



**Institute for
Sustainable
Finance**



Sustainability Macro Perspective – Northumberland Learning Connection

November 2021

Sara M. Alvarado, CFA, MBA



Sara M. Alvarado, CFA, MBA
Executive Director, Institute For Sustainable Finance

- Sara M. Alvarado joined the Institute for Sustainable Finance (ISF) as Executive Director in April, 2021. The ISF, hosted by the Smith School of Business at Queen's University, brings together academia, the private sector and government to shape Canada's innovations in sustainable finance. She is former Head of Risk & CAMLO at the Canada Infrastructure Bank in Toronto, where she built the inaugural enterprise risk management function. Prior to joining the CIB, she worked as Senior Officer, Infrastructure New Products & Special Transactions at the European Investment Bank (EIB) based in Luxembourg, with a focus on catalysing private sector investments into green infrastructure in policy priority sectors with support from the EU. Before moving to the EU, Sara spent 25 years in the investment industry in Canada, including combined 15 years in Private Placements and Infrastructure investments as Managing Director at Manulife Financial and Director at Sun Life, plus 10 years at Scotia Capital in Equity Research and Finance Regulatory Reporting.
- Sara is current Co-Chair at the World Economic Forum's Infrastructure 4.0 Initiative and is Mentor at the InfraChallenge innovation competition organized by the Global Infrastructure Hub, a G20 initiative. She is current Board Member at the Cambridge Memorial Hospital, where she sits at the Resources and Capital Redevelopment Committees. She is also past Board Member at CFA Society Toronto where she was Chair of the Fixed-Income and Programming Committees. Sara is past Board Member and Treasurer at the Cambridge Symphony Orchestra and past volunteer at the Red Cross Refugee Meal Program in Luxembourg.
- Sara is a CFA charter holder, has an MBA from the Edinburgh Business School at Heriot-Watt University, and has attended executive programmes at Harvard Business School in Boston. She is fluent in English and Spanish and conversant in French.

The ISF's Supporters

The Institute for Sustainable Finance is supported by several partners:

Founding Contributors: BMO, CIBC, RBC, Scotiabank, TD Bank Group.

Supporters: The Ivey Foundation (inaugural supporter), the McConnell Foundation, the McCall MacBain Foundation and the Chisholm Thomson Family Foundation.

Founding Sponsors:



ISF's Vision:

To be the top sustainable finance Hub in Canada.

ISF's Mission:

To align mainstream financial markets with Canada's transition to a prosperous sustainable economy.

ISF's Strategy:

To help increase Canada's sustainable finance capacity through the Institute's four pillars of Research, Education, Collaboration and Outreach, to help accelerate the transition to net-zero.

RESEARCH

Generate independent, innovative research on sustainable finance and disseminate to key stakeholders

EDUCATION

Develop educational opportunities and build professional capacity

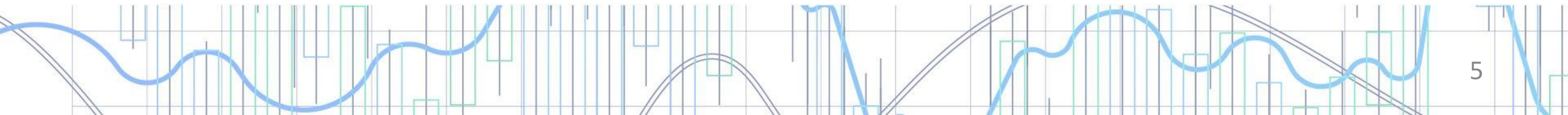
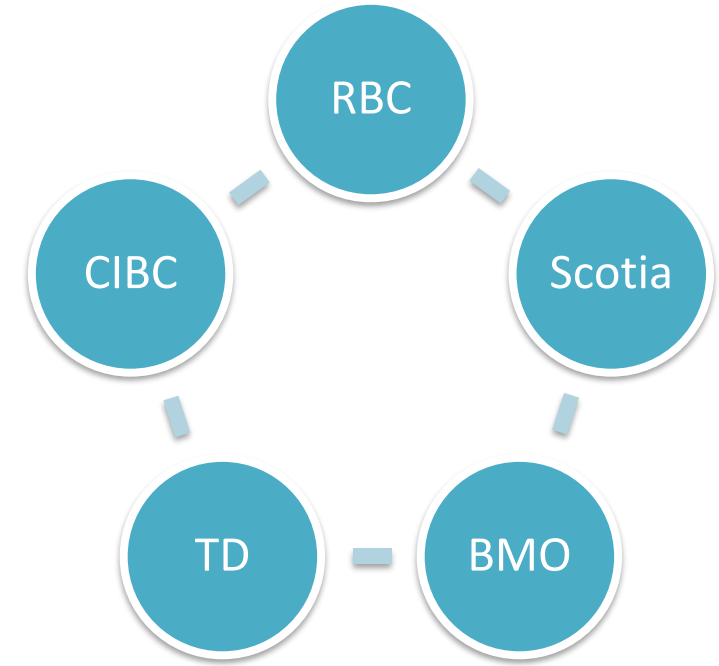
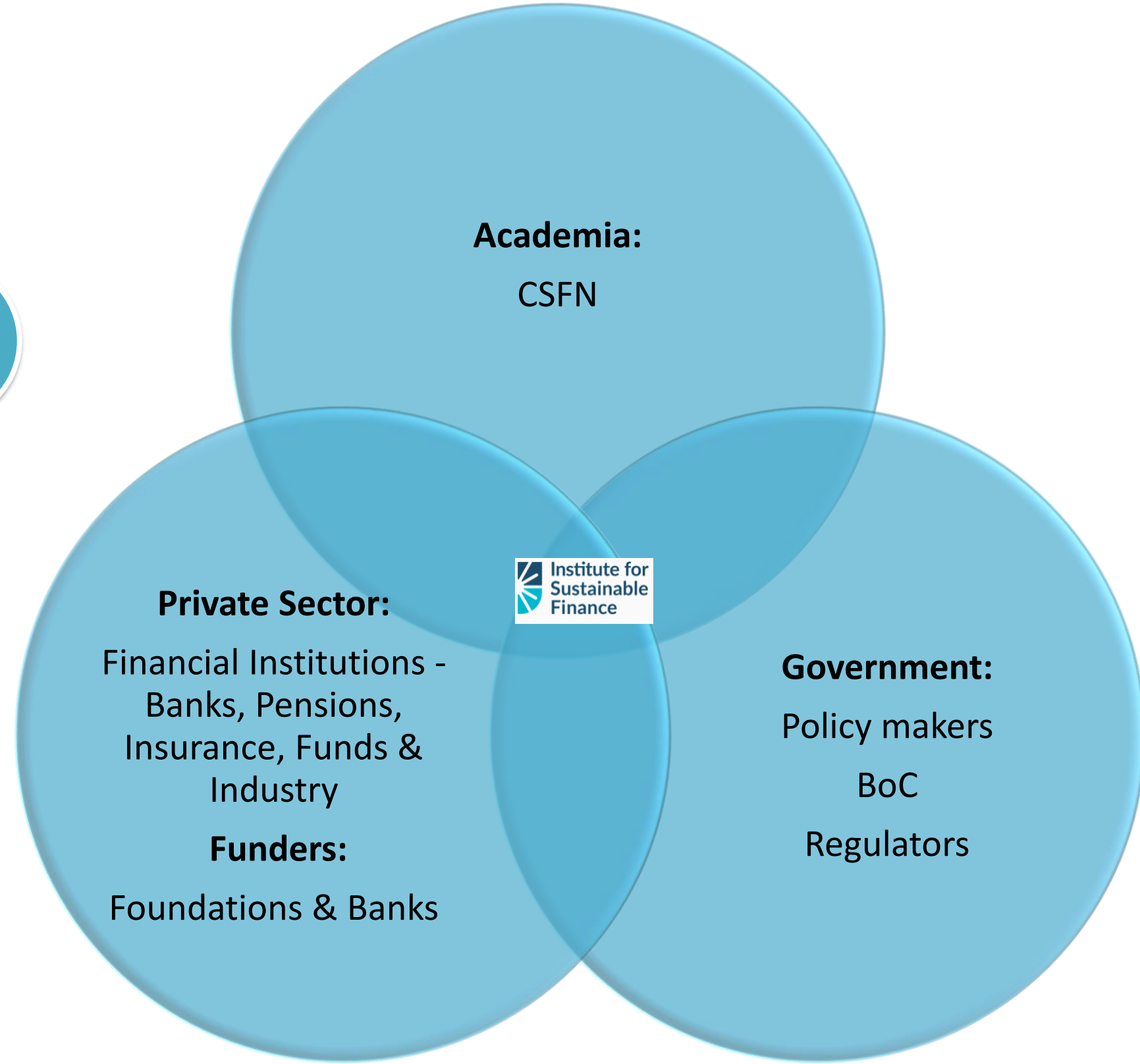
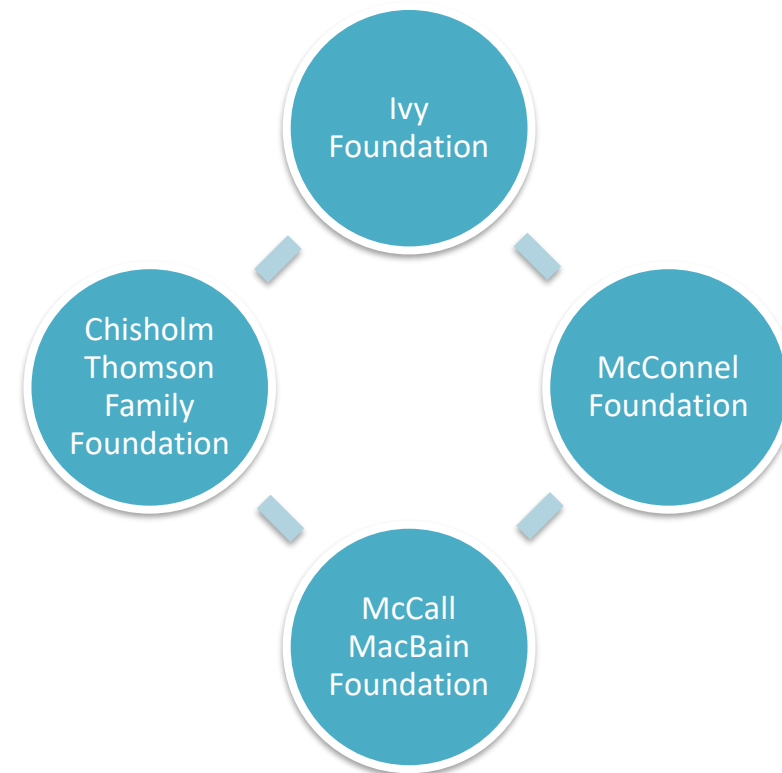
COLLABORATION

Provide a platform for collaboration between government, academia, financial sector & industry

OUTREACH

Build visibility in everything sustainable finance related across Canada

The Institute For Sustainable Finance





Queen's Executive Education Institute for Sustainable Finance



Sustainable Investing

Learn sustainable investing strategies that are transforming finance

16 INSTRUCTIONAL HOURS


Presented with the Institute for Sustainable Finance

Institute for Sustainable Finance


About ISF Resources Research Newsblog & Events Contact

Sustainable Finance Primer Series


This series aims to explore the foundations of sustainable finance – one of the most important emerging fields of our time. Each specific subject matter, breaking down its definition, its importance, its challenges, and the current situation in Canada.




Sustainable Investing
By **Sean Cleary, PhD**, Executive Director, Institute for Sustainable Finance and **Dustyn Lanz**, CEO of the Responsible Investment Association (RIA)
[Read more](#)



Stewardship and Corporate Governance
By **Sean Cleary, PhD**, Executive Director, Institute for Sustainable Finance in collaboration with Finance International
[Read more](#)



Impact Investing
By **Sean Cleary, PhD**, Executive Director, Institute for Sustainable Finance
[Read more](#)



Taxonomies
By **Sean Cleary, PhD**, Executive Director, Institute for Sustainable Finance in collaboration with Toronto Finance International
[Read more](#)

Institute for Sustainable Finance

About ISF Resources Research Newsblog & Events Contact

Upcoming

CONFERENCE

Second Annual CSFN Conference

Hosted by University of Calgary, Haskayne School of Business.

November 19-20, 2021

[Register](#)

Past Events

WEBINAR

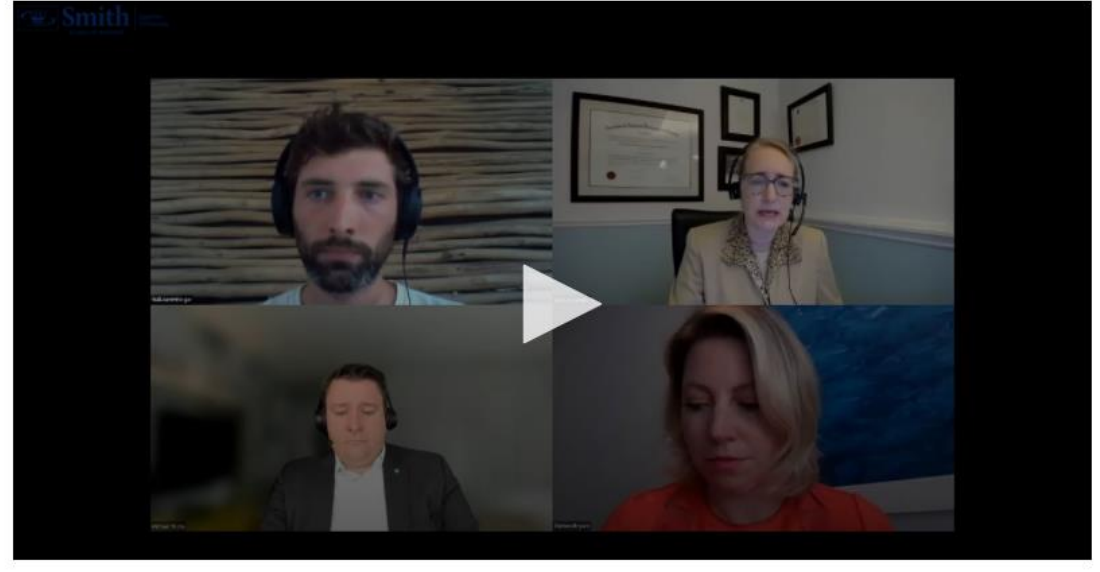
In Conversation with Radicle and Jane Goodall Institute: "Carbon Offsets, Biodiversity Finance, & Reforestation"

Oct 28, 2021

PANEL DISCUSSION

[Michael Thom](#)
[Chelsea Bryant](#)
[David Smith](#)
[Guillaume Verger](#)

Video Transcript





The Institute For Sustainable Finance

Canadian Sustainable Finance Network

As part of its mandate, the ISF established the Canadian Sustainable Finance Network (CSFN), an independent formal research and educational network for academia, industry and government to bring together a talented network of university faculty members and relevant members from industry, government and civil society. CFSN will be essential to sharing learnings and open the door to future research topics as well as creating partnerships with other entities from across Canada and globally.

91 Professors
28 Universities

Network Members

Carleton University
Sprott School of Business
Tessa Hebb

Concordia University
Stephen Kibsey
Amr Addas

Thomas Walker
Margueritte Mendell
Sherif Goubran

Dalhousie University
Greg Hebb
Jun Zhou
Iraj Fooladi
Yonggan Zhao

Ontario Tech University
Bin Chang
Karolina Krystyniak
Hui Zhu
Nadia Vanteeva
Xinyao (Joseph) Zhou

Queen's University
Andrew Grant
Smith School of Business
Sean Cleary
Ryan Riordan
Paul Calluzzo
Neal Wilcott
Nicole Robitaille
Maya Saryyeva
Pavlo Kalyta
Hadi Shaheen

Royal Roads University
Heather Hachigian
Hany Fahmy

Saint Mary's University
Najah Attig

Simon Fraser University
Christina Atanasova

Université de Montréal
Elham Kheradman
Rheia Khalaf
Stephane Rousseau

Université de Sherbrooke
Claudia Champagne
Frank Coggins

University of Alberta
Sanjay Banerjee
Lukas Roth
Vikas Mehrotra
Sadok El Ghoul

University of British Columbia
Mark Baldauf
Kai Li

University of Calgary
Yrjo Koskinen
Alex David
Miguel Palacios
Ari Pandes
Irene Herremans
Anne Kleffner
Kristen van de Biezenbos
Terry Ross

University of Manitoba
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Mingzhi Liu
Wenxia Ge
Chi Liao

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Min Maung

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Elizabeth Demers

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Michael King
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Ali Shahrad

Western University
Ivey Business School
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Tima Bansal
Nadine de Gannes

York University
The Brookfield Centre on Real Estate and Sustainable Infrastructure

Avis Devine
Irene Henriques
Sherena Hussain
Jim Clayton
Dirk Matten
James Mckellar

Schulich School of Business
Kee-Hong Bae
Pouyan Foroughi
Yelena Larkin

Lilian Ng
Aleksandra Rzeźnik

Individual Members
Martin Boyer, HEC Montreal
Senator Rosa Galvez, Université Laval à Québec
Ashrafee Hossain, Memorial University of Newfoundland
Madhu Kalimpalli, Wilfrid Laurier University
Andrew Karolyi, Cornell University
Aymen Karoui, Glendon Campus, York University
Cary Krosinsky, Yale University
Ian Robertson, University of Oxford

- Climate Change is at the top of every agenda these days, be that on financing, regulatory or industry strategy discussions, resulting in a plethora of new institutions or the refocus of established ones on sustainability and climate change topics, including challenges and potential solutions
- What does it mean globally, to the different sectors and our own jurisdictions? To infrastructure development, industry, financing, operations? We'll see....
- Today we will discuss at a macro level some of this information and the fundamental changes climate change introduces across all sectors, including their interconnectedness
- The slides provide a broad perspective given key macro players and related market developments as this all comes together, with the intention to frame the discussion from the perspective of your own situation and jurisdictional position

UN SDGs



SUSTAINABLE DEVELOPMENT GOALS

17 GOALS TO TRANSFORM OUR WORLD

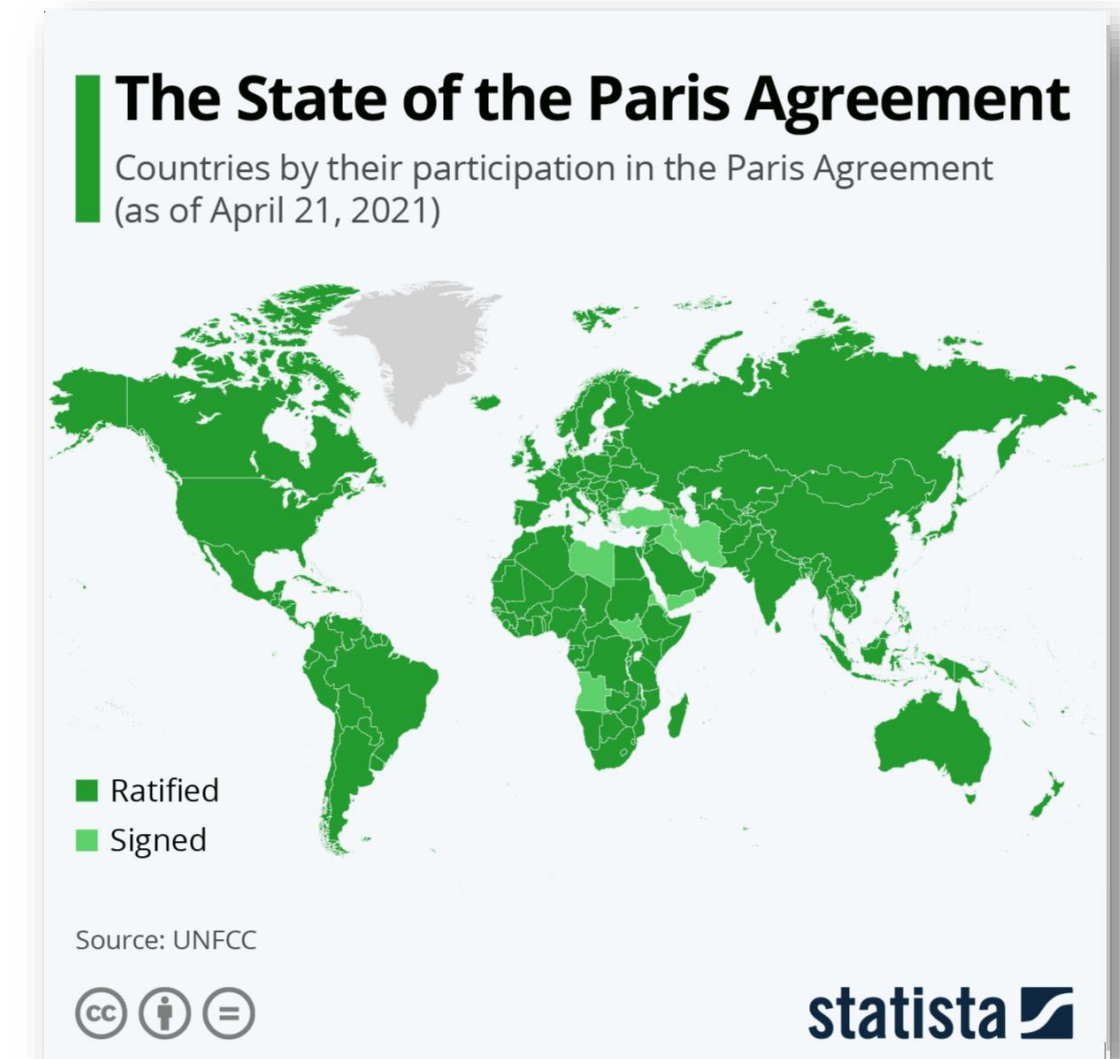
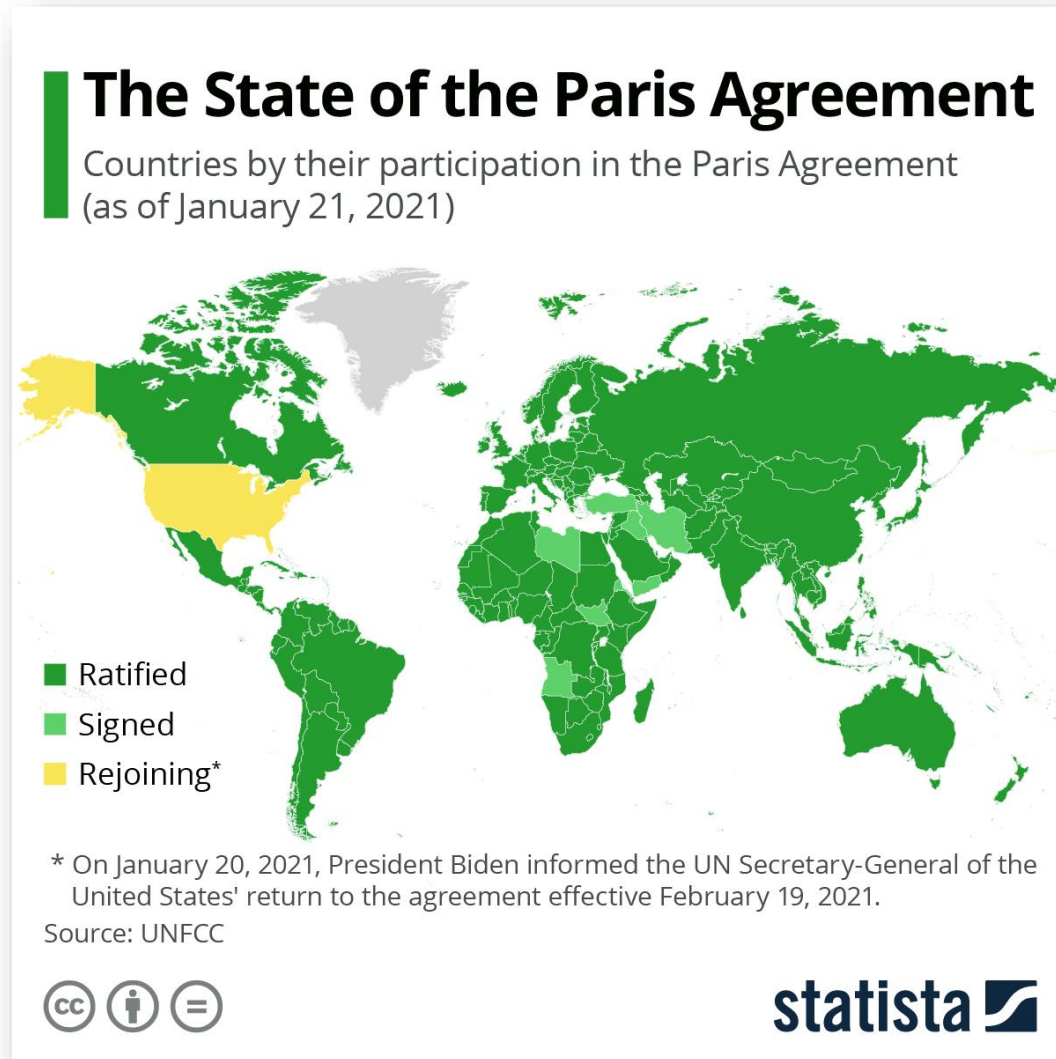
Adopted by all UN Member States in 2015 it is a shared blueprint for peace and prosperity around the world

<p>1 NO POVERTY</p>	<p>2 ZERO HUNGER</p>	<p>3 GOOD HEALTH AND WELL-BEING</p>	<p>4 QUALITY EDUCATION</p>	<p>5 GENDER EQUALITY</p>	<p>6 CLEAN WATER AND SANITATION</p>
<p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p>10 REDUCED INEQUALITIES</p>	<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>
<p>13 CLIMATE ACTION</p>	<p>14 LIFE BELOW WATER</p>	<p>15 LIFE ON LAND</p>	<p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	<p>17 PARTNERSHIPS FOR THE GOALS</p>	<p> SUSTAINABLE DEVELOPMENT GOALS</p>

<https://www.un.org/sustainabledevelopment/blog/2015/12/sustainable-development-goals-kick-off-with-start-of-new-year/>

The Paris Agreement

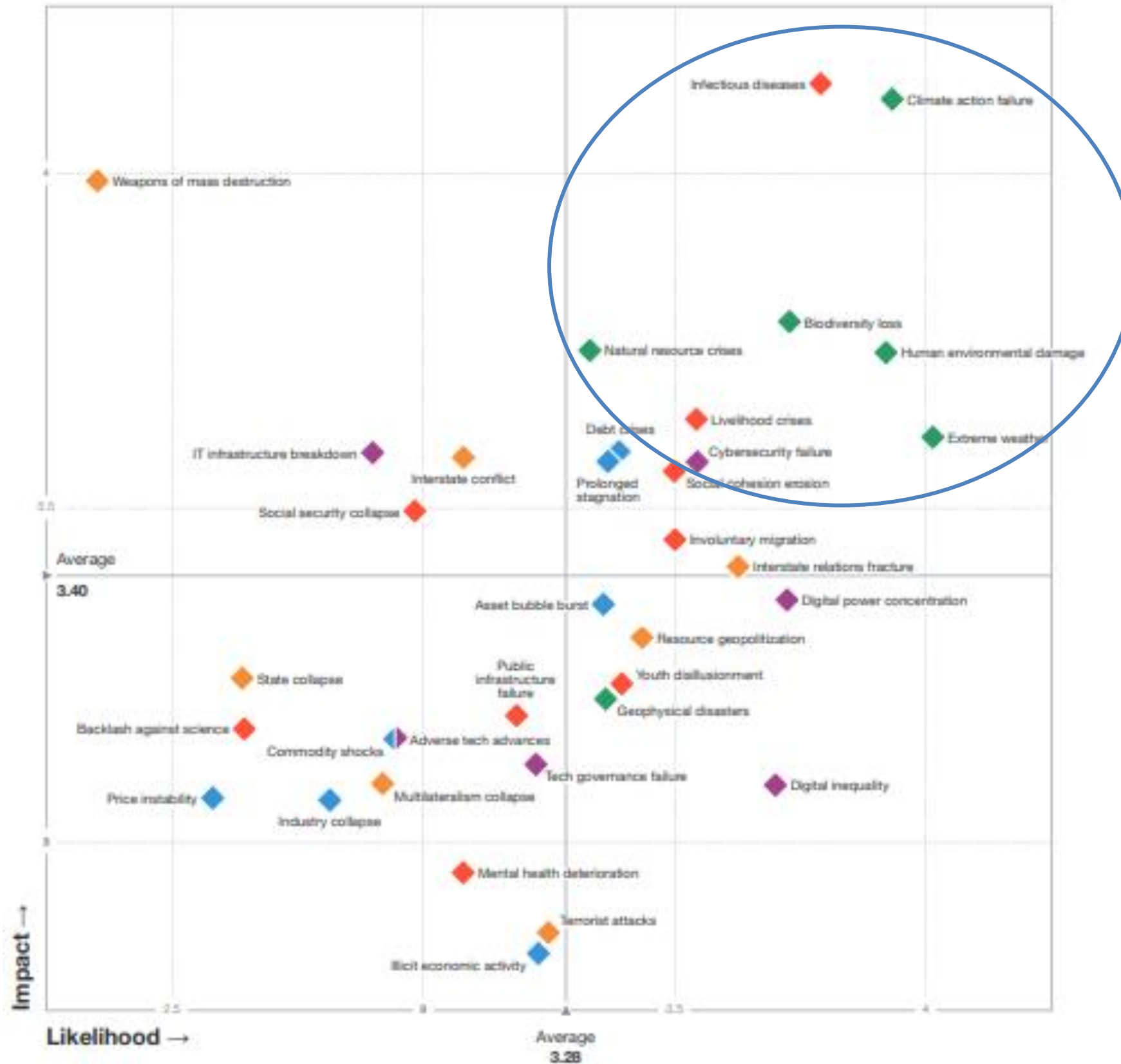
- The Paris Agreement is a **legally binding international treaty on climate change**. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015.
- Its goal is to **limit global warming to well below 2, preferably to 1.5 degrees Celsius**, compared to pre-industrial levels.
- To achieve this long-term temperature goal, countries aim to **reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century**.



<https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

<https://www.statista.com/chart/9656/the-state-of-the-paris-agreement/>

World Economic Forum Top Risks 2021



- Infectious Diseases
- Climate Action Failure
- Biodiversity Loss
- Human Environmental Damage
- Natural Resources Crisis
- Extreme Weather

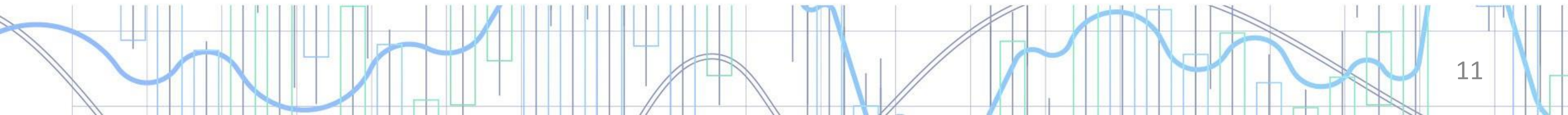
Davos 2021

[Home](#) [Participants](#) [Programme](#) [Themes](#) [Liveblog](#) [About](#) [Media Programme](#) [Book](#)

25–29 January 2021


The Davos Agenda

<https://www.weforum.org/reports/the-global-risks-report-2021>



The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change.

Science



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Alienware
The Alienware Aurora Takes Performance to the Next Level

Climate change: IPCC report is 'code red for humanity'

By Matt McGrath
Environment correspondent

9 August | Comments

UK climate change protests



Human activity is changing the climate in unprecedented and sometimes irreversible ways, a major UN scientific report has said.

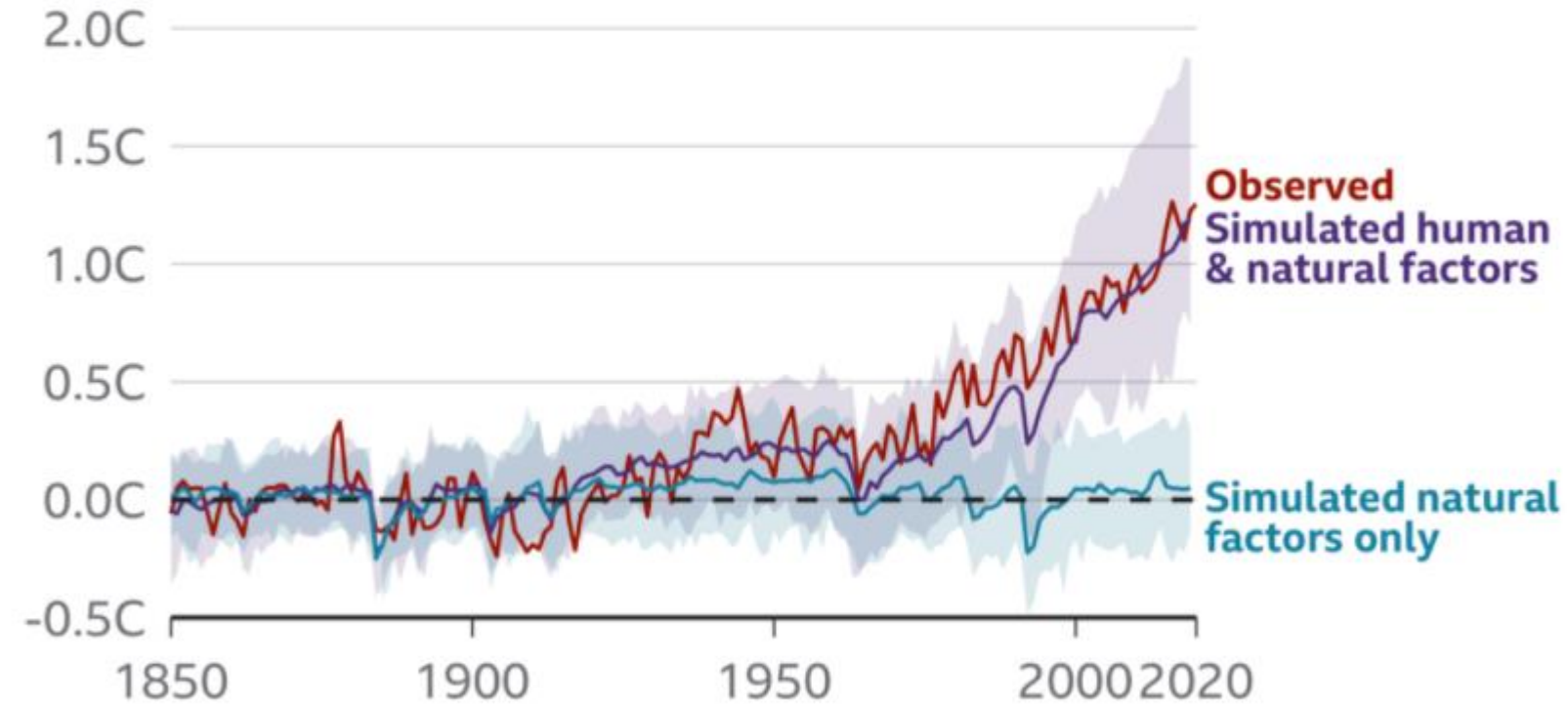
The landmark study warns of increasingly extreme heatwaves, droughts and flooding, and a key temperature limit being broken in just over a decade.

The report "is a code red for humanity", says the UN chief.

But scientists say a catastrophe can be avoided if the world acts fast.

Human influence has warmed the climate

Change in average global temperature relative to 1850-1900, showing observed temperatures and computer simulations



Note: Shaded areas show possible range for simulated scenarios

Source: IPCC, 2021: Summary for Policymakers

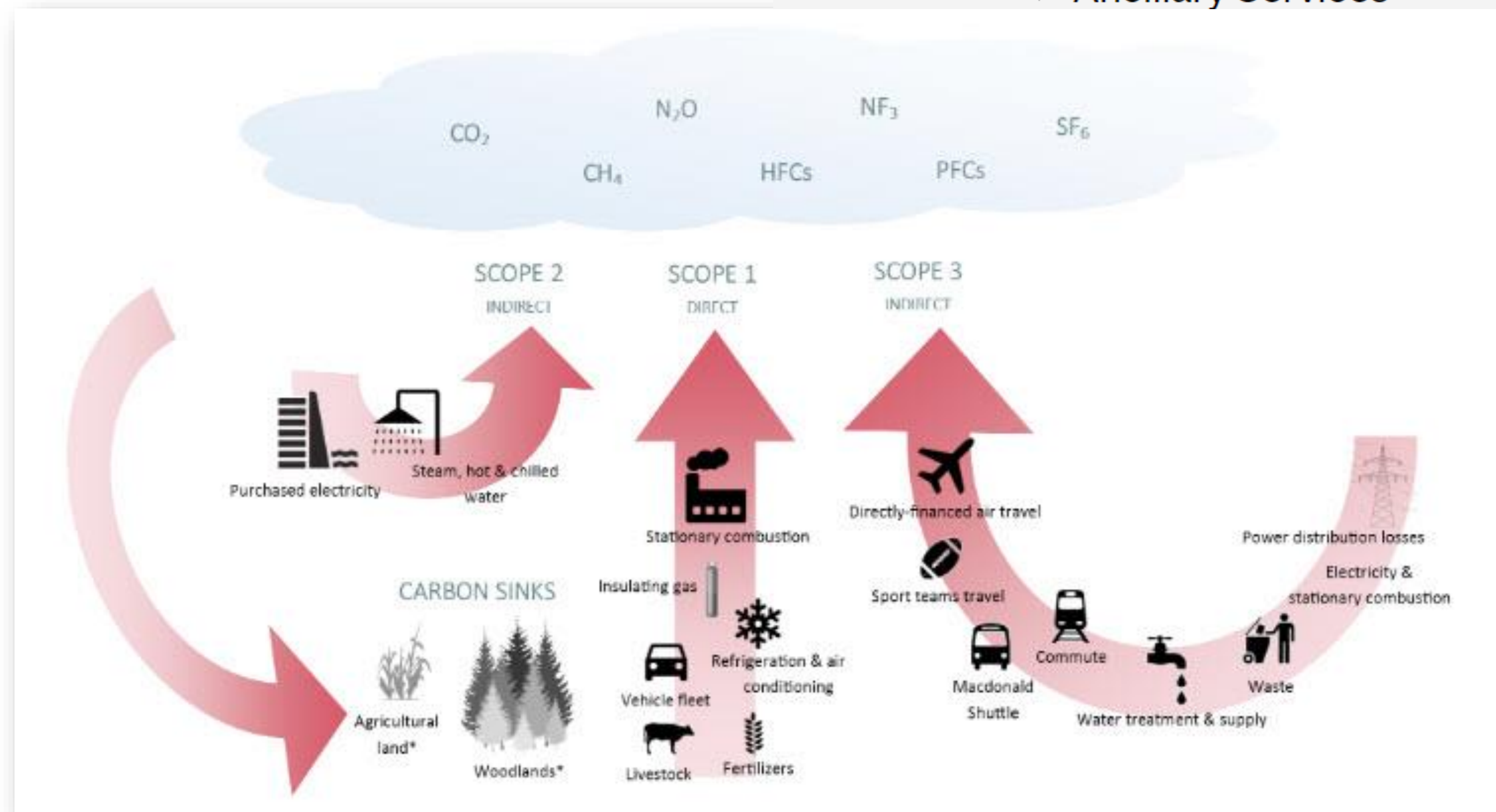


<https://www.ipcc.ch/report/ar6/wg1/#FullReport>

<https://www.bbc.com/news/science-environment-58130705>

Greenhouse Gas Emissions (GHG)

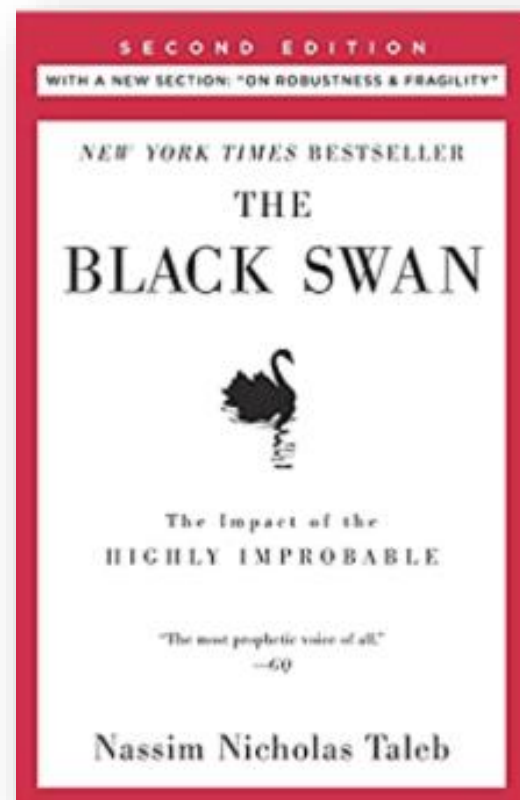
- Scope 1: Direct
- Scope 2: Energy Source
- Scope 3: Indirect



<https://www.mcgill.ca/facilities/maintenance-operations/utilities/greenhouse-gas-inventory>

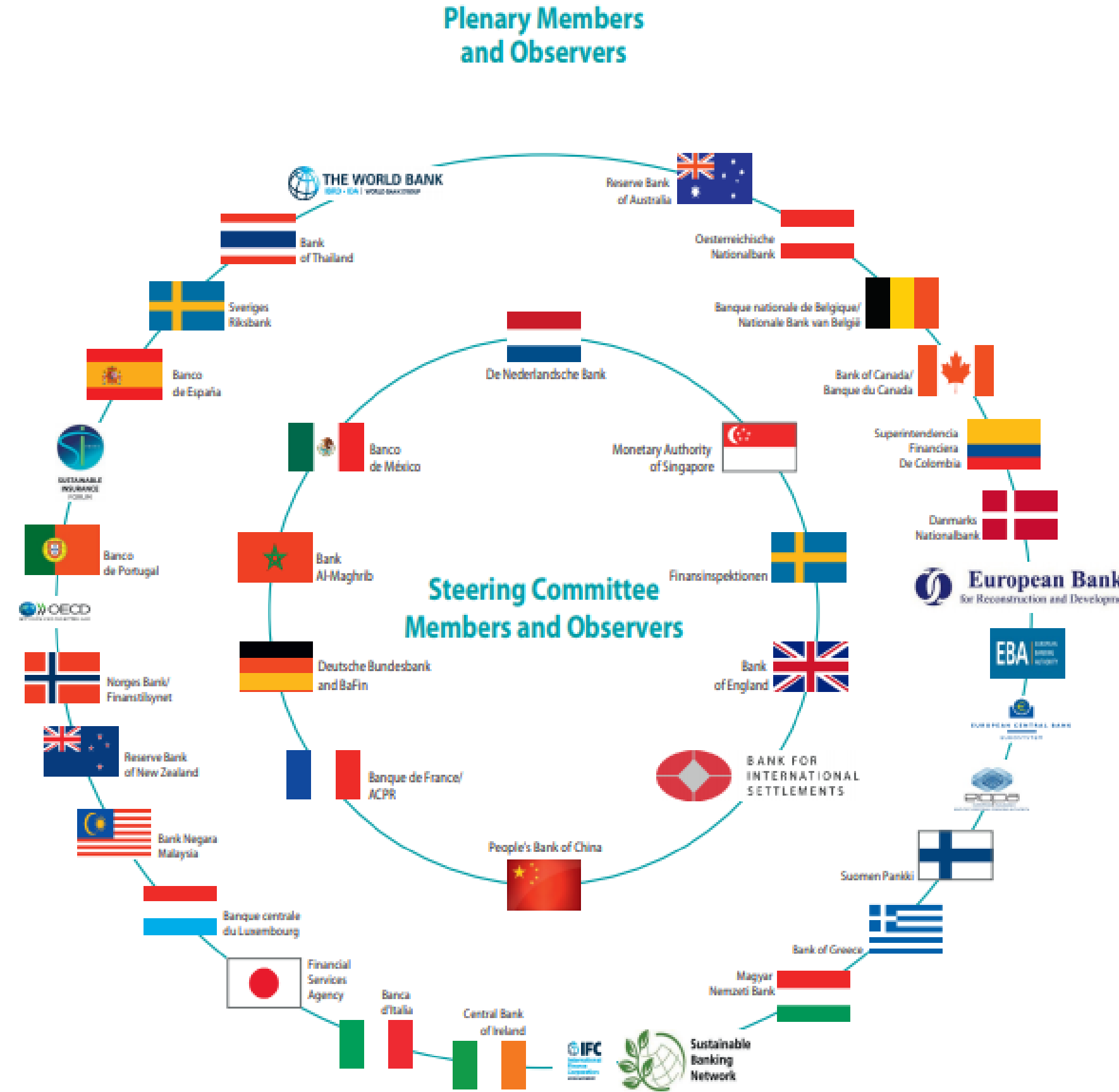
Bank for International Settlements: Green Swan

- Systemic impact to financial stability and asset prices
- Risk of uncoordinated and fast developments



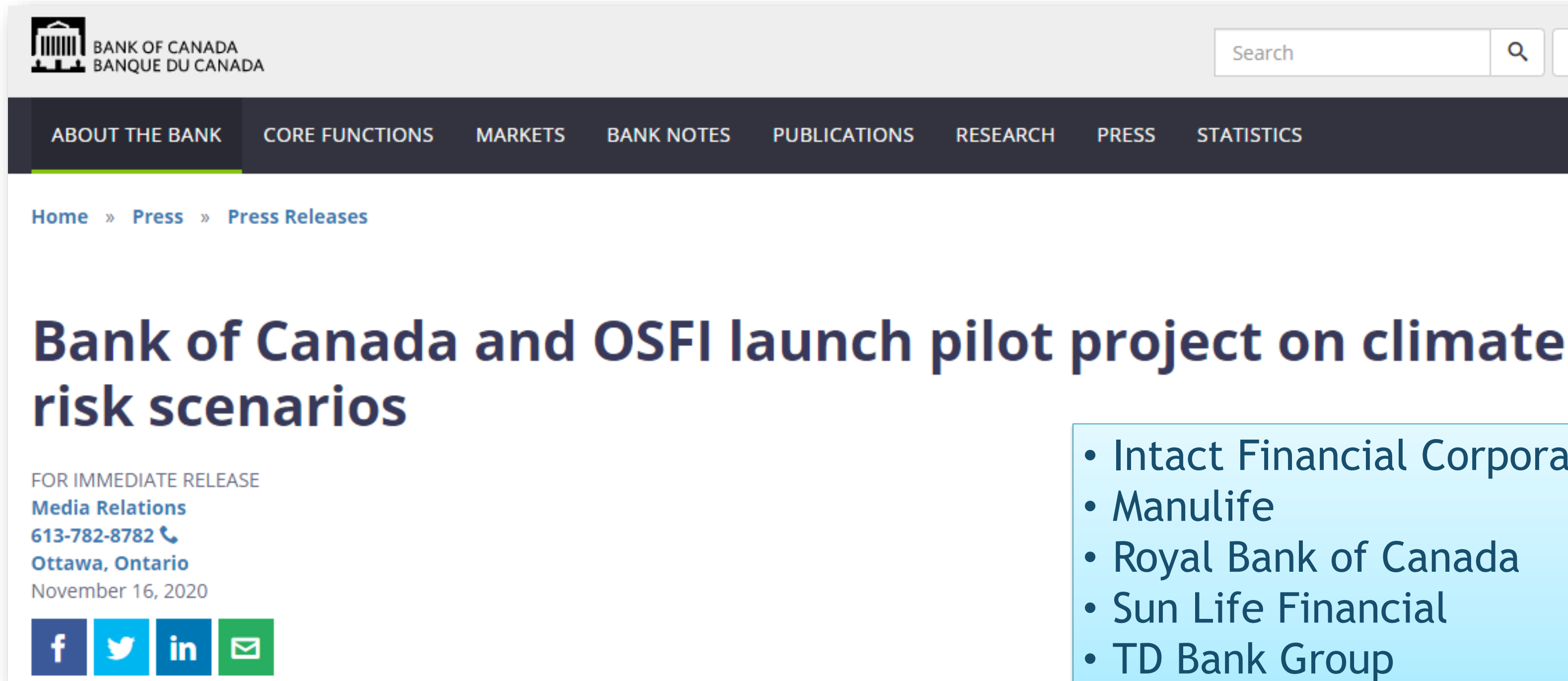
<https://www.bis.org/publ/othp31.pdf>

- Launched Dec 2017
- Central Banks form the Network for Greening the Financial System (NGFS)
- Macro Financial risk, stability of the financial system, tail scenarios
- Micro Prudential Supervision



<https://www.ngfs.net/ngfs-scenarios-portal/>

<https://www.ngfs.net/en>



The screenshot shows the Bank of Canada website's press release page. At the top left is the Bank of Canada logo with the text 'BANK OF CANADA' and 'BANQUE DU CANADA'. To the right is a search bar. Below the logo is a navigation menu with links: ABOUT THE BANK, CORE FUNCTIONS, MARKETS, BANK NOTES, PUBLICATIONS, RESEARCH, PRESS, and STATISTICS. The 'ABOUT THE BANK' link is highlighted with a green underline. Below the navigation menu is a breadcrumb trail: Home » Press » Press Releases. The main heading of the page is 'Bank of Canada and OSFI launch pilot project on climate risk scenarios'. Below the heading is the text 'FOR IMMEDIATE RELEASE', 'Media Relations', '613-782-8782', 'Ottawa, Ontario', and 'November 16, 2020'. At the bottom of this section are social media icons for Facebook, Twitter, LinkedIn, and Email.

- Intact Financial Corporation
- Manulife
- Royal Bank of Canada
- Sun Life Financial
- TD Bank Group
- The Co-operators Group Limited

<https://www.bankofcanada.ca/2020/11/bank-canada-osfi-launch-pilot-project-climate-risk-scenarios/>

"Now is the time to ensure that every financial decision takes climate change into account."
 - Mark Carney, UN Special Envoy on Climate Action and Finance, Governor of the Bank of England, December 2019



[Learn more →](#)

The Financial Stability Board created the Task Force on Climate-related Financial Disclosures (TCFD) to improve and increase reporting of climate-related exposures.

Governance

Disclose the organization's governance around climate-related risks and opportunities.

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

Risk Management

Disclose how the organization identifies, assesses, and manages climate-related risks.

Metrics & Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

<https://assets.bbhub.io/company/sites/60/2020/10/TCFD Booklet FNL Digital March-2020.pdf>

<https://www.fsb-tcf.org/about/#task-force-members>

What is the EU Taxonomy?

AT A GLANCE

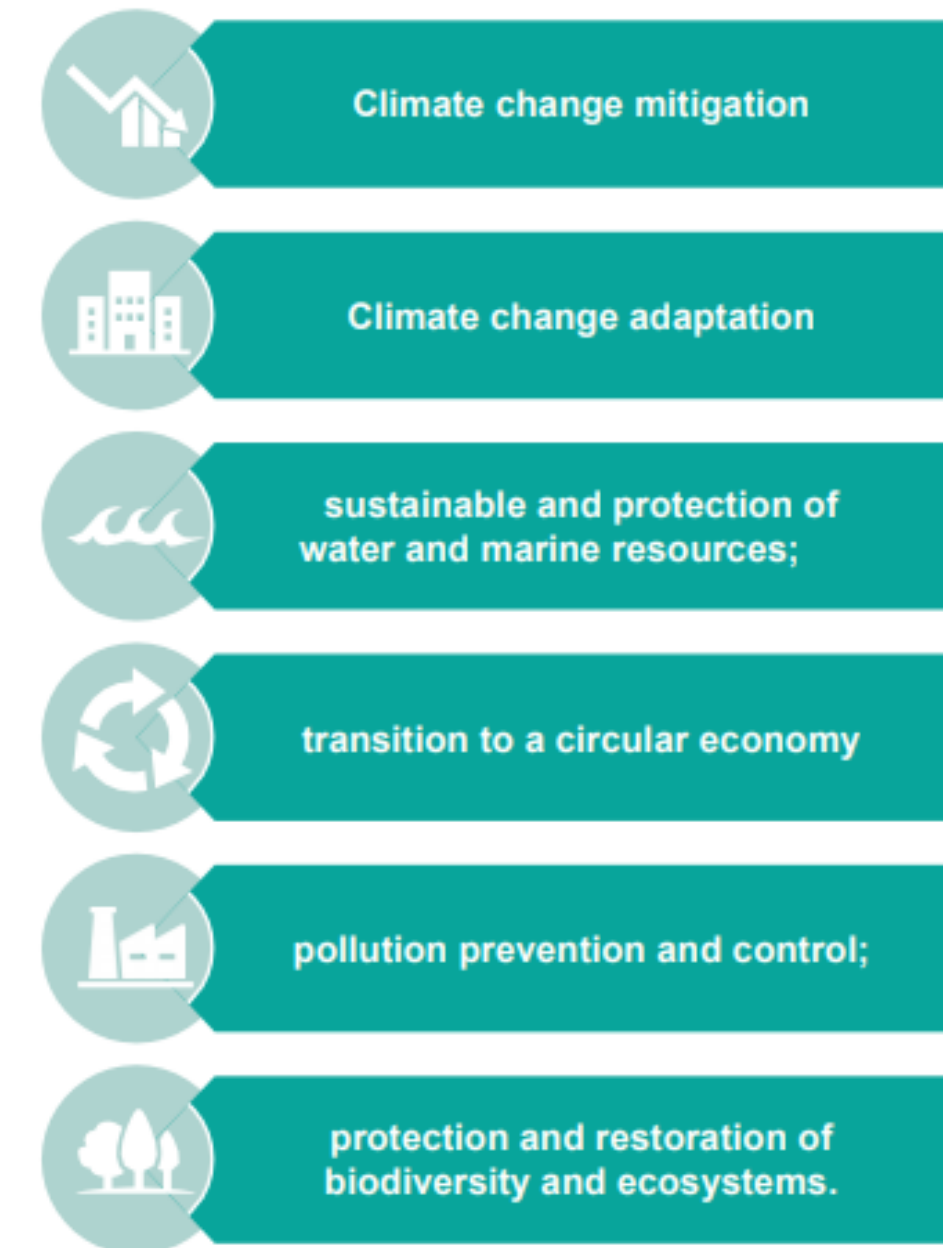
The EU Taxonomy is a tool to help investors, companies, issuers and project promoters navigate the transition to a low-carbon, resilient and resource-efficient economy.

The Taxonomy sets performance thresholds (referred to as 'technical screening criteria') for economic activities which:

- make a substantive contribution to one of six environmental objectives (Figure 1);
- do no significant harm (DNSH) to the other five, where relevant;
- meet minimum safeguards (e.g., OECD Guidelines on Multinational Enterprises and the UN Guiding Principles on Business and Human Rights).

The performance thresholds will help companies, project promoters and issuers access green financing to improve their environmental performance, as well as helping to identify which activities are already environmentally friendly. In doing so, it will help to grow low-carbon sectors and decarbonise high-carbon ones.

The EU Taxonomy is one of the most significant developments in sustainable finance and will have wide ranging implications for investors and issuers working in the EU, and beyond.



EU Regulation Sustainable Finance Disclosure Regulation (SFDR)

Five key questions answered about the EU's new SFDR sustainability rules

What is SFDR?

The SFDR rules – which come into effect this year – give asset managers like AXA IM a template for reporting how environmental, social and governance (ESG) factors are handled at both firm level and product level. That should give clients a simpler way to compare how asset managers are approaching major sustainability issues like climate change.

Asset Managers will provide greater transparency on the degree of sustainability of financial products so that they can be compared. This includes:

- Consideration of sustainability risks, including the risk of depreciation in the value of underlying assets due to environmental or social events.
- Consideration of principal adverse impacts (PAI) on sustainability factors; these are the negative effects on environmental, social and employee matters as well as respect for human rights, anti-corruption and anti-bribery resulting from an investment decision.
- Sustainable investments in economic activities that contribute to environmental or social objectives. They include investments in EU-taxonomy-eligible economic activities.

<https://www.axa-im.com/what-is-sfdr>

What is the SFDR?

A snapshot of the Sustainable Finance Disclosure Regulation (SFDR)

KPMG in Ireland > Insights > What is the SFDR?

9 March 2021 | 1 min read

The Sustainable Finance Disclosure Regulation (SFDR) imposes mandatory ESG disclosure obligations for asset managers and other financial markets participants with substantive provisions of the regulation effective from 10 March 2021.

The SFDR was introduced by the European Commission alongside the Taxonomy Regulation and the Low Carbon Benchmarks Regulation as part of a package of legislative measures arising from the European Commission's Action Plan on Sustainable Finance.

The SFDR aims to bring a level playing field for financial market participants ("FMP") and financial advisers on transparency in relation to sustainability risks, the consideration of adverse sustainability impacts in their investment processes and the provision of sustainability-related information with respect to financial products. The SFDR requires asset managers such as AIFMs and UCITS managers to provide prescript and standardised disclosures on how ESG factors are integrated at both an entity and product level. A significant portion of the SFDR applies to all asset managers, whether or not they have an express ESG or sustainability focus. The SFDR manifests in additional disclosures for financial market participants:

- on websites;
- in prospectuses and;
- in periodic reports.

<https://home.kpmg/ie/en/home/insights/2021/03/what-is-the-sfdr-sustainable-futures.html>

CFA Institute Global ESG Disclosure Standards for Investment Products

Paper for Comments issued earlier,

Announcement on November 1st, 2021

BIG PICTURE: DIFFERENT STANDARDS FOCUS ON DIFFERENT PARTS OF THE FINANCIAL SYSTEM

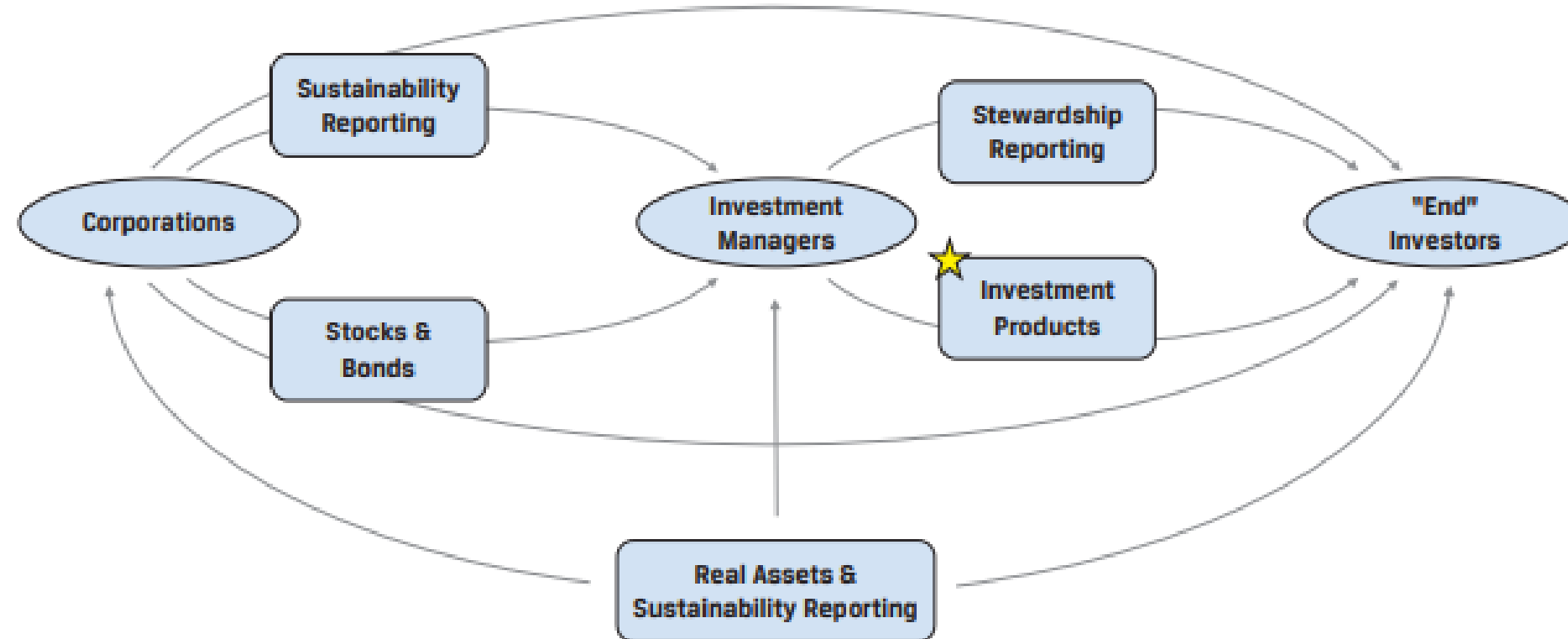


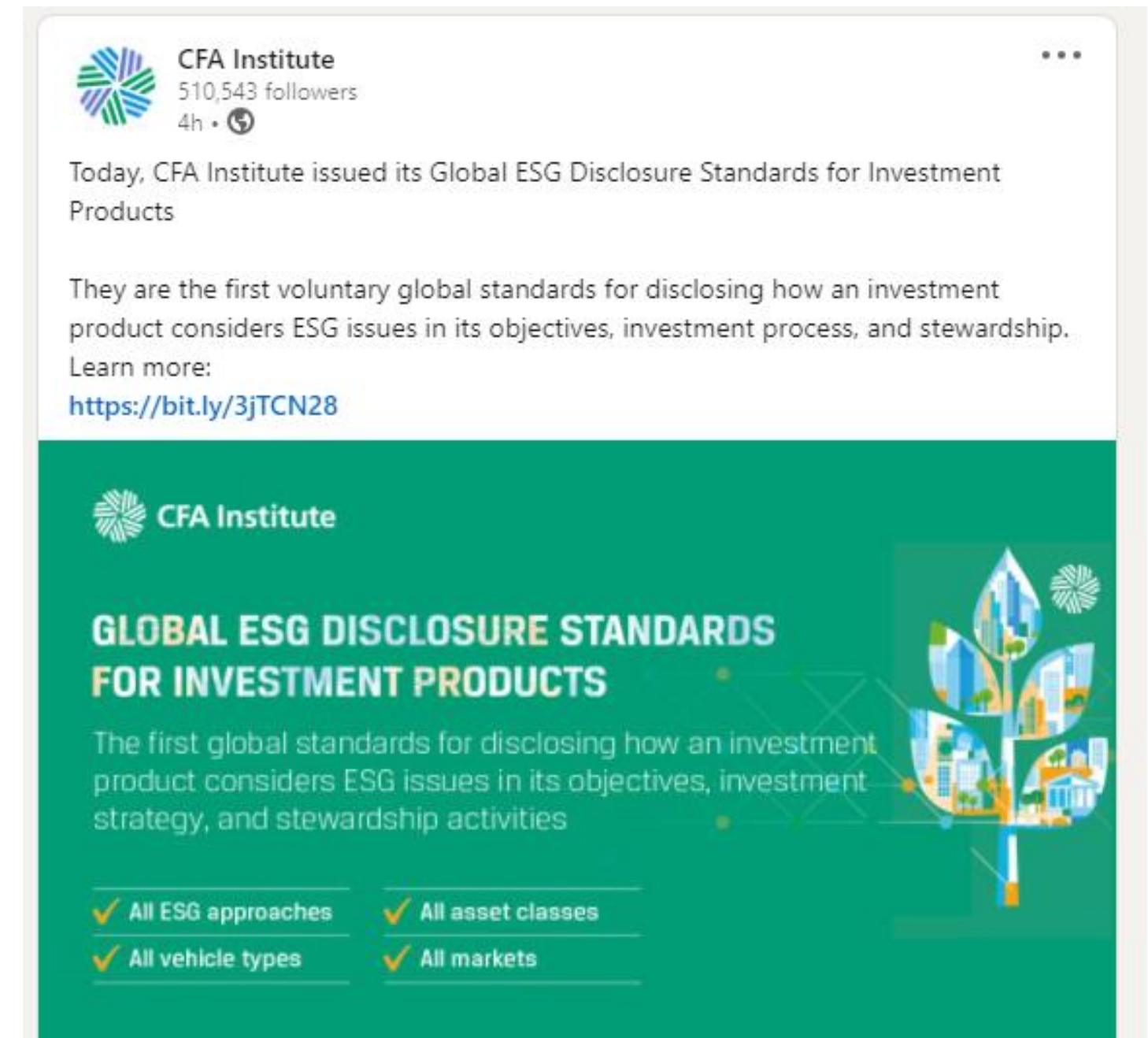
Figure 2: Illustration of the Financial System

Zooming in on investment products narrows the number of relevant regulations and voluntary codes and standards from about 125 to about 40. Figure 3 shows that different regulations

www.cfainstitute.org

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<https://www.cfainstitute.org/-/media/documents/support/ethics/exposure-draft-cfa-institute-esg-disclosure-standards-for-investment-products.ashx>



The image shows a social media post from CFA Institute (510,543 followers) announcing the issuance of Global ESG Disclosure Standards for Investment Products. Below the post is a green promotional graphic with the CFA Institute logo and the title "GLOBAL ESG DISCLOSURE STANDARDS FOR INVESTMENT PRODUCTS". The graphic includes the text: "The first global standards for disclosing how an investment product considers ESG issues in its objectives, investment strategy, and stewardship activities". It also lists four key features: "All ESG approaches", "All asset classes", "All vehicle types", and "All markets".

<https://www.cfainstitute.org/-/media/documents/ESG-standards/Global-ESG-Disclosure-Standards-for-Investment-Products.pdf>

IFRS – International Sustainability Standards Board (ISSB)

Montreal’s selection as an office for International Sustainability Standards Board applauded: CPA Canada

November 3, 2021

Chartered Professional Accountants of Canada (CPA Canada) welcomes the IFRS Foundation’s decision to establish an office of the International Sustainability Standards Board (ISSB) in Montreal, Quebec.

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Twitter



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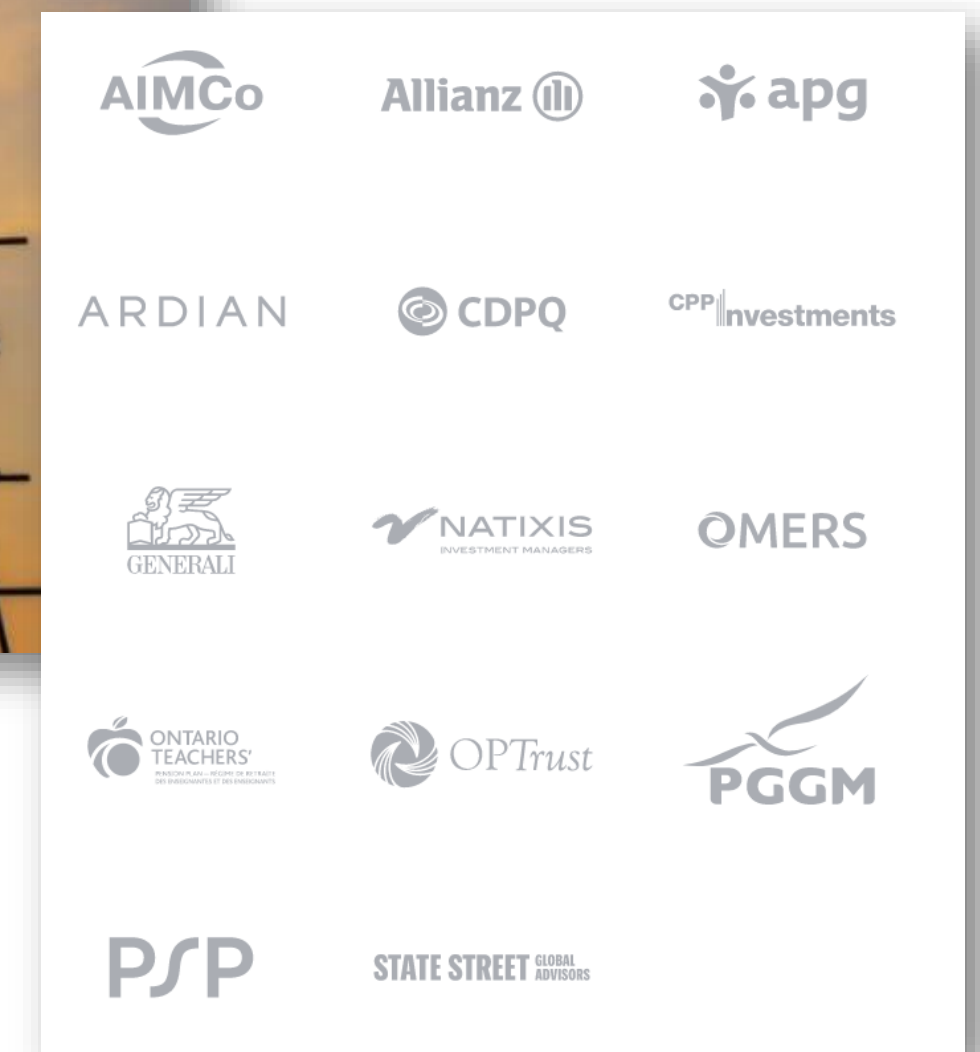
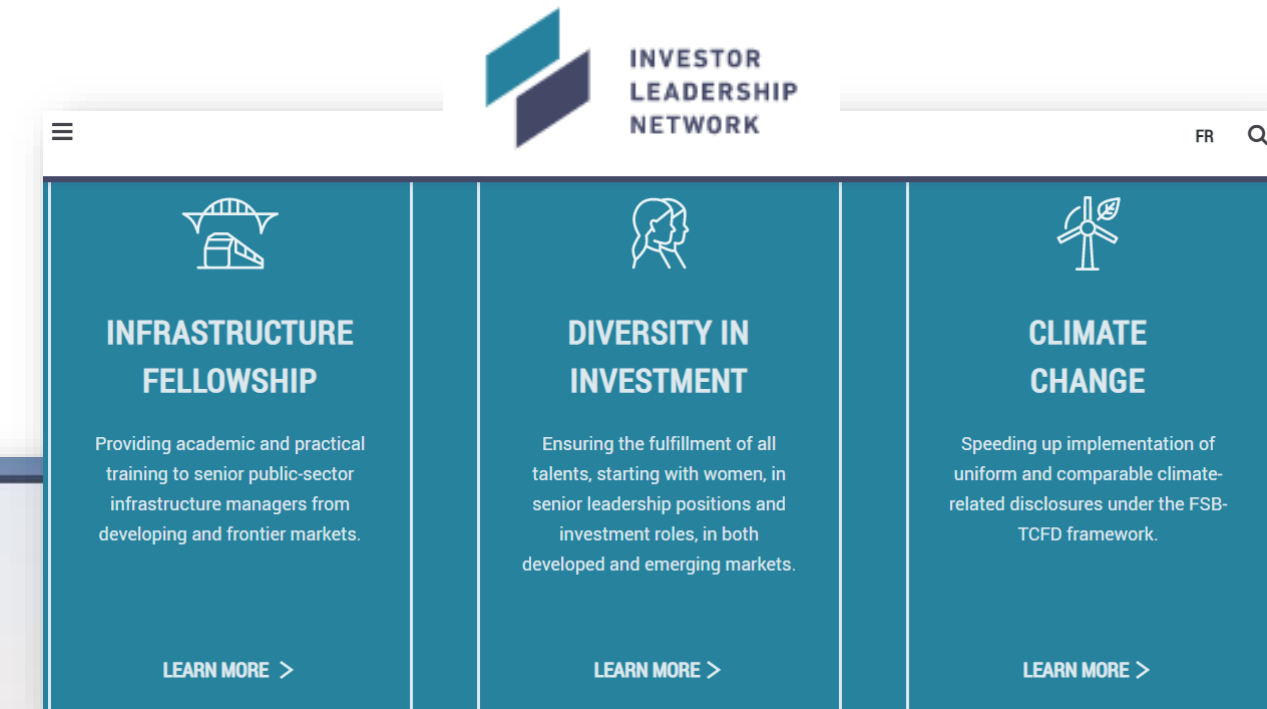


Email



Investors Leadership Network (ILN)

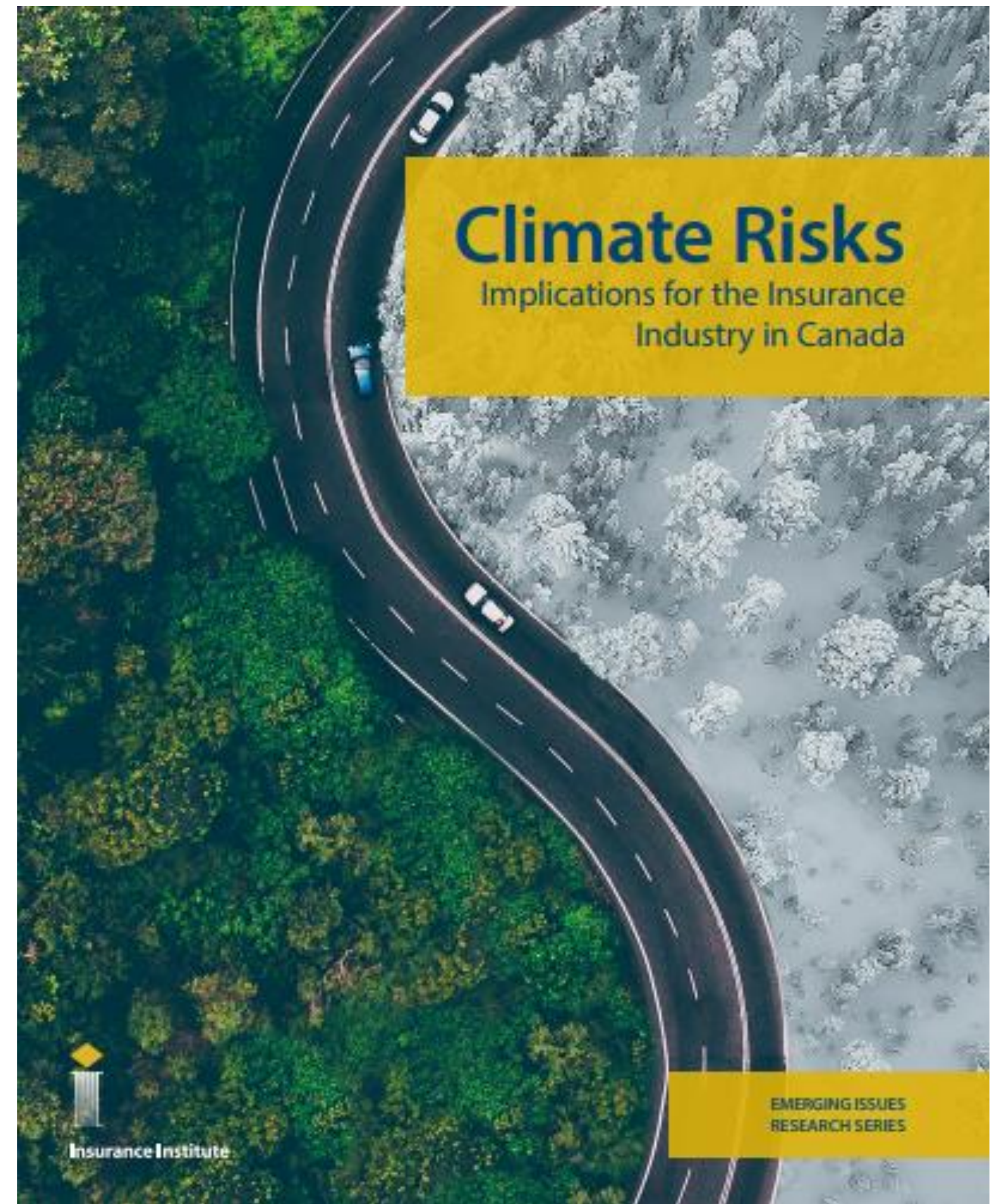
- Launched at the G7 in 2018
- Facilitate collaboration by leading global investors
- Work with global infrastructure policy and investors

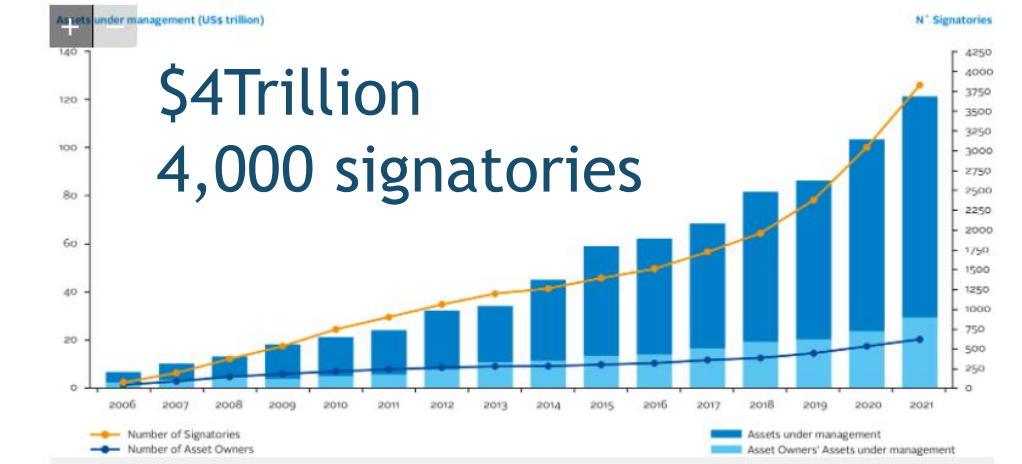


<https://www.investorleadershipnetwork.org/en/>

- **Physical Risk** such as floods and storms that damage property
- **Liability Risk** if parties affected from climate change seek compensation from those they hold responsible
- **Transitional Risk** in finance which could result from the transition to a net zero world including asset valuations

<https://www.insuranceinstitute.ca/en/resources/insights-research/Climate-risks-report>





The six Principles for Responsible Investment are a voluntary and aspirational set of investment principles that offer a menu of possible actions for incorporating ESG issues into investment practice

Principle 1: We will incorporate ESG issues into investment analysis and decision-making processes

Principle 2: We will be active owners and incorporate ESG issues into our ownership policies and practices

Principle 3: We will seek appropriate disclosure on ESG issues by the entities in which we invest

Principle 4: We will promote acceptance and implementation of the Principles within the investment industry

Principle 5: We will work together to enhance our effectiveness in implementing the Principles

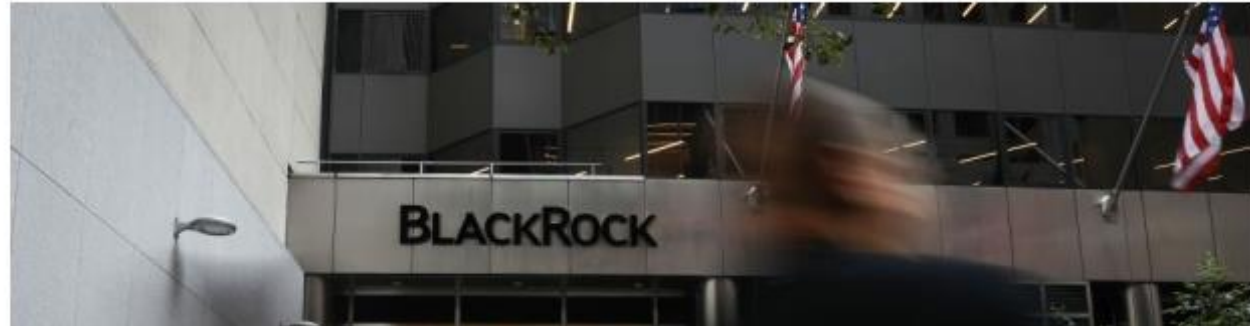
Principle 6: We will each report on our activities and progress towards implementing the Principles

BLOOMBERG NEWS WIRE | NEWS | VIDEO

NEWS WIRE | Company News | Investing Jan 9, 2020

BlackRock joins US\$41-trillion investor climate campaign

Laura Hurst, Annie Massa and Emily Chasan, Bloomberg News f t in e +





NEWS ABOUT CLIMATE

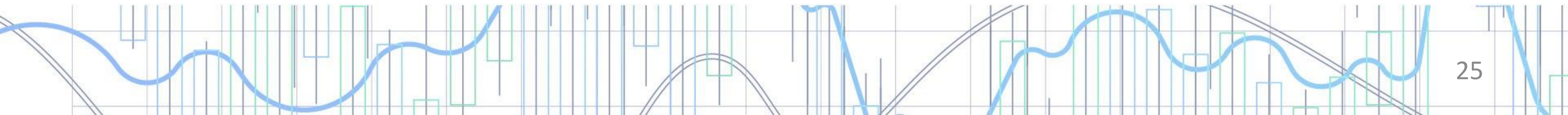
THE BUSINESS CASE | APPROACH ▾

GLOBAL INVESTORS DRIVING BUSINESS TRANSITION

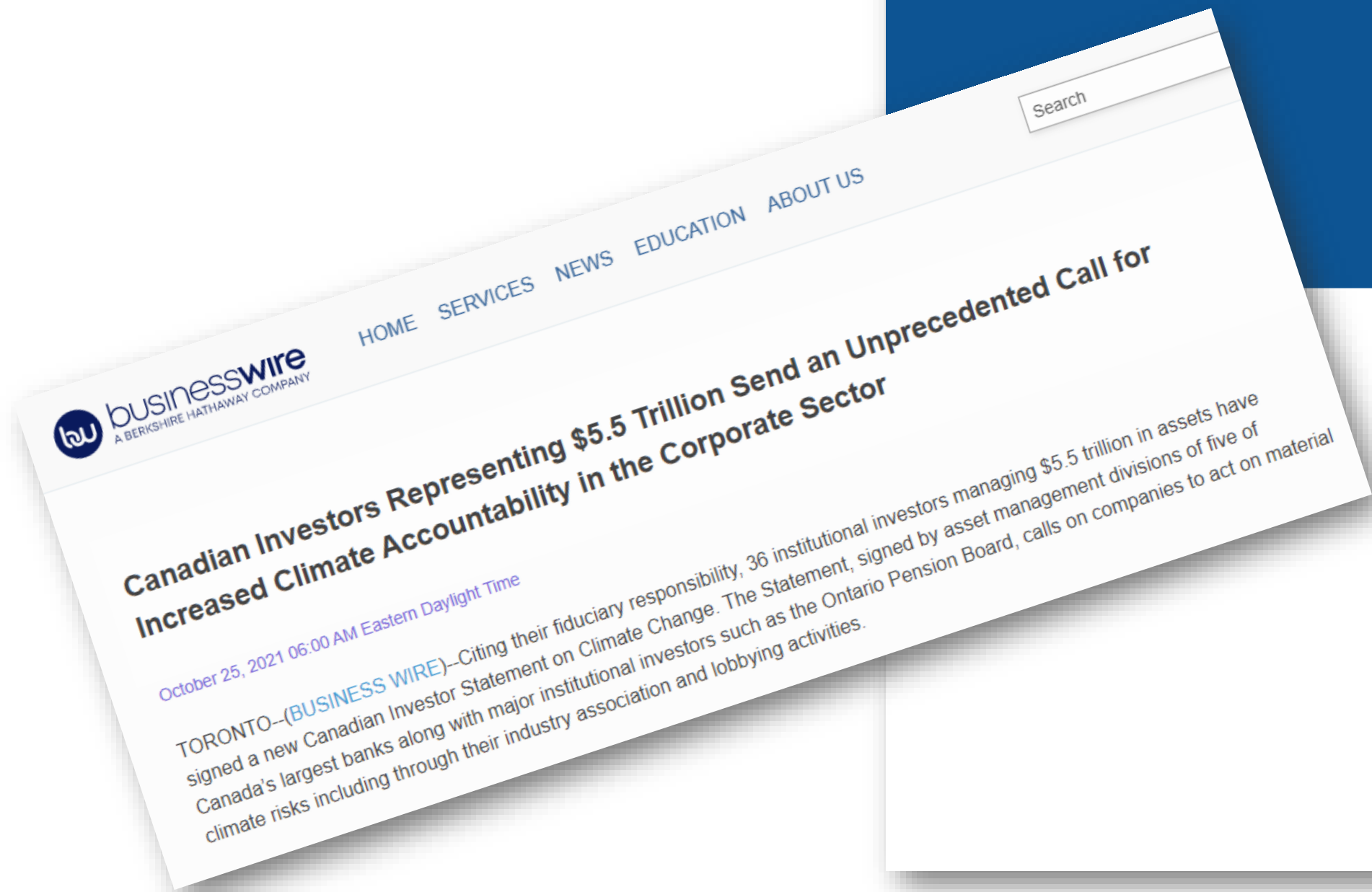
Climate Action 100+ is an investor-led initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change.



<https://www.climateaction100.org/>



Canadian Investors Climate Accountability Statement: \$5.5 Trillion



Citing their fiduciary responsibility, 36 institutional investors managing \$5.5 trillion in assets have signed a new Canadian Investor Statement on Climate Change. The Statement, signed by asset management divisions of five of Canada's largest banks along with major institutional investors such as the Ontario Pension Board, calls on companies to act on material climate risks including through their industry association and lobbying activities.

RiA Digital Academy



Ri Training for Financial Advisors, Planners & Investment Professionals

Net Zero Banking Alliance (NZBA)



Founding Signatories



INDUSTRY-LED, U.N.-CONVENED
NET-ZERO BANKING ALLIANCE

43 Founding banks
28.5 US\$ trillion in assets
23 Countries

MARK CARNEY'S PRIVATE FINANCE HUB
 UN CLIMATE CHANGE CONFERENCE UK 2021
 RACE TO ZERO
 UN environment programme | finance initiative

Signatories



Quick facts

- In the July 2020 *Economic and Fiscal Snapshot*, the Government of Canada announced funding of \$7.3 million over three years for the Sustainable Finance Action Council.
- The council’s early emphasis will be on enhancing climate-related financial disclosures in Canada’s private and public sector, aligned with the recommendations of the Task Force on Climate-related Financial Disclosures. The council will also prioritize gender and diversity reporting.
- The council’s principal mandate is to make recommendations on critical market infrastructure needed to attract and scale sustainable finance in Canada, including: enhanced assessment and disclosure of climate risks and opportunities; better access to climate data and analytics; and common standards for sustainable and low-carbon investments. These areas respond to the recommendations of the [Expert Panel on Sustainable Finance](#).
- The council will work in close collaboration with Canada’s new and independent [Net-Zero Advisory Body](#) to ensure climate considerations are reflected in public and private financial decision-making.



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Canada launches Sustainable Finance Action Council

From: [Department of Finance Canada](#)

News release

May 12, 2021 - Ottawa, Ontario - Department of Finance Canada

Around the world, investors and governments recognize that key to a sustainable economic future are sustainable financial investments. Sustainable finance is about incorporating environmental, social and governance factors into investment decisions and is a fast-growing market that is gaining speed as more and more businesses address climate change and transition to a low-carbon economy and seize the economic opportunities it presents.

Today, the Deputy Prime Minister and Minister of Finance, the Honourable Chrystia Freeland, and the Minister of Environment and Climate Change, the Honourable Jonathan Wilkinson, launched the Sustainable Finance Action Council.

The council will bring together public and private sector financial expertise to support the growth of a strong, well-functioning, sustainable finance market. Financial sector leaders will provide input on the foundational market infrastructure needed for a stable and reliable sustainable finance market in Canada that will boost investor confidence and drive economic growth. Mobilizing capital is a critical part of Canada’s work to meet its 2030 Paris target, achieve net-zero emissions by 2050, and ensure that Canada continues to have a prosperous economy.

Kathy Bardswick is today named as the inaugural Chair of Canada’s Sustainable Finance Action Council and will invite a regionally diverse group of leading financial sector organizations to participate as members of the council. Participants will include a broad representation of Canadian banks, insurance companies and pension funds. A public sector coordinating group will play a role in observing council meetings and advising the chair. The first meeting is expected to take place in early June, at which point confirmed participants will be announced. Other organizations and individuals from academia, think tanks and industry groups with expertise in sustainable finance will be engaged for their advice and input.

Net-Zero Advisory Body

In February 2021, the Minister of Environment and Climate Change announced the Net-Zero Advisory Body.

This independent group of experts has a mandate to engage with Canadians and provide advice to the Minister on pathways to achieve net-zero emissions by 2050.

Backgrounder | Terms of reference | **Members** | Links

Current Net-Zero Advisory Body

The Minister announced the initial members on February 25, 2021. Members will serve on a part-time basis for a renewable term of up to three years. The initial members bring together a diverse range of expertise in science, business, labour, policy-making, rural economic development, and Indigenous governance. Members bring different experiences, including from the transportation, clean technology, forestry, electricity, finance, and not-for-profit sectors.

Mandate of the Net-Zero Advisory Body

The primary mandate of the Net-Zero Advisory Body is to identify pathways to help Canada achieve net-zero emissions by 2050.

Some of the Advisory Body's work will include:

- focusing to identify actions that Canada can take to set a strong foundation to achieve net-zero while also supporting economic recovery following the COVID-19 pandemic;
- continuing to identify next steps in the years ahead to fight climate change and reach net-zero emissions that would grow our economy, while also making life more affordable;
- engaging broadly across Canada, including with stakeholders, Indigenous peoples, youth, other experts, and the public in a transparent and inclusive process; and,
- encouraging and empowering Canadians to help the country achieve its net-zero emissions goal.

The Advisory Body's reports and advice would inform the targets and emissions reduction plans required by the *Canadian Net-Zero Emissions Accountability Act*.

Second Session, Forty-third Parliament,
69 Elizabeth II, 2020

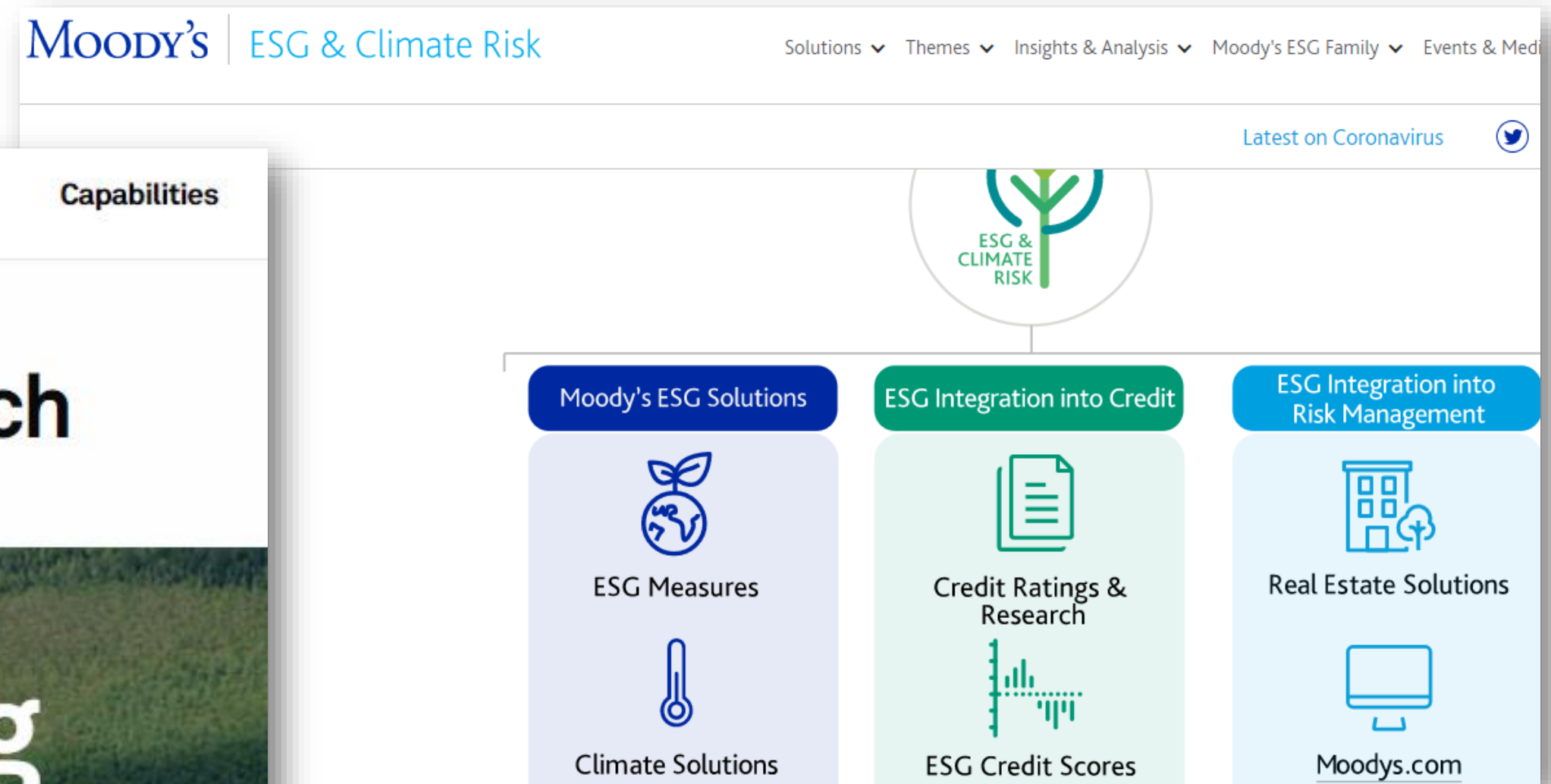
HOUSE OF COMMONS OF CANADA

BILL C-12

An Act respecting transparency and accountability in Canada's efforts to achieve net-zero greenhouse gas emissions by the year 2050

FIRST READING, NOVEMBER 19, 2020

Rating Agencies



Bloomberg, MSCI, Sustainalytics (Morningstar), Refinitiv (LSEG).....and many more provide ESG ratings

<https://www.spglobal.com/en/research-insights/featured/accelerating-progress-on-climate-risk>

<https://esg.moody's.io/solutions>

COP26 - UN Climate Change Conference
120,050 followers
3d • 🌐

Want to learn more about COP26?

#COP26 Explained sets out how the UK is working toward success in Gla: ...see more



UN CLIMATE CHANGE CONFERENCE UK 2021

COP26 EXPLAINED

WHAT DO WE NEED TO ACHIEVE AT COP26?

SECURE GLOBAL NET ZERO BY MID-CENTURY AND KEEP 1.5 DEGREES WITHIN REACH.

Countries are being asked to come forward with ambitious 2030 emissions reduction targets (NDCs) that align with reaching net zero by the middle of the century. To deliver on these stretching targets, countries will need to accelerate the phase-out of coal, encourage investment in renewables, curtail deforestation and speed up the switch to electric vehicles.

ADAPT TO PROTECT COMMUNITIES AND NATURAL HABITATS.

The climate is already changing and it will continue to change even as we reduce emissions, with devastating effects. At COP26 we need to work together to enable and encourage countries affected by climate change to protect and restore ecosystems, build defences, put warning systems in place and make infrastructure and agriculture more resilient to avoid loss of homes, livelihoods and lives.

MOBILISE FINANCE.

To realise our first two goals, developed countries must deliver on their promise to raise at least \$100bn in climate finance per year. International financial institutions must play their part and we need to work towards unleashing the trillions in private and public sector finance required to secure global net zero.

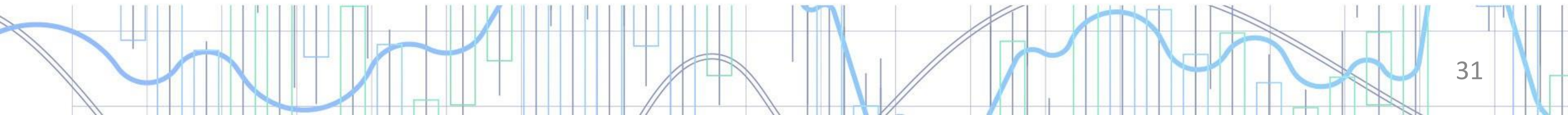
WORK TOGETHER TO DELIVER.

We can only rise to the challenges of climate change by working together. At COP26 we must finalise the Paris Rulebook (the rules needed to implement the Paris Agreement). And, we have to turn our ambitions into action by accelerating collaboration between governments, businesses and civil society to deliver on our climate goals faster.

2300+ BUSINESSES
700+ CITIES
160+ INVESTORS
600+ EDUCATIONAL INSTITUTIONS
20+ REGIONS

Race to Zero is the world's largest net zero alliance, with over 3,800 members, representing over 15% of the global economy, 1 billion people, and 21% of the world's biggest companies.

Are committed to halving emissions by 2030 and achieving net zero emissions as soon as possible – and by 2050 at the very latest as part of the Race to Zero.



Climate Risks

- **Physical Risks** related to the impact of climate change on assets, including floods, fires, and the challenges related to insurance industry coverage and potential changes. Infrastructure is not any different
- **Regulatory Risk** related to carbon markets, policy and rest or regulatory environment, think Energy revenues from traditional energy sales, vs carbon credits
- **Market Risk** given decarbonization trends by investors and asset developers, references to stranded assets
- **Reporting** on entire chain of production, parts manufacturing, Scopes 1, 2 & 3



In Summary.....



GHG



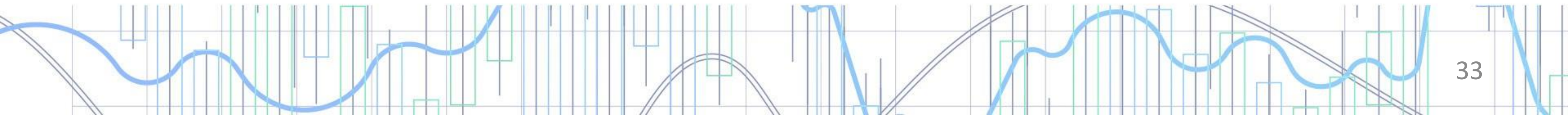
SFAC

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES



NZBA

NZAB



In Summary.....

- UN Paris Agreement and the UN SDGs (2015) have resulted in a fundamental change in the way we do business across all asset classes, including natural resources, infrastructure, industry and finance.
- Financing, which is key to get projects completed, is not only aware but fully immersed in sustainability changes from the perspectives of Regulation, Financing, Capital Allocation, Risk Management and Reporting
- Central Banks are tackling the systemic risk at the macro and micro levels: avoid Stranded Assets
- Regulators and Rating Agencies are looking at new ways of incorporating ESG into risk modeling
- Accounting profession and Boards also looking at climate change from their fiduciary duty perspectives
- Policymakers closely implementing policy that is aligned with their commitments under the Paris Agreement, and now COP26 commitments
- The use of technology can help tackle some of these challenges, tech as an enabler, not an end in itself

“Hope is absolutely crucial if we are going to get through this”, Jane Goodall

Net zero goal ‘greatest commercial opportunity of our time,’ says Mark Carney

Published on 27/02/2020, 1:10pm

Incoming UN special envoy, Cop26 president Alok Sharma and ECB president Christine Lagarde set out agenda for private finance at UN climate talks



Mark Carney told investors and bankers from the City of London that investments in the net zero emissions economy will have to become mainstream in the run-up to Cop26. (Photo: Simon Dawson, Bloomberg/ Bank of England/Flickr)



<https://www.climatechangenews.com/2020/02/27/net-zero-goal-greatest-commercial-opportunity-time-says-mark-carney/>

<https://www.facebook.com/time/videos/821800745303098/>

The ISF Team



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Sean Cleary, BMO Professor of Finance and Founding Director of the Master of Finance program at Smith School of Business, Queen's University. He holds a PhD. in finance from the University of Toronto, an MBA, an Institute of Corporate Directors designation, and is a CFA charterholder. He has authored 14 finance textbooks and has published more than 30 research articles, with his work having been cited nearly 3,500 times.



Sara Alvarado, CFA, MBA Executive Director

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A veteran investment professional with a focus on climate change and sustainability, Sara will help drive forward ISF's mandate to build Canadian sustainable finance capacity. Prior to joining ISF, she was head of risk and chief anti money laundering officer (CAMLO) at Canada Infrastructure Bank, where she was responsible for building the inaugural enterprise risk management function. Previously, she worked as senior officer, infrastructure new products and special transactions at the European Investment Bank, with a mandate to catalyze private-sector investments in the EU with focus on climate change and sustainability. Sara also spent 25 years in the investment industry in Canada.



Ryan Riordan, PhD Director of Research

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Ryan Riordan is the Associate Professor & Distinguished Professor of Finance at Smith School of Business, Queen's University. Prior to joining Smith, Ryan was an Assistant Professor of Finance at the University of Ontario Institute of Technology (UOIT) and an Assistant Professor at the Karlsruhe Institute of Technology in Germany. His work has been published in the *Journal of Financial Economics*, *Review of Financial Studies*, and the *Journal of Financial Markets* among many others.



Maya Saryyeva, MA Associate Director

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Maya Saryyeva joined the Institute for Sustainable Finance (ISF) in December 2018 to support the implementation of the Institute's core programs and outreach efforts. Prior to joining ISF, Maya worked in the international development sector, leading a number of United States Agency for International Development (USAID) funded governance and economic development initiatives in Eastern Europe as well as South and Central Asia. Maya is also pursuing a PhD in global development with a focus on sustainable finance. She researches the efficacy of global governance frameworks surrounding green bonds and sustainable initiatives.



Simon Martin Research Associate

Simon Martin holds a master's degree in economics from the University of Toronto and an undergraduate degree in finance and economics from Dalhousie University. Prior to joining the Institute for Sustainable Finance (ISF), Simon worked at the Urban Analytics Institute where he developed price prediction models and analyzed data. Simon has a strong interest in energy markets and renewable energy sources. He loves spending time outdoors and is passionate about a clean energy future.



Andrew Hakes Research Associate

Andrew joined the Institute for Sustainable Finance as a research associate in March 2020. Prior to joining the ISF, he worked as an analyst at the Delphi Group, a consultancy focused on climate change and corporate sustainability. Andrew holds a Master of Global Affairs from the University of Toronto's Munk School of Global Affairs & Public Policy, where he completed a specialization in global capital markets, as well as a collaborative program in environmental studies. Additionally, Andrew has a Bachelor of Arts (Hons) from the University of Western Ontario, holds a Sustainability Accounting Standards Board (SASB) FSA credential, and has completed CFA Level I.



Shuyi Hui Research Associate

Shuyi is passionate in exploring sustainable finance and developing unique solutions to complex problems with her experience in data mining and machine learning. Prior to joining ISF, Shuyi worked in the financial technology (fintech) industry, focusing on combining the practical uses of financial information with innovative technologies. Shuyi is a recent graduate of the Master of Management Analytics (MMA) program at Smith School of Business, Queen's University, holds a bachelor's degree in finance from the University of Toronto, and certified in Tableau, SAS Enterprise Miner, and SAS Viya. She enjoys hiking in nature and loves photography.



Will Hamilton Research Associate

William has a pure mathematics degree from Dalhousie University, and three years of experience working in radiomics and computer aided diagnosis at Toronto General Hospital. With a background in signal analysis and machine learning, he has a strong interest in the fundamentals of machine learning models, and their application in sustainable finance. William aims to improve the quality of curated datasets, with the ultimate goal of moving toward unsupervised end-to-end machine learning frameworks.



**Institute for
Sustainable
Finance**

**Thank You! Merci!
Look forward to the discussions.....**