OPTrust

Designing a **Climate Metrics Framework** for Investment Portfolios

A Toolkit for Asset Owners
2023

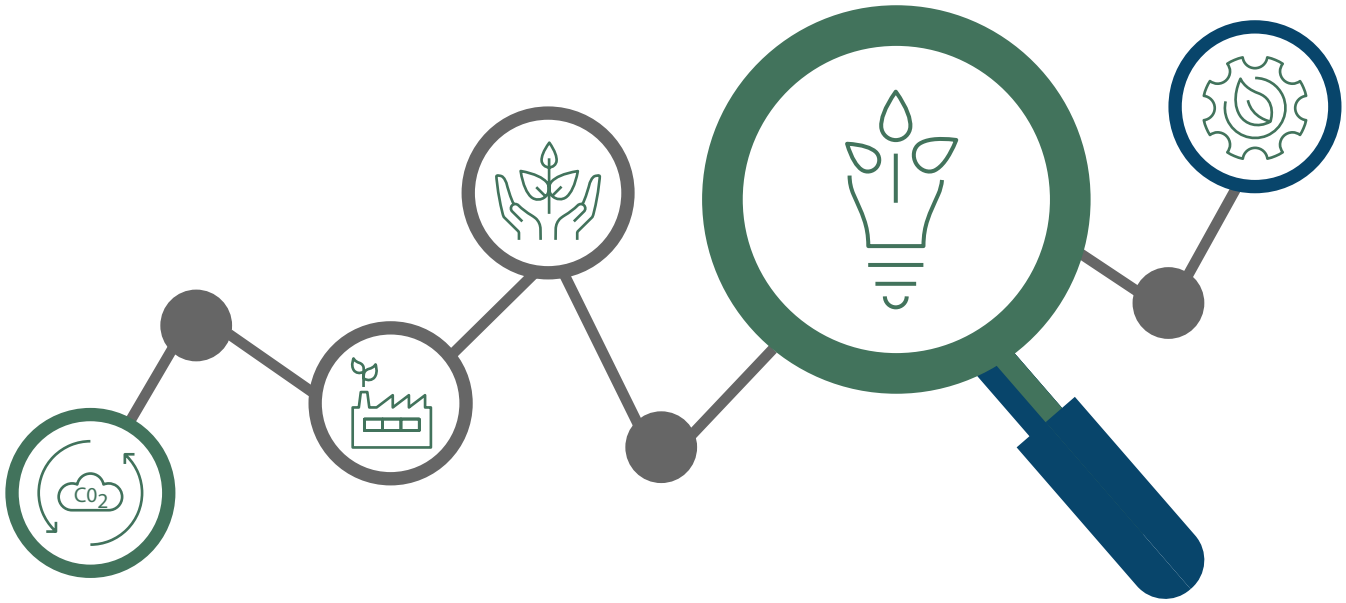


Table of contents

With net assets of almost $25 billion, OPTrust invests and manages one of Canada's largest pension funds and administers the OPSEU Pension Plan (including OPTrust Select), a defined benefit plan with over 106,000 members. OPTrust is a global investor in a broad range of asset classes including public and private equities, fixed income, real estate and infrastructure, and has a team of highly experienced investment professionals located in Toronto, London and Sydney.

Introduction

The world economy faces the increasing physical and transition risks of climate change. Exactly how climate risks will materialize and their subsequent impact on financial markets and investment portfolios remains uncertain. At the same time, investors will have significant opportunities as global efforts to tackle climate change accelerate.

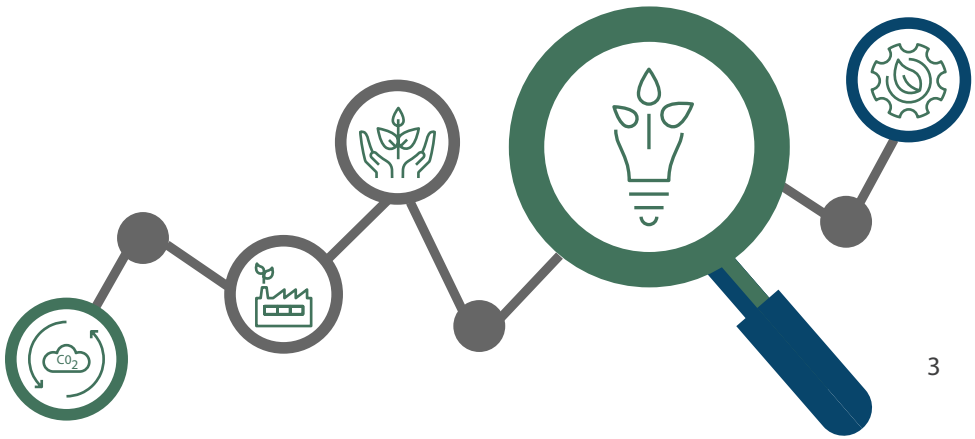
In 2022, OPTrust launched our **enhanced climate change strategy**, including a commitment to develop metrics and targets for our portfolio to allow us to more systematically track material climate information. We aimed to develop an intuitive framework that could use today's accessible data as a starting point and evolve overtime with our portfolio and developing standards.

Our goal was to develop a *fit-for-purpose* framework that recognizes OPTrust:

- **Is smaller, relative to other public pension plans, with limited internal resources.**
- **Manages investments both internally and through third-party investment managers across multiple asset classes.**
- **Invests in the middle market and through a variety of passive and quantitative strategies where availability of climate data is still nascent.**

The process of developing our initial framework helped us turn vague climate change concepts into tangible, investment-related metrics. We are sharing our learnings from this process in the hope that they help other investors who face a similar challenge grappling with the massive implications of climate change on their portfolios.

We welcome further discussion with interested parties at **sii@optrust.com**.



The climate metrics challenge

Investors, regulators and stakeholders continue to push for improved approaches to monitor and report the impacts of climate change on organizations of all types. Yet, exactly how to track, measure and discuss climate risks and opportunities remains a challenge, particularly in diversified investment portfolios. Investors today face several obstacles in identifying, understanding and acting on material climate information, including:

- There are multiple ways to measure climate risks, with definitions or use cases not always clearly disclosed or easily understood.
- Climate is a new category of investor information, with data often heavily estimated or proxied. Generating useful insights demands investors become familiar with the language of climate change, pull together various data points and take the time to understand and interpret them.
- The links between climate data and the financial health of a particular asset or portfolio are not always obvious, and not all metrics tell the same story.

This toolkit assumes basic knowledge of the various types of climate risks and opportunities and the Task Force on Climate-related Financial Disclosures (TCFD) guide, pages 74-76 is a helpful supplement.

Our approach captures five of the seven categories of metrics recommended by the TCFD (see pages 79-80) as our focus is on establishing a starting point for investment professionals looking to design metrics for their portfolios.

However, investors who rise to the challenge are primed to make more informed, strategic investment decisions and uphold good governance. At OPTrust, we believe that a well-developed **Climate Metrics Framework** can promote:

- **Risk management** through a better understanding of an assets' climate profile, allowing us to proactively manage risks stemming from the global transition to a lower-carbon economy and physical shocks to our natural environment.
- **Strategic investment** planning by enabling us to intentionally participate in the low-carbon transition, support innovation and capitalize on climate-related opportunities.
- **Data enhancement** by consistently measuring our efforts to improve the coverage and quality of climate data across the portfolio, which in turn allows us to strengthen our understanding of material climate issues and our disclosures.

With numerous other investors, regulators, central banks and industry associations designing their own approaches to climate metrics, we expect that more standardized approaches will emerge over time. However, we believe that investors who start this work early stand to benefit, including by being prepared to fulfill any future regulatory reporting requirements.

The asset owner's toolkit

The ultimate choice of metrics you use should come down to those that are: (1) clear, (2) measurable, and (3) decision-useful.

Over time, a fourth characteristic may emerge for certain metrics, (4) required.

We've shared examples of metrics, where possible, to illustrate how these characteristics come to life.

This toolkit has two main sections:

An overall approach to identify and develop climate metrics for your organization

In our experience, engagement across the entire organization is critical to ensure success and adoption.

Our approach is designed to be collaborative and iterative. We recommend gathering input from both a bottom-up (investment teams) and top-down (senior management and potentially Board) perspective.

The most important goal in the early days is to align on (1) metric definitions, (2) the cadence for collecting, monitoring and reporting data, and (3) the intended audiences. Once you capture baseline values, you can then begin conversations around how to manage the identified metrics, including potential actions to manage team and individual performance against them. Over time, as trends reveal more about how certain metrics behave, you can contemplate actively monitoring and managing more metrics.

A Climate Metrics Framework to support structuring your ideas

Organizing ideas into categories at the outset supports structured brainstorming and can reduce the ambiguity typically associated with climate metrics. Our **Climate Metrics Framework** outlines five potential categories of metrics: **carbon exposure**, **climate exposure**, **stewardship**, **climate solutions**, and **process**.

For OPTrust, these groups helped us capture nuanced data within the portfolio and provide a collective snapshot of material climate risk and opportunity across all dimensions. Individual asset-class teams also have scope within the five categories to add metrics relevant to their investments (e.g. physical risk considerations for real assets).

In each category, investors will need to develop a "best answer" on the right metrics to begin with. As you gather more data and feedback from internal teams, and as regulations and standards mature, continue to iterate the process and evolve your metrics.

Approach to developing metrics

The process to identify and develop climate metrics for portfolios is an opportunity to collaborate and engage stakeholders across the organization. Ensuring all key stakeholders have a voice in the process helps drive clarity and buy-in to what can be a challenging, ambiguous process.

Below are five suggested steps and related activities.

Step 1: Brainstorm and align on metrics

- Working with investment teams, use the categories in the **Climate Metrics Framework** to brainstorm metrics that should or could be captured at the asset-class level to monitor material climate risks and opportunities.
- Finalize the list of metrics with your relevant executives, responsible investing committees, etc.

Step 2: Establish plan to collect and monitor data

- Determine what metrics are feasible to implement in year one versus in future years – take the opportunity to prioritize low-hanging fruit.
- Outline a plan to collect data, where available, and to monitor and report via appropriate tools and committees.

Step 3: Capture baseline information (where available)

- Where possible and available, start collecting baseline data for each metric.
- Where data aren't available, identify the budget and resources necessary to collect it (or the challenges and constraints to doing so) and develop a time-bound plan.

Step 4: Prioritize metrics for target-setting

- Set targets for those metrics where climate risk needs to be – and can be – actively managed and you as an investor have levers to impact the outcomes.
- Start and/or continue discussions on the appropriate longer-term governance for your selected metrics and how to best integrate them into management and board reporting.

Step 5: Repeat and evolve

- As your internal efforts mature, and the external landscape evolves, continue to repeat steps 1-4 as necessary.

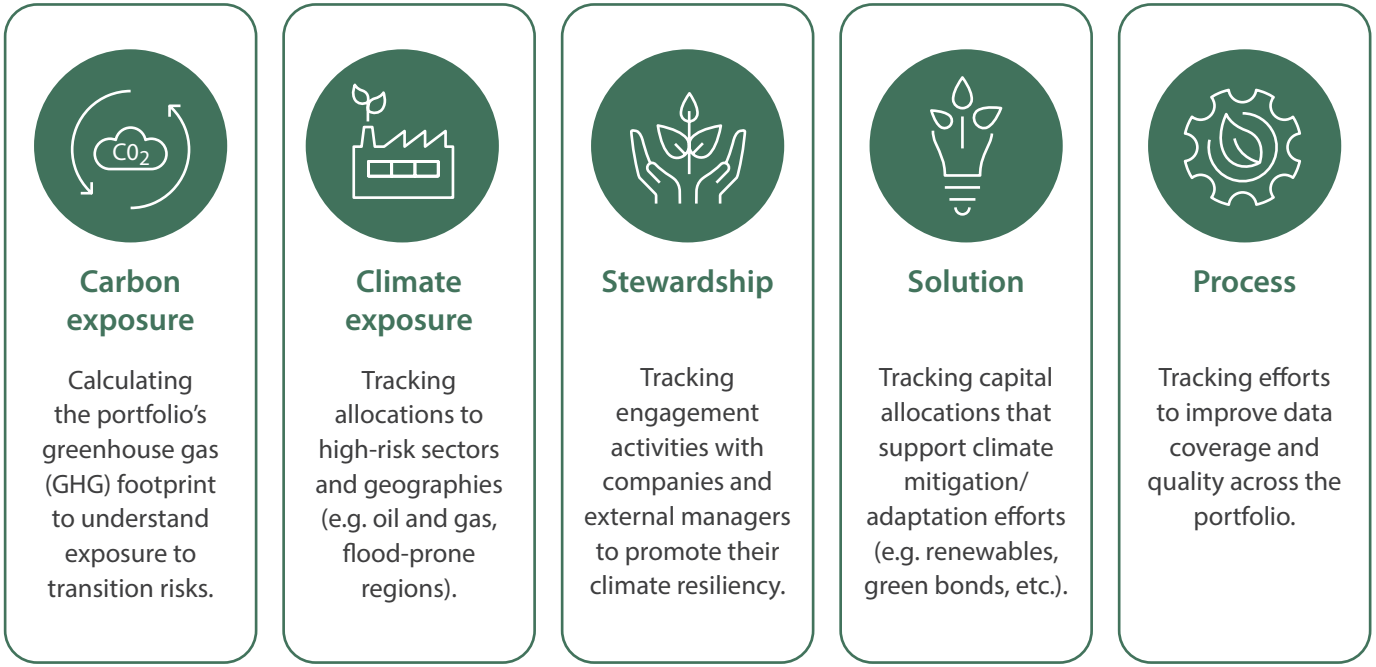
Not all metrics need targets

Here are some questions to ask teams to determine which metrics should have targets:

- Where does the risk need to be most actively managed?
- Where do we have good quality, actionable data?
- What areas of the portfolio can we exert control over?
- What areas are our stakeholders (board, clients, members, regulators, etc.) most concerned about?
- Do we foresee reporting regulations, or stakeholder expectations, changing on any metrics?

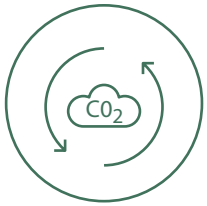
Climate Metrics Framework

Our Climate Metrics Framework provides a structured way to start discussions with investment teams. The framework's five categories are not exhaustive, but rather provide a good starting point for structured thinking about climate risk and opportunity across a portfolio. Investment teams may add additional metrics under each category that are relevant to their particular asset classes.



Metrics can capture various types of information

See the following pages for more details on each category.



Carbon exposure

What is it?	**The carbon exposure category is designed to capture metrics that measure the GHG footprint of an investment portfolio (i.e. the footprint of the underlying assets).**
Why is it relevant to measure?	As global temperatures rise, changes in policy, technology and consumer preferences will accelerate the push towards a lower-carbon economy to mitigate climate change. The potential costs of a lower-carbon transition are called "transition risks." A portfolio's GHG intensity is a proxy for its exposure to climate-related transition risk and is considered industry best practice for measuring this type of risk.
How do you measure it?	Portfolio-level carbon exposure can be measured in three ways: 1. Financed emissions, which calculate the absolute tonnes of CO_2 that are financed or "owned" by investors across both equity and debt. While change in absolute emissions matters for real-world impact, this metric may change because of market volatility or increase in portfolio size. The second and third ways are measures of carbon intensity, which normalize emissions to allow for growth in fund assets and for comparison across companies and investors of differing size. Specifically: 2. Emissions intensity, which uses enterprise value including cash (EVIC) to normalize emissions and is useful to understand the carbon intensity relative to the value invested and allows for asset management growth to be normalized. 3. Weighted average carbon intensity (WACI), which uses revenue to normalize emissions and provides insight into a company's carbon efficiency per dollar of revenue earned and allows for intra-sectoral comparison. Each of these three metrics provides a different perspective on emissions generated and each has its own strengths and weaknesses. For many investors, it's prudent to track all three. Additionally, emissions are categorized into three scopes for the purpose of accounting depending on the source from which they are emitted. **The GHG Protocol** (see pages 29-33) provides standards and tools for reporting organizational emissions. Investors should also familiarize themselves with industry guidance, including the Partnership for Carbon Accounting Financials (PCAF), that provides more information on calculation methodologies.

GHGs are the gases in the earth's atmosphere that trap heat. GHG emissions from human activities contribute to global warming.

GHGs include carbon dioxide, methane, nitrous oxide, hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs) and ozone. When calculating a carbon footprint, total GHG emissions are expressed as carbon dioxide equivalent (CO_2e).

Climate exposure

What is it?	**Climate exposure metrics track a portfolio's exposure to high-risk sectors and geographies as determined by their vulnerability to physical and transition risks.**
Why is it relevant to measure?	Tracking investments in highly vulnerable countries/cities and economic sectors enables investors to: • Be better prepared to mitigate the risks. • Proactively monitor and adapt to changing regulations and market shifts. • Better plan asset sales to minimize potential for uncompensated risks.
How do you measure it?	Climate exposure metrics can be measured in percentage or absolute terms. **For example:** • % of asset-class net asset value (NAV) invested in high-risk geographies (i.e. those exposed to extreme weather such as flooding, wildfires, hurricanes, heat waves, etc.). • $ invested in carbon-related assets and high-risk industry exposures. • # of cities with net-zero real estate regulations in the portfolio.

Stewardship

What is it?	**This category is designed to capture metrics from two perspectives. First, your engagement efforts with companies and external partners (e.g. asset managers and general partners) on their management of climate risks and opportunities. Second, information on the actions companies and partners are taking themselves to improve their climate resiliency.**
Why is it relevant to measure?	Tracking stewardship efforts helps ensure you have a pulse on how well directly owned assets and external partners are prepared to respond to the challenges of climate change. While portfolio companies and partners may already be addressing these risks today, systematically capturing information on their activities can help investors respond to potential regulatory reporting requirements in the future, and in the case of directly owned companies, defend asset valuations for future dispositions.
How do you measure it?	Stewardship metrics can be measured in percentage or absolute terms with a focus on a specific action or attribute. **For example:** • # of high-risk assets with a climate strategy, transition plan or climate-risk mitigation plan in place. • # of partners (and % of NAV) that provide emissions reporting. • # of climate-related shareholder resolutions supported.

Climate solutions

What is it?	**Climate solutions metrics track portfolio allocations to businesses, sectors or financial instruments that are directly addressing, or supporting, climate change adaptation and mitigation.**
Why is it relevant to measure?	Investors are increasingly being called on to explain the role they play in the transition to a lower-carbon economy. Tracking your investments in climate solutions enables investors to more systematically capture areas of strategic advantage across asset classes and identify ways to further capitalize on developed expertise over time. As governments and other stakeholders exert more pressure on financial institutions for transparency into how/where they are investing on climate-related themes, investors who are already tracking their investments will be at an advantage.
How do you measure it?	Climate solutions can be measured in percentage or absolute terms. **For example:** • % of total NAV invested in climate solution sectors. • Megawatt hour (MWh) of renewables capacity developed. • # of buildings with commercial heat pumps. • $ invested in green bonds (and % of bond portfolio).

Process

What is it?	**Process metrics track your efforts to improve the coverage and quality of climate information across the portfolio.**
Why is it relevant to measure?	Climate data are still in their infancy. Depending on the metric, data availability and quality can vary considerably across asset classes and financial instruments. While data issues can hinder investors' ability to make climate-informed decisions today, investors will ultimately be expected to have more sophisticated approaches in place as the data landscape matures and methodologies to track information become standardized. Tracking your organization's process improvements allows investors to address gaps in the portfolio and ensure that the latest developments in climate data and analytics are being applied to your investment activities.
How do you measure it?	Process metrics can be measured in percentage or absolute terms. **For example:** • # of directly held assets that collect emissions data (and associated PCAF data quality score). • % total fund assets for which emissions data are available. • % of investment partners that have undergone enhanced climate due diligence.

Navigating a complex journey

Addressing climate change is among the most complex challenges facing the world today. Transition pathways towards net-zero emissions, while emerging, are still unclear. The challenges facing investors are, likewise, not easy.

As an asset owner focused on continually improving our approach to managing climate considerations in our portfolio, OPTrust has benefited from the advice of many peers and associations. In the spirit of collaboration, here are some key recommendations from our experience.

- **Align your organization first with common beliefs:** Given the ambitious and ambiguous nature of this work, we strongly advocate developing climate-related investment beliefs to guide your organization's path. See OPTrust's **Climate Change Beliefs** as one example.
- **Don't let data gaps become roadblocks:** For organizations just starting, availability and quality of climate data will quickly emerge as a key challenge. Make the best use of what you have, "bootstrapping"' data projects to get started, while planning/budgeting for better data in the future.
- **Recognize a climate metrics initiative is one among many:** Your investment teams may already have other environmental, social and governance initiatives underway. While related projects should ultimately come together in a streamlined way, acknowledge how projects can be built in phases, and embrace the fuzziness, particularly in the early days.
- **Learn, act and repeat:** Developing climate metrics is a significant undertaking. Use a process that ensures asset-class teams can move up the learning curve, while still driving ahead to nimbly develop best answers at the time. As you gather more data, feedback and grow your expertise, adjust and iterate. Learn from the broader financial industry, while also using your own ingenuity to address the unique challenges of your organization's investment portfolio.
- **Linking quantitative targets to compensation can wait:** In the early years of any climate journey, securing organizational support is critical. The initial goal is to encourage open and transparent sharing of data and learnings. Based on your organization's readiness, culture and objectives, determine if it may be counterproductive to link the achievement of climate metrics to compensation from the outset, particularly if you are still reliant on partial or proxied data. However, as your understanding, data quality and climate governance improve, compensating against targets may be an effective lever for change.

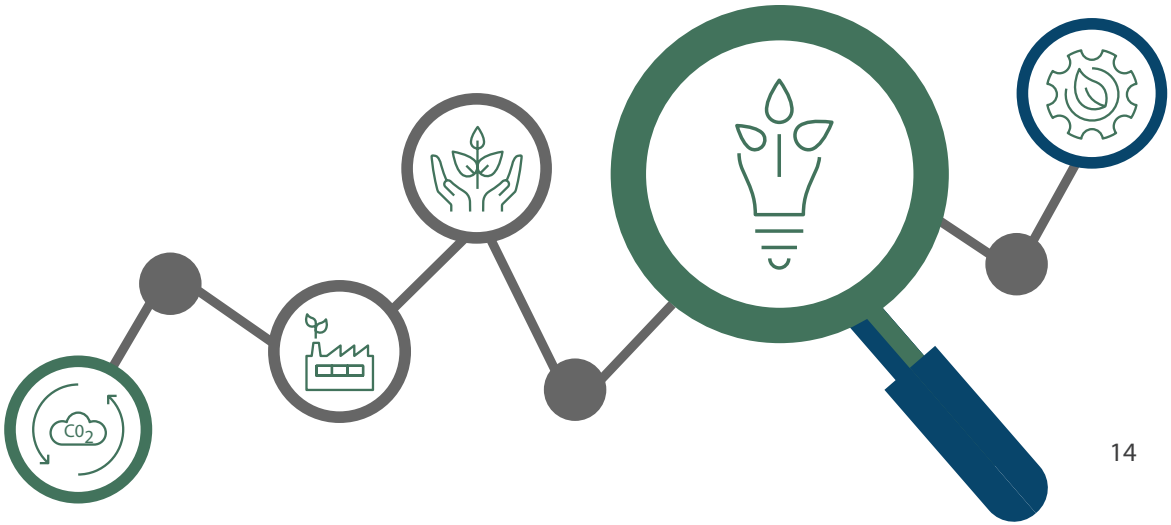
The bottom line: success requires starting somewhere.

In the decades ahead, best practices, disclosure standards and expectations around how investors approach climate change will drastically evolve. Those organizations who embrace the challenge with an aspirational, learning mindset will be those poised to adapt. We welcome opportunities to collaborate and learn from like-minded peers.

Additional resources

There are many organizations working to assist investors on their climate journeys. Below are ones we find particularly helpful.

- **TCFD**: Leading climate disclosure framework; increasingly a regulatory requirement.
- **UN PRI**: Provides overview of climate metrics currently widely used by investors.
- **PCAF**: Global partnership of financial institutions working to develop a harmonized approach for emissions accounting and reporting.
- **GHG Protocol**: Leading authority on guidance, tools and training for business and government to measure and manage emissions.
- **SBTi**: Provides guidance for science-based emissions reduction targets for companies across various sectors.
- **TPI**: Supports investor commitments to net zero by providing research and analysis on the transition in public markets.
- **Net-Zero Asset Owners Alliance** and **Paris Aligned Asset Owners**: Asset owner consortiums working towards transitioning their portfolios to net zero.



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