



 **Manulife** Investment Management

2021 Real Estate *Sustainability* Report

June 2021

For a *greener* planet

Message

2020
Performance
Highlights

Objectives
and Progress

Our Approach

Diversity, Equity,
and Inclusion

Managing
Sustainability

Case Studies

Performance



Regan Smith
Global Head of Real Estate
Sustainability

Our vision is to drive leadership in sustainable real estate across our global organization. Now more than ever, we are reminded of our interconnectedness with the planet as we face unprecedented challenges — a global pandemic and critical climate change.

Our portfolio includes real estate assets across 11 geographies and 28 cities¹. Being a good steward means focusing on the long term, integrating sustainability into our investments and operations, and collaborating with our tenants, industry leaders, and community partners. COVID-19 has only helped reaffirm our practices, accelerate our goals, and reinforce our five sustainability commitments as detailed in our **Real Estate Sustainability Framework**. Our ongoing response to climate change and the pandemic involves promoting positive, collaborative, science-based decisions in order to realize the sustainable future that we all envisage.

Over the past year, we've seen the tremendous impact buildings can have on our health and well-being. In 2020, we aligned with global health authorities and local government regulations to develop a comprehensive Return to Office program. We also engaged Dr. Joseph Allen and his consulting company, 9 Foundations Inc., to aid in developing an internal playbook outlining our operational policies and procedures. In partnership with Dr. Allen, we also provided guidance on the responsible health and safety practices for the pandemic through our Healthy Building webinars.

As a global real estate owner, we recognize we are in a unique position to lead the transition to a low-carbon economy. It's well known that buildings consume substantial amounts of energy and water, generating approximately 40% of greenhouse gas (GHG) emissions globally.² With this in mind, we developed a GHG model to identify multiple abatement opportunities and model reduction scenarios, setting a reduction target of 80% by 2050.

We also undertook a program to learn more about our portfolio's physical climate change risks and our resilience in the face of these risks. After submitting our global real estate portfolio for the GRESB Resilience module to assess our capacity to identify, manage, and adapt to physical climate shocks and stressors, we received a Resilience Score of 86 out of 100, placing us third among our peers, and well above the peer group average of 62.

Finally, to date, over 80% of our global portfolio carries a green building certification. We look forward to increasing these certifications in the future.

With sustainability a never-ending pursuit, we are aware of the impact and importance of working collaboratively toward a common goal. Together as a team, we are committed to finding and promoting solutions that support not only our own health but the planet's as well.

¹ As of March 31, 2021

² Source: www.worldgbc.org/sites/default/files/UNEP%20188_GABC_en%20%28web%29.pdf

2020 Performance *Highlights*

We are pleased to report that we have been making excellent progress on advancing our five sustainability commitments.

Message

2020 Performance Highlights

Objectives and Progress

Our Approach

Diversity, Equity, and Inclusion

Managing Sustainability

Case Studies

Performance

1. Minimize our environmental impact

80% greenhouse gas reduction target by 2050

Modeled our global portfolio GHG emissions and reduction opportunities to support an 80% GHG intensity-based reduction target by 2050.¹

48,550 MWh of renewable energy

Purchased 48,550 MWh of renewable energy.

106,000 MWh of energy saved

Equivalent to the energy used by approximately 4,000 Canadian homes.²

665,000 m³ less water consumed

Equivalent to the water needed to fill 200 Olympic-sized swimming pools.³

5,566 metric tonnes of waste diverted

From landfill, achieving an average portfolio waste diversion rate of 51%.

Buildings with a green building certification

Achieved an 81% global green building certification rate, including 6 new LEED® and 11 new BOMA BEST® certifications.⁴

2. Support health and wellness

Fitwel® certified

Achieved two new Fitwel certifications at Manulife Place in Edmonton and The Michelson in Irvine.⁵

Return to Office tenant guidebook

Launched our return to office program, which defined policies and procedures for the operation of our buildings during and after COVID-19.

3. Engage our stakeholders on sustainability

Tenant sustainability webinars

Hosted virtual events for tenants in partnership with BOMA Canada, Dr. Joseph Allen, and Alvéole.⁶

Community engagement award

Introduced a new real estate sustainability award recognizing the property team that exceeds expectations, going above and beyond to support our tenants and our communities.

This report outlines sustainability practices and performance for all of the real estate holdings owned or managed by **Manulife Investment Management's real estate team** from January 1, 2020 to December 31, 2020. All facts and figures are as of December 31, 2020, unless stated otherwise. Year over year comparisons. Reductions are for a like-for-like set of properties from our global portfolio. Details on our reporting methodology and references to the Global Reporting Initiative (GRI) standards can be found on our Sustainability website: manulifeim.com/realstate/en/sustainability/approach-and-highlights

¹ Target is an intensity-based reduction of Scope 1 and 2 emissions for the properties that are within our operational control.

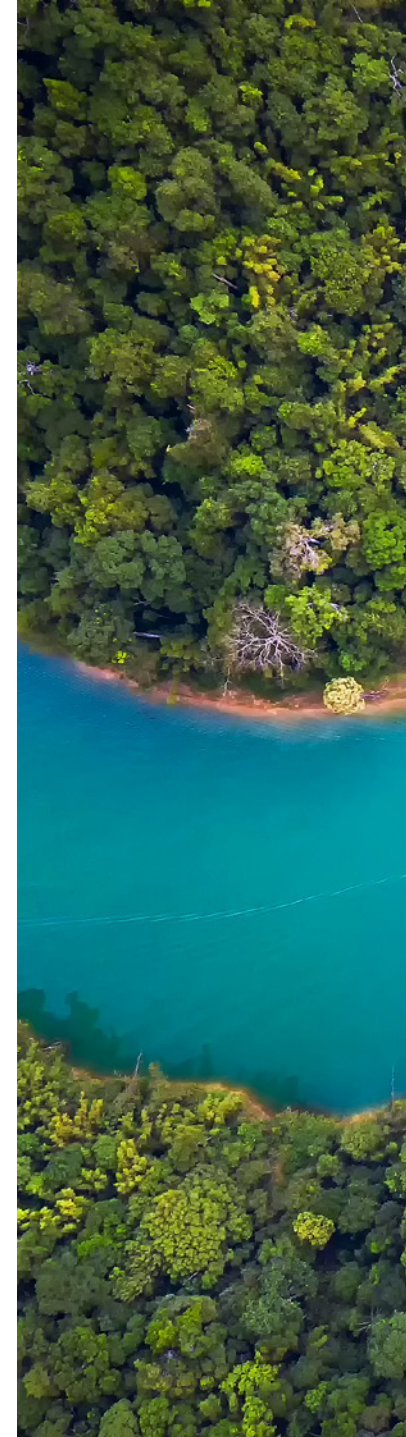
² Source: www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=2510006001

³ Source: www.livestrong.com/article/350103-measurements-for-an-olympic-size-swimming-pool

⁴ Calculated based on square footage of the gross floor area (GFA) of properties in the global portfolio. Totals from different certification standards do not sum as properties with multiple certifications are only counted once.

⁵ The specific real estate investments identified are not representative of all of the real estate investments purchased, sold or recommended, and are included for illustrative purposes only. It should not be assumed that the investment in the real estate holdings identified were or will be profitable.

⁶ For more information about Alvéole, visit: www.alveole.buzz



2020 Performance *Highlights*

Message

2020
Performance
Highlights

Objectives
and Progress

Our Approach

Diversity, Equity,
and Inclusion

Managing
Sustainability

Case Studies

Performance

4. Promote responsible business practices

Portfolio climate risk and resilience assessment

Conducted a climate risk and resilience assessment across our global portfolio.

PRI score of A

Achieved a PRI score of A in the Direct Property Investing module.¹

Sustainable investing toolkit

Updated investment tools to better integrate sustainability into our acquisitions process, including social impacts and physical climate risk assessments.

5. Be accountable for our performance

GRESB “Green Star”²

Earned a “Green Star” ranking in all six of our GRESB submissions, including three 5 Star ratings for the third straight year.

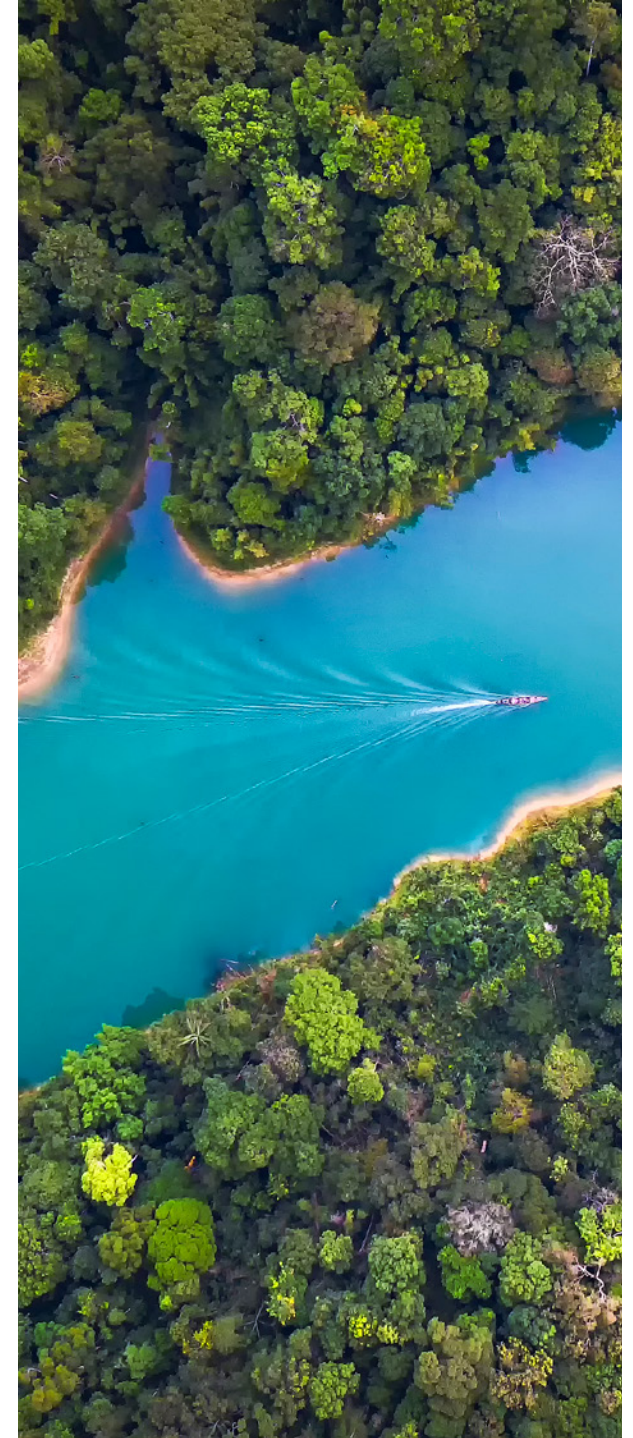
GRESB resilience leader³

Received a resilience score of 86 out of 100, placing us 3rd out of 13 among our peers and well above the Global/Diversified – Office/Industrial peer group average of 62.

Sustainable building standards

Achieved our proprietary 2020 Sustainable Building Standards targets across all asset classes.

¹ PRI: Principles for Responsible Investment. Score based on 2019 PRI Assessment. As of the date of writing this report, the 2020 results are unavailable. For more information please refer to the following, PRI Assessment: [manulifeim.com/institutional/global/en/resources/documents/2019-pri-assessment-report](https://www.manulifeim.com/institutional/global/en/resources/documents/2019-pri-assessment-report) Transparency Report: www.unpri.org/public-signatory-reports/transparency-reports-2019/4506.article PRI Assessment Methodology: www.unpri.org/reporting-and-assessment/how-investors-are-assessed-on-their-reporting/3066.article
² For more information on “Green Star” ranking, please visit: [gresb.com/ufaqs/what-is-a-green-star](https://www.gresb.com/ufaqs/what-is-a-green-star)
³ For more information on GRESB resilience scoring methodology, please visit: documents.gresb.com/generated_files/survey_modules/2020/resilience/scoring_document/complete.html



Objectives and Progress

Message	2020	Status
2020 Performance Highlights	Improve average proprietary Sustainable Building Standards score for each asset class	Achieved
	Set long-term greenhouse gas reduction target (see page 7)	Achieved
Objectives and Progress	Integrate climate mitigation and adaptation into our proprietary Sustainable Building Standards	Partially achieved – integrated into investment process. Adapting into Sustainable Building Standards, see 2021 objectives.
Our Approach	Improve portfolio energy management	Achieved
Diversity, Equity, and Inclusion	2021	Status
Managing Sustainability	Advance low-carbon strategy across portfolio, including property GHG reduction plans, and initiate internal carbon management working group	In progress
Case Studies	Develop sustainable development guidelines for new construction development	In progress
Performance	Achieve Fitwel Viral Response Module certification at the entity level ¹	In progress
	Measure portfolio-wide social impact metrics to establish baseline	In progress
	Develop and launch two new Sustainable Building Standards: “Climate Change Management” and “Climate Risk and Resilience”, and meet Level 1 across portfolio	In progress
	Inventory biodiversity initiatives and integrate biodiversity into tenant engagement programs	In progress

¹ To learn more about the Fitwel Viral Response Module, visit: www.fitwel.org/viral-response-module

Our Approach

Message

2020
Performance
Highlights

Objectives
and Progress

Our Approach

Diversity, Equity,
and Inclusion

Managing
Sustainability

Case Studies

Performance

Vision

Our vision is to drive leadership in sustainable real estate across our global organization. Our employees, in collaboration with our tenants and local communities, work to provide healthy and efficient properties—today and into the future.

Approach to sustainability and responsible investing

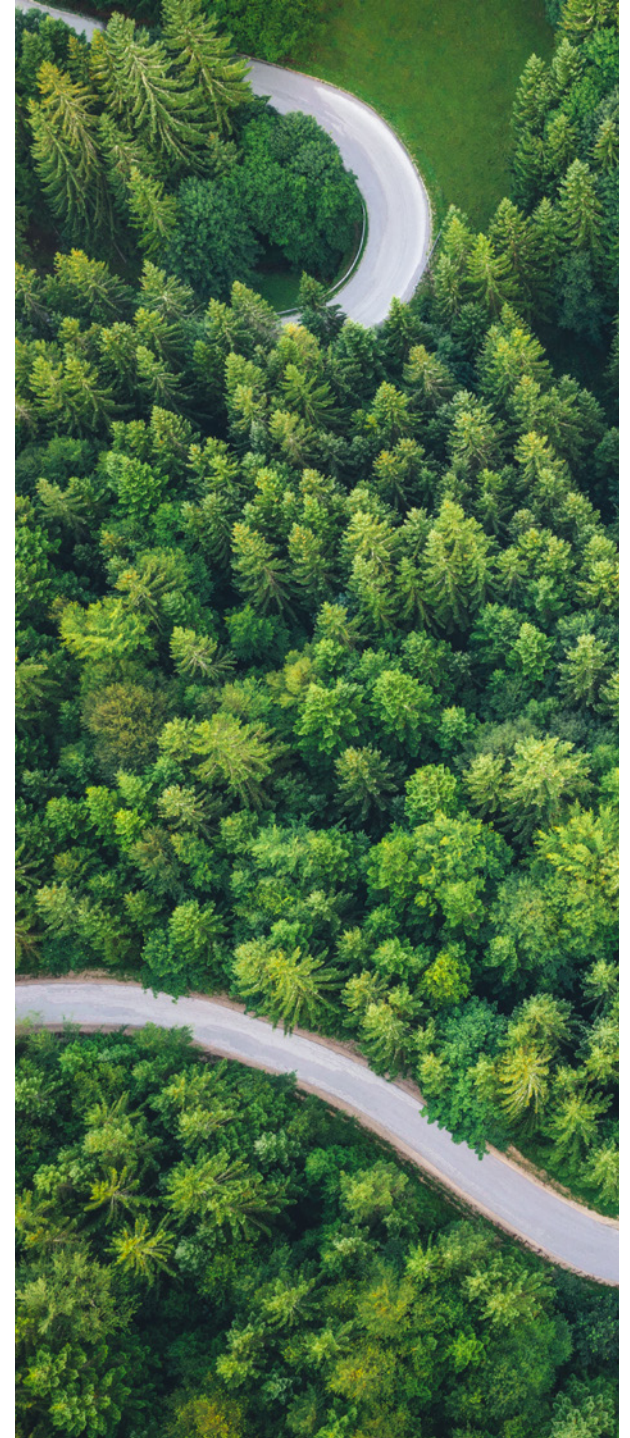
We incorporate environmental, social, and governance (ESG) considerations into all our investment management and operational practices across the real estate value chain, from construction and acquisition of an asset through all aspects of property management and leasing. These practices are supported by resources such as our Sustainability in Investment and Due Diligence tool, sustainability clauses in our standard lease, and our proprietary Sustainable Building Standards.

Our Sustainable Real Estate Framework outlines our five sustainability commitments and details our key areas of focus. We then validate practices and performance through public reporting and industry benchmarking.

We continue to advance sustainability initiatives for investments, operations, asset management, new developments, and leasing. To ensure that we are accountable to all stakeholders, we report on our performance using globally accepted standards and disclosure frameworks, including the Principles for Responsible Investment (PRI), [CDP \(formerly Carbon Disclosure Project\)](#), and [GRESB Real Estate Assessment \(formerly known as the Global Real Estate Sustainability Benchmark\)](#).

We aspire to align our **five Sustainable Real Estate Commitments** to everything we do.

1. Minimize our environmental impact
2. Support health and wellness
3. Promote responsible business practices
4. Engage our stakeholders on sustainability
5. Be accountable for our performance



Diversity, Equity, *and* Inclusion

Message

Cultivating a diverse, equitable, and inclusive environment helps all of our employees to thrive. In 2020, our parent company, Manulife committed to investing more than \$3.5 million (CAD) over the next two years to promote diversity, equity, and inclusion (DEI).¹

2020

Performance

Highlights

Objectives
and Progress

The goals of these investments include increasing the representation of diverse talent at all levels within the organization; creating greater inclusion across the company through enhanced training; and supporting organizations that help Black, Indigenous and People of Color (BIPOC) communities. Along with these initiatives and in addition to already existing gender targets, Manulife has set two additional leadership and recruitment goals:

Our Approach

- Increase BIPOC representation in leadership roles by 30% by 2025
- Annually hire at least 25% BIPOC talent in our graduate program

Diversity, Equity, and Inclusion

Within Real Estate, we've been working hard to understand our role in providing a diverse and equitable workplace. Together, we are committed to being transparent about our DEI challenges and taking steps to address them. While we have made progress in some areas, we know we have more work to do and are committed to addressing the needs of our employees, ultimately fostering a culture of inclusivity within all communities where we operate.

Managing

Sustainability

Case Studies

Performance



¹ As of June 2020, [manulife.com/en/about/inclusion.html](https://www.manulife.com/en/about/inclusion.html)

Managing Sustainability

Message

ESG management spans our organization, from top-down strategy to on-the-ground operations. It addresses both regulatory obligations and voluntary commitments.

2020

For more information, [visit our website](#).

Performance

Highlights

Objectives
and Progress



Manulife Investment Management Private Markets Sustainable Investing Committee

The Private Markets Sustainable Investing Committee was created to provide decision-making oversight and to coordinate the implementation of the sustainable investor program across the private markets asset classes.

Our Approach



Executive Sustainability Steering Committee

The Real Estate Executive Sustainability Steering Committee (ESSC) consists of senior representatives from key business functions and regions. The Committee sets annual objectives and oversees progress towards achieving our sustainability vision.

Diversity, Equity,
and Inclusion



Real Estate Sustainability Team

Regan Smith, our Head of Real Estate Sustainability, along with her team, develops and implements our sustainability strategy. Working with global investment management and asset management to assess and support the implementation of the programs and initiatives that support our commitments and vision.

**Managing
Sustainability**

Case Studies



Sustainable Building Standards

Consisting of 13 elements, our proprietary Sustainable Building Standards provide a guide to advancing sustainability across our global real estate properties.

Performance



Green Champion Community

Our Green Champion Community spans our global portfolio and includes individuals that act as local property sustainability stewards. The Green Champion Community works with the Sustainability Team and other organizational experts to execute on sustainability programs at the property level.



Property Teams

Our local property teams support our sustainability programs while also managing building operations and tenant and community relations.

More information

For our Sustainable Investing approach within private markets, please visit [Manulife Investment Management Sustainable Investing](#)

For our parent company, Manulife's sustainability approach, visit [MFC Sustainability](#)

Case Study #1

Message

2020

Performance

Highlights

Objectives
and Progress

Our Approach

Diversity, Equity,
and Inclusion

Managing
Sustainability

Case Studies

Performance

Cutting corporate carbon: Two initiatives to reduce GHG emissions in our own occupied space

Our aim is to reduce greenhouse gas (GHG) emissions across our portfolio by 80% by 2050.¹ Last year, in support of this, we undertook two key initiatives.

Firstly, we conducted a “deep carbon retrofit study” across our corporate real estate buildings (i.e., buildings that we as a business occupy). This study examined the current GHG emissions across these properties in North America and Asia.

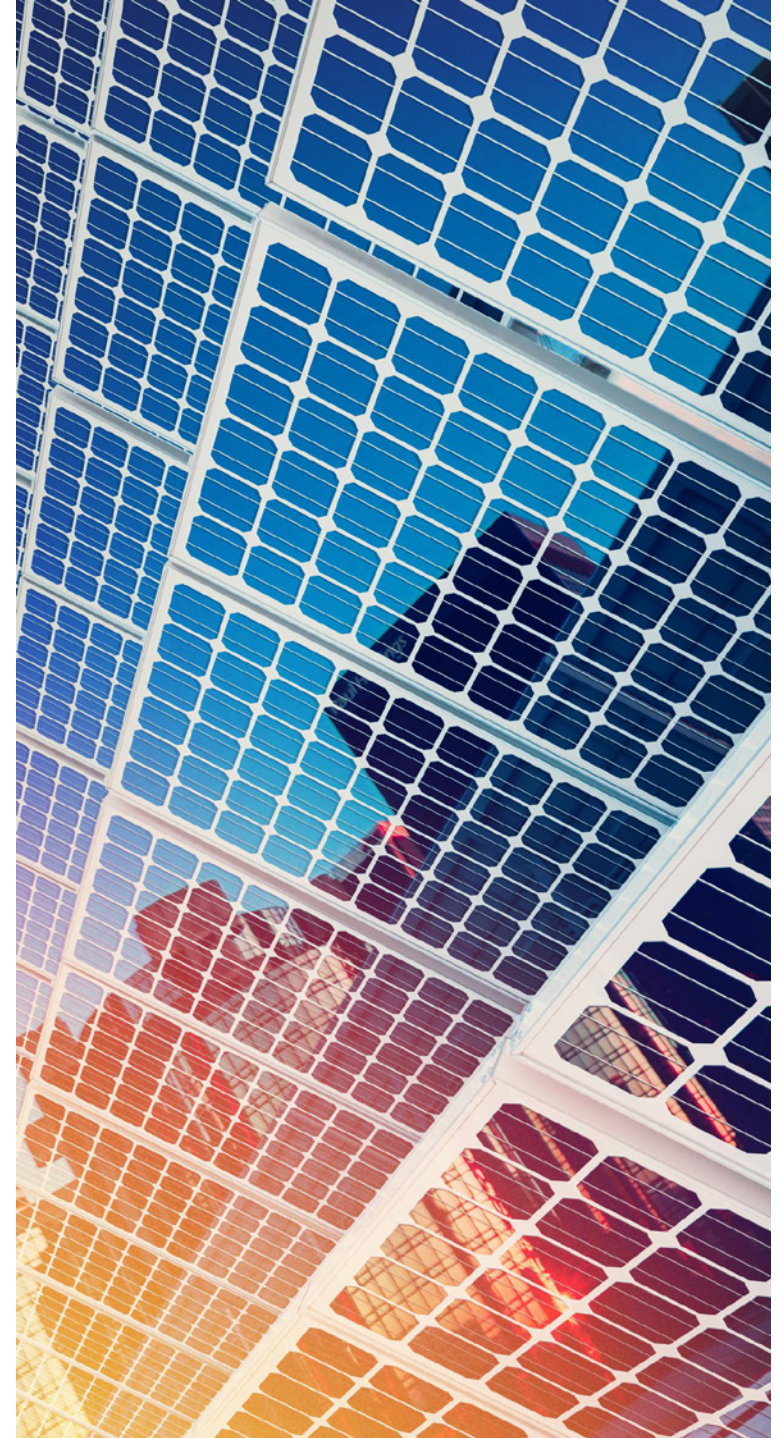
With the combined expertise of our own technical staff and that of third-party building engineers, we performed a thorough assessment of building systems. This allowed us to identify retrofits that could deliver relatively speedy carbon reductions and to devise longer-term strategies for more sizable emission cuts. Measures include efficiency projects, switching to cleaner fuels and generating renewable energy on-site.

The study is proving to be an invaluable component of our carbon reduction program, not only painting an accurate picture of our current corporate carbon output, but also providing a clear path forward, detailing effective solutions that can be incorporated into our planning and forecasting.

Reducing carbon also involves managing the space we lease, which means influencing other landlords to green their spaces. In 2020, we also incorporated sustainability into our corporate leased space selection process, enabling us to choose the best-performing properties and open a dialogue with prospective landlords on how we can collaborate to achieve environmental outcomes. We are continuing this momentum in 2021 by updating our green lease guidance so that teams can include these collaboration agreements in their leasing documents.

Together, these two corporate real estate initiatives are boosting our ability to meet our total portfolio greenhouse gas reduction target.

¹ Target is an intensity-based reduction of Scope 1 and 2 emissions for the properties that are within our operational control.



Case Study #2

Message

2020

Performance Highlights

Objectives and Progress

Our Approach

Diversity, Equity, and Inclusion

Managing Sustainability

Case Studies

Performance

A Canadian portfolio milestone: 100% green building certified

In 2020, we reached an important milestone: 100% of our Canadian managed funds now boast a green building certification. That's over 19 million square feet that meet a minimum threshold for sustainability.

This achievement is largely due to our country-wide support for properties with **BOMA BEST**, Canada's largest green building certification program, which requires that our properties adhere to 16 sustainability "Best Practices"¹ – everything from energy management to green cleaning.

Many of our Canadian properties have been recognized with other green building certifications, among them **LEED** (overall sustainability performance), **Energy Star** (energy efficiency), and **Fitwel** (health and wellness).

Now with over 80% of our global portfolio carrying a green building certification, this year we plan to improve our global certification base by expanding our BOMA BEST efforts into the United States.²

Green building certifications are important to our tenants, and many other stakeholders as well – they're real evidence that we're demonstrating best-in-class sustainability management.

¹ For more information on BOMA BEST 16 sustainability "Best Practices", visit: bomacanada.ca/bomabest/aboutbomabest

² Calculated based on square footage of the gross floor area (GFA) of properties in the global portfolio. Totals from different certification standards do not sum as properties with multiple certifications are only counted once.



Case Study #3

Message

Preparing for change: Physical climate risk and resilience assessment

2020

Performance

Highlights

It is expected that climate change will increase both the severity and frequency of many natural disasters and meteorological hazards – acute events like flooding and storms, as well as chronic conditions like drought and rising temperatures.¹

Objectives

and Progress

In 2019, we began evaluating physical climate change risks² to our properties by piloting a “climate value at risk” model. We also contributed to a scenario analysis and [guidance report](#) produced as part of our membership in UNEP FI's real estate TCFD pilot project.

Our Approach

Diversity, Equity, and Inclusion

Building on this momentum, in 2020, we conducted our own portfolio-wide risk study. Drawing on third-party sources combining both historical data and forward-looking climate model outputs, we identified seven distinct risks – floods, extreme windstorms, wildfire, sea-level rise, drought, heat stress, and earthquakes – and then produced comprehensive risk exposure profiles out to 2040.

Managing

Sustainability

Complementing this detailed understanding of our risk exposure, we also surveyed our entire portfolio for resilience measures – property features and practices that help us prepare for and mitigate these physical climate change risks.

Case Studies

Performance

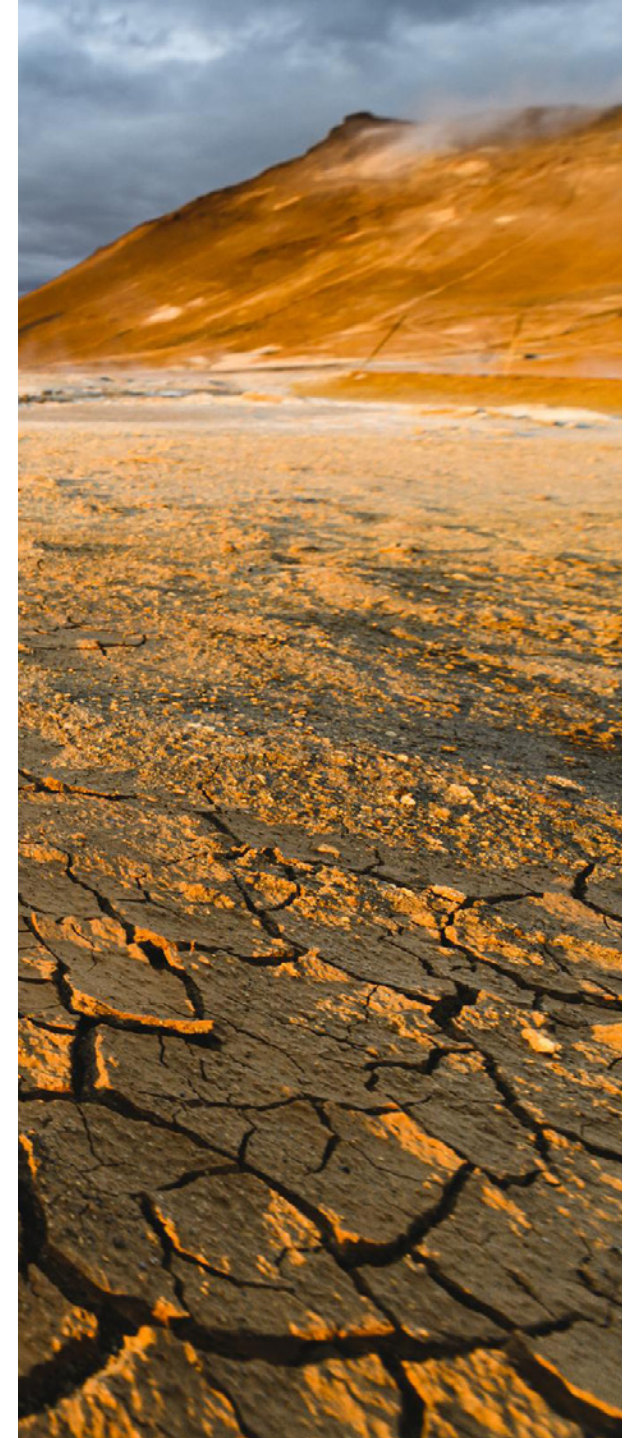
We now have an inventory of standard resilience measures that we are working to implement and track across our portfolio, primarily by adding a new resilience standard to our existing proprietary Sustainable Building Standards.

Assessing both our risks and resilience aligns us with the recommendations of the TCFD, but more importantly, it helps us manage long-term risk – the right strategy for a responsible building owner.

To learn more about our approach to climate change management, see our TCFD report on page 64 of our [Manulife Investment Management Sustainable and Responsible Investing report](#).

¹ Source: www.unepfi.org/publications/changing-course-real-estate-tcf-pilot-project-report-and-investor-guide-to-scenario-based-climate-risk-assessment-in-real-estate-portfolios

² Physical climate change risks include heat and water stress, extreme precipitation, cyclones or storms, and rising sea levels.



Case Study #4

Message

2020

Performance

Highlights

Objectives
and Progress

Our Approach

Diversity, Equity,
and Inclusion

Managing
Sustainability

Case Studies

Performance

Creating community: Montreal office portfolio team goes above and beyond

To say it was challenging for all of us to stay connected in 2020 is an understatement. But that only seems to have inspired our Montreal office portfolio team to devise even more innovative ways to engage their tenants and the local community.

To stay in touch with tenants, the team invented a host of fun, new events, all of which were delivered safely through virtual platforms. One week it was a cooking class, the next, a recipe exchange – the team even organized a holiday decorating contest virtually. And not surprisingly, there were several specially curated events aimed at maintaining tenant health and wellness, including all-important mental health.

Our Montreal team also recognized the importance of supporting vulnerable communities through these difficult times. Throughout the year, they joined forces with local organizations to deliver food baskets filled with honey from their 68 on-site hives and nearly a ton of produce from their rooftop gardens. During the holiday season, as part of our real estate team's Green Glove initiative, the team coordinated with a local food retailer to purchase prepared meals and groceries that were then delivered to local community organizations.

The team's initiative, energy and creativity are a testament to their commitment to continuous improvement, no matter what obstacles are thrown in their way.

For all their efforts, we were delighted to honor the team with the Community Engagement Leader Award at our 2020 Real Estate Sustainability Awards. Well done, Montreal.



Case Study #5

Message

2020

Performance Highlights

Objectives and Progress

Our Approach

Diversity, Equity, and Inclusion

Managing Sustainability

Case Studies

Performance

Advancing health and wellness: COVID-19 reinforces our commitment to healthy buildings

We are a company with roots in the promotion of public health. Ingrained in our business, wellness is an important part of our sustainability vision and one of our five Sustainability Commitments.

Two of our impressive sustainability performers – Manulife Place in Edmonton and The Michelson in California¹ – added a wellness “stamp of approval” to their record in 2020 by qualifying for the Fitwel health and wellness certification. Originally developed by the U.S Centers for Disease Control and Prevention, Fitwel is the leading global building certification focused on occupant health and well-being, evaluating a wide spectrum of critical features – indoor air quality, fitness amenities, access to green spaces, accessibility and alternative transportation, among others.

The two buildings offer a suite of health and wellness programs and amenities that supported their certification, including fitness centers, nearby hiking and walking trails and strategies to optimize indoor air quality. Ultimately, certification demonstrates how committed our property teams are to ensuring we provide safe and healthy spaces.

One effect of the COVID-19 pandemic was to remind us of the impact buildings have on health, and to reinforce the need to operate our spaces to help ensure safety for our stakeholders. In response, we developed Manulife Investment Management’s Return to Office program, aligning ourselves with global health authorities and local government regulations. Key to the program is our internal Return to Office Playbook outlining our recommended measures, policies, and procedures to ensure the safe and ongoing return of employees, customers and partners to our spaces. The playbook was reviewed by an expert healthy buildings consulting firm, 9 Foundations Inc., founded by Dr. Joseph Allen, who, along with his team, provided recommendations for aligning our playbook with industry best practices, as well as occupational health and safety fundamentals. Then, specifically for our tenants, we prepared a **Tenant Guidebook** that provides an overview of the policies and procedures we are implementing across our portfolio.

¹ The specific real estate investments identified are not representative of all of the real estate investments purchased, sold or recommended, and are included for illustrative purposes only. It should not be assumed that the investment in the real estate holdings identified were or will be profitable.



Our Performance

Message

2020
Performance
Highlights

Objectives
and Progress

Our Approach

Diversity, Equity,
and Inclusion

Managing
Sustainability

Case Studies

Performance

2020 was a unique year due to the COVID-19 pandemic. Although our buildings stayed open, work-from-home protocols and business closures had the effect of significantly impacting our energy and water consumption, greenhouse gas emissions, and waste generation. Methods to normalize are not designed for such extreme cases and therefore make year-over-year performance comparisons difficult. Throughout 2020, our property and operations teams continued to implement strong sustainable operational standards and, wherever possible, took advantage of these unique circumstances to implement efficiency projects.

Energy¹	2020	2019	2018	2017
Absolute energy use (eMWh)	733,980	800,611	834,493	795,895
Normalized energy use intensity (ekWh/sf) ²	19.6	23.2	23.7	23.7

Buildings consume substantial amounts of energy and water, generating about 40% of greenhouse gas emissions globally³. As building owners and managers, we seek to minimize our environmental impact by investing in resource efficiency and embedding conservation practices into our operations.

In 2020, our energy consumption totaled 733,980 eMWh. Comparing our like-for-like portfolio scores from 2019, our consumption decreased by 13.9%, which is roughly equivalent to the energy required to power 4,000 Canadian homes.

Across our global portfolio, we reduced normalized energy use intensity to 19.6 ekWh per square foot, down 15.4% from 2019 and 17.2% from 2017. Although our 2020 performance surpassed our five-year 10% energy reduction target, occupancy fluctuations in 2020 made target progress monitoring more complex. In 2021, we will reassess our performance, and still expect to maintain our current reduction trajectory from 2019 to meet our 2022 energy target.

Water⁴	2020	2019	2018	2017
Absolute water use (m ³)	2,285,260	2,520,652	2,573,773	2,556,907
Normalized water use intensity (L/sf) ⁵	53.0	61.7	65.8	67.7

In 2020, we used significantly less water, partly due to the impact of COVID-19 on building occupancy. Our absolute water footprint decreased 9.3% from 2019, despite portfolio growth and an increase in data coverage, while our like-for-like water use declined 26.0%, equivalent to over 650 million litres – enough water to fill 200 Olympic-sized swimming pools.

Our normalized water use intensity decreased by 14.0% between 2019 and 2020 to 53.0 litres per square foot. Similar to energy, COVID-19 had a significant impact on water consumption. Prior to the pandemic, we were on track to meet our five-year 7.5% water reduction target, and we expect to extend this performance through 2021 as our buildings reopen.

¹ Energy data includes electricity, natural gas, heating oil and steam consumption. 2017-2019 values are restated due to data and property area updates.

² 2017-2019 energy intensity is normalized for weather, occupancy (where data is available) and extraordinary use. 2020 energy intensity is only normalized for weather and extraordinary use because of the impact of COVID-19 on occupancy normalization. 2017-2019 values are restated due to data and property area updates.

³ Source: www.worldgbc.org/sites/default/files/UNEP%20188_GABC_en%20%28web%29.pdf

⁴ 2017-2019 values are restated due to data and property area updates.

⁵ 2017-2019 water intensity is normalized for occupancy (where data is available) and extraordinary use. 2020 water intensity is only normalized for extraordinary use because of the impact of COVID-19 on occupancy normalization.

Our Performance

Message

2020 Performance Highlights

Objectives and Progress

Our Approach

Diversity, Equity, and Inclusion

Managing Sustainability

Case Studies

Performance

Waste	2020	2019	2018	2017
Recycled waste (tonnes)	5,566	8,448	8,836	8,520
Waste to landfill (tonnes)	5,822	8,137	8,140	7,504
Waste diversion rate (%)	50.8	45.5	45.8	47.3

We continue to make waste management a focus area, beginning with data collection and reporting. In 2020, we reported on waste diversion for an additional five million square feet of our portfolio.

With the downturn in building occupancy, waste generation declined significantly from 2019 levels – our total waste generation decreased by 5,200 metric tonnes. The average diversion rate for 2020 was 50.8%, a 5.4% improvement over 2019. This year, we continue to improve waste performance measurement and identify opportunities to increase diversion and reduce waste generation where possible.

Greenhouse gas emissions¹

2020	2018	2018	2017	
Scope 1 emissions (tCO ₂ e) ²	28,721	33,558	31,403	28,492
Scope 2 emissions (tCO ₂ e) ³	98,483	117,263	148,519	146,904
GHG intensity (kgCO ₂ e/sf)	4.0	4.7	5.0	5.1

To help mitigate the effects of climate change, Manulife Investment Management is committed to reducing our greenhouse gas emissions and transitioning to low-carbon energy sources. In 2020, our total greenhouse gas (GHG) emissions were 127,205 tCO₂e, down 23,617 tCO₂e compared to 2019. In addition, we purchased 48,550 MWh of renewable energy across our portfolio.

Our 2020 emissions went down in part because of less energy use with more people working from home, as well as energy efficiency project improvements. In 2020, we conducted carbon audits at select properties to better assess GHG reduction opportunities, setting a 2050 target of 80% reduction in carbon intensity where we have operational control. In 2021, we will seek to develop a long-term portfolio GHG management program and integrate initiatives into our proprietary Sustainable Building Standards.

¹ Location-based emissions. 2019-2017 values are restated as a result of data and property area updates.

² Scope 1 includes emissions from natural gas, diesel and refrigerants. Refrigerant and diesel emissions are only included for 2019 and 2020.

³ Scope 2 includes emissions from purchased electricity and steam.

manulifeim.com/realestate/en/sustainability

Canada

250 Bloor Street East
Toronto, Ontario
M4W 1E5

United States

200 Berkeley Street
Boston, Massachusetts
02117

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