

Moving forward. Together.

2021 Task-Force on Climate-related Financial Disclosures Report

2021 TCFD Report i

About us

Co-operators is Canada's second largest co-operative insurance provider with over 6,000 employees and over 1 million clients across the country with gross premiums of over \$4 billion. Through Addenda Capital, we are an asset manager with over \$40 billion in assets under management. Our mission is to provide financial security for Canadians and their communities. Increasingly, climate change threatens our ability to carry out our mission; addressing our changing climate and supporting the transition to a low carbon society is woven into our strategy and represents the largest undertaking our civilization will face this century.

About the Taskforce on Climate-related Financial Disclosures (TCFD)

The Financial Stability Board¹ established the TCFD to promote more effective climate-related disclosures that could in turn, enable stakeholders to better understand an entity's exposure to climate related risks and carbon-related assets. This report divides climate-related risks into three categories:



Transition risks and opportunities that relate to the transition to a lower-carbon economy



Physical risks relating to the impacts of climate change



Legal or litigation risks, which is the risk of climate-related litigation that could arise by those who have suffered damages from the effects of climate change

This TCFD report is the third iteration of our journey to full compliance with the framework set out by the TCFD recommendations. The accompanying disclosures cover a reporting period from January 1, 2021, to December 31, 2021, providing an overview of our approach to identifying and managing climate-related risks and opportunities.

¹ The Financial Stability Board is an international body that monitors and makes recommendations about the global financial system. See <u>https://www.fsb.org/</u>

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The science is clear

The Intergovernmental Panel on Climate Change (IPCC) Sixth "Assessment Report"² shows that the world will likely reach or exceed 1.5 degrees C of warming within just the next two decades. Our understanding of climate science, including the link to extreme weather, is stronger than ever: It is undeniable that human caused emissions such as burning fossil fuels are responsible for the warming we have experienced over the last century. Additionally, the science of attributing extreme weather events to human-induced warming has become increasingly more sophisticated – as an insurer, investor, asset manager and risk expert, we intimately understand this connection.

This year demonstrated the magnitude and urgency outlined by the sixth IPCC report: in British Columbia, extreme heat drove record breaking temperatures which were found by a preliminary study³ to have almost certainly been driven by human-caused climate change. The province was also ravaged by catastrophic flooding and unprecedented wildfires, leading to extreme physical harms, and costing billions in insured and uninsured losses – every fraction of a degree in warming leads to more dangerous and costly impacts; business as usual is not sustainable for our communities.

²<u>https://www.ipcc.ch/report/ar6/wg1/</u> <u>³https://www.worldweatherattribution.org/western-north-american-extreme-heat-virtually-impossible-without-human-caused-climate-change/</u>

The time to act is now

The sixth IPCC assessment report shows that we're on course to exceed 1.5 degrees C of warming by 2060 at current emission rates; if we act now, taking the necessary transformative action to curb emissions this decade, we can still limit warming to the 1.5 degree C maximum outlined in the Paris Agreement⁴. According to the IPCC report, planet Earth has a remaining "carbon budget"–the total amount we can emit and still be within the 1.5 degree C threshold of 400 GtCO₂. According to recent global emissions levels of approximately 36 GtCO₂ per year⁵, we have about 10 years before that budget is spent–that is why in 2021, recognizing the stark importance of acting; Co-operators Group unveiled its new climate strategy: the journey to net zero. We are joining a growing movement of financial services organizations helping to define a path for the crucial transition to a more sustainable zero-emissions economy.

The mission of our co-operative is to strengthen the financial security of Canadians and their communities. Climate change is a direct threat to this mission in that it creates risks to Canadians' financial security in the short-term and longer-term. For this reason, climate change is a top strategic priority for our organization, and we are actively engaged in both mitigation and adaptation efforts.

The foundation for our efforts is our deep understanding of risk, and our commitment to helping Canadians and their communities understand and protect themselves against climate risk. Co-operators continues to innovate with new product offerings, services, and tools to enhance our and our clients' resilience to climate change. We launched the Climate Hazards & Advanced Risk Modelling (CHARM) platform, a risk accumulation tool that provides insight and a strategy framework to proactively manage climate-related risk. This tool is used by various business units within Co-operators to support activities ranging from climate resiliency initiatives to underwriting practices. Co-operators was the first Canadian insurer to offer flood protection to any residential customer, regardless of risk; as a next step, we will launch the commercial equivalent of this product in the first half of 2022.

Although we know that society's efforts to mitigate the risks of climate change go far beyond our organization, we are committed to providing leadership and acting as a catalyst for a sustainable society. We have set a goal to achieve net-zero greenhouse gas (GHG) emissions in our operations and investments no later than 2040 and 2050 respectively. With these goals in mind, we are proud to be the first Canadian insurer and second Canadian organization to sign on to the UN convened Net-Zero Asset Owner Alliance (NZAOA). Our asset manager, Addenda Capital joined the Net Zero Asset Managers Initiative (NZAM) and launched one of the first climate transition funds in Canada.

"There is no question that collectively, we must significantly reduce our emissions to mitigate the increasing risks and impacts of our changing climate."

Rob Wesseling, President & CEO of The Co-operators

 ⁴ The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties in Paris on 12 December 2015.
 <u>5</u> Based on data from Climate Watch Data

Our journey to net-zero

Co-operators does not operate in a vacuum. Enabling the transformational change required to limit global warming to 1.5 degrees C requires global co-ordination from government and private industry. As an extension of our ongoing work with the United Nations Principles for Sustainable Insurance (PSI), we joined the UN-led NZAOA in June 2021 while our investment manager, Addenda Capital joined the NZAM in October 2021.

Recent years have seen a significant mobilization of the financial services industry to tackle the transition to a low-carbon economy. In the Canadian context, The Bank of Canada and the Office of the Superintendent of Financial Institutions (OSFI) and a small group of financial institutions, including Co-operators, finalized a pilot project at the end of 2021. The pilot aimed to use climate-related scenarios to better understand the transition risks that the Canadian financial system could face as a result of a shift to a low-carbon economy.

The sixth IPCC assessment report released in 2021 reiterates what we have known for a long time: emissions must be significantly reduced to avoid catastrophic increases in global average temperatures by the end of this century. Recognizing this, we have mapped our journey to net zero:

Net zero operations by 2040

We aim to reduce the emissions of our operations by 45% by 2030 and achieve net-zero by 2040. This includes both direct emissions (Scope 1) and indirect emissions (Scope 2 and 3), including emissions related to corporate offices, financial advisor offices, fleet vehicles, business travel, employee commuting and working from home, IT assets and services.

Net zero investments by 2050

By 2026, we will reduce the emissions from our investments⁶ by 20% compared to 2019. By 2050 at the latest, our entire investment portfolio will be net-zero. To keep track of our progress, we will set new interim targets every four years and disclose our progress toward these goals at least annually.

Investing in solutions

Addenda Capital launched the Addenda Climate Transition Canadian Equity Pooled Fund and the Addenda Climate Transition International Equity Pooled Fund in May 2021. Each were funded with \$50 million from Co-operators; these funds will invest in public companies that have outlined their planned transition toward net-zero. By 2030 Co-operators aims to have 60% of our investment portfolio in impact or climate transition investments.

The NZAOA is compromised of institutional investors from across the world with a shared commitment to transition their investment portfolios to net-zero GHG emissions by 2050 in line with the Paris Agreement.

By 2030 Co-operators aims to have 60% of our investment portfolio in impact or climate transition investments.

Milestones



- Became the first Canadian insurer to track and disclose the carbon footprints of our investments through the United Nations Principles for Responsible Investment (UN-PRI) Montreal Carbon Pledge.
- Our asset manager, Addenda, was the first Canadian asset manager to disclose the carbon footprints of all its equity funds.
- Received the Excellence in Governance Award for Best Practices in Sustainability and Environmental, Social and Governance from The Governance Professionals of Canada.
- Became the first Canadian insurer to offer residential overland flood coverage for all Canadians, regardless of their risk level. Later expanded our flood coverage offering to include storm surge protection.
- Signed on to the TCFD and put forward a pathway to implement its recommendations.
- Formally outlined our Climate Commitment which sets forth actions we will take as an organization to address climate-related risks and seize opportunities presented by a transition to a low-carbon economy.

Milestones (continued)



- Formalized our commitment to a net zero emissions future by signing the Accounting for Sustainability (A4S) Net Zero Statement of Support.
- Published our inaugural stand-alone TCFD report which discloses our climate change governance, strategy, and risk management practices accompanied by related metrics and targets.
- Included the first climate change scenario in our annual Financial Condition Testing ("FCT") stress testing analysis for our P&C businesses, a stepping-stone towards full 2 degree C scenario analysis.
- Achieved our target of becoming carbon neutral equivalent in our corporate operations' scope 1 and 2 emissions.
- Announced Co-operators' net-zero targets for operations and investments.
- Inclusion of the first climate change scenario in our FCT stress testing for our Life businesses and the addition of a stress "shock" test for our asset and investment portfolios.
- Joined the NZAOA and NZAM; Addenda launches its first Climate Transition Canadian and International Equity Pooled Funds.
- Participated in a climate scenario analysis pilot project with the Bank of Canada and OSFI.

TCFD Roadmap

We have a long history as a catalyst for sustainability and a strong advocate on climate change. Enhancing our climate-risk practices and disclosures is a core feature of our Climate Commitment which we formally launched in 2018. Through improved disclosure, our aim is to enhance our oversight, identification and management of climate-related risks and opportunities as well as strengthen the resilience of our corporate strategy. This can better enable our stakeholders to understand and mitigate the impacts of climate change.

Governance

Completed in 2021

- Ratified climate investing goals and operational carbon reduction targets
- Ratified net zero target for investments by 2050
- Presented climate change scenario analysis in FCT for life operations to Risk and Compensation Committee (R&CC)

In progress

- Provide ongoing climate education to Board committees and the Board of Directors
- Dialogue with executive management on weaving further climate objectives into 2023 to 2026 company strategy
- Executive management are required to have at least one goal in their performance plan that supports Co-operators sustainability or co-operative identity

Strategy

Completed in 2021

- Included stress "shock" for invested assets for property and casualty (P&C) operations' climate stress testing
- Performed initial climate stress test to a 2 degree C scenario for our life operations
- Maintained climate neutrality in operations
- Joined the NZAOA and NZAM
- Participated in the Bank of Canada and OSFI pilot project

In progress

- Progress of climate scenario analysis and implement lessons learned from Bank of Canada/OSFI pilot for climate-related transition risks
- Continue to coalition build and engage with peers and other climate leaders in industry and government

Risk Management

Completed in 2021

- Enhanced climate-related risk factor reporting in the Company's Own Risk and Solvency Assessment (ORSA) reporting
- Launched the CHARM platform

In progress

 Develop an official position on the integration of climate considerations into our underwriting approach

Future objectives

 Further enhance credit/equity risk assessment models for climate transition in ORSA and FCT reporting

Metrics and Targets

Completed in 2021

- Committed to net zero emissions targets for operations and investments
- Broadened the boundary of Co-operators "carbon inventory" for operational emissions

In progress

- Convert to the Partnership for Carbon Accounting Financials (PCAF) methodology methodology to calculate carbon footprint (financed emissions) for assets under management
- Align emissions reduction target setting methodologies with globally accepted approaches such as the Science Based Targets initiative (SBTi)

Future objectives

- Expand carbon footprint to include additional portfolios
- Measure selected Scope 3 emissions

TCFD Executive Summary

Co-operators new climate strategy and targets

- Net zero operational emissions by 2040
 By 2030, reduce emissions of our operations by 45% from 2019 baseline
- Net-zero in our investments by 2050
 By 2030, 60% of invested assets into impact and climate transition investments

Investments and asset management

- Addenda Climate Transition Canadian Equity PF
- Addenda Climate Transition International Equity PF
- Continued coalition building

 NZAOA
 NZAM
- Proxy voting and engagement-Addenda

Operational progress

- CHARM platform
- Commercial flood product
- Updated P&C stress testing
- Inaugural Life stress testing

Global research

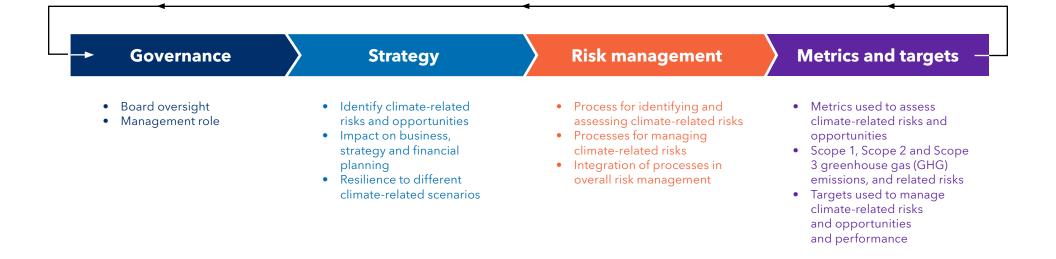
- IPCC Working Group I sixth assessment report released
 - 1.5 degrees C warming within the next two decades
 - 4.4 degrees C warming by 2100 with no mitigation
 - 400 gigatonnes of carbon dioxide (GtCO2 remaining) in Earth's "carbon budget"

Carbon footprint considerations

- Carbon neutral operations
- Carbon impact of investment portfolio

TCFD recommended disclosures

This report follows the TCFD's four recommendation categories: governance, strategy, risk management as well as metrics and targets.



Governance

Co-operators governance structure at the board and management levels combine to guide our approach to assessing and responding to climate-related risks. Committees and business groups actively work towards achieving metrics and targets.

Co-operators governance structure



Board level

At Co-operators, the Board of Directors (Board) oversees our management of climate-related risks and strategy. This is primarily executed through both the Sustainability and Citizenship Committee (S&CC) and the Risk and Compensation Committee (R&CC). Annually, the S&CC and R&CC hold a joint meeting to review our status on climate-related risks and initiatives, including progress on the TCFD recommendations.

S&CC

The S&CC is the highest governing committee for sustainability-related issues, including climate change. Meeting at least guarterly, it is comprised of four members of the Board and is responsible for fostering best practices in sustainability governance, steering the corporate responsibility agenda, and providing oversight of the sustainability performance of Co-operators group of companies, including progress against goals and targets. It advises the Board on the sustainability impact of key decisions and emerging sustainability issues, with a key focus on climate-related issues, risks, and opportunities. Furthermore, it is responsible for ensuring the alignment of the sustainability agenda with Co-operators business operations and oversees the integration of climate and sustainability practices into all our core business functions.

The S&CC is an advisor to the Board of Co-operators, informing and involving the Board on relevant topics at each Board meeting. Additionally, it reviews and provides recommendations for decisions made by the Board.

R&CC

Meeting at least quarterly, the R&CC is comprised of five members of the Board and is responsible for overseeing Co-operators group of companies' Enterprise Risk Management (ERM) program, including our identification of key risks, risk appetite, risk management policies, and risk monitoring and reporting. The R&CC oversees our Chief Risk Officer and offers guidance and advice to senior management on strategic issues linked to our Top Risk issues, including climate-related risk. The R&CC also provides oversight of our lending and investment policies, including the impact investment strategy which is managed by the Management Investment Committee (MIC).

Activity during 2021

Co-operators Board reviewed and approved our new climate strategy which includes updated climate investing goals and emissions reductions targets from our investments and operations. We are targeting net-zero GHG emissions in our operations and investments by 2040 and 2050 respectively. The Board participated in its semi-annual education days including sessions on climate change, the key topics covered were:

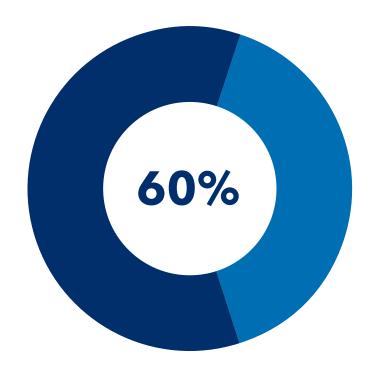
- Co-operators new climate investing goals
- Investing in climate transition
- Addenda's new climate transition pooled funds

The S&CC met six times to oversee how Co-operators meets its sustainability objectives. For example, the Committee reviewed a report on sustainable and impact investing, including discussions on sustainable food investment and calculation of investment carbon footprints. The Committee also participated in its annual joint meeting with the R&CC to assess trends and developments in sustainability including climate change, and to reflect on potential physical and transition risks and opportunities for Co-operators from recent climate-related developments.

The R&CC met ten times throughout the year to review, manage and monitor all aspects of risk management, including climate-related risks. Per Co-operators ORSA reporting, climate-risk is defined as a "Top Risk". The Committee approved Co-operators new climate investing goals in which 60% of its invested assets are to be held in impact or climate transition investments by 2030, with our entire investment portfolio to be net-zero by 2050 at the latest. The Committee also participated in its annual joint meeting with the S&CC to assess trends and developments in climate change as noted above.

Climate competence

In 2021, the Board continued to develop their knowledge with respect to climate considerations as noted above. Sustainability, of which climate is an integral component, is included in our Director Skills Matrix; the Sustainability skillset is defined as "experience with sustainability, showcasing a high degree of sustainability literacy, especially on the most material environmental, social and governance (ESG) trends, risks and opportunities for the organization including climate change."



The Committee approved Co-operators new climate investing goals in which 60% of its invested assets are to be held in impact or climate transition investments by 2030, with our entire investment portfolio to be net-zero by 2050 at the latest.

Management level

The governance of climate change cascades from the Board of Directors and its committees to the executive management team, which is responsible for executing the corporate strategy in pursuit of the organization's mission.

The executive management team allocates resources and ensures the organization has the capabilities to meet its climate-related goals, such as eliminating the organization's operational carbon footprint, ensuring clients are protected against flooding and other physical risks, and steadily increasing the proportion of the organization's investment portfolio in climate-related and resiliency-building impact investments. From the executive management team, mandates for climate action continue to cascade down to various business areas, including the Management Investment Committee (MIC). Additionally, all VP level management and above are required to have at least one goal in their performance plans that supports the organization's sustainability or cooperative identity goals. Each year the goals are audited, and the results are reported to the board and publicly through our annual integrated report.

The MIC oversees the implementation of our investment strategies and provides regular updates to the R&CC, ensuring that climate and sustainability impacts are a key focus area. The execution of our investment strategies is performed through our asset manager, Addenda.

Co-operators Sustainability and Citizenship department (S&C department), headed by the VP Sustainability and Citizenship, enables Co-operators' commitment to be a catalyst for a sustainable, co-operative society. The team is tasked with the integration of our sustainability principles throughout the organization, including our investment and insurance related functions.

Activity during 2021

Several developments and initiatives were achieved by executive management and our business units in 2021, including:

- The development and approval of Co-operators new climate investing strategy and goals
- The creation of a cross sectional TCFD working group to solicit updates from business units across the organization
- Further integration of climate-related risks in our ORSA report
- Release of Addenda's climate transition equity funds
- Development of the commercial equivalent to our personal flood risk coverage
- Research conducted to inform Co-operators potential approaches to address climate change through our insurance operations
- Implemented climate scenario analysis and stress testing for our Life operations
- Further refined P&C climate scenario to include stress testing of our asset and investment portfolios

Business functions and their climate-related roles and responsibilities



Underwriting and actuarial Continued calibration of climate risk e.g., flood, wildfires; and continue to develop climate scenario methodology



commercial flood

Pricing and product development
Embedding climate change
factors into product pricing
and further development of
innovative products such as



Enterprise risk management Continue to integrate climate-related issues into risk appetite calibrations, **ORSA** reporting



Asset management Continued embedding of sustainability and ESG principles into investing decision making for clients



Reinsurance Consider climate change in reinsurance agreements



Investment Uphold principles of Co-operators new climate investing strategy



Finance Production of the TCFD report



Sustainability and citizenship Continue to integrate our sustainability principles, including climate considerations, into investment and insurance related functions and across the organization

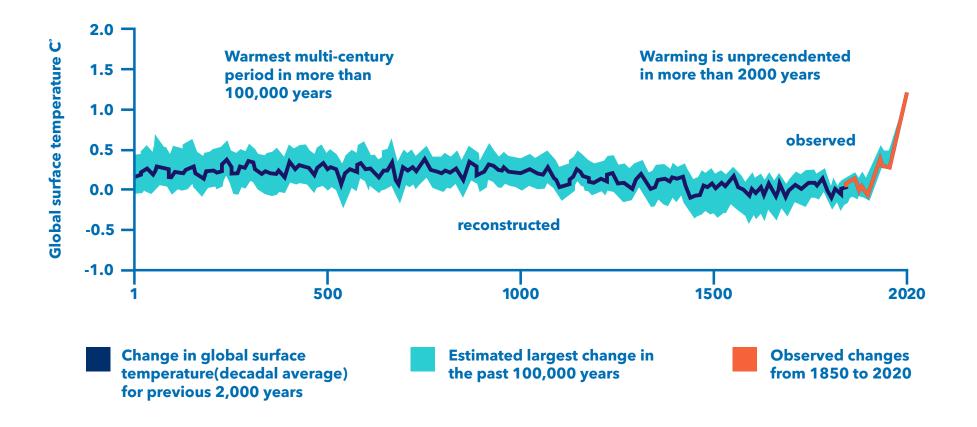
All VP level management and above are required to have at least one goal in their performance plans that supports the organization's sustainability or cooperative identity goals.

Strategy

Co-operators is proud to be a fierce advocate for climate change and a well-respected leader in climate and sustainability within the Canadian landscape. Confronting the climate crisis is at the core of our strategy, and that's why we have announced new net-zero targets for our investments and operations which will help define a path for the crucial transition to a more sustainable, zero-emissions economy.

Changes in global surface temperature

Part 1 of the IPCC sixth assessment report released in August 2021 shows that the world will likely reach or exceed 1.5 degrees C of warming within the next two decades. Only with ambitious emission cuts can the world keep global temperature rise capped to 1.5 degrees C as per the Paris Agreement.



Climate related targets

Our collective understanding of climate science, including the link to extreme weather, is stronger than ever. Capping the increase in average global surface temperature to the target of 1.5 degrees C as set by the Paris Agreement will require transformational change. The latest IPCC report has shown that CO2 emissions must be reduced to zero by 2050 to limit warming to 1.5 degrees C by the end of this century. The report has also warned of likely severe climate-related physical impacts even if aggressive actions are taken to achieve net zero targets.

With this in mind, our strategies on climate change cover all significant areas of our organization such as investments, insurance, and operations. Our new net-zero targets significantly increase the extent and level of our climate ambition. Our new climate related targets are:



By 2030, reduce emissions of our operations by 45% from 2019 baseline



By 2030, 60% of our investment assets into impact or climate transition investments



Net-zero emissions in our operations by 2040



Net-zero in our owned investments by no later than 2050

Investments and asset management

At the forefront of our investing strategy is aligning our investments with the goal of net-zero carbon emissions, consistent with the goals outlined by the Paris Agreement and the NZAOA. In 2021, we announced new net-zero targets for our investments by 2050 while by 2030, we will have 60% of our invested assets in impact or climate transition investments to support the transition to a sustainable, resilient, low-carbon society. To measurably demonstrate progress towards these goals, we have set interim targets and milestones which include reducing the emissions from our investments by 20%⁷ by 2026, when compared to 2019 levels, while also setting new interim targets every four years, and disclosing progress against these targets at least annually.

Climate investing strategy

Our strategy is guided by core principles which form an integral part of our broader mandate to our asset manager, Addenda:



MIssion and vision We are driven by our mission to provide financial security for Canadians and their communities



Science based Our positions are aligned with the Paris Agreement and the best available scientific literature (e.g., IPCC reports)



Leading We boldly advance leading climate related investment practices that address climate mitigation and climate resilience



Catalyzing We are active owners and collaborative advocates for enabling public policies and leveraging our resources and capabilities



Consistent We are consistent in our policies and practices across companies and lines of business.



Continuous improvement We carry the intention to raise our ambition level through new interim targets every four years.

As we are also an asset manager for both institutional and retail clients through Addenda, our strategy aims to assist these clients to address and mitigate climate-related risks. In 2021, Addenda joined the NZAM, furthering the commitment to ensure our investing aligns with the goal of net-zero greenhouse gas emissions. In addition, Addenda introduced its Climate Transition Equity pooled funds, which are available in their Canadian and International equity offerings. The funds focus on working with companies that share our common goal of a net-zero emissions economy by 2050. These funds focus on reducing emissions across all economic sectors along with achieving strong investment returns.

For more information about Addenda's climate strategy and transition funds, please visit addendacapital.com.

Underwriting and operations

At Co-operators, our mission is to provide financial security for Canadians and their communities. As the risks of climate change become increasingly significant, our ability to carry out our mission becomes more challenging. To be able to continue to meet our mission, consideration of climate-related risks and opportunities are at the forefront of our underwriting operations and business development.

We continue to develop climate related products and services: we were the first Canadian insurer to offer personal flood protection to any residential customer, regardless of risk and in 2021, we made significant progress in preparing our commercial flood product, which will launch in the first half of 2022. We continue to innovate and create solutions which allow us to better manage and understand climate-related risks and how they impact our insurance liabilities; in 2021 we launched the CHARM platform, a risk accumulation tool, used by Co-operators, with the ability to provide insight and a strategy framework to proactively manage risks and pricing. Furthermore, contributing to our overarching objective of community resilience, we partner across sectors on research and resources that empower communities to prepare and act ahead of climate-related events such as floods and wildfires.

As we are seen as a climate leader in the Canadian landscape, it is important that we lead by example. In 2020, we achieved our target of becoming carbon neutral equivalent, setting the stage for our expanded scope and more ambitious net-zero target announced in 2021. The evolution of our ambition to reduce our operational emissions is outlined by our goal to be net-zero by 2040; we will continue to invest in operational efficiency and other innovative solutions to achieve net zero greenhouse gas emissions from our operations, such as the construction of our new headquarters, which will pursue LEED-Gold and WELL certifications.

We partner across sectors on research and resources that empower communities to prepare and act ahead of climate-related events such as floods and wildfires.





Advocacy and engagement

Climate advocacy is a key part of our climate strategy; the transformational change required to limit global warming to 1.5 degree C by 2100 can only happen through globally coordinated efforts between governments, industries, and other actors by building alliances and coalitions.

Co-operators and Addenda have a long history of being stakeholders in United Nations Environmental Programmes (UNEP). Co-operators and Addenda are proud to have joined the NZAOA and NZAM respectively in 2021 and are looking forward to working with our peers to achieve our common goal of a net-zero emissions society. Addenda became a founding participant in Client Engagement Canada (CEC) during 2021. The CEC is a finance-led initiative aiming to combine the interests of the financial community and Canadian corporations during the transition to a net-zero economy. Co-operators joined Climate Proof Canada in 2021, which successfully advocated the federal government for commitments on key recommendations to finalize Canada's climate adaptation strategy.

Furthermore, our strategy incorporates leadership and mobilization efforts to build resilient communities and empower them to prepare and act ahead of climate-related events such as floods and wildfires. For example, in 2021, we announced a new \$500,000 multi-year commitment to support the flood risk awareness research group Partners for Action, through the University of Waterloo. This partnership helps reduce vulnerability in our communities through community engaged flood risk awareness and preparedness.

Climate scenario analysis

Assessing the resilience of an organization's strategy using climate-related scenario analysis is a key recommendation of the TCFD.

Indeed, there is an increased interest and attention from insurance and banking regulators, including industry bodies to develop scenario analysis and stress testing which can augment our understanding and assessment of climate-related risks. The development of these scenario analyses and stress testing tools for insurers remains at an early stage with methodological challenges and thin prescriptive guidance continuing to persist. However, there has been progress within the insurance and banking sectors through the Bank of Canada and OSFI pilot project which was completed at the end of 2021. This project aimed to build climate scenario analysis knowledge and support the disclosure of climate-related transition risks on investments to increase the understanding of the Canadian financial sector's potential exposure to climate-related transition risk. Co-operators was one of six financial institutions to participate in the pilot; to read the Bank of Canada report, please refer to the Bank of Canada website.

In 2021, the evolution of our internal climate scenario analysis and stress testing for our property and casualty (P&C) operations made significant process. Like 2020, the scenario presented to executive management in our Financial Condition Testing (FCT) report outlined four catastrophic events. The overall severity was calibrated using probability curves from an internal model which simulates multiple perils: the four events consisted of the reoccurrence of the 2013 Toronto flood, the 2013 Alberta flood, a 10-year return period severe convective storm, and a 20-year return period hurricane. Those loses, while material, would not pose a solvency threat to the company and would be significantly mitigated by our reinsurance treaties. The primary development in 2021 was the addition of a stress "shock" test in our asset and investment portfolio (equities and fixed income). The overall results of our scenario analysis and stress testing for our P&C operations was that our equity portfolio would be adversely impacted however, the extent of the modelled impact was mitigated by our impact and climate transition investing strategy. Importantly, our P&C operations would remain solvent and able to honour our financial obligations.

During the year, our Life insurance company: Co-operators Life Insurance Company (CLIC) developed their inaugural climate change solvency scenario which was presented to executive management in their FCT report. Like our P&C operations, this analysis focused on physical risk and related impacts; the basis for the scenario was developed inline with the guidelines issued by the Canadian Institute for Actuaries (CIA). These include potential impacts of adverse mortality and morbidity caused by rising temperatures and the consequent outcome of catastrophic weather events and/or natural disasters. These outcomes may include influenza or a pandemic outbreak due to more intense and frequent precipitation events leading to flooding, increasing exposure to toxic chemicals in runoff, and waterborne diseases. The assumptions used in this analysis were, but not limited to – mortality, morbidity, and asset depreciation⁸. Overall, CLIC remained solvent and well within regulatory capital requirements under this scenario, despite the adverse societal impacts.

Climate-related risks identified by Co-operators

Co-operators maintains a list of potential climate-related risks in an effort to assess the impacts and potential response, along with determining the period in which these risks can impact us.

Risks	Туре	Description and Response	Time Horizon
Increase in frequency and severity of extreme weather events	y of extreme an increasing protection gap between insured losses and total economic losses. Closing this gap by broadly		Short-term (1 to 3 years) and ongoing
Increase in mortality and morbidity	Physical	The mortality and morbidity risks related to climate change may impact our Life insurance portfolio. For example, increases in extreme weather events such as flooding, and heatwaves may lead to increased health issues including the spread of infectious diseases and viruses. Accordingly, we regularly test the health risk from an epidemic, among other risks, in our company's financial condition testing scenario.	Short-term (1 to 3 years) and ongoing
Risk exposure accumulation	Physical	Risk exposure accumulation is the risk of large aggregate losses from a single event or peril due to the concentration of insured risk exposed to that single event or peril. One of the biggest drivers of our insured losses is due to changes in exposure - we expect that adverse changes in exposure will continue to accumulate in the coming years. We have invested resources into tools such as CHARM to ensure that our understanding of our risk exposure is as accurate as possible.	Short-term (1 to 3 years) and ongoing
Asset depreciation and lower returns	Transition	Climate change may impact the value of our investment portfolio, as investee companies are further impacted by climate-related physical events and changes in technology, consumer preferences and/or regulation. This may directly lead to adverse financial performance for those companies and by extension, ourselves. Addenda factors in climate risk to their investment approach and is in regular dialogue with investee companies to advocate for increased disclosures of climate risks and management responses. Additionally, new product offerings launched in 2021 to provide asset owners the opportunity to participate in sustainable investing through Addenda's existing impact investing framework. Co-operators included asset and equity factors in climate scenario analysis to assess the impact of stress testing.	Short-term (1 to 3 years) and ongoing
Regulatory	Transition	Recent developments in energy and carbon emissions policy and pricing both in Canada and globally are leading to higher direct and indirect costs. Over time, these costs will increase pressure on our ability to maintain and grow profitability. This profitability will impact the companies we invest in.	Short-term (1 to 3 years) and ongoing
Litigation	Liability	Litigation risks relate to the adverse impact that could arise from parties seeking to recover losses suffered from climate change. Globally, there has been an increase in the number of legal challenges brought forward to remedy injury and losses from the consequences of climate inaction. New laws and regulations can create additional liability risks for insurance providers; Co-operators must be conscious of this emerging risk profile.	Long-term (5+ years)
Affordability of property coverage	Transition	Issues of affordability of property coverage due to increasing premiums resulting from climate change may result in provincial government intervention. We manage this risk through participation in industry adaptation and prevention projects to better understand how we can partner with other institutional stakeholders to reduce the probability of economic losses related to extreme weather events and their corresponding impact on premiums and coverage for our customers.	Long-term (5+ years)
Reputation	Transition	Co-operators is considering approaches to better understand the carbon intensity of our underwriting portfolios and our exposures to carbon-intense sectors, both for economic purposes and to proactively manage reputational risks and related market considerations.	Short-term (1 to 3 years) and ongoing

Climate-related opportunities identified by Co-operators

Similar to the tracking of climate-related risks for Co-operators, we look to opportunities to adapt and implement solutions to contribute to positive impact activities.

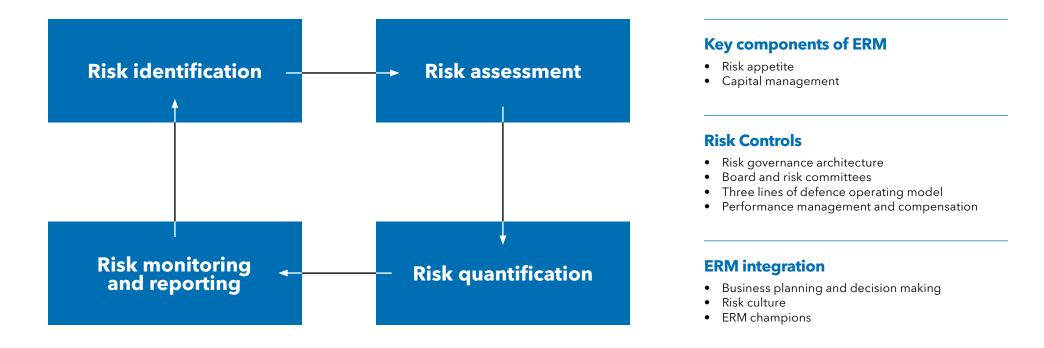
Opportunities	Туре	Description and Response	Time Horizon
Innovative product solutions	Product offerings	Designing innovative product solutions to enable and empower community resilience is prioritized in Co-operators' Climate Commitment. We developed Canada's first and only comprehensive water product that covers all Canadians, despite their level of flood risk. This product includes storm surge coverage and is available to all risk types and property types (including cottages and seasonal dwellings, apartments, and condos). In 2021, we made significant progress in the development of the equivalent flood product for the commercial market; this product is expected to launch within the first half of 2022. In addition, Addenda launched the Canadian and International Climate Transition Equity Pooled Funds.	Current
Developing new tools to mitigate climate-related risks for clients	Client resiliency	Our goal is to use the technology at our disposal to utilize modelling and analytics to better quantify climate risk. This encompasses several programs, including accurately tracking wildfire progression to enable more timely underwriting actions, expanding and targeting our efforts to notify users of impending extreme weather events; building tools to more precisely monitor risk accumulation to identify clients at a high-risk of being impacted by climate change; and developing advanced flood models and simulators to improve flood risk identification and monitoring.	Short-term (1 to 3 years) and ongoing
Operational efficiency – net zero	Resource usage	We achieved our target of becoming net carbon neutral equivalent in 2020, offsetting 100 per cent of our emissions. In 2021, we took these targets further, announcing our commitment to becoming net-zero in our operations by 2040. To achieve this, Co-operators will continue to reduce emissions across the value chain (Scopes 1, 2 and 3) by investing in sustainable operational efficiencies.	Long-term (5+ years)
Advance advocacy and enhance involvement by government stakeholders	Client resiliency	As part of an ongoing effort to build resilient communities, we have partnered across sectors on research and resources that empower communities to prepare and act ahead of climate-related events such as floods and wildfires. We recently announced a new multi-year commitment with flood risk awareness research group Partners in Action, while we continue to help communities build local wildfire resilience through our partnership with FireSmart Canada.	Current
Coalition building	n building Knowledge acquisition Co-operators does not operate in a vacuum. To limit global warming to 1.5 degrees C by the end of the century will requires transformational change. This change can only come about by building alliances and coalitions between industry and government. By pooling the resources and expertise of industry and government, society will give itself the best chance possible to achieve the goals set out in the Paris Agreement. In turn, our recent work with the Bank of Canada and OSFI led to valuable insights and lessons learned for our internal assessments of climate- related transition risks on our investments.		Current

Risk Management

Co-operators recognizes the rising priority of assessing the risks relating to climate change across the insurance and financial services industry. Sustainability risks, including climate change, are integrated within our broader risk management framework and assessment mechanisms. The ability to articulate what our risks are and how they are measured and managed is important for internal and external stakeholder understanding, as well as to ensure an accurate and consistent view of our risks through a variety of reporting and disclosure mechanisms. Our risk management practices are influenced by our co-operative identity; we apply a consultative and community-based approach that takes a comprehensive longer-term view of our business and seeks to incorporate sustainability principles as mandated by our S&CC.

Our risk framework

Successful application of our Enterprise Risk Management (ERM) Framework results in alignment between our articulated risk appetite, capital plans, and business strategies and operating plans. As risks and strategies evolve, our continuous cycle of risk identification, risk assessment, risk quantification and risk reporting ensure that we flex and adapt to the changes within our company and our operating environment. A comprehensive set of risk controls supports our overall ERM approach. ERM integration ensures that our ERM activities do not occur in isolation of business activities and are embedded in our risk culture.



Assessing risk

It is through the risk assessment process that we determine if risks are sufficiently mitigated, identify the need for more or less control, acknowledge the dependency that we may have on a particular mitigant, and discuss alternative mitigation options that may be available to us.

Our risk monitoring and reporting tools are designed to provide relevant, accurate and timely information on our material risk issues. For example, our risk dashboard provides a comparative of our ongoing risk profile against our articulated risk appetite, while our comprehensive stress testing program which now includes a climate-related scenario, reflects the assessment of our risk profile under moderate to severe stress, including discussion of risk controls to mitigate the exposure.

Top risks, which include climate change, are defined as those risks that could prevent us from fulfilling our vision and/or realizing our strategic goals. Furthermore, our top and emerging risks are synthesized into a report which highlights the potential impacts of the risk, and why it matters.



Three lines of defence model

At a high level, we employ a "three lines of defence" model which provides a comprehensive and holistic approach to risk management, comprising risk identification, assessment and quantification, control and monitoring, and reporting. We seek to apply this approach in managing climate-related physical, liability, and transition risks, among other risk types.

First Line Business Unit employees

Second Line

2

3

Independent oversight functions, including but not limited to: Actuarial, Governance, Legal, Finance

Third Line Internal and external auditors

- Risk identification, assessment, mitigation;
- Monitoring and reporting
- Alignment of business and operation strategies with risk appetite
- Provides independent oversight of risks and helps to build and monitor first line controls;
- Guidance in their area of expertise;
- Establishing appropriate risk controls as appropriate
- Provide independent assurance to the board and senior management;
- Assessing the effectiveness of governance, risk management and controls

Climate related risk approach

Investments

Our investment management firm Addenda holds primary responsibility, as outlined in our investment policies, for climate risk management and assessment for our invested asset portfolio. These responsibilities cascade to Addenda's portfolio managers who are best positioned to understand the material climate-related risks and opportunities within Co-operators' investment portfolios.

Addenda has implemented identification, assessment, and management processes at the research and due diligence stages for new investments. To support climate analysis for all current portfolio holdings, sophisticated tools and practices have been developed to assess and manage both physical and transition risks. These tools are used in conjunction with Addenda's Sustainable Investing Team who are responsible for assisting all portfolio managers with the identification and management of climate-related issues and trends, such as:

- Providing summaries of companies' climate-related information benchmarked against the TCFD recommendations, including emissions and target data.
- Leading engagement efforts with portfolio companies on topics including climate risk and emissions reduction.
- Producing and distributing industry reports and papers to investment teams on emerging best practices and associated global and Canadian initiatives for climate risk management by institutional asset managers and owners.

To further assist Addenda's portfolio managers' integration of climate risks, Addenda developed a standardized tool to allow portfolio managers to identify key ESG issues in all sectors within Addenda's equities and fixed income portfolios. The tool is based on SASB⁹ standards and supports the assessment of ESG issues both at the sector and issuer level. Key metrics assessed include: GHG emissions, energy use, reduction targets, exposure to renewable energy vs. fossil fuels, and emissions intensity relative to peers. For a more comprehensive analysis of Addenda's risk management practices, refer to Addenda's 2021 TCFD report.

Company risk assessment and management

Climate-related risk practices	Public equities	Commercial mortgages	Fixed income
Climate data	Applies	Applies	Applies
SASB+ tool	Applies	N/A	Applies
CatNet®	N/A	Applies	N/A

Portfolio management

Climate-related risk practices	Public equities	Commercial mortgages	Fixed income
CatNet®	N/A	Applies	N/A
Climate sector analysis	N/A	N/A	Applies
Carbon footprint	Applies	N/A	N/A
Climate scenario analysis	Applies	Applies	Applies

We have made the decision to offer flood insurance to everyone, regardless of risk.

Insurance

Co-operators dedicates significant resources to anticipate and prepare for the many impacts of climate change using a variety of approaches. We preserve our capital while managing costs through reinsurance risk transfer mechanisms. Reinsurance protections are designed to cover for catastrophes within given exposure limits, thereby protecting our insurance entities from excessive losses from significant catastrophes. Our insurance companies are responsible for controlling exposures to individual catastrophes and defining its reinsurance requirements based on our overarching risk appetite and capital profile. Moreover, our counterparty credit risk exposure is minimized by spreading our reinsurance program across many trusted partners and setting robust financial standards of eligibility.

The materiality and timing of climate-change impacts to our reinsurance arrangements depend on many factors, including global mitigation/sustainability efforts, global climate-related natural catastrophic events, geography of our portfolio, insurance product/coverage, risk type, etc. There is inherent uncertainty in the modeling of natural perils and climate change. Our catastrophe reinsurance strategy is based on a relatively near-term outlook with treaties commonly placed for one-year periods. This is aligned with the short-tail nature of the underlying business and our ability to re-price that business annually (and continuously manage the underlying portfolio). However, we recognize that climate change risks are apparent in near, mid, and long-term scenarios and have the potential to impact our profitability. It is widely accepted that climate change is resulting in more severe weather events and possibly increasing the frequency of such events. Our property catastrophe reinsurance program helps us manage the financial impact of these events by receiving recoveries from reinsurers when the events are above the attachment point of our reinsurance treaty. Reinsurers are aware of the impact of climate change and use this in consideration of their pricing and offering of reinsurance capacity. Therefore, climate change has a direct impact on our reinsurance agreements. If reinsurers begin to mandate higher retentions, then we would have to include that change in our operations (business planning, pricing, capital modeling, etc). However, the approach we take on our understanding of the risk, modeling, pricing, and underwriting helps us ensure we continue to have the support from reinsurers.

As an organization, we have made the decision to offer flood insurance to everyone, regardless of risk. Consequently, we are particularly vulnerable to adverse selection when it comes to this peril and as such, it is essential that we understand every aspect of the risk calculation of which climate-risk is a function. We launched the CHARM platform in 2021, which allows Co-operators to facilitate decision-making strategies to proactively manage risk, such as deciding where to grow the business and how to align pricing.

It is widely accepted that climate change is resulting in more severe weather events and possibly increasing the frequency of such events.

Participant in Bank of Canada/OSFI pilot project

In 2021, Co-operators was one of six institutions to participate in the Bank of Canada/OSFI pilot project to better understand the risks to the Canadian financial system that could arise from a transition to a low-carbon economy. The primary objectives of the pilot were to build the capabilities of regulators and financial institutions in climate scenario analysis, to help the Canadian financial sector improve its assessment and disclosure of climate-related risks and to increase understanding of the financial sector's potential exposure to a range of risks associated with this transition. The scope of the pilot was focused solely on climate transition risks to which a set of adverse climate transition scenarios were developed.

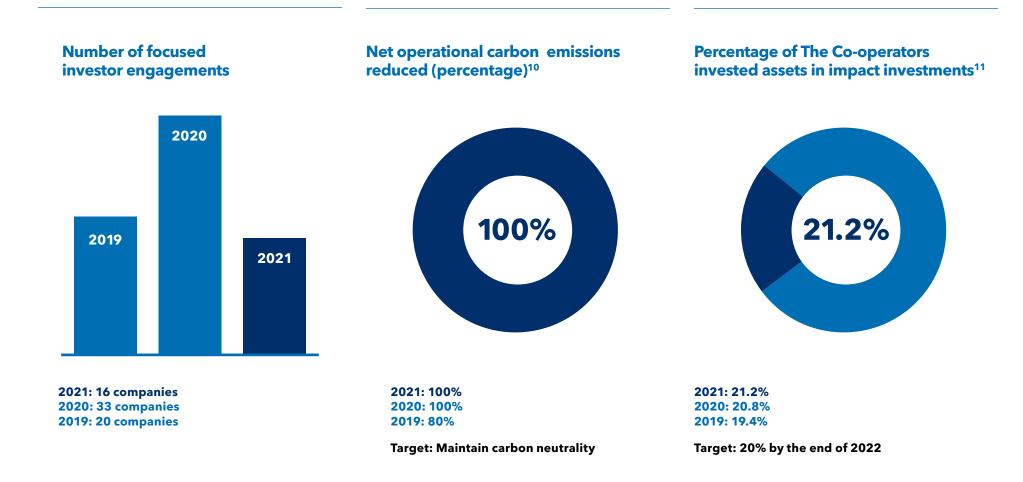


To read the full report, please visit the Bank of <u>Canada website</u>. The pilot explored the 10 most emissions-intensive sectors in the Canadian economy, including agriculture, primary energy, electricity and transportation – Co-operators' involvement focused on our P&C investment holdings as at December 31, 2019. Through our participation in this pilot, we learned valuable lessons which will provide us with the opportunity for a more granular credit and equity risk assessment. The credit model methodology from the pilot can be leveraged with our ORSA and FCT work, and there may be opportunities to include additional metrics in our TCFD reporting.

Metrics and targets

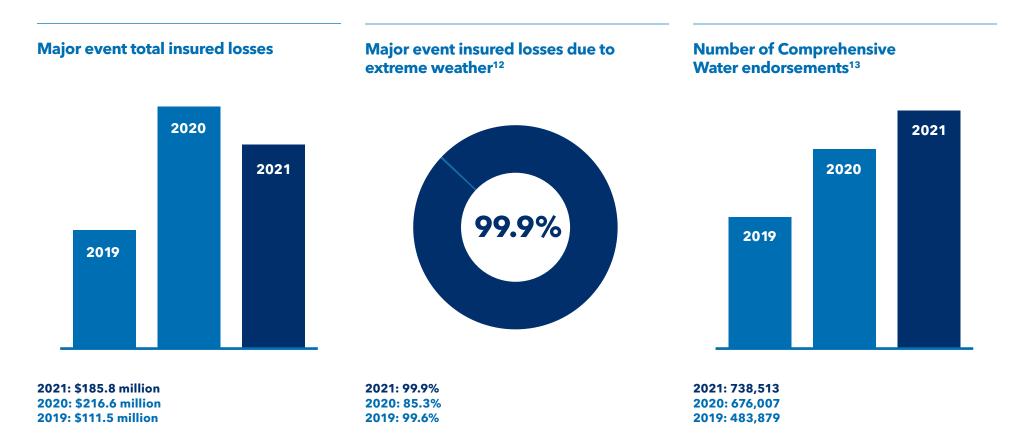
There are several metrics that we have implemented and targets we have set to help Co-operators manage our climate-related risks and opportunities pertaining to our operations, investments, and community outreach.

Metrics and targets used to assess climate-related risk and opportunities



¹⁰ In 2021, we established a new base year of 2019 and new operational boundaries that include more scope 3 emissions sources. 2021 is the first year we have offset carbon emissions in alignment with these new boundaries—prior year results were relative to our previous boundary and base year of 2010. For full details, see the Supplementary Disclosure at cooperators.ca/reports.

¹¹ Our impact investment portfolio totals \$2.64 billion, of which \$1.96 billion relates to climate specific investments.



In 2021, almost all of our major event loss claims were the result of extreme weather. While there is variation year over year, the clear trend in major event claims resulting from flooding, wildfires and storm activity shows a marked increase in both the frequency and severity of these events over the past 10 to 15 years as outlined in the IPCC report.

In 2021, flooding in British Columbia caused significant physical damage to properties and farms; as of December 31, 2021, Co-operators incurred \$58.6 million, net of reinsurance, in insured losses with respect to the floods in British Columbia. While in 2020, we saw storms and floods cause substantial damage in Fort McMurray, Alberta and Calgary, Alberta, respectively with a total of \$78.7 million paid in claims to date, net of reinsurance.

¹² The proportion of major events loss claims paid to clients due to extreme weather, including heavy and/or frequent rainfall, ice, hail, wind, flooding, and wildfires.

¹³ Our Comprehensive Water product is Canada's only flood product to cover overland flooding, storm surge, and storm and sewer backup, even for those at the highest risk of flooding.

Moving beyond carbon neutral to net-zero

We achieved our target of our operations becoming net carbon neutral equivalent in 2020, offsetting 100 per cent of our emissions. In 2021, we took these targets further, announcing our commitments to becoming net-zero in our operations and investments by 2040 and 2050 respectively, in line with the Paris agreement ambitions. To demonstrate progress towards these goals, we have set interim targets and milestones that will hold us to account; for example we will reduce the emissions of our operations by 45 per cent by 2030 and our financed emissions in our public equities and publicly traded corporate bond portfolios by 20% by 2026, from 2019 baselines.

Co-operators carbon inventory

In 2021, Co-operators expanded the boundary of our carbon inventory which tracks GHG emissions from our operations. This includes both direct emissions (Scope 1) and indirect emissions (Scopes 2 and 3), including emissions resulting from corporate offices, fleet vehicles, and business travel. As of 2021 we will also track emissions from employee commuting and working from home, financial advisor and service offices, IT assets and services.

Emissions (tCO2e)	2021	2020	2019
Scope 1			
Corporate offices (natural gas and fuel oil)	2,001	2,272	2,356
Fleet	413	510	888
Total Scope 1	2,414	2,782	3,244
Scope 2			
Corpoerate offices (electricity and steam)	3,565	3,689	4,115
Scope 3			
Advisor and service offices	5,281	5,651	5,717
Air travel	66	741	5,258
Auto travel	133	248	891
IT services	757	853	1,055
IT assets	2,511	1,380	1,788
Commuting	307	1,362	5,851
Work from home	3,348	2,808	575
Total Scope 3	12,403	13,043	21,135
Grand Total	18,382	19,514	28,494

Carbon emissions and related risks from investments

GHG emissions are a prime driver of rising global temperatures and, as such, are a key focal point of policy, regulatory, market and technology responses to limit climate change. As a result, organizations with significant emissions are likely to be more strongly impacted by transition risk than other organizations. At Co-operators, we track, monitor and report on the carbon footprint of our investments to better understand the investment implications of climate change. We also engage with companies in our investment portfolios through Addenda to advocate for effective climate change risk management and emissions reductions, along with relevant and consistent climate disclosures. Co-operators proxy voting policy (which is publicly available) includes supporting increased public disclosure of climate risks and management responses, cost-effective greenhouse gas emissions reduction measures, strategies and plans that are consistent with a 1.5 degrees C world, and ending obstruction to climate-friendly public policies.

The carbon footprint (or financed emissions) of our investments represents our share of the GHG emissions of the companies represented in our equity, preferred share, and corporate bond portfolios, which is calculated in tonnes of CO2 equivalent using the PCAF methodology.

We include our share of both scope 1 emissions (direct GHG emissions) and scope 2 emissions (GHG emissions from electricity, steam, heat, and cooling) for the companies in which we invest. We will seek to adopt best practice regarding scope 3 emissions (all other indirect GHG emissions) of our invested asset portfolio as better data and related methodologies to track these data become available to us.

Carbon footprint of assets under management

Addenda monitors the carbon footprint (financed emissions) of its portfolio assets¹⁴ over time. Addenda uses weighted average carbon intensity data (tCO2e¹⁵/\$m revenues) to assess their managed portfolio's sensitivity to an increase in carbon price. To calculate the financed emissions of Addenda's portfolio assets, company disclosures are utilized and where unavailable, proxy data is used to derive its financed emissions. For more details on Addenda's carbon footprinting and climate investing approach, and trends in the carbon intensity of its portfolios over time please refer to the Addenda TCFD report.

Financed emissions of Co-operators listed equity and corporate bond portfolios were as follows:

369,644 tCO2e

2020: 366,888 tCO2e 2019: 311,432 tCO2e

¹⁴ Equity portfolios (Canadian, U.S, and International) and Corporate Bonds ¹⁵ Scope 1 and 2 GHG emissions

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"Setting climate targets and joining the Net-Zero Asset Owner Alliance are natural extensions of our co-operative identity and are crucial to maintain the financial strength of our organization, our sector and our economy."

Karen Higgins, Chief Financial Officer of Co-operators

Key Contacts

Finance

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Sustainability & Citizenship

Chad Park Vice-President, Sustainability & Citizenship chad_park@cooperators.ca

Climate Partners

- CDP (Carbon Disclosure Project)
 - Climate change program (Addenda Capital Inc. and The Co-operators Group Limited)
 - Water program (Addenda Capital Inc.)
 - Forests program (Addenda Capital Inc.)
- Corporate Knights' Council for Clean Capitalism
- Green Bond Principles (Addenda Capital Inc.)
- Green Economy Canada
- Institute for Catastrophic Loss Reduction
- Institute for Sustainable Finance (Addenda Capital Inc. and The Co-operators Group Limited)
- Investor Network on Climate Risk (Addenda Capital Inc.)
- Montreal Carbon Pledge (Addenda Capital Inc. and The Co-operators Group Limited)
- Partners for Action Network
- FireSmart Canada®
- Responsible Investment Association (Addenda Capital Inc., The CUMIS Group Limited, The Co-operators Group Limited)
- Smart Prosperity Leaders' Initiative
- Task Force on Climate-Related Financial Disclosures Supporters (Addenda Capital Inc. and The Co-operators Group Limited)
- The Accounting for Sustainability CFO Leadership Network
- United Nations Disaster Risk Reduction
- United Nations Environment Programme Finance Initiative - Global Steering Committee
 - Pilot asset management group implementing the TCFD recommendations (Addenda Capital Inc.)
 - Pilot insurer group implementing the TCFD recommendations
 - Principles for Sustainable Insurance
- United Nations-supported Principles for Responsible Investment (Addenda Capital Inc.)

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