related risks?