

2024 Task Force on Climate- related Financial Disclosures (TCFD) Report

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Foreword

TT International Asset Management's 2024 TCFD Report sets out our governance, strategy, risk management for climate change risks and opportunities, and discloses metrics and targets including our Net Zero Asset Managers initiative target.

TT is dedicated to achieving the best possible risk-adjusted returns for our investors. We believe that responsible investment is essential for maximising returns for our clients and limiting reputational risk. Climate change is a systemic risk that we consider in our company analysis and engagements.

In 2024, we had 83 targeted ESG engagements with 67 companies. 17 of these engagements focussed on climate change, including coal financing policies and green capital expenditure.

Our Environmental Solutions Fund, an Article 9 investment strategy, has invested in companies that enable the green transition and protect against ecosystem destruction and also contributed almost USD 1 million to environmental charities since its inception in 2020. In 2024, TT was recognised with the ESG Investing Award for 'Best ESG Investment Fund: Global Thematic' for this strategy for the third year in a row. The environmental expertise of the portfolio managers remains a core differentiator for TT, particularly within our SDG aligned equity strategies where these credentials shape our investment approach.

We manage assets for some of the world's most sophisticated institutional investors with long investment horizons. This requires us to understand and correctly interpret the investment implications of ESG issues surrounding our investments, including on climate change, so that we can preserve and enhance our clients' capital. By incorporating the ESG insights we glean from our stewardship activities into our investment decisions, we believe we can generate even stronger risk-adjusted returns for our clients. By serving our investors diligently as a responsible investor, we believe we fulfil our fiduciary duty to our investors such as pension plans, university endowments, and sovereign wealth funds, thus helping them to fulfil their own responsible investment and stewardship obligations.

Eric Mackay

Managing Director, TT International Asset Management

Governance

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

- Describe the board's oversight of climate-related risks and opportunities.

TT International has an ESG Committee, comprised of representatives from across the business – Investments, Risk, Operations, and Compliance – who meet on a monthly basis to update management and the wider business on ESG developments and ensure all ESG issues are being considered and all our obligations are consistently met. The ESG Committee reports to the TT Management Committee. Eric Mackay, our Managing Director and board member oversees climate-related risks and opportunities.



- Describe management's role in assessing and managing climate-related risks and opportunities.

TT's management is responsible for assessing and managing climate-related risks and opportunities. In 2019, TT's Management Committee identified climate change and biodiversity loss as market-wide and systemic risks that we seek to factor into our investment and risk management strategies; in fact, this was the motivation for TT's Management Committee to approve the launch of our Environmental Solutions strategy in 2020. Today we have a market-leading offering for clients seeking a pure environmental investment mandate, whilst for other clients looking to improve the ESG credentials of their investments, we help to implement their exclusions and objectives on portfolio decarbonisation.

TT's management also sought to build ESG competencies by hiring the Head of Sustainability and Stewardship in 2020, a newly created position at the firm. Today we have two additional team members, and the team has expanded ESG engagements and company analysis. The Sustainability and Stewardship team is responsible for the operationalisation of the climate assessments at the firm and working with the investment analysts on climate engagements. The team's responsibilities with respect to climate change include:

- Undertaking ESG assessments of investment portfolios and highlighting risks to the investment teams
- Engaging with portfolio companies

- Evaluating and joining collaborative engagements where collaborative action may deliver more effective outcomes on systemic issues
- Voting on climate-related resolutions
- Reporting to clients on ESG, including on climate change

Strategy

Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.

The 2018 “[IPCC Special Report](#) on the Impacts of Global Warming of 1.5°C Above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, In The Context Of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty” was instrumental in shaping our thinking that climate change and biodiversity loss pose a systemic risk not only to our lives, but also to financial markets. We consider climate change and biodiversity as market-wide and systemic because these risks can result in the degradation of life on earth and can also cause involuntary migration, geopolitical strife, food insecurity, and pandemics.

In 2019, we formally identified climate change and biodiversity loss as market-wide and systemic risks that we seek to factor into our investment and risk management strategies and launched our Environmental Solutions strategy in 2020. In this strategy, we have invested in companies that enable the green transition and protect against ecosystem destruction and additionally contributed almost USD 1 million to environmental charities.

When we created this strategy, we also established an external Research Advisory Board with experts on environmental technology, ecology and conservation, and green tech to help us understand and navigate these risks better. We also look to leverage our expertise in environmental investing to include relevant investment opportunities in our other strategies as appropriate.

Describe the impact of climate-related risks and opportunities on the organisation’s business, strategy and financial planning.

TT’s investments:

In May 2020, we launched the TT Environmental Solutions Fund, where *all* investments must produce products or services that tackle an environmental problem, with 80 percent of the capital invested in companies that derive the majority of their revenues or operating profit from environmental solutions. This strategy has three key objectives:

- generate strong long-term returns by investing in the leading global structural growth theme,
- drive capital to companies delivering the green transition and protecting against ecosystem destruction,
- directly benefit the environment by directing 33 percent of all management fees to a select number of environmental charities.

The charities we are supporting are Heal (Rewilding Charity), The University of Western Australia – Oceans Institute, The Global Returns Project, and the Thousand Year Trust. We selected these charities due to their alignment with our fund’s mission and their potential for meaningful impact:

- Heal's primary focus is on rewilding and restoring ecosystems so that nature can take care of itself. Heal also aims to promote conservation, and economic and community development. In January 2023, Heal acquired its first landholding of 460 acres near Bruton in Somerset, where it will create a new nature reserve. TT International was the largest single donor to the equity for the purchase of the Somerset site.
- The University of Western Australia – Oceans Institute addresses challenges facing the world’s oceans, including climate change, marine biodiversity loss, and unsustainable human use. It does this through research innovation and education of future ocean leaders. We supported three academic projects at the Oceans Institute:
 - *Eggs in Two Baskets: Exploring a Climate Change Adaptation Option for Sea Turtles*
 - *Developing a Low-cost Approach to Regional Scale Coastal Hazard Monitoring*
 - *Understanding the Social License of Offshore Renewables in Australia for a Smooth Renewable Energy Transition*

A new project with UWA (*A New Vision for Coastal Resilience: Engaging Communities through Art to Design a Transformative Future*) was selected for 2024.

- The Global Returns Project aims to channel private investor capital – a significant but largely untapped source of funding – into a selection of the most effective not-for-profit organisations tackling the climate and nature crisis.
- The Thousand Year Trust aims to triple the amount of Atlantic temperate rainforest growing across the UK over the next 30 years from the current assessed 330,000 acres to one million acres.

We selected these charities because of their alignment with our strategy, and because our support can make a difference for their mission. Heal’s, The University of Western Australia – Oceans Institute, and the Thousand Year Trust address biodiversity on land and in the oceans through active programmes as well as academic research. We have interviewed a number of environmental charities and required them to complete a detailed due diligence questionnaire in our selection process.

During 4Q 2022 we launched our Global SMID strategy, where we seek to invest in a diversified portfolio of small- and mid-cap companies which present the opportunity for long-term growth, within the environmental, technological, demographic and sociological, and top-down and opportunistic global themes. This strategy also explicitly offers exposure to climate-related investments.

TT’s own operations:

We aim to create a positive impact for not only for the companies and countries in which we invest, but also the wider society. As such, we have our market-based carbon footprint independently calculated and assessed by an external body – Carbon Footprint Ltd – and choose to offset it on an annual basis.

In 2024, our carbon footprint was 768 tonnes of CO₂e, 76 percent of which was from air travel.

We chose to fund three projects in China, Nigeria, and Eritrea that also fulfil many of the United Nations' Sustainable Development Goals:

- **Qianbei Afforestation Project in China (547 tCO₂e):** Located in Guizhou Province, this Verified Carbon Standard (VCS) afforestation project transforms degraded, barren land into biodiverse forest using native tree species. It helps to sequester carbon, control rocky desertification, and improve soil quality. The project also creates jobs – 70 percent of which go to women – and provides training in planting and forest management. This project supports SDG 13 (Climate Action), SDG 15 (Life on Land), and SDG 5 (Gender Equality).
- **Promoting Improved Cooking Practices in Nigeria (148 tCO₂e):** This Gold Standard project replaces inefficient, polluting traditional cookstoves with cleaner Toyola cookstoves across Nigeria. It reduces deforestation, lowers indoor air pollution, and cuts carbon emissions. Women are central to the initiative—both as beneficiaries and as community agents delivering training and awareness. This project supports SDG 7 (Affordable and Clean Energy), SDG 13 (Climate Action), and SDG 1 (No Poverty).
- **Zoba Debub Community Boreholes in Eritrea (73 tCO₂e):** Another a Gold Standard project, this initiative restores and maintains boreholes equipped with hand pumps, providing clean drinking water to rural communities. By removing the need to boil water, it reduces firewood consumption and related carbon emissions, while improving health outcomes and protecting local forests. This project supports SDG 6 (Clean Water and Sanitation), SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality), and SDG 13 (Climate Action).

In choosing these projects, TT's Environment Working Group continued to prioritise initiatives that combine climate impact with biodiversity protection, access to water, and social development.

In addition to offsetting our carbon footprint, we contributed to tree planting efforts in Kenya—one tree for every 10 tonnes of CO₂e offset – supporting reforestation and sustainable livelihoods in the Great Rift Valley.

Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

We apply the NGFS 2-degree orderly scenario with average physical climate risk, along with the NGFS 3-degree fragmented world scenario with aggressive physical climate risk. At the end of 2024, all our long only equity funds showed lower value-at-risk than their benchmarks in an NGFS 2-degree orderly scenario with average physical climate risk and in an NGFS 3-degree fragmented world scenario with aggressive physical risk.

2C NGFS Orderly - Average Physical Risk

Portfolio	Portfolio Total VaR	Benchmark Total VaR	Portfolio v Benchmark Total VAR
Asia ex Japan	-3.4%	-8.5%	-5.1%
Asia Pacific	-3.4%	-8.5%	-5.1%
EM Unconstrained	-8.7%	-9.5%	-0.8%
Environmental Solutions	-0.9%	-3.8%	-2.9%
Global Emerging Markets	-8.2%	-9.5%	-1.3%
UK	-4.4%	-6.2%	-1.8%
World ex US	-2.1%	-6.5%	-4.4%
Sustainable EM	-1.9%	-6.3%	-4.4%
EM ex China	-7.6%	-8.6%	-1.0%
Global SMID	-1.9%	-6.6%	-4.7%

3C NGFS Fragmented World - Aggressive Physical Risk

Portfolio	Portfolio Total VaR	Benchmark Total VaR	Portfolio v Benchmark Total VAR
Asia ex Japan	-5.3%	-11.3%	-6.0%
Asia Pacific	-4.4%	-10.5%	-6.1%
EM Unconstrained	-11.8%	-12.4%	-0.6%
Environmental Solutions	-0.9%	-3.8%	-2.9%
Global Emerging Markets	-11.4%	-12.4%	-1.0%
UK	-8.8%	-8.9%	-0.1%
World ex US	-3.4%	-9.4%	-6.0%
Sustainable EM	-3.5%	-8.9%	-5.4%
EM ex China	-10.9%	-11.3%	-0.4%
Global SMID	-3.4%	-10.5%	-7.1%

Risk Management

TT's hedge fund heritage ensures that our risk management capabilities are outstanding and are thus able to play an important role in the investment process. Risk reduction is embedded in the philosophy of our funds, as our teams place significant emphasis on balance sheet strength and robust governance. The teams focus heavily on valuation as they believe that stocks that trade at a significant premium to their intrinsic value are inherently risky. ESG factors are considered and analysed independently, as we believe these can constitute material risk factors that require a distinct set of analytical tools. The focus on all these risk factors is enhanced by the fact that our portfolio managers have a

significant portion of their wealth invested in our funds. This helps to ensure that absolute, as well as relative, risk is considered.

We hold regular ESG risk meetings on our portfolios with the portfolio managers and TT Risk team. At these meetings, we review the holdings with relatively high governance risks including accounting and audit flags, low external ESG scores, and controversies and ESG developments. We also calculate the portfolio's weighted average carbon intensity and analyse the companies that contribute most substantially to this metric, as well as their decarbonisation plans and commitments.

We subscribe to the MSCI Climate Value-at-Risk data and research and use the information in our analyses. We assess the climate scenarios applied by MSCI and regularly evaluate their relevance to our perspectives on renewables penetration. We also sought input on this topic from the Research Advisory Board for our Environmental Solutions strategy. We also have an internal, real-time, carbon measurement tool which calculates the weighted average carbon intensity of our long-only strategies vis-à-vis their benchmark.

Identification of climate-related factors that have investment implications

Examples of financially material climate related factors that our investment teams and Sustainability and Stewardship team consider as part of their company and industry analysis include:

- Changes to regulation (e.g. carbon taxes)
- Physical climate risk (e.g. extreme weather, flooding, drought) and transition climate risk (e.g. decarbonisation strategy and degree of alignment with the Paris Agreement, net zero commitments)
- Product evolution (e.g. energy-efficient products)
- Cost and balance sheet implications (e.g. environmental and legal liabilities)
- Brand and reputational issues (activities or financing related)
- Access to raw materials (e.g. biodiversity risks; risks to the green transition)

In terms of our assessment of the highest risks for our investment portfolios, we see increasing instances of acute physical risk materialising and have thus far been successful in translating this into our company assessments and portfolio management decisions. We review company disclosures to the CDP outlining potential impacts from physical and transition risks. In the short term, we are seeing policy actions being rolled back globally and companies walking away from their climate targets, which is heightening reputational risk while temporarily reducing transition-related market risks. We believe that in the longer term, chronic physical risk and legal risk will be heightened.


As per the IEA¹, global energy-related CO₂ emissions increased by 0.8 percent in 2024, reaching a new high of 37.8 Gt. The increase was driven by natural gas and coal – natural gas emissions grew by around 2.5 percent in 2024 driven by increased consumption in China, the United States, the Middle East, and India. Meanwhile coal consumption rose by 0.8 percent in 2024 driven by growing consumption in China, India, and Southeast Asia.

¹ <https://www.iea.org/reports/global-energy-review-2025/co2-emissions>

Regional disparities were evident: emissions grew in developing economies, as well as in international aviation and marine bunkers, offsetting reductions in advanced economies such as the European Union, Japan, and the United States.




A partial recovery from the severe droughts of 2023 resulted in an 11 percent year-on-year increase in hydropower generation. The continued rapid adoption of clean energy technologies—such as solar PV, wind, nuclear, electric cars, and heat pumps—has been instrumental in limiting the rise in emissions. Since 2019, these technologies have prevented 2.6 Gt CO₂ annually, equivalent to 7 percent of global energy-related emissions.

Our Environmental Solutions fund has a Research Advisory Board comprised of world-class experts on environmental technology, ecology and conservation, and green finance. We leverage their expertise to understand climate transition opportunities and risks; the backgrounds of the directors on the Research Advisory Board as of end of 2024 are detailed below.



TT Environmental Solutions

Research Advisory Board

	Technology	Ecology	Green Finance
			
	Mircea Dincă	Dr Joseph Bull	Lucy Rands
Experience	<ul style="list-style-type: none"> W. M. Keck Chair as Professor of Energy, MIT The Dincă research Lab is focused on addressing research challenges related to the storage and consumption of energy 	<ul style="list-style-type: none"> Quantitative conservation scientist with an academic background in ecology and physics A university lecturer and consultant 	<ul style="list-style-type: none"> Partner at Environmental Technologies Fund The specialist sustainable venture capital fund invests in businesses that deliver sustainability through innovation

The topics we discussed with the Research Advisory Board in 2024 included the implications of the 2024 US election for environmental policy and funding, the role of AI in environmental applications such as carbon tracking, biodiversity monitoring, precision agriculture, and material efficiency, energy consumption from AI applications, developments in data centre cooling technologies including reuse of waste heat and advances in HVAC technologies, technological developments in solid-state and prismatic EV batteries, underexplored investment themes such as nature-based solutions and parametric insurance, global trends in biodiversity regulation and nature-related disclosures, and expectations for COP 16 particularly around biodiversity finance, subsidy reform and nature-positive economic models.

Engagement

Engagement is a cornerstone of our risk management for our portfolios. Our targeted climate change engagements in 2024 involved 15 companies across 17 separate engagements. These companies accounted for a combined 182 million tonnes of Scope 1 and 2 emissions and had a combined market capitalisation of USD 461 billion as of end-2024, ranging from USD 278 million to USD 216 billion.

Some of the climate-related topics we discussed with our investee companies were as follows:

- In October 2024, we met with **NTPC** and **NTPC Green Energy** ahead of the latter's IPO. We enquired about the company's plans to increase the renewable energy capacity in India. NTPC Green Energy reiterated its 2032 60GW renewable energy capacity target whilst highlighting that it may likely reach this target well ahead of schedule. The company also explained how it is addressing land and connectivity challenges facing renewables by partnering with Public Sector Undertakings (PSUs) and purchasing private land. We asked NTPC about its plans for green hydrogen development; the company sees green hydrogen adoption as still 6 to 7 years away, but it has been conducting several pilot projects with the plan to use solar energy to power the electrolysis process for green hydrogen production.
- In May 2024, we engaged with **SABESP** to understand the timeline for when the company would communicate its emissions targets and report its updated emissions data. We spoke with SABESP's Head of Sustainability and Corporate Governance, who explained that the company has a deadline to set decarbonisation targets by December 2024 and that these targets will cover Scope 1,2 and 3 emissions. SABESP said that it intends to publish its sustainability report in June, and this report will include its TCFD report and contain its inventory of carbon emissions. When SABESP released its 2023 sustainability report, we were pleased to see that the company's carbon intensity had declined by 24 percent vs 2022.
- In February 2024, we co-signed a Climate Action 100+ letter to **BP's** incoming CEO, expressing our concerns about the company's lack of consultation before announcing its revised climate-related targets in February 2023. The letter urged the company to avoid further downward revisions and to prioritise implementing its climate strategy while maintaining ongoing dialogue with investors as it planned its 2025 energy transition update. We also sought assurance regarding BP's investment in short-cycle oil and gas projects, requesting details on break-even prices, carbon intensity, and the allocation of capital between new and existing assets, particularly in the context of the company's \$8 billion additional investment in oil and gas by 2030. Lastly, the letter welcomed BP's investments in the transition and emphasised the need for the company to demonstrate the value from these initiatives to the market.
- We have been a part of the Climate Action 100+ engagement with **Samsung Electronics** since November 2023. In our meeting in May 2024, the company reiterated its plans to increase PPAs and said that it recently signed two small renewable projects. The company said it is looking at the possibility of introducing a Scope 3 target, but it did not commit to setting one. In November 2024, we discussed Samsung's energy procurement priorities, including its advocacy for infrastructure reform in Korea to strengthen the grid and its focus on carbon-free energy. The company is pushing for broader acceptance of nuclear energy as part of its decarbonisation efforts, especially in Korea where the nuclear value chain is already established and the levelised cost of electricity is competitive. We also discussed the company's supply chain initiatives. Samsung

is encouraging suppliers to set their own decarbonisation goals, though regulations in Korea limit Samsung's ability to explicitly demand this from its suppliers; therefore, the company has launched an ESG partnership fund to support its suppliers.

- We held our first collaborative Climate Action 100+ meeting with **Tata Steel** in September, where we engaged on the company's emissions targets, decarbonisation strategy, capital allocation, policy engagement, and the green steel premium. Tata explained that its expectations for customers to pay a premium for green steel and for governments to better support steel decarbonisation were not being met, prompting a reassessment of market conditions before setting a medium-term emissions target. In response to our inquiry about it is rising emissions intensity, Tata attributed this increase to recent acquisitions of units that are less efficient than their own operations. Tata further clarified that its decarbonisation strategy would be influenced by plant location. The company is moving forward with establishing a 100 million tonne EAF facility in India as a sustainable step. We also raised the issue of using green hydrogen in steel production. Tata noted that, at approximately \$200 more per tonne of steel, hydrogen-based production is currently not feasible. Overall, Tata's responses helped us to gain valuable insight into the challenges and dynamics of steel decarbonisation, and we were encouraged by its commitment to the EAF project and net-zero. However, we remain cautious about the potential reliance on emissions offsets to achieve its 2045 target, which we will continue to monitor closely.

We met with **Petrobras** in December 2024 as part of our Climate Action 100+ engagement. The company outlined its 41 percent emissions reduction achieved in 2023 versus 2015, which was three times the aviation emissions in Brazil. While it has not introduced a Scope 3 emissions target that our previous letter recommended, it disclosed new categories of Scope 3 data and initiatives to reduce these emissions. Petrobras also said that it has the potential to reduce its emissions intensity by about 5 percent by 2030 for all scopes of emissions. In response to our enquiries about setting targets beyond 2030, the company explained that it is waiting for the Brazilian government to release sector expectations for the 2050 NDC target. The discussion on Net Zero 2050 allowed us to gain insights into Petrobras's electrification of assets, integration with renewables, and plans to commercialize CCUS. We will follow up on setting Scope 3 emissions and development of post-2030 targets in 2025.

Collaborative engagements: We also participate in collaborative engagements with companies on climate change. We joined the Climate Action 100+ collaborative engagement in October 2021. CA100+ focuses on 168 companies that have a major role to play in the transition to a net-zero emissions economy. Investors are responsible for driving engagement and developing and implementing company-specific engagement strategies. Our selected engagements above detail our 2024 engagements with Climate Action 100+ focus companies.

Collaborative sector engagement: As a part of Climate Action 100+'s first collaborative sector engagement, we worked with the Institutional Investors Group on Climate Change (IIGCC) and two other asset managers on a "green steel" policy paper. The four priority areas discussed in the paper are industrial policy given the significant capital intensity of the steel sector, measures to improve circularity, demand stimulation, and just transition for steel workers. TT took the lead on the 'demand stimulation' topic for this engagement. In July 2024, we travelled to

Brussels to meet with DG Energy, the European Commission department responsible for the EU's energy policy, and Eurofer, European Steel Association which represents the entirety of steel production in the European Union. The policy paper titled “Investor Priorities for Transitioning the European Steel Sector” was published in September 2024.

Through the IIGCC, we had two further calls with DG ENER (the European Commission department responsible for the EU's energy policy) on the financial market barriers to energy transition in the EU and highlighted where the EU investment and loans could be utilised with the greatest impact and where regulation was holding back investment.

Metrics and Targets

Metrics

In 2024, our operational carbon footprint was 21 percent lower year-on-year at 768 tonnes of CO₂e, 76 percent of which was from air travel. We seek to use other modes of transport where possible; however, visiting existing and potential investee companies can be very helpful for our investment process, and we therefore do not look to target a reduction on absolute emissions. However, we fully offset our carbon footprint on an annual basis and additionally contributed to tree planting efforts in Kenya—one tree for every 10 tonnes of CO₂e offset.

Portfolio Carbon Footprint

We regularly measure scope 1 and 2 emissions on our portfolios for reporting to our investors and assessing our portfolios vs their benchmarks. The weighted average carbon intensities for our portfolios and their benchmarks are as follows:

Portfolio	Portfolio WACI	Portfolio Coverage (%)	Benchmark WACI	Benchmark coverage (%)
Asia ex Japan	68	84	278	100
Asia Pacific	67	84	253	100
EM Unconstrained	270	89	316	100
Environmental Solutions	82	99	113	100
Global Emerging Markets	316	94	316	100
UK	75	98	73	94
World ex US	67	88	164	100
Sustainable EM	63	89	225	100
Global SMID	74	89	186	100
Midcap Long	19	48	77	100
Midcap Short	28	30	77	100

Source: MSCI and company reports

All strategies, with the exception of our UK fund, had lower or at least equal weighted average carbon intensity vs their benchmarks at the end of 2024.

Our EM Debt funds, which is a new asset class for us, were launched in December 2024. We will be including them in our TCFD reporting in 2025.

Targets

We submitted our initial net zero commitment to the Net Zero Asset Managers initiative in 2024. We anticipate that the total AUM for our sustainable funds and assets managed for clients with net zero targets will reach 51.3 percent of the total AUM under our long-only equity strategies by 2030. Our 2030 target is that 50.5 percent of the AUM for our sustainable funds and assets managed for clients with net zero targets will have adopted science-based targets.