

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Great-West Lifeco Inc. (hereinafter “Great-West Lifeco” or “the Corporation” or “we” or “our” or “us”) is an international financial services holding company with interests in life insurance, health insurance, retirement and investment services, asset management and reinsurance businesses. We operate in Canada, the United States, UK and Europe under the brands Canada Life, Empower, Putnam Investments and Irish Life. At the end of 2021, our companies had more than 28,000 employees, 215,000 advisor relationships, and thousands of distribution partners – all serving our more than 33 million customer relationships across these regions. Great-West Lifeco and its companies have approximately \$2.3 trillion in consolidated assets under administration as of December 31, 2021, and are members of the Power Corporation of Canada group of companies. Great-West Lifeco trades on the Toronto Stock Exchange (TSX) under the ticker symbol GWO.

Great-West Lifeco has long held responsible and ethical management as an intrinsic value, which we believe is essential to our long-term profitability and value creation for our stakeholders. As such, one of the Corporation’s values is “committing ourselves to sustainability”. As part of this commitment, we believe playing an active and thoughtful role in ensuring the transition to a carbon neutral economy is a critical priority for the sustainability of our world. As a global financial institution, we recognize our opportunity to be an ally and active participant taking much needed collective action.

Last year, we were pleased to affirm our commitment to achieving net zero greenhouse gas (GHG) emissions well before 2050 in our operations and by 2050 for our financed emissions. Interim science-based targets are currently in development. We are hopeful our commitment drives new economic activities, generates climate resilient investment opportunities, and supports a viable transition for sectors that require transformational change to remain resilient as we respond to this global challenge. Meeting our commitment means working collaboratively with clients and advisory and investment partners to drive innovation towards a sustainable future. Our immediate focus will be on developing a comprehensive transition plan, including interim targets to reduce emissions reflective of contemporary climate science.

Our net zero ambition builds on our commitment to address climate-related risks and opportunities, which we have affirmed by becoming an official Supporter of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in 2020. It also reinforces the support of many of our subsidiaries for the United Nations-led Principles of Responsible Investing, and our commitment to integrate the TCFD recommendations into our operation practices and reporting functions as part of our broader ESG mandate across the organization.

The following document presents our approach to climate-related issues for the Great-West Lifeco and its operating subsidiaries.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

- Barbados
- Bermuda
- Canada
- Germany
- India
- Ireland
- Isle of Man
- United Kingdom of Great Britain and Northern Ireland
- United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

CAD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C-FS0.7

(C-FS0.7) Which activities does your organization undertake, and which industry sectors does your organization lend to, invest in, and/or insure?

	Does your organization undertake this activity?	Insurance types underwritten	Industry sectors your organization lends to, invests in, and/or insures
Banking (Bank)	No	<Not Applicable>	<Not Applicable>
Investing (Asset manager)	Yes	<Not Applicable>	Exposed to all broad market sectors
Investing (Asset owner)	Yes	<Not Applicable>	Exposed to all broad market sectors
Insurance underwriting (Insurance company)	Yes	General (non-life) Life and/or Health	None of the above

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	CA39138C1068
Yes, a Ticker symbol	Lifeco trades on the TSX under ticker symbol GWO
Yes, a SEDOL code	BG05N18

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	The Risk Committee of the Board of Directors is responsible for, among other things, oversight of the Corporation's enterprise risk management (including its management of sustainability risk and more specifically climate change risk). Oversight of climate-related risks is an important responsibility of the Risk Committee's mandate, particularly given the uncertain nature of climate-related issues. Sustainability risk, including climate change, is explicitly reflected in the ERM Framework. The Risk Committee oversees the ERM framework, which includes financial risks (market, credit, and insurance) and non-financial risks (operational, conduct, and strategic). We recognize that climate change and sustainability risks are not a stand-alone risk type, but rather underlie all risk types. In 2021, the Risk Committee reviewed our Corporate Purpose and Social Impact Strategy, which included the Great-West Lifeco's net zero by 2050 commitment. They also approved the updated Own Risk and Solvency Assessment (ORSA), which affirmed that the balance sheet remains resilient following additional climate scenario and stress testing of physical flood and wind risks in our Property & Casualty (P&C) reinsurance and mortality and morbidity insurance business.
Board-level committee	The Investment Committee of the Board of Directors is responsible for, among other things, climate change as part of the oversight it provides on global investment strategies, including climate-related transition risks and opportunities such as cleaner energy sectors that could impact our investment growth strategies. Oversight of climate-related impacts are an important part of the responsibility of the Investment Committee of the Board, enabling the Corporation to proactively identify and mitigate potential risks, while ensuring we maximize the opportunities within our investment portfolio.
Board-level committee	The Audit Committee reviews and recommends to the Board of Directors for approval certain corporate disclosures of environmental related information (including climate-related topics) with respect to governance, risks, opportunities and performance on an annual basis. In 2021, this included climate-related corporate disclosures, including our net zero commitment.
Chief Executive Officer (CEO)	The President and Chief Executive Officer of Great-West Lifeco is informed of CSR-related issues, including climate-related matters, via a number of management reporting channels. The CEO has oversight over the Corporation's climate-related strategies and resources and capabilities within the Corporation to support those strategies, including a recent senior management appointment focused on advancing the Corporation's CSR strategy and related policies. Management of climate change is formally established at the executive level of the Corporation through the Sustainability Risk Working Group (chaired by the Chief Risk Officer) and the Sustainable Investment Council (chaired by the Chief Investment Officer). In 2021 the President and CEO reviewed and provided senior executive oversight over the development of the Corporate Purpose and Social Impact Strategy, which included the Great-West Lifeco's net zero by 2050 commitment.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding risk management policies</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p> <p>Other, please specify (Climate-related corporate disclosures)</p>	<p>Climate-related risks and opportunities to our own operations</p> <p>Climate-related risks and opportunities to our investment activities</p> <p>Climate-related risks and opportunities to our insurance underwriting activities</p> <p>The impact of our own operations on the climate</p> <p>The impact of our investing activities on the climate</p>	<p>The Great-West Lifeco Board of Directors and Board-level committees (including the Risk Committee, Investment Committee, and the Audit Committee) together have oversight of climate-related issues and meet at least quarterly. The Risk Committee reviews the ERM Framework, including the Risk Appetite Framework. The Risk Committee provides oversight and monitors both current and emerging risks and opportunities facing the Corporation, including climate-related transition, physical, and liability risks. In this respect, climate change is one of the stress and scenario tests within our ORSA report. The climate change scenarios incorporate all ERM Framework categories of risk, including transition, physical and liability risks. The Investment Committee reviews risks and opportunities related to our investment strategy and activities, including specific physical and transition risks. The Investment Committee also oversees our investment strategies and performance against investment plans, including cleaner energy investments through our private debt placements in renewable energy projects. In 2021, the Board of Directors, Risk Committee and Investment Committee, reviewed our Corporate Purpose and Social Impact Strategy, which included the Great-West Lifeco's net zero by 2050 commitment. They also approved the update to the Own Risk and Solvency Assessment (ORSA) report, which affirmed that the balance sheet remains resilient following additional climate scenario and stress testing of physical flood and wind risks in our Property & Casualty (P&C) reinsurance and mortality and morbidity insurance business. The Audit Committee reviews and recommends to the Board of Directors for approval certain corporate disclosures of environmental related information (including climate-related topics) with respect to governance, risks, opportunities and performance on an annual basis. In 2021, climate-related corporate disclosures, including our net zero commitment, were approved by the Audit Committee.</p>

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	Board competencies for corporate sustainability are presented in the 2021 Management Proxy Circular with 15 board members possessing related skills and experience in a variety of areas including sustainability, and at least 2 board members with specific climate-related skills.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Reports to the board directly	Both assessing and managing climate-related risks and opportunities	<p>Risks and opportunities related to our investing activities</p> <p>Risks and opportunities related to our insurance underwriting activities</p> <p>Risks and opportunities related to our own operations</p>	Quarterly
Chief Risks Officer (CRO)	CEO reporting line	Both assessing and managing climate-related risks and opportunities	<p>Risks and opportunities related to our investing activities</p> <p>Risks and opportunities related to our insurance underwriting activities</p> <p>Risks and opportunities related to our own operations</p>	Quarterly

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Investment Officer (CIO)	Other, please specify (President and Group Head, Strategy, Investments, Reinsurance and Corporate Development)	Both assessing and managing climate-related risks and opportunities	Risks and opportunities related to our investing activities	Quarterly
Other, please specify (Deputy Chief Financial Officer)	Finance - CFO reporting line	Both assessing and managing climate-related risks and opportunities <i>Other, please specify: Reviewing and approving sustainability strategies</i>	Risks and opportunities related to our own operations	Quarterly
Other, please specify (Executive Risk Management Committee)	Risk - CRO reporting line	Both assessing and managing climate-related risks and opportunities	Risks and opportunities related to our investing activities Risks and opportunities related to our insurance underwriting activities Risks and opportunities related to our own operations	Quarterly
Other, please specify (Lifeco Strategic Operating Committee (LSOC))	Risk - CRO reporting line	Both assessing and managing climate-related risks and opportunities	Risks and opportunities related to our investing activities Risks and opportunities related to our insurance underwriting activities Risks and opportunities related to our own operations	Quarterly
Other, please specify (Lifeco Executive Management Committee (LEMC))	CEO reporting line	Both assessing and managing climate-related risks and opportunities	Risks and opportunities related to our investing activities Risks and opportunities related to our insurance underwriting activities Risks and opportunities related to our own operations	More frequently than quarterly
Other, please specify (Sustainability Risk Working Group)	Risk - CRO reporting line	Both assessing and managing climate-related risks and opportunities	Risks and opportunities related to our investing activities Risks and opportunities related to our insurance underwriting activities Risks and opportunities related to our own operations	More frequently than quarterly
Other, please specify (Sustainable Investment Council)	Investment - CIO reporting line	Both assessing and managing climate-related risks and opportunities	Risks and opportunities related to our investing activities Risks and opportunities related to our insurance underwriting activities	More frequently than quarterly
Other, please specify (CSR Council)	Other, please specify (Deputy Chief Financial Officer and Chief Accounting and Control Officer)	Both assessing and managing climate-related risks and opportunities <i>Other, please specify: Reviewing and approving sustainability strategies</i>	Risks and opportunities related to our own operations	Annually
Chief Sustainability Officer (CSO)	CEO reporting line	Both assessing and managing climate-related risks and opportunities <i>Other, please specify: Reviewing and approving sustainability strategies and corporate communications. Providing strategic oversight on the deployment, positioning and communications associated with our Corporate Purpose and Social Impact Strategy, which includes our net zero commitment.</i>	Risks and opportunities related to our investing activities Risks and opportunities related to our insurance underwriting activities Risks and opportunities related to our own operations	Quarterly

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Incentives for climate-related issues are provided at the various functions and business lines of the Great-West Lifeco business. Specifically, incentives related to climate-related issues include integration into the business, implementing strategies, achieving targets, performance objectives and reporting expectations.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Other C-Suite Officer	Non-monetary reward	Emissions reduction target	The Deputy Chief Financial Officer's annual objectives include oversight on the Corporation's corporate social responsibility initiatives, including activities being undertaken to achieve our carbon reduction target.
Chief Risk Officer (CRO)	Monetary reward	Other (please specify) (Climate change-related risk management)	The Great-West Lifeco Chief Risk Officer is compensated based on the effectiveness of the risk management oversight function, which includes providing independent risk oversight of all risk-taking activities and embedding a disciplined risk management culture across Lifeco. The CRO conducts an annual risk culture assessment of Lifeco leaders as part of the annual compensation process and reports the results to the Compensation Committee of the Board. The assessment includes a component of compliance with our ERM Framework which incorporates sustainability risk including climate change risk.
Other, please specify (CSR Committee)	Non-monetary reward	Emissions reduction target	The CSR committee members' annual objectives include executing on the Corporation's corporate social responsibility initiatives, including activities being undertaken to achieve our carbon reduction target.
Other, please specify (VP, Corporate Properties)	Monetary reward	Emissions reduction target	The Vice President, Corporate Properties variable compensation bonus structure includes executing on initiatives to achieve our carbon reduction target.
Other, please specify (Property Catastrophe Team)	Monetary reward	Other (please specify) (Risk management)	The Great-West Lifeco leadership property catastrophe team is compensated for identifying optimal property catastrophe cover retrocession reinsurance opportunities within defined criteria and considering exposure to property risks, including physical climate parameters.
Facilities manager	Monetary reward	Emissions reduction target	The corporate property managers at GWL Realty Advisors Inc. that manage Great-West Lifeco's corporate head office and investment properties are rewarded through the company's annual bonus structure for progress on achieving BOMA BEST® certifications, which aligns with our energy and carbon reduction objectives and includes sustainable procurement considerations. Various property managers of Great-West Lifeco are also incentivized through their annual bonus structures for progress being made towards energy reduction targets at buildings and contributions to emissions inventories and reporting.
Chief Investment Officer (CIO)	Monetary reward	Portfolio/fund alignment to climate-related objectives	The Great-West Lifeco Chief Investment Officer is compensated based on the value created through our investment portfolios. Ensuring environmental criteria, including climate-related risks and opportunities are considered in our investment decision-making related to acquisitions or divestments in part of this mandate, which could have an impact on value creation in our investments. In addition, the Chief Investment Officer at our Irish Life Investment Managers (ILIM) subsidiary has monetary incentives to enhance our overall ESG solutions for clients, improve the carbon intensity of our discretionary portfolios versus broad market benchmarks and increase the percentage of AUM in ESG strategies, which includes climate-related factors.
Portfolio/Fund manager	Monetary reward	Portfolio/fund alignment to climate-related objectives	The portfolio fund managers in our Irish Life Investment Managers affiliate have performance incentives tied to ensuring the investment fund portfolio is 30% more carbon efficient per asset class than the benchmark.
Dedicated Responsible Investment staff	Monetary reward	Portfolio/fund alignment to climate-related objectives	The sustainable investing team works with the broader equity research and portfolio management team to incorporate ESG, including climate change, into the investment process. The objectives of this mandate are linked to performance objectives and incentives.
Chief Sustainability Officer (CSO)	Monetary reward	Emissions reduction target	The Chief Sustainability Officer's annual objectives includes strategic oversight on the deployment, positioning and communications associated with the Corporation's Corporate Purpose and Social Impact Strategy, which includes our net zero commitment.

C-FS1.4

(C-FS1.4) Does your organization offer its employees an employment-based retirement scheme that incorporates ESG criteria, including climate change?

	Employment-based retirement scheme that incorporates ESG criteria, including climate change	Describe how funds within the retirement scheme are selected and how your organization ensures that ESG criteria are incorporated	Provide reasons for not incorporating ESG criteria into your organization's employment-based retirement scheme and your plans for the future
Row 1	Yes, as an investment option	Great-West Lifeco incorporates ESG principles into self-directed defined contribution employment-based retirement schemes through the responsible investment options offered to employees by select subsidiary investment management companies. Specifically, this includes all our funds that are managed with an ESG integration approach, as well as socially responsible investment (SRI) funds, and/or a brokerage window to select sustainable investment options are provided. These options, or a subset of them, are available for employees at Canada Life, Irish Life Investment Management, Empower Retirement, PanAgora, and Putnam Investments (as part of investment options for employees' 401(k) plans in the USA).	<Not Applicable>

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	2	The definition of short-term will vary depending on the process, initiative or objective. With respect to the classification of current and emerging risks, we generally consider the short term to be 0–2 years. Our strategy development function does not formally define time horizons however they generally consider short-term to be 1-2 years.
Medium-term	2	5	The definition of medium-term will vary depending on the process, initiative or objective. Our strategy development function does not formally define time horizons however; they generally consider medium-term to be 2-5 years.
Long-term	5	25	The definition of long-term will vary depending on the process, initiative or objective. Our strategy development function does not formally define time horizons however; they generally consider the long-term to be beyond 5 years to 25 years.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

We define substantive financial or strategic impacts on our business based on our Enterprise Risk Management (ERM) framework based on a consideration of the velocity, probability and impact of a risk on our business. A substantive financial impact occurs where the following conditions occur: high velocity (immediate adverse impact on business operations and market valuation and the speed of onset of impact is less than 6 months); high impact (greater than \$1 billion impact on earnings or capital) and high probability (plausible scenario but still unlikely greater than 25%).

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

Sustainability risks, including climate change, are integrated into the ERM Framework, which provides the foundation to enable effective risk management and oversight. We recognize that climate change risk impacts both financial risks (market, credit, insurance) as well as non-financial risks (operational, conduct, strategic). Climate change risks are not stand-alone risk types, but underlie all risk types (e.g. credit, market, insurance, operational and strategic risk). As a result, the processes for managing climate change risks are embedded in the processes for managing each risk type. A key component of the ERM framework is the ongoing assessment of current and emerging risks within our direct operations. Through this process, the materiality of risks is assessed based on velocity, probability and impact. Where material issues are identified, policies and risk management programs, and controls are established to ensure the risks and opportunities are being addressed through consistent guidelines and standards. Within our direct operations, for example, we assessed the impacts of physical extreme weather events on our business operations, including office locations and data centres. For example, at our Winnipeg campus we tested a 1 in 22-year Enhanced Fujita (EF) scale tornado with a possible estimated loss exposure of \$33.4 million. In 2021, we also assessed extreme weather events in Europe and possible flooding impacts in Ireland. Through the materiality assessment, we determined that while the risks were noteworthy, the losses would not be substantive to the business, representing less than 1% of capital and operating expenditures. Furthermore, the climate-related physical risks would be further minimized given the inherent diversification of our business offices, data centres and business continuity centres, in Canada, the U.S., and Europe. To continue to develop our processes, these assessments are now shared across our business through our risk scenario library. From a transition standpoint, we assessed the possible reputational risks from a lack of disclosure and transparency on climate governance, science targets, net zero commitments, risk management, strategy and performance. Last year, in addition to enhancing our public disclosure on climate-related matters (CDP submission, 2021 Annual Report, ESG Scorecard, Public Accountability Statement and the Sustainability Reports of Canada Life, UK, Putnam, and Irish Life), we also formally committed our net zero by 2050 ambition following a rigorous risk assessment process by our ERM team.

Value chain stage(s) covered

Upstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

Sustainability risks, including climate change, are integrated into the ERM Framework, which provides the foundation to enable effective risk management and oversight. We recognize that climate change and sustainability risk impacts both financial risks (market, credit, insurance) as well as non-financial risks (operational, conduct, strategic). Sustainability risk is not a stand-alone risk type, but underlies all risk types (e.g. credit, market, insurance, operational and strategic risk). As a result, the processes for managing sustainability risk are embedded in the processes for managing each risk type. A key component of the ERM framework is the ongoing assessment of current and emerging risks upstream in our value chain. Through this process, the materiality of risks is assessed based on velocity, probability and impact. Where material issues are identified, policies and risk management programs, and controls are established to ensure the risks and opportunities are being addressed through consistent guidelines and standards. For example, the assessment of upstream climate-related risks has included third party suppliers and the feasibility of engaging them as part of our net zero commitment. We also continued to conduct climate scenarios of the physical flood and wind risks in our Property & Casualty (P&C) reinsurance and mortality and morbidity insurance business. The results were included as part of our ORSA report, confirming our business remained resilient.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As part of our regulatory tracking process, we identify, assess and report on climate-related current regulations through regional and Lifeco level Chief Compliance officer reports to the relevant risk committees. We assess possible regulatory implications on our business, including compliance costs and possible impacts on our investments and insurance underwriting products and services. In 2021, we considered country-level net zero commitments leading up to and following the United Nation's COP26 meetings, climate-related taxonomies for investment products, carbon pricing regimes, and mandatory TCFD-aligned climate disclosure requirements. For example, in Canada, we assessed our exposure to carbon prices of up to \$170 CAD by 2030 (a target rate announced by the Federal government) and to GHG emissions related city by-laws for buildings across our portfolio of owner-occupied offices, corporate and regional offices, and third-party investment management properties. In the U.S., we assessed the recently released Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change, which requires us to consider the financial impacts from climate change into our governance frameworks, business strategies, risk management processes and scenario analysis, and develop our approach to climate-related financial disclosure. In the UK, we considered the mandatory TCFD-aligned requirements as well as the UK PRA's Supervisory Statement SS3/19, requiring UK insurers and reinsurance firms to have an approach to manage the financial risk from climate change.
Emerging regulation	Relevant, always included	As part of our regulatory tracking process, we identify, assess and report on through regional and Lifeco level Chief Compliance officer reports to the relevant risk committees. We assess possible emerging regulatory implications on our business, including compliance costs and possible impacts on our investments and insurance underwriting products and services. We actively monitor for pipeline emerging policy and regulatory requirements and participate in regulatory change proposals either directly or through various industry associations. In North America, we participated on climate-related disclosure proposals from the Canadian Securities Administrators National Instrument 51-107 Disclosure, the Securities and Exchange Commission, the US Department of Labour proposals, and more recently the International Sustainability Standards Board (ISSB) and the Office of the Superintendent of Financial Institutions (OSFI) related proposals. We also participated in the Canadian Sustainable Finance Action Council (SFAC) which seeks to influence policy and regulatory developments. In Europe, we continued to monitor the European Insurance and Occupational Pensions Authority consultations on integrating sustainability risks and disclosures, focused on property insurance. We also monitored developments relating to the possible implications of Europe's Sustainable Finance Disclosure Regulations (SFDR) and the EU Sustainable Finance Taxonomy, which imposes additional climate disclosures on websites, in prospectus and in periodic reports. In addition, in Germany we monitor the Federal Financial Supervisory Authority and its intention to release a consultation on sustainability risk management. In assessing the possible emerging climate-related regulations, we determined that the level of exposure to non-compliance remains low given the strengthening of our policies and processes and the results from the climate scenario testing over the past few years. In the UK, we continued to monitor the activities of the PRA as well as the Green Finance Strategy commitments to work with regulators to clarify roles and explore mandatory reporting. In Ireland, the Central Bank of Ireland has a lead role in ensuring that financial firms incorporate climate change into strategic and financial plans, while ensuring that consumers have sufficient information.
Technology	Relevant, always included	We assess the impacts of technology developments, including costs associated with transitioning to lower emission and smarter technologies, and changing innovations related to fuel switching away from the use of fossil fuels. For example, within our property management services carried out by our subsidiary GWL Realty Advisors, we have been assessing costs and capital investments at some properties to transition towards smarter more efficient buildings that optimize energy efficiency and 'smart' building technology. While important, these costs are not expected to generate a substantive change to our business operations given that GWL Realty Advisor's real estate management services represent less than 0.1% of our overall revenue. As part of the climate scenario testing, we considered risks and opportunities related to transition risks associated with technology and the potential impact on our general account investment portfolio. In this case, we considered sectors that could be exposed to increased costs due to investments in cleaner technologies as well as the potential depreciation of assets or assets classes from emerging disruptive technologies. We also consider technology risks within the investment portfolios of our subsidiaries. For example, Putnam Investments continues to assess its investment portfolio for leaders that were effectively innovating to meet the changing energy transition.
Legal	Relevant, sometimes included	Through our climate risk assessments, we assess the impacts of exposure to climate-related litigation lawsuits, fines, and orders and the possible liability, cost and reputational implications in our operations, value chain or investments. For example, in 2021, we continued to monitor litigation lawsuits against oil and gas, energy and utility companies brought to the courts on climate change impacts. While noteworthy, the impacts of possible litigation in our investments are limited given the diversification of our asset allocation, geographies and sectors. No individual sector accounted for more than 10% of our invested assets and the percentage of assets in the energy sector that could be highly exposed to litigation lawsuits amounted to less than 5% of invested assets in bonds or equities.
Market	Relevant, always included	Through our risk assessments, we consider the impact of climate-related events on the market demand for our products and services. For example, we have assessed the possible losses that could result from fluctuating socio-economic conditions from society's exposure to weather-related losses and the potential impact from lapse rates. Through our assessment, we concluded that lapse rates from extreme weather events, such as Hurricane Katrina, were not severe and had limited impact on insurance affordability and customer retention rates. We also consider the potential for stranded assets that may arise from climate-related market trends. For example, we reviewed the extent to which some of our investments may be impacted by the increasing demand for electric vehicles. Given the diversification of our investment strategy, the potential for stranded assets was not deemed substantive to our overall business. It is important to note that over the past year we have started to also see a growing interest by clients for climate-related considerations in the delivery of our investment and insurance products and services, which have either directly or indirectly been included as queries in requests for proposals. While still nascent, this is an area of continued market growth that is considered as part of our product development assessments.
Reputation	Relevant, always included	Through our climate-related risk assessments, we consider the reputation of Great-West Lifeco on climate-related impacts from our stakeholders, including customers, governments, investors, and NGOs, among others. We recognize that the increasing stakeholder interest in climate change raises the importance of transparent disclosure on how we identify and manage climate change risks, which if not effectively addressed could damage brands, stakeholder trust, demand for products and services, and ability to access capital. For example, over the past few years, there has been an increase in investor interest on environmental, social and governance factors, which includes responding to and mitigating climate risks. As a result, we remain focused on the transparency and credibility of the information we publish publicly on climate-related issues, including with respect to governance, risks, opportunities and performance. Last year, in addition to enhancing our public disclosure on climate-related matters (CDP submission, 2021 Annual Report, ESG Scorecard, Public Accountability Statement and the Sustainability Reports of Canada Life, UK, Putnam, and Irish Life), we also formally committed our net zero by 2050 ambition following a rigorous risk assessment process by our ERM team. However, when considered generally in the context of our overall business and other types of reputational risks we do not consider climate-related reputational risks to have a substantive impact on our business, revenues or expenditures.
Acute physical	Relevant, always included	We consider exposure to increased severity of extreme weather events, such as cyclones, hurricanes and floods in our reinsurance business and the general account investment portfolio and the effect on operating costs associated with our own operations as well as the value of our investment portfolios. For example, in our reinsurance business we based our assessments on worst-case scenarios (peak peril modeling) which have indicated these events would not result in a substantive impact to our business. Claims related to losses from hurricanes Harvey, Irma, and Maria combined resulted in established reserves of \$175 million, which were not considered to be substantive on our overall business. It is important to note that reinsurance is designed to attach for very significant claim events for the underlying cedants, and there are contractual limits, which cap exposure on the portfolio. We license the latest modeling from an industry-leading provider to help us calculate loss probabilities for our portfolios by geographic region. Reinsurance contracts are renegotiated annually, which allows an opportunity to revisit risk exposures and limits on an ongoing basis. Therefore, any impacts from acute weather-related events would not have a substantive impact on our business operations, revenue or expenditures over the long-term. We also have a maximum claim amount for all such contracts, limiting our risk exposure. In our general account investment portfolio, we assessed acute physical risks as part of the brown climate scenario stress test, where we assumed a limited corrective transition response and fallout from extreme weather events that could lead to high mortality rates, property damage, decline in property values, business disruption and a pandemic event. Within our direct operations, we also assessed the impacts of physical extreme weather events on our business operations. At our Winnipeg campus we tested a 1 in 22-year Enhanced Fujita (EF) scale tornado with a possible estimated loss exposure of \$33.4 million. We also assessed possible flooding impacts in Ireland. Through the materiality assessment, we determined that while the risks were noteworthy, the losses would not be substantive to the business, representing less than 1% of capital and operating expenditures. Furthermore, the climate-related physical risks would be minimized given the inherent diversification of our business offices, data centres and business continuity centres.
Chronic physical	Relevant, always included	Through our climate-related risk assessments, we consider exposure to changes in chronic physical impacts, including changes in precipitation patterns, extreme variability in weather patterns, rising mean temperatures, and rising sea levels on operating costs associated with our own operations as well as the value of our investment portfolios. For example, in our general account investment portfolio we assessed chronic physical risks as part of the brown climate scenario test, which assumed a limited corrective transition response and fallout from weather events. In particular, potential areas of vulnerability of our investment portfolio were reviewed in our bonds and conventional mortgages on properties and real estate holdings in coastal areas. These risk exposures are inherently limited by our mortgage portfolio limits, which currently does not exceed 8% for any region, thereby decreasing our risk arising from any one location. In 2021, we updated our risk assessment by including gradual precipitation flood and wind risks in our Property & Casualty (P&C) reinsurance and mortality and morbidity insurance business. The results were included as part of our ORSA report, confirming our business remained resilient. In terms of our life and health insurance businesses, we inherently diversify our morbidity and mortality risks limiting concentrations in any one specific region or geography. Furthermore, research and analysis are done regularly to provide the basis for establishing pricing and valuation assumptions that properly reflect the insurance market, including potential climate-related health impacts. Over the past few years, we have not experienced notable changes in insurance claims as a result of climate-related impacts and note that we also have inherent portfolio diversification between our mortality and longevity business.

(C-FS2.2b) Do you assess your portfolio's exposure to climate-related risks and opportunities?

	We assess the portfolio's exposure	Explain why your portfolio's exposure is not assessed and your plans to address this in the future
Banking (Bank)	<Not Applicable>	<Not Applicable>
Investing (Asset manager)	Yes	<Not Applicable>
Investing (Asset owner)	Yes	<Not Applicable>
Insurance underwriting (Insurance company)	Yes	<Not Applicable>

C-FS2.2c

(C-FS2.2c) Describe how you assess your portfolio's exposure to climate-related risks and opportunities.

	Type of risk management process	Proportion of portfolio covered by risk management process	Type of assessment	Time horizon(s) covered	Tools and methods used	Provide the rationale for implementing this process to assess your portfolio's exposure to climate-related risks and opportunities
Banking (Bank)	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Investing (Asset manager)	A specific climate-related risk management process	38	Qualitative and quantitative	Short-term Medium-term Long-term	Portfolio temperature alignment Scenario analysis Stress tests Internal tools/methods	As an asset manager, Great-West Lifeco assesses exposure to climate-related risks and opportunities as it relates to its investment portfolios, covering the insurance General Account (on balance sheet investments for Great-West Lifeco) as well as investments of third party clients mainly managed through Great-West Lifeco's asset management subsidiaries. Great-West Lifeco's third party client asset management subsidiaries include Canada Life Asset Manager, Irish Life Investment Managers (ILIM), Putnam Investments (Putnam), and PanAgora Asset Management (PanAgora). We assess the exposure of the investment portfolio on a broad range of climate-related risks and opportunities, including climate vulnerable sector exposure, clean energy low carbon finance exposure, climate-related investment product exposure as well as carbon emission intensity. The exposure assessments are generally undertaken when it is investment relevant and financially material, and when there is sufficient data. As an example, our subsidiary, ILIM assesses exposure to transition risks by measuring the carbon footprint of its investment portfolio and managing the carbon intensity to a percentage lower than relative indices or benchmarks. In keeping with the evolving legislation in the US and Canada related to defining the integration of ESG into investment decision-making, we have followed the approach of just including "sustainable funds" in this percentage.
Investing (Asset owner)	Integrated into multi-disciplinary company-wide risk management process	100	Qualitative and quantitative	Short-term Medium-term Long-term	Scenario analysis Stress tests	As an asset owner, Great-West Lifeco assesses exposure to climate-related risks and opportunities of its owned assets within the General Account as well as its physical assets and operations, including office buildings and data centres. For example, in the General Account, Great-West Lifeco assesses the physical and transition climate-related risks and opportunities of assets covering bonds, mortgages, real estate, and equities. The assessment is based on three climate scenarios: "green" orderly and disorderly scenarios to a well below 2-degree warming scenario; and, a "brown" scenario to a 4.5 degree warming scenario. The assessment is conducted to determine the balance sheet impacts and to inform mitigation measures and strategies. See question 3.1b for details of these scenarios. From an operational perspective, Great-West Lifeco assesses the number of climate-related events on our operations and our performance relating to these events, through a Business Continuity Management Framework that focuses on emergency response, incident management, disaster recovery and business recovery.
Insurance underwriting (Insurance company)	Integrated into multi-disciplinary company-wide risk management process	100	Qualitative and quantitative	Short-term Medium-term Long-term	Scenario analysis Stress tests	As an international financial services holding company with interests in insurance, Great-West Lifeco assesses the exposure to climate-related risks and opportunities in both the health/life insurance business and the property catastrophe reinsurance business. With respect to our property catastrophe coverages, an annual scenario modelling on climate-related events and the impact on our reinsurance business is conducted. We review model outputs from cedents in order to monitor our peak perils at the most significant locations in order to assess the likelihood, severity and velocity of extreme weather events, including windstorms, hurricanes and cyclones. The information from these scenario models enables us to assess the potential quantum of losses, which in turn informs our pricing models. We identify and assess climate change related risk impacts, to determine whether the risk limits would be impacted. With respect to the property catastrophe reinsurance business, we monitor the number and severity of extreme weather events, such as cyclones, hurricanes and floods in our reinsurance business as well as the value of claims related to such losses. For example, Great-West Lifeco included property catastrophe reinsurance loss reserves of \$175 million after-tax relating to estimated claims resulting from the impact of Hurricanes Harvey, Irma and Maria. With respect to the health/life insurance business, Great-West Lifeco runs longevity models taking into consideration various factors that could result in health impacts and exposure to morbidity and mortality risks. Furthermore, research and analysis are done regularly to provide the basis for establishing pricing and valuation assumptions that properly reflect the insurance market, including potential climate-related health impacts.

C-FS2.2d

(C-FS2.2d) Does your organization consider climate-related information about your clients/investees as part of your due diligence and/or risk assessment process?

	We consider climate-related information	Explain why you do not consider climate-related information and your plans to address this in the future
Banking (Bank)	<Not Applicable>	<Not Applicable>
Investing (Asset manager)	Yes	<Not Applicable>
Investing (Asset owner)	Yes	<Not Applicable>
Insurance underwriting (Insurance company)	Yes	<Not Applicable>

C-FS2.2e

(C-FS2.2e) Indicate the climate-related information your organization considers about clients/investees as part of your due diligence and/or risk assessment process, and how this influences decision-making.

Portfolio

Investing (asset manager)

Type of climate-related information considered

Emissions data
Emissions reduction targets
Climate transition plans
TCFD disclosures

Process through which information is obtained

Directly from the client/investee
From an intermediary or business partner
Data provider
Public data sources

Industry sector(s) covered by due diligence and/or risk assessment process

Energy
Materials
Capital Goods
Commercial & Professional Services
Transportation
Automobiles & Components
Consumer Durables & Apparel
Consumer Services
Retailing
Food & Staples Retailing
Food, Beverage & Tobacco
Household & Personal Products
Health Care Equipment & Services
Pharmaceuticals, Biotechnology & Life Sciences
Software & Services
Technology Hardware & Equipment
Semiconductors & Semiconductor Equipment
Telecommunication Services
Media & Entertainment
Utilities
Real Estate

State how this climate-related information influences your decision-making

As an asset manager, Great-West Lifeco requests climate-related information from clients/investees through the investments made in the insurance General Account (on balance sheet investments for Great-West Lifeco) as well as investments of third-party clients mainly managed through Great-West Lifeco's asset management subsidiaries. Great-West Lifeco's third party client asset management subsidiaries include GWL Realty Advisors, Irish Life Investment Managers (ILIM), Putnam Investments (Putnam), GLC Asset Management (GLC), and PanAgora. For example, both Irish Life Investment Managers (ILIM) and Putnam Investments request climate-related information from investees through their proxy voting and engagement processes as part of their research and risk assessment practices when the information is deemed to be material and additive to the investment process. ILIM requests climate-related information for risk investment purposes through its direct and collaborative engagements (CA100+ and CDP NDC) and its third-party ESG and proxy providers request climate-related information for the purpose of risk assessments and to inform voting decisions. Meanwhile, GWL Realty Advisors request climate-related information from its clients and the real estate investment properties under management as part of its risk management practices to inform emission reduction and efficiency improvements.

Portfolio

Investing (asset owner)

Type of climate-related information considered

Emissions data

Process through which information is obtained

Directly from the client/investee
Data provider
Public data sources

Industry sector(s) covered by due diligence and/or risk assessment process

Energy
Materials
Capital Goods
Commercial & Professional Services
Transportation
Automobiles & Components
Consumer Durables & Apparel
Consumer Services
Retailing
Food & Staples Retailing
Food, Beverage & Tobacco
Household & Personal Products
Health Care Equipment & Services
Pharmaceuticals, Biotechnology & Life Sciences
Software & Services
Technology Hardware & Equipment
Semiconductors & Semiconductor Equipment
Telecommunication Services
Media & Entertainment
Utilities
Real Estate

State how this climate-related information influences your decision-making

As an asset owner, Great-West Lifeco's investment analysis process for the general account includes robust due diligence assessments of potential acquisitions, holdings and divestments, which include climate-related information. For example, in the management of the Canadian Segregated Fund, we request climate-related information from investees and/or clients, including with respect to carbon emission data, carbon management and performance. The information is used to identify and assess

performance related to climate-related risks and opportunities.

Portfolio

Insurance underwriting (Insurance company)

Type of climate-related information considered

Other, please specify (Physical Climate Risk Exposure)

Process through which information is obtained

Directly from the client/investee
Data provider

Industry sector(s) covered by due diligence and/or risk assessment process

Other, please specify (insurance clients irrespective of sector)

State how this climate-related information influences your decision-making

As an insurance provider, Great-West Lifeco will request climate-related information from clients as part of the due diligence decision-making process for reinsurance underwriting. Information requested could include physical climate risk exposure ratings related to property and casualty insurance.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

No

C2.3b

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

	Primary reason	Please explain
Row 1	Risks exist, but none with potential to have a substantive financial or strategic impact on business	We assessed climate risks and did not identify through our enterprise risk management processes, including within our market, credit, insurance and operational risk processes, any substantive financial or strategic impacts on our business. Lifeco's operations, offices, data centres and business continuity locations are inherently diversified across geographies in Canada, U.S. and Europe limiting risk exposure. For example, climate scenario stress tests in Winnipeg, Europe and Ireland determined the financial impact from extreme weather events to be less than 1% of capital and operating expenditures. Within the general accounts, the asset portfolio assessed against "green" and "brown" scenarios identified 4% of potential areas of vulnerability mainly within bonds, conventional mortgages, real estate holdings and equity sectors. The inherent diversification of investments limits exposure to such vulnerabilities. Bond holdings in potentially vulnerable sectors have shorter duration (less than 10 years) inherently limiting concentration risk. Commercial mortgage properties are inherently regionally diversified and vulnerable properties have P&C insurance. Vulnerable equity holdings such as metals/mining, power generation, oil & gas, and chemicals, comprise less than 1% of the total asset portfolio. The inclusion of the P&C and individual / group life business, and invested assets in properties and mortgages this year further demonstrated the balance sheet to be resilient. Within the reinsurance business, we monitor peak perils at the most significant locations to assess the likelihood, severity and velocity of extreme weather, including windstorms, hurricanes and cyclones, which in turn informs pricing models. Inherent risk limits are in place and monitored to cap maximum exposure through property catastrophe coverage in accordance with the company's risk appetite and preference. Notably, losses from hurricanes Harvey, Irma, and Maria amounted to claim reserves of \$175 million, which were not substantive overall. For life/health insurance, the inherent diversification between mortality, longevity, and morbidity risks limits concentrations in any one specific region or geography.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

No

C2.4b

(C2.4b) Why do you not consider your organization to have climate-related opportunities?

	Primary reason	Please explain
Row 1	Opportunities exist, but none with potential to have a substantive financial or strategic impact on business	We assessed climate-related opportunities as part of the ERM. This includes products and services, investments in clean energy, and sustainable real estate investment opportunities. With respect to products and services, our asset management subsidiaries including Putnam Investments and Irish Life Investment Managers (who are signatories to the UNPRI), manage more than \$189 billion across a number of ESG related strategies. This includes Putnam's Sustainable Leaders Fund and Sustainable Futures Fund; Irish Life's NNIP Sustainable Global Equities Indices, ILIM Climate Focused Fund, Customer ESG Indices, Standard ESG Indices, Sustainable Equities and MAPs; PanAgora Dynamic Equity and Stock Selector Strategies, Sustainable Global Equity, Dynamic Flex, Diversified Risk global Equity ESG Aware Strategies and Setanta Ethical & SRA Funds. While these products are noteworthy, they are not considered substantive given our diversified businesses and extensive distribution reach. Canada Life also offers Sustainable Portfolios, of which the underlying fund strategies include ESG-related funds which include: ESG U.S. Equity Fund, U.S. Carbon Transition Equity Fund, Sustainable Emerging Markets Equity Fund, Sustainable Global Equity Fund and Sustainable Global Bond Fund. These Sustainable Portfolio series of target date and target risk funds were launched in the second half of 2021 and currently represent less than 1% of Canada Life's total fee income. Within the clean energy market, we currently have investments over \$4.4 billion in wind, solar, and other renewable energy project investments in Canada, through our Private Debt Investment Group, and our European and US Investment teams in the General Account. While important, investments in low carbon/renewable energy projects/markets are not substantive representing ~2% of our invested assets.

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

Publicly available transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)

<Not Applicable>

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Last year, we were pleased to affirm our commitment to achieving net zero greenhouse gas (GHG) emissions well before 2050 in our operations and by 2050 for our financed emissions in Great-West Lifeco's General Account. Interim targets are currently in development and expected to be announced in 2022. As our transition plan develops, we are optimistic it will drive new economic activities, generate climate resilient investment opportunities, and support a viable transition for sectors that require transformational change to remain resilient as we respond to this global challenge. Meeting our commitment also means working collaboratively with suppliers, clients and advisory and investment partners to drive innovation towards a sustainable future. In 2022, our immediate focus is on re-baselining our General Account financed emissions to incorporate a large acquisition which closed in April 2022, and then using our new financed emissions baseline to develop a more comprehensive transition plan, including interim targets to reduce emissions reflective of contemporary climate science. The publication of our commitment and initial high level plan aspirations were communicated through the following press release - <https://www.greatwestlifeco.com/news-events/news/lifeco-news-release-nov-10-2021.html#:~:text=WINNipeg%2C%20Nov%209%2C%202021%20%2D,to%20be%20announced%20in%202022> We have various feedback mechanisms on our net zero commitment and initial high-level plan, including directly through representation of our majority shareholder on the Great-West Lifeco board of directors. We also receive feedback from investors through investor presentations, including during the 2021 Q4 meeting shortly after our net zero commitment was published.

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario		Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios	Bespoke transition scenario	Portfolio	1.6°C – 2°C	In order to assess the potential impact climate change on our General Account on a range of outcomes, three scenarios were used as described below consistent with the NGFS scenario framework – order, disorderly and hot house world scenarios. a) Green scenario (2 C) with orderly transition: Government policies facilitate the transition to a low carbon environment in an orderly manner, in line with the Paris Accord, and becoming GHG-neutral by 2050. In this scenario, the transition takes place gradually. Assumptions: government intervention to ensure the transition occurs in an orderly manner; asset defaults and downgrades on sectors with transition risk exposure; stock markets experience moderate shock; growth stagnates in later years due to poor performance from “at risk” sectors. b) Green scenario (2 C) with disorderly transition: While the green environment is still achieved, in the absence of government intervention, it is driven by grassroots movements. The transition occurs quickly, limiting the ability to adapt and there is an increasing financial market volatility. Assumptions: asset defaults and downgrades on sectors with transition risk exposure; stock markets for “at risk” sectors experience severe stress in the first few years and growth stagnates in later years; and opportunities arise for low carbon related sectors. c) Brown scenarios (4 C) (Hot House World Scenario): Limited corrective transition response in a business as usual scenario. The fall out from natural disasters and litigious environment leads to volatile financial markets. The impact of climate change includes high mortality rates, property damage, decline in property values, business disruption and a pandemic environment. Assumptions: Physical and liability risks emerge; equity and property prices decline, especially coastal and low-lying areas. Reputational damage and consumer activism lead to credit downgrades and defaults; weather associated event and business disruption; deterioration in the mortality improvement assumption; and consumer groups become more litigious. We extended the time horizon to a 50-year period, with the emergence of transition impacts ahead of physical impacts. The analysis covered the General Account, and included our Mass Mutual acquisition and portfolio growth. Note that in addition to the Bespoke Transition scenario, this work also used Physical - RCP8.5, RCP4.5 and RCP2.6 scenarios and looked at 3.1-4C as well as 1.6-2C.
Physical climate scenarios	Bespoke physical scenario	Portfolio	Unknown	In 2021, we conducted a physical climate brown scenario (described above) to determine the potential short-term impact of a natural disaster on our insurance exposure (P&C exposure, individual / group life business) and our investment portfolio (real estate and mortgages). Potential events (including a UK Central London storms/flooding compared to a severe flood scenario similar to summer 2007 and a U.S. Florida windstorm similar to Hurricane Katrina) were tested to assess our exposure to potential climate-related events and the associated risk mitigant. Stress testing results demonstrate our balance sheet is resilient.
Transition scenarios	IEA NZE 2050	Portfolio	<Not Applicable>	Within the Great West Lifeco general account, we assessed our asset portfolio against the IEA 1.5°C scenario industry carbon budget allocation. For mortgages and investment properties we applied the CRREM 1.5°C scenario with emission intensities varying by country and building type. The analysis also assessed the impact of an increase in the portfolio exposure consistent with the IPCC RCP 2.6 scenario.
Physical climate scenarios	RCP 2.6	Portfolio	<Not Applicable>	Using the IPCC 5th Assessment Report, a physical climate scenario analysis was undertaken for our owned and managed real estate assets in Canada under three emission scenarios: • RCP2.6: Aggressive mitigation assumes that global annual GHG emissions peak between 2010-2020, with emissions declining substantially thereafter • RCP4.5: Strong mitigation assumes that emissions peak around 2040, then decline • RCP8.5: Business-as-usual assumes that emissions continue to rise throughout the 21st century The time periods used were 2045 (representing average conditions projected for 2031-2060) and 2070 (representing average conditions projected for 2056-2085)

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

(1) What are the future potential exposures of the general account balance sheet to climate impacts using the green and brown scenarios and the potential areas of vulnerability in the asset portfolio, including bonds, mortgages, real estate and stocks? (2) What are the required reductions in Great-West Lifeco’s financed emissions of the general account to meet our net zero emissions by 2050 per asset class and what are the reduction levers needed? (3) What are the most material physical climate risks that could impact GWL Realty Advisors real estate portfolio and what properties are most exposed?

Results of the climate-related scenario analysis with respect to the focal questions

(1) Within the general accounts, we assessed our asset portfolio against “green” and “brown” climate scenarios and identified 4% of potential areas of vulnerability mainly within bonds, conventional mortgages, real estate holdings and equity sectors. However, the inherent diversification of these investments limits our exposure to such vulnerabilities. For example, within bond holdings in potentially vulnerable sectors, we inherently maintain high quality holdings that are of shorter duration (less than 10 years) than the rest of the portfolio limiting our concentration risk to vulnerable sectors. Commercial mortgage properties are regionally diversified and vulnerable properties have P&C insurance. Finally, within equity holdings, vulnerable sectors such as metals and mining, power generation, oil and gas, and chemicals, comprise less than 1% of the total asset portfolio. We also determined that climate change was potentially most significant for properties located in a coastal or low-lying area, primarily in the UK, Ireland, Vancouver, California and Central London. These properties are covered under P&C insurance. In the U.S. separate hazard policies are required for commercial mortgage property in flood/hurricane zones. As a result of the analysis, we concluded that the balance sheet remains strong and resilient with respect to the climate change scenarios. Meanwhile, the results have directly informed strategies to consider selectively trimming exposure in longer maturities, limits related to vulnerable industries and coverage of P&C insurance on vulnerable properties. (2) The results of the scenario analysis recommend that Lifeco reduce its total emissions by 90.9% between 2021 and 2050 to meet science-based net-zero requirements. 86% of all required reductions are expected to occur within Listed (‘Corporate’) bonds, Private debt – Power, and Sovereign bonds. To achieve net-zero targets across asset classes, we are using the analysis to apply a combination of reduction levers, which may include (but are not limited to): • Engage: Engage with companies in Lifeco’s portfolio to enable the transition to net zero. • Reduce: Reducing exposure in carbon-intensive industries or in companies with no net-zero commitments or adequate plans and progress to meet them. • Grow: Prioritize investments in assets with low carbon industry intensities or in companies that are on track to meet net-zero. (3) The scenario analysis generally indicated that assets in coastal cities and southern US states had relatively higher exposure to the physical risks of climate change. However, in general, the portfolio was assessed as being ‘low risk’. Climate change risk ratings for each property were identified through the scenario analysis, and we are now investigating various risk mitigation actions to address the relevant climate hazards and are integrating these risk ratings into our due diligence processes for new acquisitions.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate-related risks and opportunities have influenced our product and service strategies over a 1-3 year time horizon. We have strategies within our investment subsidiaries to increase the integration of climate-related considerations into investment products. This includes low carbon finance, sustainable fund options as well as integration into mainstream investment decisions by applying a climate lens. Specifically, we made the decision to increase investments into sustainable funds that include climate-related considerations through our asset management subsidiaries. When compared to 2020, our investments in sustainable funds increased 56% from CAD121 billion to CAD189 billion in 2021. Several of our investment subsidiaries are also now providing innovative products that integrate climate-related information into client investment portfolios. For example, at PanAgora we are now able to run data on the carbon intensity and science-based targets of an investment portfolio, which clients can request. To take advantage of the low carbon transition, we have continued to increase our investments in the cleaner energy market to support the transition to a low carbon economy, which in 2021 increased 26% when compared to 2020, amounting to over \$5.54 billion in wind, solar, and hydro renewable energy projects, as well as purchases of Ontario and Quebec's green bonds. While noteworthy, these investments are not substantive given that less than 2% of invested assets are tied to investments in low carbon renewable energy markets and green bonds
Supply chain and/or value chain	Yes	Climate-related risks and opportunities have strengthened our approach to selecting third party services providers who conduct investments on our behalf, considered over a 1-3 year time horizon. Last year we made the decision to continue to strengthen the integration of climate-related information into our third-party service providers selection process to ensure they align with our expectations to have climate change topics embedded into their investee proxy voting and engagement process. For example, Irish Life Investment Managers' third parties have specific requirements to integrate climate-related information into their proxy voting and engagement processes as part of their risk assessment practices. They also monitor climate metrics in third party assessments to enable voting sanctions on the highest risk, high carbon emitting companies, including targeted voting against director elections
Investment in R&D	Yes	Through our investment subsidiaries, we are investing in climate-related data research to support the development of client product solutions and portfolio optimizing strategies, considered for a 1-5 year time horizon. For example, PanAgora has onboarded additional climate-related data sets in 2021 to have a more granular approach to their quantitative models and ensure the data is brought into a centralized location. The additional data sets allow PanAgora to perform research on optimizing portfolios and providing solutions to clients from a reporting standpoint.
Operations	Yes	Within our operations, climate-related risks and opportunities over a 5-15 year time horizon have influenced our strategy with respect to our carbon emissions as well as our corporate reporting and disclosures. With respect to our corporate carbon footprint, we identified opportunities to reduce our carbon emissions and have now set emission reduction targets over a short (2025) and longer term (2036) timeframe. Our focus is on increasing investments in more energy efficient initiatives in our corporate investment properties. For example, as part of this strategy, we set a Scope 1 and 2 GHG emissions target for the Canadian properties to achieve a 27.3% reduction by 2025 and 50.4% reduction by 2036, based on a 2013 baseline. As a specific case study, we have started to strengthen our strategy towards even greater energy efficiency to achieve this target, including with respect to building equipment retrofits, data centre optimization and green building certifications such as BOMA BEST® and/or LEED®. Additionally, increasing stakeholder interest in climate change has influenced our reporting strategies on climate-related information. As a result, we continue to enhance the information we publish publicly on climate-related issues, including with respect to governance, risks, opportunities and performance. Last year, in addition to enhancing our public disclosure on climate-related matters (CDP submission, 2021 Annual Report, ESG Scorecard, Public Accountability Statement and the Sustainability Reports of Canada Life, UK, Putnam, and Irish Life), we also formally committed to our net zero by 2050 ambition, which includes both our financed emissions and operations across the Company. Through this commitment, we focused last year on quantifying our financed emissions, as well as our direct and indirect operational emissions, including from purchased goods and services. Following from this work, we will be developing a robust transition plan, which will be anchored by interim targets.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Access to capital Assets	Revenues: While climate-related events do not pose significant risks or opportunity from a revenue standpoint, we do consider potential revenue losses in our financial planning process in the context of our reinsurance business. We review model output from our cedents in order to monitor peak perils at the most significant locations in order to assess the likelihood, severity and velocity of extreme weather events, including windstorms, hurricanes and cyclones. The information enables us to assess the potential quantum of losses, which in turn informs our pricing models. For example, Great-West Lifeco established reserves of \$175 million for claims relating to losses from hurricanes Harvey, Irma and Maria which did not result in a substantive impact to the business. Notably, these extreme weather events resulted in no significant losses in our other lines of business, including our other US operations, products, and services. Furthermore, we place contractual limits, which cap exposure on the portfolio. We also renegotiate our reinsurance contracts annually, which enables us to revisit risk exposures and limits on an ongoing basis. For more information, please refer to the risks and opportunities section of this questionnaire. We also continue to monitor the growth of our revenues from our investments into sustainable funds that include climate-related considerations through our asset management subsidiaries. When compared to 2020, our investments in sustainable funds increased 56% from CAD121 billion to CAD189 billion in 2021. Direct costs: While climate-related events do not pose significant risk or opportunity on our operating costs that could be substantive to our business, we do factor energy costs as part of our financial planning process. For example, we have increased investments into more energy efficiency programs in our corporate and investment properties, including building equipment retrofits, data centre optimization and green buildings, which align well with our Scope 1+2 GHG targets for Canadian properties to achieve a 27.3% GHG reduction by 2025 and a 50.4% reduction by 2036, based on a 2013 baseline year. While these are important efficiency improvements, our energy spend is less than 1% of Great-West Lifeco's overall expenditures, and therefore these are not noticeable increases in our operating costs. As part of our net zero commitment, we have expended costs with a third party provider to conduct a detailed global baseline emissions quantification, 1.5C scenario analysis and reduction lever opportunity assessment. The analysis is being used to inform our interim science-targets and more detailed transition plan. Capital expenditures: We have not identified significant climate-related risks and opportunities, and therefore have not had to factor them into capital expenditures as part of our financial planning process. We have resilience built into our owned corporate properties, many of which are located in areas that have relatively lower exposure to climate-related extreme weather patterns. For more information, please see the risks and opportunities section of this questionnaire for more information. Access to capital: We have not identified significant climate-related risks or opportunities, and therefore have not had to factor them into access to capital considerations as part of our financial planning process. Please see the risks and opportunities section of this questionnaire for more information. It is important to note that Great-West Lifeco engages with various organizations on climate-related requests and has been ranked highly for carbon management by independent third parties. Specifically, Great-West Lifeco has ranked higher than its North American peers on its CDP submissions, scored in the top quartile among global industry peers on MSCI's "Climate Change Vulnerability Performance" ranking on its ESG Scorecard assessment, and our real estate subsidiary GWL Realty Advisors, which manages our corporate head offices and investment real estate assets in Canada, has consecutively attained the highest, 'Green Star', ranking on the Global Real Estate Sustainability Benchmark (GRESB), for the past five years. We believe this performance has enhanced our positioning from a reputational standpoint and possibly indirectly strengthened investor confidence. Assets: While climate-related events do not pose significant inherent risk to or opportunity for us, we may sometimes factor climate-related opportunities into our investment of assets under management as part of our financial planning process through a consideration of investments into cleaner energy. For example, in 2021, the General Account invested over \$5.54 billion in renewable energy projects, which included wind, solar, and hydro energy projects. However, with less than 1% of our overall asset value tied to investments in the clean energy markets, the growth opportunities are currently not considered substantive to the financial or strategy impact on the business.

C-FS3.6

(C-FS3.6) Does the policy framework for your portfolio activities include climate-related requirements for clients/investees, and/or exclusion policies?

Yes, our framework includes both policies with client/investee requirements and exclusion policies

C-FS3.6a

(C-FS3.6a) Provide details of the policies which include climate-related requirements that clients/investees need to meet.

Portfolio

Investing (Asset manager)

Type of policy

Policy related to other products and services

Portfolio coverage of policy

0.1

Policy availability

Publicly available

Attach documents relevant to your policy

202205 Climate Focused Fund Flyer May 2022.pdf

Criteria required of clients/investees

Disclosure of Scope 1 emissions
Disclosure of Scope 2 emissions
Disclosure of Scope 3 emissions
Set an emissions reduction target

Value chain stages of client/investee covered by criteria

Direct operations and supply chain

Timeframe for compliance with policy criteria

Complying with criteria is a pre-requisite for business

Industry sectors covered by the policy

Energy
Materials
Capital Goods
Commercial & Professional Services
Transportation
Automobiles & Components
Consumer Durables & Apparel
Consumer Services
Retailing
Food & Staples Retailing
Food, Beverage & Tobacco
Household & Personal Products
Health Care Equipment & Services
Pharmaceuticals, Biotechnology & Life Sciences
Software & Services
Technology Hardware & Equipment
Semiconductors & Semiconductor Equipment
Telecommunication Services
Media & Entertainment
Utilities
Real Estate

Exceptions to policy based on

Industry sector
Products and services
Other, please specify (Materiality of the issue)

Explain how criteria coverage and/or exceptions have been determined

The climate focused fund policy is constructed to integrate a decarbonization tilt to the proprietary assets of our subsidiary Irish Life Investment Managers. It excludes fossil fuels through the supply chain and requires companies with higher green activities. The fund has a global broad market exposure that is better aligned with a 1.5C pathway. The climate focused fund which we have launched is circa EUR100m (portfolio coverage of policy column shows this out of ILIM's firmwide AUM of EUR100b). This is expected to grow considerably as we market the fund.

Portfolio

Insurance underwriting (Insurance company)

Type of policy

Insurance underwriting policy

Portfolio coverage of policy

100

Policy availability

Not publicly available

Attach documents relevant to your policy

Criteria required of clients/investees

Other, please specify (Be within acceptable risk range in the results of climate scenario analysis on the client/investee)

Value chain stages of client/investee covered by criteria

Direct operations only

Timeframe for compliance with policy criteria

Complying with criteria is a pre-requisite for business

Industry sectors covered by the policy

- Energy
- Materials
- Capital Goods
- Commercial & Professional Services
- Transportation
- Automobiles & Components
- Consumer Durables & Apparel
- Consumer Services
- Retailing
- Food & Staples Retailing
- Food, Beverage & Tobacco
- Household & Personal Products
- Health Care Equipment & Services
- Pharmaceuticals, Biotechnology & Life Sciences
- Software & Services
- Technology Hardware & Equipment
- Semiconductors & Semiconductor Equipment
- Telecommunication Services
- Media & Entertainment
- Utilities
- Real Estate

Exceptions to policy based on

<Not Applicable>

Explain how criteria coverage and/or exceptions have been determined

Great-West Lifeco has integrated climate-related considerations into the insurance underwriting policies, which includes requirements to conduct scenario modelling on climate-related events and the impact on the entire reinsurance business. These insurance-underwriting policies require Great-West Lifeco to monitor peak perils at the most significant locations in order to assess the likelihood, severity and velocity of extreme weather events, including windstorms, hurricanes and cyclones. The information from these scenario models enables us to assess the potential quantum of losses, which in turn informs our pricing models .

C-FS3.6b

(C-FS3.6b) Provide details of your exclusion policies related to industries and/or activities exposed or contributing to climate-related risks.

Portfolio

Investing (Asset manager)

Type of exclusion policy

- Thermal coal
- Power from coal
- Oil from tar sands
- Arctic oil and gas

Year of exclusion implementation

2021

Timeframe for complete phase-out

Already phased out

Application

Other, please specify (ILIM does not do project finance. ILIM applies exclusions across all of their proprietary funds and asset classes, and the exclusions set the baseline for investments. Below this baseline, companies are deemed ineligible for investment.)

Country/Region the exclusion policy applies to

Other, please specify (All regions)

Description

As part of its investment exclusionary policy, Irish Life Investment Managers has specific requirements on climate-related factors, including excluding companies with 25% or more revenue involvement in thermal coal power generation and 10% or more revenue involvement in thermal coal extraction/production, as well as companies with 10% or more revenue involvement in arctic oil or oil sands. Exclusions are already implemented, and are revised at least semi-annually in order to ensure an efficient phase-out that is correctly aligned with global climate goals.

C-FS3.7

(C-FS3.7) Does your organization include climate-related requirements in your selection process and engagement with external asset managers?

	Climate-related requirements included in selection process and engagement with external asset managers	Primary reason for not including climate-related requirements in selection process and engagement with external asset managers	Explain why climate-related requirements are not included in selection process and engagement with external asset managers and your plans for the future
Row 1	Yes	<Not Applicable>	<Not Applicable>

C-FS3.7a

(C-FS3.7a) Provide details of the climate-related requirements included in your selection process and engagement with external asset managers.

Coverage

Minority of assets managed externally

Mechanisms used to include climate-related requirements in external asset manager selection

Review investment manager's climate performance (e.g., active ownership, proxy voting records, under-weighting in high impact activities)
Review investment manager's climate-related policies

Describe how you monitor and engage with asset managers to ensure investment activities are consistent with your climate strategy

Great-West Lifeco includes climate-related considerations as part of the selection process for external managers. Specifically, external managers are encouraged to have clear policies that align with Great-West Lifeco ESG principles, including with respect to climate change. In addition, through Great-West Lifeco's investment subsidiary Irish Life Investment Managers ("ILIM"), external manager selection is undertaken through detailed due diligence assessments that cover ESG factors broadly, including specific climate-related criteria.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2014

Target coverage

Country/region

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

<Not Applicable>

Base year

2013

Base year Scope 1 emissions covered by target (metric tons CO2e)

3736

Base year Scope 2 emissions covered by target (metric tons CO2e)

4558

Base year Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

8294

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

31

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

14

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

19

Target year

2025

Targeted reduction from base year (%)

27.3

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

6029.738

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2914

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

2646

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

5560

% of target achieved relative to base year [auto-calculated]

120.745744087919

Target status in reporting year

Achieved

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

<Not Applicable>

Please explain target coverage and identify any exclusions

This target (2013-2025) applies to Scope 1 and 2 emissions for Great-West Lifeco's owner-occupied and investment properties in Canada. The target excludes Scope 1 + 2 GHG emissions associated with corporate jet fuel use, backup generator diesel fuel use, and refrigerants. The target includes emissions associated with our property-level electricity, natural gas, and steam consumption at our corporate head office and investment properties. There is a new reporting boundary in place for the 2022 CDP submission to align with PCAF. Owner-Occupied properties are reported under Scope 1, 2 and 3. Investment properties including the Segregated Funds are reported under Scope 3 – Category 15 (only energy related emissions) . This target is part of our commitment to align with the Paris Agreement and net zero ambition, and will be updated in 2022 for further alignment.

Plan for achieving target, and progress made to the end of the reporting year

<Not Applicable>

List the emissions reduction initiatives which contributed most to achieving this target

Emissions reduction initiatives that contributed most to achieving this target include building efficiency projects such as HVAC upgrades, installation of high efficiency motors/pumps, and building controls.

Target reference number

Abs 2

Year target was set

2014

Target coverage

Country/region

Scope(s)Scope 1
Scope 2**Scope 2 accounting method**

Location-based

Scope 3 category(ies)

<Not Applicable>

Base year

2013

Base year Scope 1 emissions covered by target (metric tons CO2e)

3736

Base year Scope 2 emissions covered by target (metric tons CO2e)

4558

Base year Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

8294

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

31

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

14

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

19

Target year

2036

Targeted reduction from base year (%)

50.4

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

4113.824

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

2914

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

2646

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

5560

% of target achieved relative to base year [auto-calculated]

65.4039447142896

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

<Not Applicable>

Please explain target coverage and identify any exclusions

This target (2013-2036) applies to Scope 1 and 2 emissions for Great-West Lifeco's owner-occupied properties in Canada. The target excludes Scope 1 + 2 GHG emissions associated with corporate jet fuel use, backup generator diesel fuel use, and refrigerants. The target includes emissions associated with our property-level electricity, natural gas, and steam consumption at our corporate head office. There is a new reporting boundary in place for the 2022 CDP submission to align with PCAF. Owner-Occupied properties are reported under Scope 1, 2 and 3. Investment properties including the Segregated Funds are reported under Scope 3 – Category 15 (only energy related emissions). This target is part of our commitment to align with the Paris Agreement and net zero ambition, and will be updated in 2022 for further alignment.

Plan for achieving target, and progress made to the end of the reporting year

To achieve our target, we have focused on: energy efficiency, building retrofits and tenant behavioral changes at the Great-West Lifeco corporate offices in scope for this target.

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Net-zero target(s)

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Not applicable

Target year for achieving net zero

2050

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions

Our net zero greenhouse gas (GHG) emissions target is to be achieved well before 2050 in our operations. Interim targets in line with science are currently in development. There are currently no exclusions identified.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

As we develop our detailed transition plan, we will determine our approach to neutralizing unabated emissions. Based on our scenario analysis of reducing financed emissions in line with the IEA 1.5 scenario, we have completed high-level calculations based on current expected carbon prices for purchasing high-quality carbon credits that are SBTi-approved on an annual basis after 2050. We are also reviewing the range of natural and technological climate solutions to neutralize remaining emissions.

Planned actions to mitigate emissions beyond your value chain (optional)

Target reference number

NZ2

Target coverage

Investing (Asset owner)

Absolute/intensity emission target(s) linked to this net-zero target

Not applicable

Target year for achieving net zero

2050

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions

Our net zero greenhouse gas (GHG) emissions target is to be achieved by 2050 for our financed emissions in Great-West Lifeco's General Account. Interim targets in line with science are currently in development. There are currently no exclusions identified.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

As we develop our detailed transition plan, we will determine our approach to neutralizing unabated emissions. Based on our scenario analysis of reducing financed emissions in line with the IEA 1.5 scenario, we have completed high-level calculations based on current expected carbon prices for purchasing high-quality carbon credits that are SBTi-approved on an annual basis after 2050. We are also reviewing the range of natural and technological climate solutions to neutralize remaining emissions.

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	26	
To be implemented*	13	0.94
Implementation commenced*	1	0.94
Implemented*	11	715.92
Not to be implemented		

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings	Lighting
--------------------------------	----------

Estimated annual CO2e savings (metric tonnes CO2e)

0.94

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3750

Investment required (unit currency – as specified in C0.4)

5000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to lighting retrofit updates in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Building Energy Management Systems (BEMS)
--------------------------------	---

Estimated annual CO2e savings (metric tonnes CO2e)

49

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

35000

Investment required (unit currency – as specified in C0.4)

5400

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to implementing night-time space temperature setbacks in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Building Energy Management Systems (BEMS)
--------------------------------	---

Estimated annual CO2e savings (metric tonnes CO2e)

2

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

1970

Investment required (unit currency – as specified in C0.4)

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to modifying the schedule of kitchen supply fans in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

3

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

2500

Investment required (unit currency – as specified in C0.4)

3000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to modifying the operation of fitness centre fans in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Insulation
--------------------------------	------------

Estimated annual CO2e savings (metric tonnes CO2e)

4

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

2300

Investment required (unit currency – as specified in C0.4)

3800

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to insulating exposed steam piping in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Maintenance program
--------------------------------	---------------------

Estimated annual CO2e savings (metric tonnes CO2e)

2

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

1100

Investment required (unit currency – as specified in C0.4)

3600

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to repairing / replacing steam per heat valves in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Maintenance program
--------------------------------	---------------------

Estimated annual CO2e savings (metric tonnes CO2e)

1

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

530

Investment required (unit currency – as specified in C0.4)

1800

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to steam re-heat valve repair in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Building Energy Management Systems (BEMS)
--------------------------------	---

Estimated annual CO2e savings (metric tonnes CO2e)

12

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

6690

Investment required (unit currency – as specified in C0.4)

25000

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to installing air-flow sensors in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

17.35

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

4715

Investment required (unit currency – as specified in C0.4)

23575

Payback period

4-10 years

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to the exhaust fan energy recovery ventilator (ERV) in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

623.09

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

65923

Investment required (unit currency – as specified in C0.4)

Payback period

Please select

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to the fan coil terminal unit (HVAC overhaul) in buildings.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

1.54

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

75691

Investment required (unit currency – as specified in C0.4)

Payback period

Please select

Estimated lifetime of the initiative

11-15 years

Comment

This initiative relates to the fan coil terminal unit (HVAC overhaul) in buildings.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for energy efficiency	At Great-West Lifeco we have a dedicated budget for energy efficiency projects. Each year, an investigation is made into possible energy efficiency projects. The dedicated budget will vary based on the type of projects, return on investment, and overall positive sustainability impact (e.g. GHG emissions reduction potential). While significant investments were made in energy efficiency-related projects, only some of these projects had emission reductions accounted for and reported.
Financial optimization calculations	Financial optimization calculations are conducted on a project-by-project basis by asset management and property management teams for major capital expenditures at Lifeco corporately-owned properties as well as all investment (segregated fund) properties managed by GWL Realty Advisors.
Employee engagement	Employee engagement is a core component of Great-West Lifeco's sustainability strategy. In 2021, we continued the work of the Great-West Lifeco Global Real Estate Sustainability Council and the Corporate Properties Sustainability Working Group (CPSWG). The CPSWG, consisting of experienced property management and building operations employees, helps to direct sustainability initiatives with a particular focus on greenhouse gas (GHG) reductions at our corporate properties. So far, they have concentrated on retrofits focusing on energy, water and waste reduction, and the sharing of best practices and strategies among our facilities. The CPSWG also helps co-ordinate environment-themed employee engagement activities, such as our participation in the longstanding Earth Day and Earth Hour events. Additionally, sustainability initiatives that can lead to emission reductions at the corporate level are run throughout the year as well, including energy awareness programs, waste reduction initiatives (e.g. paper use reduction), and the promotion of sustainable commuting strategies.

C-FS4.5

(C-FS4.5) Do any of your existing products and services enable clients to mitigate and/or adapt to the effects of climate change?

Yes

(C-FS4.5a) Provide details of your existing products and services that enable clients to mitigate and/or adapt to climate change, including any taxonomy used to classify the products(s).

Product type/Asset class/Line of business

Investing	Real estate/Property
-----------	----------------------

Taxonomy or methodology used to classify product

Internally classified

Description of product

Through our real estate management subsidiaries we have certified select assets under management using certification systems such as LEED, BOMA BEST, and BREAAAM. These certifications have requirements and minimum performance thresholds for energy efficiency and therefore, indirectly, GHG emissions.

Product enables clients to mitigate and/or adapt to climate change

Mitigation
Adaptation

Portfolio value (unit currency – as specified in C0.4)

2800000000

% of total portfolio value

0.01

Type of activity financed/insured or provided

Green buildings and equipment

Product type/Asset class/Line of business

Investing	Other, please specify (Fund of funds and fixed income)
-----------	--

Taxonomy or methodology used to classify product

The EU Taxonomy for environmentally sustainable economic activities

Description of product

The low carbon product relates to the recent launch of our climate focused fund by our subsidiary – Irish Life Investment Managers (ILIM). The fund integrates a “decarbonization tilt” into the assets improving the alignment of these funds with the climate transition, which includes corporate bonds and emerging market asset classes. The fund excludes fossil fuels through the supply chain and increases allocations to companies with higher green activities, resulting in a global broad market exposure that is better aligned with a 1.5C pathway.

Product enables clients to mitigate and/or adapt to climate change

Mitigation

Portfolio value (unit currency – as specified in C0.4)

144000000

% of total portfolio value

0.01

Type of activity financed/insured or provided

Green buildings and equipment
Low-emission transport
Renewable energy
Carbon removal
Nature-based solutions
Sustainable agriculture
Other, please specify (The above selections are examples of the types of activities the companies in this fund are likely to be undertaking, and therefore we are financing.)

Product type/Asset class/Line of business

Investing	Other, please specify (fixed income, listed equity, mutual funds and fund of funds)
-----------	---

Taxonomy or methodology used to classify product

Externally classified using other taxonomy or methodology, please specify (several of these funds are classified under the EU taxonomy (Setanta, ILIM funds).)

Description of product

Lifeco subsidiaries had CAD \$189 billion in ESG-related investment mandates as at year-end 2021, of which climate change is a component of \$120 billion. This group of products include low carbon finance, carbon mitigation and adaptation, sustainable fund options using combinations of classifications such as exclusionary screening, positive screening, and corporate engagement & shareholder action. The coverage of these products is as follows: Thirteen ILIM ESG funds and client custom mandates, indices and strategies; five PanAgora sustainability-related strategies that includes their ESG-integrated equity strategies; nine Putnam ESG and sustainable investing funds, twelve distinct Canada Life Sustainable Portfolios (Target Date and Target Risk Funds); and one Setanta Socially Responsible Investment fund. In keeping with evolving legislation in the US and Canada related to defining the integration of ESG into investment decision-making, we have followed the approach of just including “sustainable funds” in this percentage.

Product enables clients to mitigate and/or adapt to climate change

Mitigation
Adaptation

Portfolio value (unit currency – as specified in C0.4)

12000000000

% of total portfolio value

5

Type of activity financed/insured or provided

Green buildings and equipment

Low-emission transport

Renewable energy

Carbon removal

Nature-based solutions

Sustainable agriculture

Other, please specify (The above selections are examples of the types of activities the companies in these ESG products and fund are likely to be undertaking, and therefore we are financing)

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

Name of organization(s) acquired, divested from, or merged with

<Not Applicable>

Details of structural change(s), including completion dates

<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	There is a new reporting boundary in place for the 2022 CDP submission to align with PCAF. Owner-Occupied properties are reported under Scope 1, 2 and 3. Investment properties including the Segregated Fund are reported under Scope 3 – Category 15 (only energy related emissions).

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	Baseline year data is recalculated where changes to the portfolio are made via acquisition or divestiture. Acquisitions have been added in starting in the baseline year, unless constructed after this period. Divestments have been removed from the inventory entirely. Additionally, all base year data has been recalculated based upon the boundary change in 5.1b. Each year all base year data is recalculated based upon the above criteria at a 0% threshold.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2013

Base year end

December 31 2013

Base year emissions (metric tons CO2e)

11980.35

Comment

There is a new reporting boundary in place for the 2022 CDP submission to align with PCAF. Owner-Occupied properties are reported under Scope 1, 2 and 3. Investment properties including the Segregated Fund are reported under Scope 3 – Category 15 (only energy related emissions).

Scope 2 (location-based)

Base year start

January 1 2013

Base year end

December 31 2013

Base year emissions (metric tons CO2e)

31639.12

Comment

There is a new reporting boundary in place for the 2022 CDP submission to align with PCAF. Owner-Occupied properties are reported under Scope 1, 2 and 3. Investment properties including the Segregated Fund are reported under Scope 3 – Category 15 (only energy related emissions).

Scope 2 (market-based)

Base year start

January 1 2013

Base year end

December 31 2013

Base year emissions (metric tons CO2e)

31639.12

Comment

While GWL does calculate market based and location based emissions for Scope 2, there were no purchases of energy that would create differentiation of these two sources in the baseline year. The result is that location and market based emissions are identical for the baseline period.

Scope 3 category 1: Purchased goods and services

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

200000

Comment

Although we estimated the emissions from our spend data and EPA emissions factors, the data did not come directly from suppliers EPA emission factors were assigned by supplier category and multiplied by USD spend. The resulting value of around 200 ktCO2 is therefore a broad estimation that takes into consideration our spend categories but not the actual emissions of each distinct supplier. This exercise is helpful to find hotspots in our supply chain with high emissions/spend to engage with. The scope of suppliers is all Canada Life, Empower, and European (excluding Putnam) third-party suppliers, accounting for about \$1.4B of the \$1.7B spend among those entities and over 3000 suppliers.

Scope 3 category 2: Capital goods

Base year start**Base year end****Base year emissions (metric tons CO2e)****Comment**

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start**Base year end****Base year emissions (metric tons CO2e)****Comment**

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1 2013

Base year end

December 31 2013

Base year emissions (metric tons CO2e)

165.24

Comment

Excludes Investment property and Leased water consumption

Scope 3 category 5: Waste generated in operations

Base year start

January 1 2013

Base year end

December 31 2013

Base year emissions (metric tons CO2e)

1901.91

Comment

Excludes Investment property and Leased waste generation

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

January 1 2013

Base year end

December 31 2013

Base year emissions (metric tons CO2e)

7470.79

Comment

These emissions include energy consumption only (not emissions associated with waste and water transport).

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

142470

Comment

Scope 3 portfolio investment emissions relates to the Canadian segregated real estate funds (GWL Canadian Real Estate Fund No.1 and London Life Real Estate Fund - managed by GWL Realty Advisors), and investment properties in the Lifeco General Account. Lifeco continues to pilot methodologies for accounting for the carbon footprint of our financed emissions. Accounting for our portfolio emissions is evolving day-to-day, as Lifeco's portfolio companies' own emissions reporting capabilities evolve alongside emerging regulations and methodologies that are being refined by industry groups and data analytics providers. We are currently undergoing a process to set targets aligned with climate science and actively enhancing our internal methodologies for data compilation and analysis, including refining metrics for portfolio management.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

Other, please specify (The Partnership for Carbon Accounting Financials)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

6649.93

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

We have operations where we are able to access electricity supplier emission factors or residual emissions factors. Market-based Scope 2 emissions are calculated but not assured.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

15059.55

Scope 2, market-based (if applicable)

12147

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

Great-West Lifeco purchases renewable and low-carbon electricity from local utilities in Canada, US, UK, and Ireland.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

200000

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Although we estimated the emissions from our spend data and EPA emissions factors, the data did not come directly from suppliers EPA emission factors were assigned by supplier category and multiplied by USD spend. The resulting value of around 200 ktCO2 is therefore a broad estimation that takes into consideration our spend categories but not the actual emissions of each distinct supplier. This exercise is helpful to find hotspots in our supply chain with high emissions/spend to engage with. The scope of suppliers is all Canada Life, Empower, and European (excluding Putnam) third-party suppliers, accounting for about \$1.4B of the \$1.7B spend among those entities and over 3000 suppliers. When considered in the context of the scope 3 emissions from our investments, these emissions are considered to be immaterial.

Capital goods

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

These emissions are from the production of our office buildings assets and infrastructure. When considered in the context of the scope 3 emissions from our investments, these emissions are considered to be immaterial

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

These emissions are from the production of our buildings, assets and infrastructure. When considered in the context of the scope 3 emissions from our investments, these emissions are considered to be immaterial.

Upstream transportation and distribution

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

43.03

Emissions calculation methodology

Fuel-based method

Other, please specify (The water consumption for each property was multiplied by country or region-specific emissions factors.)

Percentage of emissions calculated using data obtained from suppliers or value chain partners

82

Please explain

The emissions relate to the transport and distribution of products that we purchase for our offices. The emissions we have calculated relate to the distribution of water for consumption in our international corporate owner-occupied properties. When considered in the context of the scope 3 emissions from our investments, these emissions are considered to be immaterial.

Waste generated in operations

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

430.13

Emissions calculation methodology

Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

91

Please explain

This includes emissions related to the waste we generate at our international corporate owner-occupied properties that is sent to landfill or waste-to-energy plants. When considered in the context of the scope 3 emissions from our investments, these emissions are considered to be immaterial.

Business travel

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

1324.11

Emissions calculation methodology

Fuel-based method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

This includes emissions generated from both air and ground business travel. When considered in the context of the scope 3 emissions from our investments, these emissions are considered to be immaterial.

Employee commuting

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

This includes travel by our employees, such as bus, rail and automobile. When considered in the context of the scope 3 emissions from our investments, these emissions are considered to be immaterial.

Upstream leased assets

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

2976.91

Emissions calculation methodology

Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

90

Please explain

Upstream leased assets are outside of our financial and operational control. These emissions are associated with Great-West Lifeco external (third-party managed) field offices and other leased area for Canada Life employees in Canada.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

We do not produce a product that results in downstream emissions from transportation and distribution.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

We do not sell products that result in GHG emissions from the processing of sold products.

Use of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

We do not sell products in our business where the use of the product is relevant in the context of emissions.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

We do not sell products in our business where GHG emissions associated with end of life treatment of sold products would be relevant.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The operation of assets that are owned by Great-West Lifeco (acting as lessor) and leased to other entities in the reporting year are already included in scope s category 15 (investments) GHG emissions reporting, since they're investment properties.

Franchises

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO₂e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Great-West Lifeco does not own any franchises.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

No other upstream emissions are considered material.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

No other downstream emissions are considered material.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

3.37e-7

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

21709.48

Metric denominator

unit total revenue

Metric denominator: Unit total

6441700000

Scope 2 figure used

Location-based

% change from previous year

21.61

Direction of change

Decreased

Reason for change

Revenue increased by 6.33% and year-over-year GHG emissions decreased by 16.6% due to COVID-19 related office closures, travel restrictions, and due to implementing several emission reduction initiatives at Lifeco office locations. These initiatives included lighting retrofits, Implement nighttime space temperature setback, steam re-heat valve repairs, airflow sensor installations, HVAC overhauls, among others. For Lifeco, the largest decreases were seen for electricity within owner-occupied properties (3,200 tCO2e or 19%), business travel (852 tCO2e or 39.2%) and for natural gas within owner-occupied properties (595.8 tCO2e or 10%).

Intensity figure

0.78

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

21709.48

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

28000

Scope 2 figure used

Location-based

% change from previous year

25.8

Direction of change

Decreased

Reason for change

Employee count increased by 12.3% and year-over-year GHG emissions decreased by 16.6% due to COVID-19 related office closures, travel restrictions, and due to implementing several emission reduction initiatives at Lifeco office locations. These initiatives included lighting retrofits, Implement nighttime space temperature setback, steam re-heat valve repairs, airflow sensor installations, HVAC overhauls, among others. For Lifeco, the largest decreases were seen for electricity within owner-occupied properties (3,200 tCO2e or 19%), business travel (852 tCO2e or 39.2%) and for natural gas within owner-occupied properties (595.8 tCO2e or 10%).

Intensity figure

0.00195

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

21709.48

Metric denominator

square foot

Metric denominator: Unit total

11131797.9

Scope 2 figure used

Location-based

% change from previous year

16.65

Direction of change

Decreased

Reason for change

There was no change in area. GHG emissions decreased by 16.6% due to COVID-19 related office closures, travel restrictions, and due to implementing several emission reduction initiatives at Lifeco office locations. These initiatives included lighting retrofits, Implement nighttime space temperature setback, steam re-heat valve repairs, airflow sensor installations, HVAC overhauls, among others. For Lifeco, the largest decreases were seen for electricity within owner-occupied properties (3,200 tCO2e or 19%), business travel (852 tCO2e or 39.2%) and for natural gas within owner-occupied properties (595.8 tCO2e or 10%).

C7. Emissions breakdowns

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	
Other emissions reduction activities	715.19	Decreased	2.75	In 2021, we decreased our Scope 1 and 2 emissions by 2.75% due to implementing several emission reduction initiatives at Lifeco office locations. These initiatives included lighting retrofits, steam re-heat valve repairs, airflow sensor installations, HVAC overhauls, among others. As a result, Scope 1 and 2 emissions reduced 715.92 tCO2e. We divided this number by 26,045 tCO2e (the total Scope 1 and 2 emissions in 2020) and multiplied by 100 to achieve an overall 2.75% decrease. The calculation was as follows: $(-715.92 \text{ tCO}_2\text{e}/26,045 \text{ tCO}_2\text{e}) = -2.75\%$. Note that due to a new reporting boundary to align with PCAF methodology for financial institutions, our global Scope 1 + 2 emissions decreased from 42,946.43 metric tons to 21,709.48 metric tons. This was a result of moving investment properties previously accounted for in Scope 1 and Scope 2 emissions into Scope 3 – Financed Emissions (Category 15). We have recalculated our previous years emissions to align with this new boundary, and under it our 2020 Scope 1 and 2 emissions were 26,045 tCO2e.
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	253.1	Decreased	0.97	In 2021, we decreased our Scope 1 and 2 emissions by 0.97% due to the reduced usage of corporate jets and company vehicles at Lifeco due to COVID-19 travel restrictions. As a result, Scope 1 and 2 emissions were reduced by 253.10 tCO2e. We divided this number by 26,045 tCO2e (the total Scope 1 and 2 emissions in 2020) and multiplied by 100 to achieve an overall 0.97% decrease. The calculation is as follows: $(253.10 \text{ tCO}_2\text{e}/26,045 \text{ tCO}_2\text{e}) = 0.97\%$
Change in methodology	0	No change	0	
Change in boundary	21236.95	Decreased	81.54	In 2021, we reduced our Scope 1 and 2 emissions by 81.54% due to a change in boundary in alignment with the PCAF standard. The change in boundary relates to including the emissions of Lifeco's owner occupied properties under Scopes 1, 2 and 3; moving the energy-related emissions of the Segregated Funds investment properties to Scope 3 – Category 15. As a result, Scope 1 and 2 emissions were reduced by 21,236.95 tCO2e. We divided this number by 26,045 tCO2e (the total Scope 1 and 2 emissions in 2020, plus the newly classified Scope 3 Category 15 emissions from 2020) and multiplied by 100 to achieve an overall 81.54% decrease. The calculation is as follows: $(21,236.96 \text{ tCO}_2\text{e}/26,045 \text{ tCO}_2\text{e}) = 81.54\%$
Change in physical operating conditions	3456.82	Decreased	13.27	In 2021, we decreased our Scope 1 and 2 emissions by 13.27% due to weather and occupancy changes in Lifeco's Canadian corporate buildings and their international portfolio. As a result, Scope 1 and 2 emissions were reduced by 3456.82 tCO2e. We divided this number by 26,045 tCO2e (the total Scope 1 and 2 emissions in 2020) and multiplied by 100 to achieve an overall 13.27% decrease. The calculation is as follows: $(3456.82 \text{ tCO}_2\text{e}/26,045 \text{ tCO}_2\text{e}) = 13.27\%$
Unidentified	110.65	Increased	0.42	In 2021, we increased our Scope 1 and 2 emissions by 0.42% due to reasons currently unidentified. As a result, Scope 1 and 2 emissions were reduced by 110.65 tCO2e. We divided this number by 26,045 tCO2e (the total Scope 1 and 2 emissions in 2020) and multiplied by 100 to achieve an overall 0.42% increase. The calculation is as follows: $(110.65 \text{ tCO}_2\text{e}/26,045 \text{ tCO}_2\text{e}) = 0.42\%$.
Other	20.66	Decreased	0.08	In 2021, we decreased our Scope 1 and 2 emissions by 0.08% due to a lower use of emissions sources including refrigerants and diesel back-up fuel. weather and occupancy changes in Lifeco's Canadian corporate buildings and international portfolio. As a result, Scope 1 and 2 emissions were reduced by 20.66 tCO2e. We divided this number by 26,045 tCO2e (the total Scope 1 and 2 emissions in 2020) and multiplied by 100 to achieve an overall 0.08% decrease. The calculation is as follows: $(20.66 \text{ tCO}_2\text{e}/26,045 \text{ tCO}_2\text{e}) = 0.08\%$

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	28779.57	28779.57
Consumption of purchased or acquired electricity	<Not Applicable>	41922.48	15143.44	57065.92
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	7940.59	7940.59
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	41922.48	51863.6	93786.08

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

Canada

Consumption of electricity (MWh)

27994.6

Consumption of heat, steam, and cooling (MWh)

7940.59

Total non-fuel energy consumption (MWh) [Auto-calculated]

35935.19

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

United States of America

Consumption of electricity (MWh)

18169.58

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

18169.58

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)

4015.86

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

4015.86

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Ireland

Consumption of electricity (MWh)

6885.88

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

6885.88

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Other, please specify (Energy Use Intensity)

Metric value

18.8

Metric numerator

kWh

Metric denominator (intensity metric only)

ft²

% change from previous year

9.8

Direction of change

Decreased

Please explain

Energy Intensity decreased by 2.03 kWh/ft² as a result of reductions in electricity and natural gas usage across all GWO portfolios. These decreases can be attributed to several factors including continued COVID-19 impacts, weather, and continued efforts by GWO to make improvements to their operations.

Description

Energy usage

Metric value

209227.32

Metric numerator

MWH

Metric denominator (intensity metric only)**% change from previous year**

9.8

Direction of change

Decreased

Please explain

Energy usage decreased by 22,649 MWH as a result of reductions in electricity and natural gas usage across all GWO portfolios. These decreases can be attributed to several factors including continued COVID-19 impacts, weather, and continued efforts by GWO to make improvements to their operations.

Description

Other, please specify (Water Consumption)

Metric value

572812.15

Metric numerator

m³

Metric denominator (intensity metric only)**% change from previous year**

23

Direction of change

Decreased

Please explain

Water consumption decreased by 171,058 m³ as a result of reductions in water usage from COVID-19 office closures and employees working from home.

Description

Other, please specify (Water Use Intensity)

Metric value

0.05

Metric numerator

m³

Metric denominator (intensity metric only)

ft²

% change from previous year

23

Direction of change

Decreased

Please explain

Water Use Intensity decreased by 0.015 m³/ft² due to a decrease in water usage from COVID-19 office closures and employees working from home.

Description

Waste

Metric value

2341.01

Metric numerator

metric tonnes

Metric denominator (intensity metric only)**% change from previous year**

1.8

Direction of change

Increased

Please explain

Landfill waste generation increased by 40 metric tonnes, due primarily to increases in Canada of 58 tonnes. This increase was due to higher office attendance associated with relaxed COVID-19 related work from home measures in 2021.

Description

Other, please specify (waste diversion rate)

Metric value

52

Metric numerator

%

Metric denominator (intensity metric only)**% change from previous year**

1.9

Direction of change

Increased

Please explain

The waste diversion rate increased slightly due to an overall reduction in waste to landfill, and waste to energy and recycling.

Description

Other, please specify (Waste to Energy (tonnes))

Metric value

166.51

Metric numerator

metric tonnes

Metric denominator (intensity metric only)**% change from previous year**

34.9

Direction of change

Increased

Please explain

Waste to Energy generation increased by 43 metric tonnes, due to an increase from the Canada Life UK properties of 47.4 tonnes.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

FINAL The Canada Life Assurance Company FY2021 Verification Report (1).pdf

Page/ section reference

Please see pages 3-9 for details on the limited level assurance statement from PwC (e.g., scope and subject matter, independence and quality control, conclusions etc.).

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

FINAL The Canada Life Assurance Company FY2021 Verification Report (1).pdf

Page/ section reference

Please see pages 3-9 for details on the limited level assurance statement from PwC (e.g., scope and subject matter, independence and quality control, conclusions etc.).

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Upstream transportation and distribution

Scope 3: Waste generated in operations

Scope 3: Business travel

Scope 3: Investments

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

FINAL The Canada Life Assurance Company FY2021 Verification Report (1).pdf

Page/section reference

Please see pages 3-9 for details on the limited level assurance statement from PwC (e.g., scope and subject matter, independence and quality control, conclusions etc.).

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Year on year change in emissions (Scope 3)	ISAE 3410	PwC verified the year on year change in emissions for Scope 1, Scope 2, Scope 1 & 2 (combined), and Scope 3 GHG emissions. See attached PwC Assurance Statement (pg.10). FINAL The Canada Life Assurance Company FY2021 Verification Report (1).pdf
C6. Emissions data	Year on year change in emissions (Scope 1)	ISAE 3410	PwC verified the year on year change in emissions for Scope 1, Scope 2, Scope 1 & 2 (combined), and Scope 3 GHG emissions. See attached PwC Assurance Statement (pg.10). FINAL The Canada Life Assurance Company FY2021 Verification Report (1).pdf
C6. Emissions data	Year on year change in emissions (Scope 2)	ISAE 3410	PwC verified the year on year change in emissions for Scope 1, Scope 2, Scope 1 & 2 (combined), and Scope 3 GHG emissions. See attached PwC Assurance Statement (pg.10). FINAL The Canada Life Assurance Company FY2021 Verification Report (1).pdf
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE 3410	PwC verified the year on year change in emissions for Scope 1, Scope 2, Scope 1 & 2 (combined), and Scope 3 GHG emissions. See attached PwC Assurance Statement (pg.10). FINAL The Canada Life Assurance Company FY2021 Verification Report (1).pdf

C11. Carbon pricing

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations

GHG Scope

Scope 1
Scope 2

Application

The price is applied to all owner-occupied and investment properties in Canada by our subsidiary GWLRA.

Actual price(s) used (Currency /metric ton)

20

Variance of price(s) used

Carbon tax/pricing implications on utility costs have been assessed for the Canadian portfolio. The GHG emissions inventory report for GWLRA, includes forward-looking carbon pricing assessments based on the government of Canada's commitment to carbon pricing (the Greenhouse Gas Pollution Pricing Act). For example, carbon taxes are currently targeted at a rate of between \$20.4/tonne (QC) to \$45/tonne (BC), with the aim of \$50/tonne across the country by 2022, although some exceptions may apply as provinces implement their own federally-approved programs. Under the Federal proposal, the government would increase the carbon price by \$15 per year starting in 2023 rising to \$170 per tonne in 2030. The forward-looking carbon pricing analysis (transition risk assessment) includes a scenario of pricing at \$170/tonne CO2e by 2030.

Type of internal carbon price

Shadow price
Implicit price

Impact & implication

GWL Realty Advisors, a wholly-owned asset management subsidiary of Great-West Lifeco, uses carbon prices for informational purposes – to determine potential future operating cost increases (e.g., utility expenditure) at properties within its Canadian managed portfolio. These prices are assessed under different pricing scenarios, reflecting carbon prices that are considered necessary to achieve various carbon reduction and carbon neutrality targets set forth by the Government of Canada. Together, these shadow price scenarios provide insight into possible future operating expenses and associated operational and financial risks across the real estate portfolio. On an ad hoc basis, GWL Realty Advisors considers implicit carbon prices during capital budgeting and expenditure on energy retrofits for Great-West Lifeco's owner-occupied and investment properties. These prices help determine the true financial payback, and point to the efficacy of conservation initiatives and retrofits, that span more than 1-2 years. Overall, the use of shadow and implicit carbon prices (and different carbon pricing scenarios) by GWL Realty Advisors has not significantly impacted Great-West Lifeco's business decisions. This is due to operating costs from utilities expenditures (at Lifeco's Canadian owner-occupied and investment properties) accounting for <1% of total operating costs under all assessed carbon prices.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations

GHG Scope

Scope 1
Scope 2

Application

The price is applied to all owner-occupied and investment properties in Canada by our subsidiary GWLRA.

Actual price(s) used (Currency /metric ton)

30

Variance of price(s) used

Carbon tax/pricing implications on utility costs have been assessed for the Canadian portfolio. The GHG emissions inventory report for GWLRA, includes forward-looking carbon pricing assessments based on the government of Canada's commitment to carbon pricing (the Greenhouse Gas Pollution Pricing Act). For example, carbon taxes are currently targeted at a rate of between \$20.4/tonne (QC) to \$45/tonne (BC), with the aim of \$50/tonne across the country by 2022, although some exceptions may apply as provinces implement their own federally-approved programs. Under the Federal proposal, the government would increase the carbon price by \$15 per year starting in 2023 rising to \$170 per tonne in 2030. The forward-looking carbon pricing analysis (transition risk assessment) includes a scenario of pricing at \$170/tonne CO₂e by 2030.

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Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations

GHG Scope

Scope 1
Scope 2

Application

The price is applied to all owner-occupied and investment properties in Canada by our subsidiary GWLRA.

Actual price(s) used (Currency /metric ton)

45

Variance of price(s) used

Carbon tax/pricing implications on utility costs have been assessed for the Canadian portfolio. The GHG emissions inventory report for GWLRA, includes forward-looking carbon pricing assessments based on the government of Canada's commitment to carbon pricing (the Greenhouse Gas Pollution Pricing Act). For example, carbon taxes are currently targeted at a rate of between \$20.4/tonne (QC) to \$45/tonne (BC), with the aim of \$50/tonne across the country by 2022, although some exceptions may apply as provinces implement their own federally-approved programs. Under the Federal proposal, the government would increase the carbon price by \$15 per year starting in 2023 rising to \$170 per tonne in 2030. The forward-looking carbon pricing analysis (transition risk assessment) includes a scenario of pricing at \$170/tonne CO₂e by 2030.

Type of internal carbon price

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Implicit price

Impact & implication

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Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations

GHG Scope

Scope 1
Scope 2

Application

The price is applied to all owner-occupied and investment properties in Canada by our subsidiary GWLRA.

Actual price(s) used (Currency /metric ton)

50

Variance of price(s) used

Carbon tax/pricing implications on utility costs have been assessed for the Canadian portfolio. The GHG emissions inventory report for GWLRA, includes forward-looking carbon pricing assessments based on the government of Canada's commitment to carbon pricing (the Greenhouse Gas Pollution Pricing Act). For example, carbon taxes are currently targeted at a rate of between \$20.4/tonne (QC) to \$45/tonne (BC), with the aim of \$50/tonne across the country by 2022, although some exceptions may apply

as provinces implement their own federally-approved programs. Under the Federal proposal, the government would increase the carbon price by \$15 per year starting in 2023 rising to \$170 per tonne in 2030. The forward-looking carbon pricing analysis (transition risk assessment) includes a scenario of pricing at \$170/tonne CO₂e by 2030.

Type of internal carbon price

Shadow price
Implicit price

Impact & implication

GWL Realty Advisors, a wholly-owned asset management subsidiary of Great-West Lifeco, uses carbon prices for informational purposes – to determine potential future operating cost increases (e.g., utility expenditure) at properties within its Canadian managed portfolio. These prices are assessed under different pricing scenarios, reflecting carbon prices that are considered necessary to achieve various carbon reduction and carbon neutrality targets set forth by the Government of Canada. Together, these shadow price scenarios provide insight into possible future operating expenses and associated operational and financial risks across the real estate portfolio. On an ad hoc basis, GWL Realty Advisors considers implicit carbon prices during capital budgeting and expenditure on energy retrofits for Great-West Lifeco's owner-occupied and investment properties. These prices help determine the true financial payback, and point to the efficacy of conservation initiatives and retrofits, that span more than 1-2 years. Overall, the use of shadow and implicit carbon prices (and different carbon pricing scenarios) by GWL Realty Advisors has not significantly impacted Great-West Lifeco's business decisions. This is due to operating costs from utilities expenditures (at Lifeco's Canadian owner-occupied and investment properties) accounting for <1% of total operating costs under all assessed carbon prices.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations

GHG Scope

Scope 1
Scope 2

Application

The price is applied to all owner-occupied and investment properties in Canada by our subsidiary GWLRA.

Actual price(s) used (Currency /metric ton)

170

Variance of price(s) used

Carbon tax/pricing implications on utility costs have been assessed for the Canadian portfolio. The GHG emissions inventory report for GWLRA, includes forward-looking carbon pricing assessments based on the government of Canada's commitment to carbon pricing (the Greenhouse Gas Pollution Pricing Act). For example, carbon taxes are currently targeted at a rate of between \$20.4/tonne (QC) to \$45/tonne (BC), with the aim of \$50/tonne across the country by 2022, although some exceptions may apply as provinces implement their own federally-approved programs. Under the Federal proposal, the government would increase the carbon price by \$15 per year starting in 2023 rising to \$170 per tonne in 2030. The forward-looking carbon pricing analysis (transition risk assessment) includes a scenario of pricing at \$170/tonne CO₂e by 2030.

Type of internal carbon price

Shadow price
Implicit price

Impact & implication

GWL Realty Advisors, a wholly-owned asset management subsidiary of Great-West Lifeco, uses carbon prices for informational purposes – to determine potential future operating cost increases (e.g., utility expenditure) at properties within its Canadian managed portfolio. These prices are assessed under different pricing scenarios, reflecting carbon prices that are considered necessary to achieve various carbon reduction and carbon neutrality targets set forth by the Government of Canada. Together, these shadow price scenarios provide insight into possible future operating expenses and associated operational and financial risks across the real estate portfolio. On an ad hoc basis, GWL Realty Advisors considers implicit carbon prices during capital budgeting and expenditure on energy retrofits for Great-West Lifeco's owner-occupied and investment properties. These prices help determine the true financial payback, and point to the efficacy of conservation initiatives and retrofits, that span more than 1-2 years. Overall, the use of shadow and implicit carbon prices (and different carbon pricing scenarios) by GWL Realty Advisors has not significantly impacted Great-West Lifeco's business decisions. This is due to operating costs from utilities expenditures (at Lifeco's Canadian owner-occupied and investment properties) accounting for <1% of total operating costs under all assessed carbon prices.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

- Yes, our customers/clients
- Yes, our investees
- Yes, other partners in the value chain

C-FS12.1b

(C-FS12.1b) Give details of your climate-related engagement strategy with your clients.

Type of clients

Clients of Asset Managers (Asset owners)

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to educate clients about your climate change performance and strategy

% client-related Scope 3 emissions as reported in C-FS14.1a

100

Portfolio coverage (total or outstanding)

2

Rationale for the coverage of your engagement

Engagement targeted at clients with the highest potential impact on the climate

Impact of engagement, including measures of success

Every quarter, GWL Realty Advisors engages with clients of its segregated real estate funds (GWL Canadian Real Estate Fund No. 1 and London Life Real Estate Fund – managed by GWL Realty Advisors, with gross fund value of \$10.2bn CAD as of Q42021). The impact of the engagement is to educate customers about the fund's climate performance and strategy. Measures of success include having an ESG section in 25% of the quarterly fund bulletins, which are shared directly with clients and made publicly available online. In addition, the Canadian Real Estate Fund is directed towards institutional investors and the quarterly bulletin is supplemented with direct meetings with larger investors in the fund. These meetings include discussion of ESG and climate-related performance of the fund and targeted at the largest investors. In Q4 2021, the fund bulletins included ESG commitments on the first page. In addition, text in the Q4 bulletins included the following content: "Since 2013, the Fund has realized a 30% reduction to its Global Green House Gas (GHG) emissions across its office and residential portfolios through regular energy audits, setting reduction targets and retrofitting buildings to improve energy efficiency and reduce emissions. While significant, there is much more ahead and in late 2021, the Fund committed to align with the Federal government target of achieving Net Zero in GHG emissions by 2050. Management will provide timely updates to stakeholders as the 'road map' is developed and interim goals are achieved."

Type of clients

Clients of Asset Managers (Asset owners)

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to educate clients about your climate change performance and strategy

% client-related Scope 3 emissions as reported in C-FS14.1a

87

Portfolio coverage (total or outstanding)

2

Rationale for the coverage of your engagement

Non-targeted engagement

Impact of engagement, including measures of success

On an ongoing basis, GWLRealty Advisors conducts tenant and resident engagement (satisfaction) surveys to inform our continuous improvement efforts at both our commercial and multi-residential properties under management. For example, GWLRealty Advisors engages to share information on sustainability-related metrics such as green building certification status, energy performance (e.g., energy reductions), water use efficiency, waste production and GHG emissions of the property. We have engaged with 9,800 leases (e.g. one representative from each of 9,800 leases) out of a total number of leases of 12,000 at the time the survey was conducted, across all our buildings. Within the real-estate asset class this reach out covers 82% of leases, which represents 87% of the financed emissions (asset owner) reported in 14.1a. Property and asset management teams, as required, address issues and follow-ups pertaining to the surveys. By engaging with the occupants of its buildings, GWL Realty Advisors is able to contribute to the continuous improvement of the efficiency of its assets under management, for example, engagement by GWLRealty Advisors staff can lead tenants to adopt and install higher efficiency equipment for their spaces. The impact of the engagement is the reduction of GHG emissions achieved across the GWL Realty Advisors office and multi-residential portfolio. Success is measured through tenant engagement scores (rated on a 1-10 scale), with the objective to improve or meet the previous survey's scores. In 2021, GWL Realty Advisors achieved a 30% GHG emissions across its office and multi-residential portfolio, compared to its 2013 baseline, in part due to the efforts of tenants and residents. Please note these Scope 3 emissions are specifically associated with the Asset Owner category of FSQ14.1a which covers investment properties in the Lifeco General Account.

C-FS12.1c

(C-FS12.1c) Give details of your climate-related engagement strategy with your investees.

Type of engagement

Engagement & incentivization (changing investee behavior)

Details of engagement

Exercise active ownership

Support climate-related shareholder resolutions

Support climate-related issues in proxy voting

Implement a stewardship and engagement strategy, with a clear escalation and voting policy, that is consistent with our ambition for all assets under management to achieve net zero emissions by 2050 or sooner

Encourage better climate-related disclosure practices among investees

Encourage investees to set a science-based emissions reduction target

% scope 3 emissions as reported in C-FS14.1a/C-FS14.1b

0

Investing (Asset managers) portfolio coverage

9

Investing (Asset owners) portfolio coverage

0

Rationale for the coverage of your engagement

Engagement targeted at investees with the highest potential impact on the climate

Impact of engagement, including measures of success

Through Great-West Lifeco's subsidiary, Irish Life Investment Managers (ILIM), we engage with investee companies on climate-related risks, opportunities, policy requirements and those with the highest potential impact on the climate. In 2021, ILIM's measure of success for engagements with investees was to increase the number of direct and collaborative engagements on climate above the 2020 number of 571; in 2021 it rose to 833. During 2020 ILIM conducted twenty-five climate change engagements with investees. In 2021, ILIM launched 7 new engagements with investees on climate change and continued engaging with sixteen of the twenty-five from 2020 (it was possible to successfully conclude 9 of the 2020 dialogues as a result of information contained in company responses to engagement requests). This resulted in a total of 23 active, direct engagements on climate change in 2021. On the collaborative front, ILIM increased the number of climate change engagements: as part of the CDP Non-Disclosure Campaign, ILIM co-signed 546 climate change engagement letters in 2020, and this number expanded to 810 in 2021. The impact of the engagement is as follows: o In 2021, ILIM's engagement directly or collaboratively, resulted in reaching approximately 10% of individual investee companies on climate-related issues. o ILIM collaborates with the Climate Action 100+ to engage with investees with the highest potential impact on the climate, focusing on 80% of the worlds largest GHG emitters to take action on climate change. In 2021, out of the companies engaged, 52% have now set 2050 net zero targets, and 72% have committed to align their disclosures with TCFD recommendations. o ILIM also engages investees to promote climate-related disclosure. In 2021, ILIM engaged with the CDP Non-Disclosure Campaign to drive further corporate transparency around climate change. Disclosure rate increased from 18% in 2020 to 25% in 2021. This engagement represents ~80% coverage of the financed emissions in ILIM's equity investments, and equities is ~60% of their December 31, 2021 AUM. It is important to note that ILIM's final financed emissions were not available to report in section 14 at the time of CDP submission, so the "% of Scope 3 emissions as reported in section 14" was selected as 0%. ILIM's financed emissions will be reported later in 2022 as part of their TCFD report.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Other Partners - Community Organizations

We engage with various organizations to support climate change awareness and management and encourage our staff to get involved in these causes. Recent examples include the International Institute for Sustainable Development (IISD), Nature Conservancy of Canada and the Commuter Challenge.

International Institute for Sustainable Development (IISD):

We are engaged with the IISD to promote research and knowledge of the risks associated with climate change.

The topic of engagement is focused on understanding the risk of climate change and how we can anticipate the risk to increase community resilience.

We were the catalyst funder for Prairie Climate Centre – a joint venture between the IISD and the University of Winnipeg. The Centre provides research, advice and policy development. Through our engagement with the IISD we have supported coordinated research, advice and policy development on climate change. In 2021, we supported IISD’s climate adaptation strategic focus in Canada – providing accelerating solutions for a stable climate, sustainable resources, and fair economies with a focus on driving action on climate adaptation in Canada, leveraging IISD’s global and Prairies-focused expertise.

Their work in climate risk management and adaptation in Canada aims to help decision-makers devise policies and programs that will be sustainable over the long-term. Through participatory approaches that bring together local knowledge and scientific information, IISD experts develop the strategies, tools, and policy advice needed to respond effectively to the impacts of a changing climate on livelihoods, cultures, economies, and the environment. They are a founding partner of ClimateWest, a central hub for climate services in Manitoba, Saskatchewan, and Alberta providing access to regionally relevant climate information and the support to use it effectively in planning and decision making.

Nature Conservancy of Canada (NCC):

We are engaged with the NCC as a national sponsor to support conservation, public engagements and community partnerships on the topic of sustainability and climate change.

As a national sponsor, we continued to support a week-long virtual event: Big Backyard BioBlitz, encouraging Canadians to observe nature and learn more about habitats and species in their backyards and neighbourhoods through the use of the iNaturalist app. Data collected from backyards and greenspaces across the country will help inform knowledge about species and impacts of climate change, while contributing to a broader view of nature in Canada.

2021 Big Backyard BioBlitz 6,699 participants registered from across Canada as observers and identifiers. A fivefold increase from 2020. 57% were first-time volunteers, resulting in: 36,843 observations made (an observation is an encounter with an individual organism at a particular time and location), and 4,336 species identified. 35.5% of the observations were research grade and contributed to science. In addition to educating our employees on sustainability, our engagement has helped the NCC complete nearly 600 new conservation projects completed across Canada, connect more than 300,000 Canadians to nature, and nearly 20,000 volunteers cared for nature since our relationship began.

Commuter Challenge:

We are engaged with Green Action Centre for the National Commuter Challenge with our employees across Canada and as a sponsor locally in Winnipeg.

Through our participation we are engaging our employees to take action and providing education and awareness of the impact of active and sustainable transportation on climate change and effect on air quality and reduction of greenhouse gas emissions. Commuter Challenge is a week-long event during Canadian Environment Week typically end of May/Early June culminating June 5th with Environment Day annually. It is a friendly competition between Canadian cities and workplaces, that encourages Canadians to leave their cars at home. Rewards walking, cycling, carpooling/ride-sharing, taking transit and telecommuting and celebrates active and sustainable transportation. In 2021 more than 516 workplaces participated, with 3,053 individuals registered resulting in 69,411 Kg CO2 avoided by eliminating 336,151 kms travelled. More than 154 Canada Life employees participation across all locations

C-FS12.2

(C-FS12.2) Does your organization exercise voting rights as a shareholder on climate-related issues?

	Exercise voting rights as a shareholder on climate-related issues	Primary reason for not exercising voting rights as a shareholder on climate-related issues	Explain why you do not exercise voting rights on climate-related issues
Row 1	Yes	<Not Applicable>	<Not Applicable>

C-FS12.2a

(C-FS12.2a) Provide details of your shareholder voting record on climate-related issues.

Method used to exercise your voting rights as a shareholder

Exercise voting rights through an external service provider

How do you ensure your shareholder voting rights are exercised in line with your overall climate strategy?

Vote tracking

Publish requirements of external service providers in relation to climate-related issues

Review external service provider's climate-related policies

Include climate-related requirements in service provider mandates

Percentage of voting disclosed across portfolio

15

Climate-related issues supported in shareholder resolutions

Climate transition plans

Climate-related disclosures

Aligning public policy position (lobbying)

Emissions reduction targets

Board oversight of climate-related issues

Do you publicly disclose the rationale behind your voting on climate-related issues?

<Not Applicable>

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

Canada Life Asset Management – Annual Stewardship and Engagement Report Irish Life Investment Managers – RI Annual Review 2021 ILIM Climate Action Pledge

Putnam – Engagement and Stewardship Report

ILIM climate-action-pledge-october-2021.pdf

ILIM responsible-investing-annual-review-2021.pdf

Putnam engagement and stewardship report 2021.pdf

2021 clam-annual-stewardship-and-engagement-report.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

At Great-West Lifeco, an annual review of our direct and indirect activities that influence public policy, including both financial and non-financial engagements with voluntary sector organizations, is conducted by our Community Relations Department to ensure relevancy, efficacy and consistency of approach and strategy. Where relevant, this process includes a review of our direct and indirect activities that influence public policy, which are assessed for consistency with our overall climate change strategy. This includes our support of organizations addressing climate change strategies and sustainability, including finding practical solutions to address energy and carbon management issues at a policy, business and personal level. New opportunities to support such endeavours are measured against annual strategic objectives. With respect to our investment subsidiaries, specific internal processes exist to ensure their engagement activities are consistent with their climate strategies as described in their respective engagement and stewardship reports. For example, ILIM published pledges which commit to advocate for climate action with policy makers, investors, and industry groups.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Sustainable finance

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Prudence and Loyalty in Selecting Plan Investments and Exercising Shareholder Rights: RIN 1210-AC03

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Through our subsidiary, Putnam, we sent a letter on December 13, 2021 applauding the Department of Labour's (DOL) efforts to remove barriers to the prudent integration of ESG-considerations for ERISA fiduciaries and to treat ESG considerations in the same manner as all other financially material information. There is growing evidence that ESG options may offer younger savers a point of new engagement with and interest in their plans. As ESG integration becomes increasingly widespread in the industry, and demand for ESG-focused products grows, it is essential that regulation in this area provides a framework that is neutral and balanced and that will stand the test of time. While the letter includes a few constructive comments on technical elements, overall we support the substance of the DOL proposal.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

<Not Applicable>

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify (American Academy of Actuaries)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The American Academy of Actuaries supports knowledge and raises awareness among policymakers and the public at large of the increasing risks from extreme weather events. It aims to evaluate and help manage exposure to these risks from an insurance perspective, by combining current climate science knowledge with actuarial experience.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (REALPAC (Real Property Association of Canada))

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

REALPAC recognizes the significant economic, environmental, social, governance (EESG) impact of Canada's commercial real estate sector, and the need for an industry-driven approach toward supporting national and provincial strategies on greenhouse gas reduction (climate change action), the importance of reasoned discourse with political and policy officials, and the value of persuasive arguments for sustainable economic growth. The Association also recognizes the need for industry-wide "green" benchmarking data and shared best practices and is working with its constituents and its national and international counterparts to help to responsibly ensure the sector is well positioned for a sustainable future. As members of REALPAC, as well as REALPAC's Environmental, Social and Governance (ESG) Committee, we support initiatives to increase awareness on energy improvements and increase government incentives towards energy efficient existing and new commercial real estate.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Building Owners and Managers Association (BOMA) and its regional chapters)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

BOMA is the voice of the Canadian commercial real estate industry, addressing issues of national concern, and promotes excellence in the industry through information, education advocacy and recognition, including on issues of carbon and energy efficiency. BOMA Canada implements timely, responsible and consistent policy positions on issues of critical importance to the Canadian commercial real estate industry (including climate change-related legislation). Through our Board membership with BOMA, we support initiatives to increase awareness of energy and climate change issues, and incentives to increase building energy and carbon efficiency investments.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Green Building Council (CaGBC))

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The CaGBC mission is to "Lead and accelerate the transformation to high-performing, healthy green buildings, homes and communities throughout Canada". This includes the adoption of green building practices that ultimately lead to reduced greenhouse gas emissions. The CaGBC is working with federal, provincial and municipal leaders and government officials to support the development and implementation of green building policies and sustainability practices across Canada and is working with CaGBC members and stakeholders to set and report against ambitious targets and action plans that will contribute to Paris Agreement goals. Through our membership with the CaGBC, we support initiatives to increase the adoption of green building practices, participation in green building certification systems, and incentives to increase energy and carbon efficiency investments.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Boston Association of Institutional Investors)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

The Association of Institutional investors is a member led organization of institutional investment advisors that represents the interests of investors and strives to advance good practices and promote fair and efficient financial markets through open engagement with policy makers and others. The ESG working group is focused on advancing knowledge and awareness for investors on environmental, social and governance factors.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

lifeco-2021-annual-report-en.pdf

Page/Section reference

Pages 3, 12, 13

Content elements

Risks & opportunities
Emission targets
Other metrics

Comment

The Great-West Lifeco Inc. 2021 Annual Report discloses information related to Great-West Lifeco's responsible investing approach as well as sustainability risk exposure, including with respect to climate change.

Publication

In voluntary communications

Status

Complete

Attach the document

canada-life-public-accountability-statement-2021.pdf

Page/Section reference

Pages 16, 17, 18

Content elements

Emissions figures
Emission targets
Other, please specify (green building certifications)

Comment

The 2021 Canada Life Public Accountability Statement describes climate-related activities, including performance targets and risk management.

Publication

In voluntary communications

Status

Complete

Attach the document

gwlr-ar-2021-eng.pdf

Page/Section reference

Pages 16, 17, 18

Content elements

Risks & opportunities
Emissions figures
Emission targets

Comment

The GWL Realty Advisors, a wholly owned subsidiary of Great-West Lifeco discloses its greenhouse gas emissions performance in the Annual Review document.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Putnam Sustainability and Impact Report 2021.pdf

Page/Section reference

Pages 4, 6, 17, 21

Content elements

Other metrics
Other, please specify (Climate engagement)

Comment

Putnam Investments, a wholly owned subsidiary of Great-West Lifeco discloses its approach to integrating climate-related matters into its investment decisions through its Sustainability and Impact Report.

Publication

In voluntary communications

Status

Complete

Attach the document

Putnam engagement and stewardship report 2021.pdf

Page/Section reference

Pages 4, 5, 6

Content elements

Governance
Risks & opportunities

Other, please specify (investee engagement)

Comment

Putnam Investments, a wholly owned subsidiary of Great-West Lifeco discloses how it engages with investee companies as it relates to climate change issues.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

ILIM responsible-investing-annual-review-2021.pdf

Page/Section reference

Pages 14, 15, 16, 17, and 18

Content elements

Governance
Other metrics

Comment

Irish Life Investment Managers, a wholly owned subsidiary of Great-West Lifeco discloses climate related information through its Responsible Investment Annual Review.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

2021 clam-annual-stewardship-and-engagement-report.pdf

Page/Section reference

Pages 61, 63, 70

Content elements

Governance
Other metrics

Comment

Canada Life Asset Management, a wholly owned subsidiary of Great-West Lifeco discloses climate related information through its Annual Stewardship and Engagement Report.

C-FS12.5

(C-FS12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1 CDP Signatory Climate Action 100+ Institutional Investors Group on Climate Change (IIGCC) Principle for Responsible Investment (PRI) Task Force on Climate-related Financial Disclosures (TCFD) Other, please specify (UKSIF, Sustainable Roundtable)	(1) Great-West Lifeco is an official Supporter of the Financial Stability Board's TCFD recommendations, recognizing the importance of climate-related disclosures with respect to governance, strategy, risk, and metrics and targets. (2) Great-West Lifeco's asset management subsidiaries are signatories to the UNPRI, including Irish Life Investment Managers (ILIM) (since 2010); Putnam Investments (since 2011); PanAgora Asset Management (since 2011) and Setanta Asset Management. (3) Great-West Lifeco's asset management subsidiaries, ILIM, Putnam Investments, PanAgora and Canada Life Asset Management are part of the Climate Action 100+, focused on engaging the top 100 global Greenhouse gas emitters to disclose their transition plans in alignment with the Paris Agreement. (4) ILIM is a CDP Signatory and part of the non-disclosure campaign – a group of 88 investors who focus on companies that did not provide sustainability and climate-related disclose representing some of the biggest emitters on 20 of the largest exchanges across the world. (5 and 6) Great-West Lifeco's asset management subsidiary, Putnam Investments is a member of the Sustainable Roundtable Inc., which provides benchmarks for sustainable workplace opportunities. Furthermore, our asset management subsidiary, Canada Life Assurance Management, is a member of the Institutional Investors Group on Climate Change (IIGCC), and the UK Sustainable Investment and Finance Association (UKSIF)

C14. Portfolio Impact

C-FS14.0

(C-FS14.0) For each portfolio activity, state the value of your financing and insurance of carbon-related assets in the reporting year.

Investing in all carbon-related assets (Asset manager)

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

4845214719

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Percentage of portfolio value comprised of carbon-related assets in reporting year

2

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

Investing in coal (Asset manager)

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

6059043

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Percentage of portfolio value comprised of carbon-related assets in reporting year

0

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

Investing in oil and gas (Asset manager)

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

4839155676

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Percentage of portfolio value comprised of carbon-related assets in reporting year

2

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

Investing all carbon-related assets (Asset owner)

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

55035310000

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Percentage of portfolio value comprised of carbon-related assets in reporting year

24.95

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

Investing in coal (Asset owner)

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

120150000

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Percentage of portfolio value comprised of carbon-related assets in reporting year

0.05

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

Investing in oil and gas (Asset owner)

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

7820470000

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Percentage of portfolio value comprised of carbon-related assets in reporting year

3.45

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

Insuring all carbon-related assets

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

0

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

0

Percentage of portfolio value comprised of carbon-related assets in reporting year

0

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

Insuring coal

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

0

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

0

Percentage of portfolio value comprised of carbon-related assets in reporting year

0

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

Insuring oil and gas

Are you able to report a value for the carbon-related assets?

Yes

Value of the carbon-related assets in your portfolio (unit currency – as specified in C0.4)

0

New loans advanced in reporting year (unit currency – as specified in C0.4)

<Not Applicable>

Total premium written in reporting year (unit currency – as specified in C0.4)

0

Percentage of portfolio value comprised of carbon-related assets in reporting year

0

Primary reason for not providing a value for the financing and/or insurance to carbon-related assets

<Not Applicable>

Please explain why you are not providing a value for the financing and/or insurance to carbon-related assets and your plans for the future

<Not Applicable>

C-FS14.1

(C-FS14.1) Does your organization measure its portfolio impact on the climate?

	We conduct analysis on our portfolio's impact on the climate	Disclosure metric	Please explain why you do not measure the impact of your portfolio on the climate
Banking (Bank)	<Not Applicable>	<Not Applicable >	<Not Applicable>
Investing (Asset manager)	Yes	Portfolio emissions	<Not Applicable>
Investing (Asset owner)	Yes	Portfolio emissions	<Not Applicable>
Insurance underwriting (Insurance company)	No, but we plan to do so in the next two years	<Not Applicable >	Current methodology to calculate financed emissions for insurance only exists for motor vehicle loans. Great-West Lifeco's insurance is in the life and health insurance sectors, for which there is not yet methodology. For asset classes where final or draft methodology exists, those have been completed in Great-West Lifeco's general account.

C-FS14.1a

(C-FS14.1a) Provide details of your organization’s portfolio emissions in the reporting year.

Investing (Asset manager)

Portfolio emissions (metric unit tons CO2e) in the reporting year

124210

Portfolio coverage

1

Percentage calculated using data obtained from clients/investees

88

Emissions calculation methodology

The Global GHG Accounting and Reporting Standard for the Financial Industry

Please explain the details and assumptions used in your calculation

Scope 3 portfolio investment emissions relates to the Canadian segregated real estate funds (GWL Canadian Real Estate Fund No.1 and London Life Real Estate Fund - managed by GWL Realty Advisors). The metrics are used to monitor the GHG emissions associated with each investment fund/portfolio and/or asset class. These funds had a gross fund value of \$10.2bn CAD as of Q4 2021. The current coverage is not considered substantive based on the total Great-West Lifeco AUM (not including General Account) portfolio of \$787 Billion as at year-end 2021. Lifeco continues to pilot methodologies for accounting for the carbon footprint of our financed emissions. Accounting for our portfolio emissions is evolving day-to-day, as Lifeco’s portfolio companies’ own emissions reporting capabilities evolve alongside emerging regulations and methodologies that are being refined by industry groups and data analytics providers. We are currently undergoing a process to set targets aligned with climate science and actively enhancing our internal methodologies for data compilation and analysis, including refining metrics for portfolio management. In terms of calculation, energy data collected from the Canadian segregated fund real estate investment portfolio was multiplied by appropriate emissions factors as listed below. Note that the portfolio GHG emissions related to the real estate assets have been externally assured (limited level) in accordance with the International Standards on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements (“ISAE 3410”), issued by the International Auditing and Assurance Standards Board. GWPs: Carbon dioxide (tCO2/unit): 1; Methane (tCH4/unit): 25; Nitrous Oxide (tN2O/unit): 298 Electricity and Water - Environment and Climate Change Canada. National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada Part 1. (Ottawa: Environment and Climate Change Canada, 2021.), 61-73. Natural Gas - Environment and Climate Change Canada. National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada Part 2. (Ottawa: Environment and Climate Change Canada, 2021.), 211-212 Based on 500 year emissions with following equation: Emission Factor = (CH4 GWP)*Lo*(1-EXP(-500*k))/1000). Steam: Enwave communication March 8, 2021 and Creative Energies - Email communication with Lori Parker at Creative Energy on April 4, 2021.

Investing (Asset owner)

Portfolio emissions (metric unit tons CO2e) in the reporting year

18260

Portfolio coverage

1

Percentage calculated using data obtained from clients/investees

88

Emissions calculation methodology

The Global GHG Accounting and Reporting Standard for the Financial Industry

Please explain the details and assumptions used in your calculation

For Great-West Lifeco’s General Account portfolio, as at December 31, 2021: We calculated the Scope 3 financed GHG emissions of the Great-West Lifeco general account using the GHG Protocol Corporate Accounting and Reporting Standard (Category 15, Scope 3 emissions) guidance. This figure accounts for the emissions associated with investment properties within Lifeco’s General Account portfolio. Scope 3 financed GHG emissions were calculated using the proportional emissions from investments. The “Investment-specific method” was used, which involves collecting scope 1 and scope 2 emissions from the investee and allocating the emissions based upon the share of Great-West Lifeco’s investment. Many of these investment properties are fully owned by the General Account, and there is an investment of the General Account into the real estate segregated funds reported in the “asset manager” row; the proportion of which has been removed from the asset manager figure and included in the asset owner figure. This methodology is in line with the Partnership for Carbon Accounting Financials (PCAF) 2020 Global GHG Accounting and Reporting Standard for the Financial Industry (First Edition). Lifeco continues to pilot methodologies for accounting for the carbon footprint of our financed emissions. Accounting for our portfolio emissions is evolving day-to-day, as Lifeco’s portfolio companies’ own emissions reporting capabilities evolve alongside emerging regulations and methodologies that are being refined by industry groups and data analytics providers. We are undergoing a process to set targets aligned with climate science and actively enhancing our internal methodologies for data compilation and analysis, including refining metrics for portfolio management.

C-FS14.2

(C-FS14.2) Are you able to provide a breakdown of your organization’s portfolio impact?

	Portfolio breakdown	Please explain why you do not provide a breakdown of your portfolio impact
Row 1	Yes, by country/region	<Not Applicable>

C-FS14.2c

(C-FS14.2c) Break down your organization’s portfolio impact by country/region.

Portfolio	Country/region	Portfolio metric	Portfolio emissions or alternative metric
Investing (Asset owner)	Canada	Absolute portfolio emissions (tCO2e)	12687
Investing (Asset owner)	United Kingdom of Great Britain and Northern Ireland	Absolute portfolio emissions (tCO2e)	169
Investing (Asset owner)	Ireland	Absolute portfolio emissions (tCO2e)	873
Investing (Asset owner)	United States of America	Absolute portfolio emissions (tCO2e)	1394
Investing (Asset manager)	Canada	Absolute portfolio emissions (tCO2e)	123589
Investing (Asset manager)	United States of America	Absolute portfolio emissions (tCO2e)	621

C-FS14.3

(C-FS14.3) Did your organization take any actions in the reporting year to align your portfolio with a 1.5°C world?

	Actions taken to align our portfolio with a 1.5°C world	Please explain why you have not taken any action to align your portfolio with a 1.5°C world
Banking (Bank)	<Not Applicable>	<Not Applicable>
Investing (Asset manager)	Yes	<Not Applicable>
Investing (Asset owner)	Yes	<Not Applicable>
Insurance underwriting (Insurance company)	No, but we plan to in the next two years	Current methodology to calculate financed emissions for insurance only exists for motor vehicle loans. Great-West Lifeco's insurance is in the life and health insurance sectors, for which there is not yet methodology. For asset classes where final or draft methodology exists, those have been completed in Great-West Lifeco's general account.

C-FS14.3a

(C-FS14.3a) Does your organization assess if your clients/investees' business strategies are aligned with a 1.5°C world?

	Assessment of alignment of clients/investees' strategies with a 1.5°C world	Please explain why you are not assessing if your clients/investees' business strategies are aligned with a 1.5°C world
Banking (Bank)	<Not Applicable>	<Not Applicable>
Investing (Asset manager)	Yes, for some	We have started the process of assessing our clients/investees' business strategies alignment to a 1.5 degree world. This assessment is conducted through our asset management subsidiaries, Irish Life Investment Managers, Canada Life Asset Management, and PanAgora, who are part of various industry coalitions such as the Climate Action 100+ Group, the Institutional Investors Group on Climate Change (IIGCC) and the UK Sustainable Investment and Finance Association that are engaging the top 100 greenhouse gas emitters globally on developing their climate transition plans in alignment with the Paris Agreement. Furthermore, through ILIM's climate focused fund, we are engaging investees on their climate transition plans and decarbonization strategies.
Investing (Asset owner)	Yes, for all	<Not Applicable>
Insurance underwriting (Insurance company)	<Not Applicable>	<Not Applicable>

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	The Risk Committee of the Board of Directors is responsible for, among other things, providing risk oversight of the Corporation for all risks, including sustainability environmental risks, which would include relevant biodiversity-related matters. Oversight of such matters is an important responsibility of the Risk Committee's mandate, given Great West Lifeco's commitment to respect the environment and to take a balanced and sustainable approach to conducting business. The Risk Committee oversees the ERM framework, which includes financial risks (market, credit, and insurance) and non-financial risks (operational, conduct, and strategic). We recognize that sustainability risks, including relevant biodiversity-related risks, are not a stand-alone risk type, but rather underlie all risk types. The Senior Vice-President, Global Chief Communications and Sustainability Officer is responsible for, among other things, supporting the design and execution of an enterprise-wide approach to our Environmental, Social and Governance (ESG) strategy and framework. Where relevant, within the environmental dimension, the role would include biodiversity-related matters.	Risks and opportunities to our own operations Risks and opportunities to our investment activities The impact of our own operations on biodiversity The impact of our investing activities on biodiversity

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Other, please specify (Commitment to using responsibly sourced paper and other forest products that meet the Forest Stewardship Council's strict environmental and social standards to ensure we are protecting forests and animals.)	SDG Other, please specify (Forest Stewardship Council)

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Yes, we assess impacts on biodiversity in both our upstream and downstream value chain	Investing portfolio (Asset manager)

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Education & awareness Other, please specify (Procurement of FSC certified products, materiality consideration of biodiversity within fundamental and thematic research at Putnam, and investee engagement on biodiversity where materially relevant and performance issues exist through ILIM)

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Pressure indicators

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Other, please specify (Biodiversity investee engagement and shareholder voting)	Irish Life Investment Managers Responsible Investing Annual Review 2021, pages 7, 8, 10, 13, 16, 18 and 20. ILIM responsible-investing-annual-review-2021.pdf
In voluntary sustainability report or other voluntary communications	Risks and opportunities	Putnam Sustainability and Impact 2022 Report, page 7, 22-33. Putnam Sustainability and Impact Report 2021.pdf
In voluntary sustainability report or other voluntary communications	Other, please specify (Community Investments)	2021 Public Accountability Statement Canada Life, pages 25, 26, 27. canada-life-public-accountability-statement-2021.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

(C-FS14.0) For each portfolio activity, state the value of your financing and insurance of carbon-related assets in the reporting year: please note that for "Asset Owner", the carbon-related assets are defined as those in TCFD annex, section E per CDP Guidance (which includes Energy as well as Transportation and Agriculture, Food and Forest Products). For "Asset Manager", these figures represent Lifeco's subsidiary Putnam Investments and not the entirety of Lifeco's asset management portfolio.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Deputy Chief Financial Officer and Chief Accounting and Control Officer, Great-West Lifeco	Chief Financial Officer (CFO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
-----------------------	--

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

FW-FS Forests and Water Security (FS only)

FW-FS1.1

(FW-FS1.1) Is there board-level oversight of forests- and/or water-related issues within your organization?

	Board-level oversight of this issue area	Explain why your organization does not have board-level oversight of this issue area and any plans to address this in the future
Forests	Yes	<Not Applicable>
Water	Yes	<Not Applicable>

FW-FS1.1a

(FW-FS1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for forests- and/or water-related issues.

Issue area(s)	Position of individual(s)	Please explain
Please select	Board-level committee	The Risk Committee of the Board of Directors is responsible for, among other things, providing risk oversight of the Corporation for all risks, including sustainability environmental risks, which would include relevant forest-related and water-related matters. Oversight of such matters is an important responsibility of the Risk Committee's mandate, given Great West Lifeco's commitment to respect the environment and to take a balanced and sustainable approach to conducting business. The Risk Committee oversees the ERM framework, which includes financial risks (market, credit, and insurance) and non-financial risks (operational, conduct, and strategic). We recognize that sustainability risks, including relevant forest-related and water-related risks, are not a stand-alone risk type, but rather underlie all risk types.

FW-FS1.1b

(FW-FS1.1b) Provide further details on the board's oversight of forests- and/or water-related issues.

Issue area(s)

Forests

Frequency with which the issue area(s) is a scheduled agenda item

Sporadic - as important matters arise

Governance mechanisms into which this issue area(s) is integrated

Reviewing and guiding risk management policies

Scope of board-level oversight

Risks and opportunities to our investment (asset management) activities

Risks and opportunities to our investment (asset ownership) activities

Please explain

The Risk Committee of the Board of Directors is responsible for, among other things, providing risk oversight of the Corporation for all risks, including sustainability environmental risks, which would include relevant forest-related matters. Oversight of such matters is an important responsibility of the Risk Committee's mandate, given Great West Lifeco's commitment to respect the environment and to take a balanced and sustainable approach to conducting business. The Risk Committee oversees the ERM framework by reviewing and guiding risk management policies covering both financial risks (market, credit, and insurance) and non-financial risks (operational, conduct, and strategic). We recognize that sustainability risks, including relevant forest-related risks, are not a stand-alone risk type, but rather underlie all risk types.

Issue area(s)

Water

Frequency with which the issue area(s) is a scheduled agenda item

Sporadic - as important matters arise

Governance mechanisms into which this issue area(s) is integrated

Reviewing and guiding risk management policies

Scope of board-level oversight

Risks and opportunities to our investment (asset management) activities

Risks and opportunities to our investment (asset ownership) activities

Please explain

The Risk Committee of the Board of Directors is responsible for, among other things, providing risk oversight of the Corporation for all risks, including sustainability environmental risks, which would include relevant water-related matters. Oversight of such matters is an important responsibility of the Risk Committee's mandate, given Great West Lifeco's commitment to respect the environment and to take a balanced and sustainable approach to conducting business. The Risk Committee oversees the ERM framework by reviewing and guiding risk management policies covering both financial risks (market, credit, and insurance) and non-financial risks (operational, conduct, and strategic). We recognize that sustainability risks, including relevant water-related risks, are not a stand-alone risk type, but rather underlie all risk types.

FW-FS1.1c

(FW-FS1.1c) Does your organization have at least one board member with competence on forests- and/or water-related issues?

Forests

Board member(s) have competence on this issue area

Yes

Criteria used to assess competence of board member(s) on this issue area

Board competencies on forest-related issues would be included as part of the Corporate Social Responsibility skills as presented in the 2021 Management Proxy Circular. This identifies 15 directors as having CSR-related skills, which includes the constituents involved in sustainability.

Primary reason for no board-level competence on this issue area

<Not Applicable>

Explain why your organization does not have at least one board member with competence on this issue area and any plans to address this in the future

<Not Applicable>

Water

Board member(s) have competence on this issue area

Yes

Criteria used to assess competence of board member(s) on this issue area

Board competencies on water-related issues would be included as part of the Corporate Social Responsibility skills as presented in the 2021 Management Proxy Circular. This identifies 15 directors as having CSR-related skills, which includes the constituents involved in sustainability.

Primary reason for no board-level competence on this issue area

<Not Applicable>

Explain why your organization does not have at least one board member with competence on this issue area and any plans to address this in the future

<Not Applicable>

FW-FS1.2

(FW-FS1.2) Provide the highest management-level position(s) or committee(s) with responsibility for forests- and/or water-related issues.

Name of the position(s) and/or committee(s)

Chief Sustainability Officer (CSO)

Reporting line

CEO reporting line

Issue area(s)

Forests
Water

Responsibility

Both assessing and managing risks and opportunities

Coverage of responsibility

Risks and opportunities related to our investing (asset ownership) activities

Frequency of reporting to the board on forests- and/or water-related issues

As important matters arise

Name of the position(s) and/or committee(s)

Chief Investment Officer (CIO)

Reporting line

CEO reporting line

Issue area(s)

Forests
Water

Responsibility

Both assessing and managing risks and opportunities

Coverage of responsibility

Risks and opportunities related to our investing (asset ownership) activities

Frequency of reporting to the board on forests- and/or water-related issues

As important matters arise

FW-FS2.1

(FW-FS2.1) Do you assess your portfolio's exposure to forests- and/or water-related risks and opportunities?

	We assess our portfolio's exposure to this issue area	Explain why your portfolio's exposure is not assessed for this issue area and any plans to address this in the future
Banking - Forests exposure	<Not Applicable>	<Not Applicable>
Banking – Water exposure	<Not Applicable>	<Not Applicable>
Investing (Asset manager) – Forests exposure	Yes	<Not Applicable>
Investing (Asset manager) – Water exposure	Yes	<Not Applicable>
Investing (Asset owner) – Forests exposure	Yes	<Not Applicable>
Investing (Asset owner) – Water exposure	Yes	<Not Applicable>
Insurance underwriting – Forests exposure	<Not Applicable>	<Not Applicable>
Insurance underwriting – Water exposure	<Not Applicable>	<Not Applicable>

FW-FS2.1a

(FW-FS2.1a) Describe how you assess your portfolio's exposure to forests- and/or water-related risks and opportunities.

Portfolio

Investing (Asset manager)

Exposure to

Forests-related risks and opportunities

Type of risk management process

A specific ESG-related risk management process

Proportion of portfolio covered by risk management process

12

Type of assessment

Qualitative only

Time horizon(s) covered

Short-term

Tools and methods used

External consultants

Provide the rationale for implementing this process to assess your portfolio's exposure to forests- and/or water-related risks and opportunities

Through our asset management affiliates, Irish Life Investment Managers (ILIM) and Putnam, we obtain material ESG related information, including forest-related information, from third party data providers, company reports and other public data sources, as part of our bespoke ESG risk assessment processes. Where performance is lagging, we use the information to engage with investees on disclosure of their policies and risk mitigation measures. For example, in 2021, ILIM engaged 260 companies through the CDP Non-Disclosure Campaign on deforestation disclosure where determined to be material. They also used the information to inform direct engagements with investees, of which 20% were on natural capital issues in 2021, including biodiversity. Additionally, ILIM conducts voting on natural capital issues through support of natural capital shareholder proposals, including on forest-related matters. For example, in 2021, ILIM voted in favour of 10 natural capital-related proposals, including a successful vote related to deforestation from the soy supply chain at Bunge Limited. Meanwhile, Putnam conducts its due diligence to identify companies that are providing products and services to address deforestation issues. Among other uses, the information is used to inform the identification of leaders and solutions providers for investment consideration for its Sustainable Leaders Fund and Sustainable Future Fund.

Portfolio

Investing (Asset manager)

Exposure to

Water-related risks and opportunities

Type of risk management process

A specific ESG-related risk management process

Proportion of portfolio covered by risk management process

18

Type of assessment

Qualitative only

Time horizon(s) covered

Short-term

Tools and methods used

External consultants

Provide the rationale for implementing this process to assess your portfolio's exposure to forests- and/or water-related risks and opportunities

Through our asset management affiliates - ILIM and Putnam - we obtain material ESG related information, including on water, from third party data providers, company reports and other public data sources, as part of our risk assessment processes. Where performance is lagging, we use the information to engage with investees on disclosure of their policies and risk mitigation measures. For example, in 2021, ILIM engaged 245 companies through the CDP Non-Disclosure Campaign on water security disclosure where determined to be material. They also used the information to inform direct engagements with investees, of which 20% were on natural capital issues in 2021, including water-related issues. Additionally, ILIM conducts voting on natural capital issues through support of natural capital shareholder proposals, including on water-related matters. For example, in 2021, ILIM voted in favour of 10 natural capital-related proposals, including a successful vote related to ocean plastic pollution at DuPont de Nemours, Inc. Meanwhile, Putnam conducts its assessment to identify companies that are providing products and services to address water conservation and scarcity issues. The information is used to identify leaders for inclusion in its Sustainable Leaders Fund and Sustainable Future Fund. In addition, PanAgora has integrated

water efficiency factors for some of its flagship equity strategies as an alpha opportunity, including Dynamic Equity, Stock Selector, Sustainable Global Equity, and Dynamic FLEX Strategies.

Portfolio

Investing (Asset owner)

Exposure to

Forests-related risks and opportunities

Type of risk management process

A specific ESG-related risk management process

Proportion of portfolio covered by risk management process

25

Type of assessment

Qualitative only

Time horizon(s) covered

Short-term

Tools and methods used

External consultants

Provide the rationale for implementing this process to assess your portfolio's exposure to forests- and/or water-related risks and opportunities

The assets we manage in our general account are assessed for ESG possible risks, including forest-related issues, where material as part of our risk assessment processes using a third party ESG data provider. The information is used to inform possible engagement opportunities with the respective companies.

Portfolio

Investing (Asset owner)

Exposure to

Water-related risks and opportunities

Type of risk management process

A specific ESG-related risk management process

Proportion of portfolio covered by risk management process

25

Type of assessment

Qualitative only

Time horizon(s) covered

Short-term

Tools and methods used

External consultants

Provide the rationale for implementing this process to assess your portfolio's exposure to forests- and/or water-related risks and opportunities

The assets we manage in our general account are assessed for ESG possible risks, including water-related issues, where material as part of our risk assessment processes. The information is used to inform possible engagement opportunities with the respective companies. In addition, on a regular basis we measure and assess water consumption and possible risks in our real estate investment portfolio managed through our subsidiary GWL Realty Advisors. The information is used to inform water conservation investments, as part of our broader Sustainability Benchmarking and Conservation Program.

FW-FS2.2

(FW-FS2.2) Does your organization consider forests- and/or water-related information about clients/investees as part of its due diligence and/or risk assessment process?

	We consider forests- and/or water-related information	Explain why information related to this issue area is not considered and any plans to address this in the future
Banking – Forests-related information	<Not Applicable>	<Not Applicable>
Banking – Water-related information	<Not Applicable>	<Not Applicable>
Investing (Asset manager) – Forests-related information	Yes	<Not Applicable>
Investing (Asset manager) – Water-related information	Yes	<Not Applicable>
Investing (Asset owner) – Forests-related information	Yes	<Not Applicable>
Investing (Asset owner) – Water-related information	Yes	<Not Applicable>
Insurance underwriting – Forests-related information	<Not Applicable>	<Not Applicable>
Insurance underwriting – Water-related information	<Not Applicable>	<Not Applicable>

FW-FS2.2a

(FW-FS2.2a) Indicate the forests- and/or water-related information your organization considers about clients/investees as part of your due diligence and/or risk

assessment process, and how this influences decision making.

Portfolio

Investing (Asset manager)

Information related to

Forests

Type of information considered

Scope and content of forests policy

Process through which information is obtained

Directly from the client/investee

Data provider

Public data sources

Industry sector(s) covered by due diligence and/or risk assessment process

Energy

Materials

Consumer Durables & Apparel

Utilities

Other, please specify (Industrials)

State how these forests- and/or water-related information influences your decision making

Through our asset management affiliates - ILIM and Putnam - we obtain material ESG related information, including forest management, from third party data providers, company reports and other public data sources, as part of our risk assessment / due diligence processes. Where performance is lagging, we use the information to engage with investees on disclosure of their policies and risk mitigation measures. For example, in 2021, ILIM engaged 260 companies through the CDP Non-Disclosure Campaign on deforestation disclosure where determined to be material. Meanwhile, Putnam conducts its due diligence to identify companies that are providing products and services to address deforestation issues. The information is used inform the identification of leaders for its Sustainable Leaders Fund and Sustainable Future Fund.

Portfolio

Investing (Asset manager)

Information related to

Water

Type of information considered

Scope and content of water policy

Process through which information is obtained

Directly from the client/investee

Data provider

Public data sources

Industry sector(s) covered by due diligence and/or risk assessment process

Energy

Materials

Consumer Durables & Apparel

Technology Hardware & Equipment

Utilities

Other, please specify (Industrials)

State how these forests- and/or water-related information influences your decision making

Through our asset management affiliates - ILIM and Putnam - we obtain material ESG related information, including on water, from third party data providers, company reports and other public data sources, as part of our risk assessment / due diligence processes. Where performance is lagging, we use the information to engage with investees on disclosure of their policies and risk mitigation measures. For example, in 2021, ILIM engaged 245 companies through the CDP Non-Disclosure Campaign on water security disclosure where determined to be material. Meanwhile, Putnam conducts its due diligence to identify companies that are providing products and services to address water conservation. Among other uses, the information is used inform the identification of leaders and solutions providers for investment consideration for its Sustainable Leaders Fund and Sustainable Future Fund.

Portfolio

Investing (Asset owner)

Information related to

Forests

Type of information considered

Scope and content of forests policy

Process through which information is obtained

Directly from the client/investee

Data provider

Public data sources

Industry sector(s) covered by due diligence and/or risk assessment process

Energy

Materials

Capital Goods

Commercial & Professional Services

Transportation

Automobiles & Components

Consumer Durables & Apparel

Consumer Services

Retailing

Food & Staples Retailing

Food, Beverage & Tobacco

Household & Personal Products
 Health Care Equipment & Services
 Pharmaceuticals, Biotechnology & Life Sciences
 Software & Services
 Technology Hardware & Equipment
 Semiconductors & Semiconductor Equipment
 Telecommunication Services
 Media & Entertainment
 Utilities
 Real Estate

State how these forests- and/or water-related information influences your decision making

The assets we manage in our general account are assessed for ESG possible risks, including forest-related issues, where material as part of our risk assessment due diligence processes. The information is used to inform possible engagement opportunities with the respective companies.

Portfolio

Investing (Asset owner)

Information related to

Water

Type of information considered

Scope and content of water policy

Process through which information is obtained

Directly from the client/investee

Data provider

Public data sources

Industry sector(s) covered by due diligence and/or risk assessment process

Energy
 Materials
 Capital Goods
 Commercial & Professional Services
 Transportation
 Automobiles & Components
 Consumer Durables & Apparel
 Consumer Services
 Retailing
 Food & Staples Retailing
 Food, Beverage & Tobacco
 Household & Personal Products
 Health Care Equipment & Services
 Pharmaceuticals, Biotechnology & Life Sciences
 Software & Services
 Technology Hardware & Equipment
 Semiconductors & Semiconductor Equipment
 Telecommunication Services
 Media & Entertainment
 Utilities
 Real Estate

State how these forests- and/or water-related information influences your decision making

The assets we manage in our general account are assessed for ESG possible risks, including water-related issues, where material as part of our risk assessment / due diligence processes. The information is used to inform possible engagement opportunities with the respective companies. In addition, on a regular basis we measure and assess water consumption information in our real estate investment portfolio managed through our subsidiary GWL Realty Advisors. The information is used to inform water conservation investments, as part of our broader Sustainability Benchmarking and Conservation Program.

FW-FS2.3

(FW-FS2.3) Have you identified any inherent forests- and/or water-related risks in your portfolio with the potential to have a substantive financial or strategic impact on your business?

	Risks identified for this issue area	Primary reason why your organization has not identified any substantive risks for this issue area	Explain why your organization has not identified any substantive risks for this issue area
Forests	No	Evaluation in process	We continue to evaluate possible risks related to forest risks in our investment portfolio. For example, in the General Account, we use third party ESG research service providers to identify the relevant material ESG risks in the investment portfolio, which includes forest-related risks. This information analysis is currently underway and not yet consolidated to determine whether substantive risks exist. At our investment management affiliates such as Putnam Investments, we are also in the process of identifying sustainability leaders for our funds that can demonstrate thriving business models, including products and services supporting forest health such as regenerative land-use, biodynamic practices, soil health, and biodiversity and ecosystems health. While integrating forest related considerations into our funds is important, we have not seen a substantive demand from our clients, which could adversely impact demand for our investment products.
Water	No	Evaluation in process	We continue to evaluate possible risks related to water in our investment portfolio. For example, in the General Account, we use third party ESG research service providers to identify the relevant material ESG risks in the investment portfolio, which includes water-related risks. We also consider possible water-related risks in our private debt business when lending to utility companies such as hydro-energy. GWL Realty Advisors manages water risks in our Canadian real estate portfolio, having developed its sustainable benchmarking and conservation program, which includes water reduction targets for office assets. Furthermore, since 2013, we have reduced the water use intensity of our Canadian office and residential real estate portfolios by 36%. While important, the water-related risks within our real estate investment portfolio are not considered substantive, especially given the geographic distribution of our properties.

FW-FS2.4

(FW-FS2.4) Have you identified any inherent forests- and/or water-related opportunities in your portfolio with the potential to have a substantive financial or strategic impact on your business?

	Opportunities identified for this issue area	Primary reason why your organization has not identified any substantive opportunities for this issue area	Explain why your organization has not identified any substantive opportunities for this issue area
Forests	No	Evaluation in process	The evaluation of forest-related opportunities is currently in process. For example, in the General Account, we use third party ESG research service providers to identify the relevant material ESG risks and opportunities in the investment portfolio, which includes forest-related opportunities. This information analysis is currently underway and not yet consolidated to determine whether substantive opportunities exist. At our investment management affiliates such as Putnam Investments, we are also in the process of identifying sustainability leaders and solution providers that can demonstrate thriving business models, including products and services supporting forest health. For example, this includes companies that are leading in regenerative land-use, biodynamic practices, soil health, and biodiversity and ecosystems health. As at Dec 31 2021, our asset management affiliates manage responsible investment funds comprising more than \$189 billion across a number of ESG related strategies, including forest-related considerations. This includes Putnam's Sustainable Leaders Fund and Sustainable Futures Fund; Irish Life's NNIP Sustainable Global Equities Indices, ILIM Climate Focused Fund, Customer ESG Indices, Standard ESG Indices, Sustainable Equities and MAPs; and Setanta Ethical & SRA Funds. While these products are important, they are not considered substantive given our diversified businesses and extensive distribution reach. For example, in 2021, the income from responsible investment options represented less than 1% of our total fee income.
Water	No	Evaluation in process	The evaluation of water-related opportunities is currently in process. For example, in the General Account, we use third party ESG research service providers to identify the relevant material ESG opportunities in the investment portfolio, which includes water-related opportunities. This information analysis is currently underway and not yet consolidated to determine whether substantive opportunities exist. GWL Realty Advisors includes water conservation opportunities as part of its sustainable benchmarking and conservation program for our real estate investment portfolio. Since 2013, we have reduced the water consumption intensity of our real estate investment portfolio by 60%. While important, the water conservation opportunities within our real estate investment portfolio is not considered substantive, especially given it represents less than 2% of our diversified global investment portfolio. At our investment management affiliates such as Putnam Investments, we are also in the process of identifying opportunities to invest in sustainability leaders and solution providers that can demonstrate thriving business models. Through their investments in the thriving planet category, they are identifying company products and services related to resource stewardship, including water security. As at Dec 31 2021, our asset management affiliates manage responsible investment funds comprising more than \$189 billion across a number of ESG related strategies, including water related opportunities. This includes Putnam's Sustainable Leaders Fund and Sustainable Futures Fund; Irish Life's NNIP Sustainable Global Equities Indices, ILIM climate Focused Fund, Customer ESG Indices, Standard ESG Indices, Sustainable Equities and MAPs; PanAgora inclusion of a Water Efficiency Factor in some of its flagship equity strategies (Dynamic Equity and Stock Selector Strategies, Sustainable Global Equity, Dynamic FLEX, Diversified Risk global Equity ESG Aware Strategies) and Setanta Ethical & SRA Funds. While these products are important, they are not considered substantive given our diversified businesses and extensive distribution reach. For example, in 2021, the income from responsible investment options represented less than 1% of our total fee income.

FW-FS3.1

(FW-FS3.1) Do you take forests- and/or water-related risks and opportunities into consideration in your organization's strategy and/or financial planning?

Forests

Risks and opportunities related to this issue area taken into consideration in strategy and/or financial planning

Yes, we take these risks and opportunities into consideration in the organization's strategy and financial planning

Description of influence on organization's strategy including own commitments

Forest-related risks and opportunities are taken into account as part of the Great West-Lifeco corporate initiatives, including with respect to our community investment strategy and our strategy when procuring products and services. For example, we are a member of the Forest Stewardship Council (FSC), and have committed to using responsibly sourced paper and other forest products that meet the FSCs strict environmental and social standards. From a community investment standpoint, we are committed to supporting causes that protect and regenerate forests. For example, since 2009 we have been supporting Reforest London as they plant, grow and sustain urban forests. We also continue to support the Nature Conservancy of Canada, focusing on protecting Canadas forests. We also consider forest-related risks in our asset management affiliate's investment portfolios. For example, Irish Life Investment Managers (ILIM) have included forest-related risks as part of collaborative engagement and shareholder voting strategies. Meanwhile, Putnam has included forest-related issues as part of its investment fundamental research to inform their investment decisions.

Financial planning elements that have been influenced

Indirect costs

Description of influence on financial planning

Forest related risks and opportunities have influenced our indirect costs within the business to deploy on the respective strategies, including procurement of products and services, community investments, investee engagement and research analysis.

Explain why forests- and/or water-related risks and opportunities have not influenced your strategy and/or financial planning

<Not Applicable>

Water

Risks and opportunities related to this issue area taken into consideration in strategy and/or financial planning

Yes, we take these risks and opportunities into consideration in the organization's strategy and financial planning

Description of influence on organization's strategy including own commitments

Water-related risks and opportunities are taken into account through the investment strategies of our subsidiaries. For example, GWL Realty Advisors ensures that water conservation of our real estate portfolio is effectively managed through its Sustainability Benchmarking and Conservation Program and other conservation initiatives. Irish Life Investment Managers (ILIM) have included water-related risks as part of their collaborative engagement and share voting strategies. Meanwhile, Putnam has included water-related issues as part of its investment fundamental research to inform their selection of leaders and laggards within their funds.

Financial planning elements that have been influenced

Indirect costs

Description of influence on financial planning

Water related risks and opportunities have influenced our indirect costs within the business, for deploying on water conservation strategies in the real estate portfolio as well as costs associated with investee engagement and research analysis.

Explain why forests- and/or water-related risks and opportunities have not influenced your strategy and/or financial planning

<Not Applicable>

FW-FS3.2

(FW-FS3.2) Has your organization conducted any scenario analysis to identify forests- and/or water-related outcomes?

Forests

Scenario analysis conducted to identify outcomes for this issue area

No, we have not conducted any scenario analysis to identify outcomes for this issue area, but we plan to in the next two years

Type of scenario analysis used

<Not Applicable>

Parameters, assumptions, analytical choices

<Not Applicable>

Description of outcomes for this issue area

<Not Applicable>

Explain how the outcomes identified using scenario analysis have influenced your strategy

<Not Applicable>

Explain why your organization has not conducted scenario analysis for this issue area and any plans to address this in the future

We currently do not conduct scenario analysis on forest impacts given our more immediate focus at this time on climate-related issues. As we evolve our approach, we will be exploring possible forest related scenario analysis as relevant and where considered a substantive risk or opportunity in our portfolio.

Water

Scenario analysis conducted to identify outcomes for this issue area

Yes, we have conducted scenario analysis and we have identified outcomes for this issue area

Type of scenario analysis used

Climate-related
Water-related

Parameters, assumptions, analytical choices

Assumptions and analytical choices were based on three scenarios (RCP 2.6, 4.5, 8.5) over two time periods (2045, 2070) Parameters assessed included: annual precipitation, extreme rainfall, drought length, and sea-level rise.

Description of outcomes for this issue area

We conducted a climate-related scenario analysis to determine how drought and precipitation patterns could impact our real estate investment portfolio managed by our subsidiary GWL Realty Advisors. The results revealed regions potentially exposed to future water scarcity but generally, given the geographic distribution of our real estate properties under management, the investment portfolio was rated as having a 'low risk' exposure to drought.

Explain how the outcomes identified using scenario analysis have influenced your strategy

The outcomes have influenced our continued strategy to invest in water conservation practices at all our office buildings through our broader sustainability benchmarking and conservation program, and especially in those regions prone to water stress and/or drought.

Explain why your organization has not conducted scenario analysis for this issue area and any plans to address this in the future

<Not Applicable>

FW-FS3.3

(FW-FS3.3) Do any of your existing products and services enable clients to mitigate deforestation and/or water insecurity?

	Existing products and services that enable clients to mitigate deforestation and/or water insecurity	Explain why your organization does not offer products and services which enable clients to mitigate deforestation and/or water insecurity and any plans to address this in the future
Forests	Yes	<Not Applicable>
Water	Yes	<Not Applicable>

FW-FS3.3a

(FW-FS3.3a) Provide details of your existing products and services that enable clients to mitigate deforestation and/or water insecurity.

Product type

Listed Equity

Taxonomy or methodology used to classify product(s)

Internally classified

Description of product(s)

Through our asset management affiliate Putnam, we provide the Sustainable Leaders and the Sustainable Future, which includes leaders or solution providers in water and forestry-related products and services.

Product enables clients to mitigate

Deforestation
Water insecurity

Type of activity financed, invested in or insured

Sustainable forest management
Forests restoration
Afforestation
Sustainable agriculture
Water treatment infrastructure

Portfolio value (unit currency – as specified in C0.4)

9398533000

% of total portfolio value

1

Product type

Listed Equity

Taxonomy or methodology used to classify product(s)

Internally classified

Description of product(s)

Through our asset management affiliate, Irish Life Investment Managers, we are investors in a forestry-related fund (Irish Forestry Unit Trust - IFUT) that invests in forestry on behalf of Irish institutional pension and charity funds.

Product enables clients to mitigate

Deforestation

Type of activity financed, invested in or insured

Sustainable forest management
Forests restoration

Portfolio value (unit currency – as specified in C0.4)

66240000

% of total portfolio value

1

FW-FS3.4

(FW-FS3.4) Does the policy framework for the portfolio activities of your organization include forests- and/or water-related requirements that clients/investees need to meet?

	Policy framework includes this issue area	Explain why your organization does not include this issue area in the policy framework and any plans to address this in the future
Forests	No, but we plan to include this issue area within the next two years	Currently, we have established an ESG framework providing investment teams with guidance on the ESG factors and risks that could impact the economic value of a company and that can be used to assess how a company performs as a steward of nature. The environmental factors we provide guidance on includes forest management covering an investees performance related to habitat fragmentation and ecosystem disruption, disruption of natural environments without sufficient mitigating measures; previous/potential regulatory penalties on biodiversity mismanagement; and measures related to environmental management ISO certifications, spills, and environmental fines. As our analysts become more familiar with applying this template guidance, we will be considering plans to make such requirements a standardized policy framework across the organization.
Water	No, but we plan to include this issue area within the next two years	Currently, we have established an ESG framework providing investment teams with guidance on the ESG factors and risks that could impact the economic value of a company and that can be used to assess how a company performs as a steward of nature. The environmental factors we provide guidance on includes resource use covering an investees performance as it relates to the use and management of water. Analysts are to consider the volume of water needed to support a company's operations, concerns over water scarcity in operating regions and the adoption of technologies that enable a more circular economy and /or the development of water conservation approaches. As our analysts become more familiar with applying this template guidance, we will be considering plans to make such requirements a standardized policy framework across the organization.

FW-FS4.1

(FW-FS4.1) Do you engage with your clients/investees on forests- and/or water-related issues?

	We engage with clients/investees on this issue area	Explain why you do not engage with your clients/investees on the issue area and any plans to address this in the future
Clients – Forests	No, but we plan to within the next two years	We currently do not engage with our clients on forest-related issues given our more immediate focus at this time on climate-related issues. As we evolve our approach, we will be exploring possible engagement activities as relevant. Putnam engages clients in water and forests to the extent that they reflect investment themes in their research, but they do not undertake separate engagement on water or forests as standalone issues separate from their process/portfolios.
Clients – Water	No, but we plan to within the next two years	Through our asset management subsidiaries we engage with clients on water-related issues, as part of broader ESG integration themes. As we evolve our approach, we will be exploring a more focused engagement activity with our clients on water related issues. Putnam engages clients in water and forests to the extent that they reflect investment themes in their research, but they do not undertake separate engagement on water or forests as standalone issues separate from their process/portfolios.
Investees – Forests	Yes	<Not Applicable>
Investees – Water	Yes	<Not Applicable>

FW-FS4.1b

(FW-FS4.1b) Give details of your forests- and/or water-related engagement strategy with your investees.

Issue area this engagement relates to

Forests

Type of engagement

Engagement & incentivization (changing investee behavior)

Details of engagement

Encourage better forests-related disclosure practices

Other, please specify (Engage with investees on measuring exposure to forest-related risks)

Investing (asset manager) portfolio coverage of engagement

Investing (asset owner) portfolio coverage of engagement

Rationale for the coverage of your engagement

Engagement targeted at investees with increased forest-related risks

Impact of engagement, including measures of success

Through our asset management affiliate Irish Life Investment Managers (ILIM), we take part in the CDP Non-Disclosure Campaign, which aims to drive further corporate transparency on various issues, including deforestation, by encouraging companies to respond to CDP disclosure requests. Through this collaborative engagement, in 2021, we co-signed letters to 260 companies for better disclosure on how they were addressing forestry risks. Our measure of success is the rate of disclosure achieved as a result of the engagement. In 2021, the CDP campaign that we participated in achieved a disclosure rate of 15% based on the 260 companies we engaged on forest-related issues. ILIM also conducts direct engagement with investees.

Issue area this engagement relates to

Water

Type of engagement

Engagement & incentivization (changing investee behavior)

Details of engagement

Encourage better water-related disclosure practices

Other, please specify (Engage with investees on measuring exposure to water-related risks)

Investing (asset manager) portfolio coverage of engagement

Investing (asset owner) portfolio coverage of engagement

Rationale for the coverage of your engagement

Engagement targeted at investees with increased water-related risks

Impact of engagement, including measures of success

Through our asset management affiliate Irish Life Investment Managers (ILIM), we take part in the CDP Non-Disclosure Campaign, which aims to drive further corporate transparency on various issues, including deforestation, by encouraging companies to respond to CDP disclosure requests. Through this collaborative engagement, in 2021, we co-signed letters to 245 companies requesting better disclosure on how water security risks were being managed. Our measure of success is the rate of disclosure achieved as a result of the engagement. In 2021, the CDP campaign that we participated in achieved a disclosure rate of 17% based on the 245 companies we engaged on water-security issues.

FW-FS4.2

(FW-FS4.2) Does your organization exercise its voting rights as a shareholder on forests- and/or water-related issues?

	We exercise voting rights as a shareholder on this issue area	Issues supported in shareholder resolutions	Give details of the impact your voting has had on this issue area	Explain why your organization does not exercise voting rights on this issue area and any plans to address this in the future
Forests	Yes	Halting deforestation Other, please specify (Understanding how forests are managed and promoting disclosure)	Through our asset management affiliates, we have exercised our voting rights as a shareholder on material forest-related issues. For example, through Irish Life Investment Managers, we have voted in favour of well-constructed shareholder proposals on forest-related topics. Specifically, ILIM voted in favour of a shareholder proposal for Bunge Limited to assess if and how it could increase the scale, pace and rigour of its efforts to eliminate native vegetation conversion in its soy supply chain.	<Not Applicable>
Water	Yes	Reduce water pollution Other, please specify (Understanding how water-related risks are managed and promoting disclosure)	Through our asset management affiliates, we have exercised our voting rights as a shareholder on material water-related issues. For example, through Irish Life Investment Managers, we have voted in favour of well-constructed shareholder proposals on water-related topics. Specifically, ILIM voted in favour of a shareholder proposal for Dupont de Nemours Inc. to provide an annual report on plastic pollution, including data on plastic pellet spills and discuss of pellet loss prevention, clean-up and containment.	<Not Applicable>

FW-FS4.4

(FW-FS4.4) Does your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may impact forests and/or water security?

	Direct or indirect engagement that could influence policy, law, or regulation that may impact this issue area	Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact this issue area	Explain why you do not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact this issue area
Forests	No, but we plan to in the next two years	Important but not an immediate priority	We currently do not engage in activities that could directly or indirectly influence policy, law or regulations related to forests given our more immediate focus at this time on climate-related issues. While we are members of the Forest Stewardship Council, we support forest protection through our procurement of products and services only. As we evolve our approach, we will be exploring possible engagement activities as relevant.
Water	No, but we plan to in the next two years	Important but not an immediate priority	We currently do not engage in activities that could directly or indirectly influence policy, law or regulations related to water given our more immediate focus at this time on climate-related issues. As we evolve our approach, we will be exploring possible engagement activities as relevant.

FW-FS5.1

(FW-FS5.1) Does your organization measure its portfolio impact on forests and/or water security?

	We measure our portfolio impact on this issue area	Explain how your organization measures its portfolio impact on this issue area, including any metrics used to quantify impact	Primary reason for not measuring portfolio impact on this issue area	Explain why your organization does not measure its portfolio impact on this issue area and any plans to change this in the future
Banking – Impact on Forests	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Banking – Impact on Water	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Investing (Asset manager) – Impact on Forests	No, but we plan to in the next two years	<Not Applicable>	Important but not an immediate priority	While important, we are currently focused on engaging with our investees on their approach to managing risks related to forests, where considered material. In future years, as we evolve our approach, we will plan to compile portfolio impact information.
Investing (Asset manager) – Impact on Water	No, but we plan to in the next two years	<Not Applicable>	Important but not an immediate priority	While important, we are currently focused on engaging with our investees on their approach to managing risks related to water, where considered material. In future years, as we evolve our approach, we will plan to compile portfolio impact information.
Investing (Asset owner) – Impact on Forests	No, but we plan to in the next two years	<Not Applicable>	Important but not an immediate priority	While important, we are currently focused on engaging with our investees on their approach to managing risks related to forests, where considered material. In future years, as we evolve our approach, we will plan to compile portfolio impact information.
Investing (Asset owner) – Impact on Water	No, but we plan to in the next two years	<Not Applicable>	Important but not an immediate priority	While important, we are currently focused on engaging with our investees on their approach to managing risks related to water, where considered material. In future years, as we evolve our approach, we will plan to compile portfolio impact information.
Insurance underwriting – Impact on Forests	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Insurance underwriting – Impact on Water	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

FW-FS5.2

(FW-FS6.1) Have you published information about your organization's response to forests- and/or water-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In a voluntary sustainability report

Status

Complete

Attach the document

ILIM responsible-investing-annual-review-2021.pdf

Page/Section reference

Pages 7, 8, 10, 13, 16, 18 and 20

Content elements

Risks and opportunities

Other, please specify (forests and water investee engagement and shareholder voting)

Comment

Publication

In a voluntary sustainability report

Status

Complete

Attach the document

Putnam Sustainability and Impact Report 2021.pdf

Page/Section reference

page 7, 22-33

Content elements

Risks and opportunities

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

canada-life-public-accountability-statement-2021.pdf

Page/Section reference

Pages 25, 26, 27.

Content elements

Other, please specify (community investments and forest-related commitments and water performance)

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

gwlr-ar-2021-eng.pdf

Page/Section reference

Pages 7, 8, 16, 17 and 18

Content elements

Other, please specify (Performance on water-related metrics)

Comment

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms
