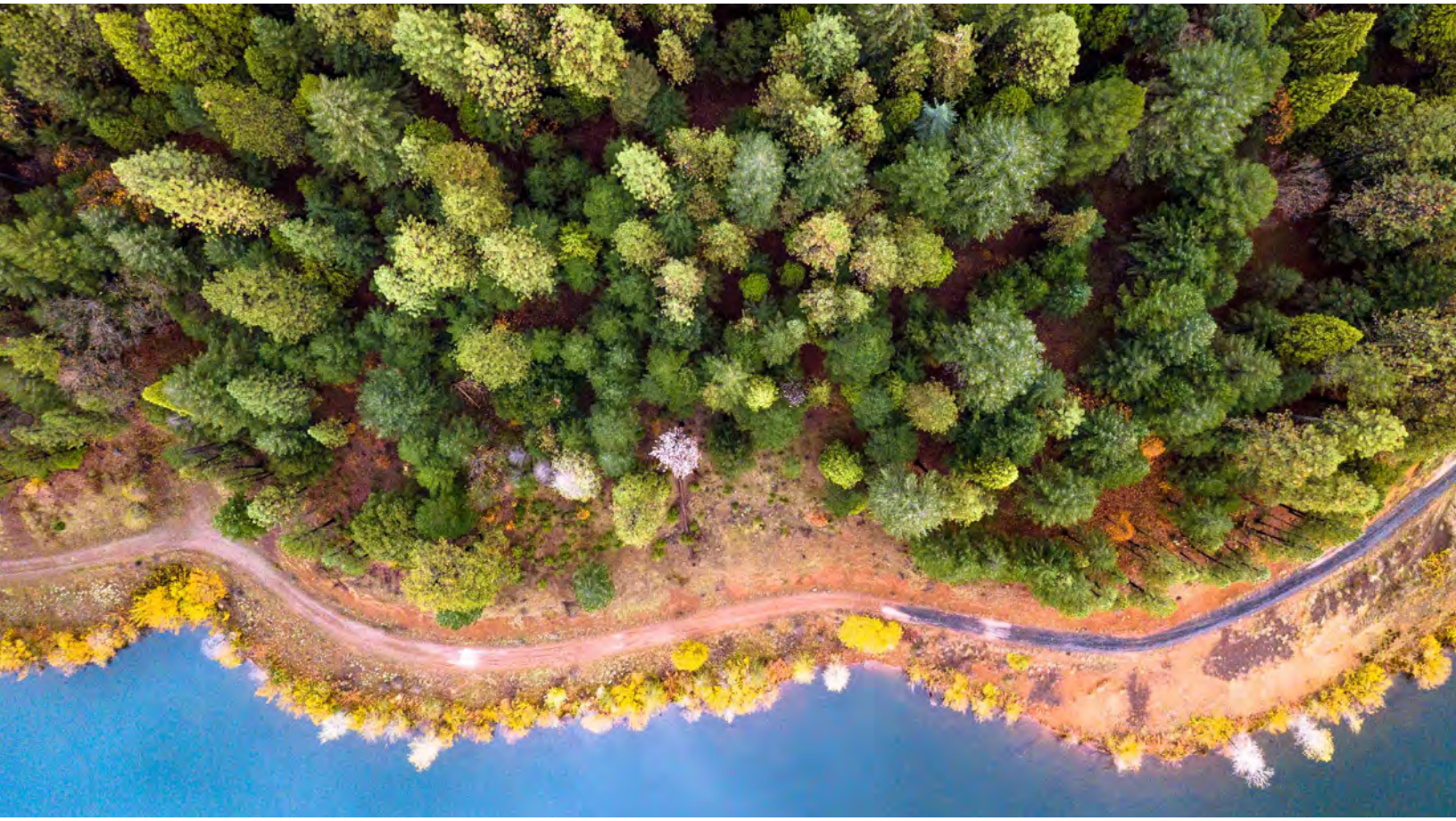
The Nature Conservancy



The Journey to Practical Portfolio Decarbonization

Bola Olusanya, Chief Investment Officer

OCTOBER 2021

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Background

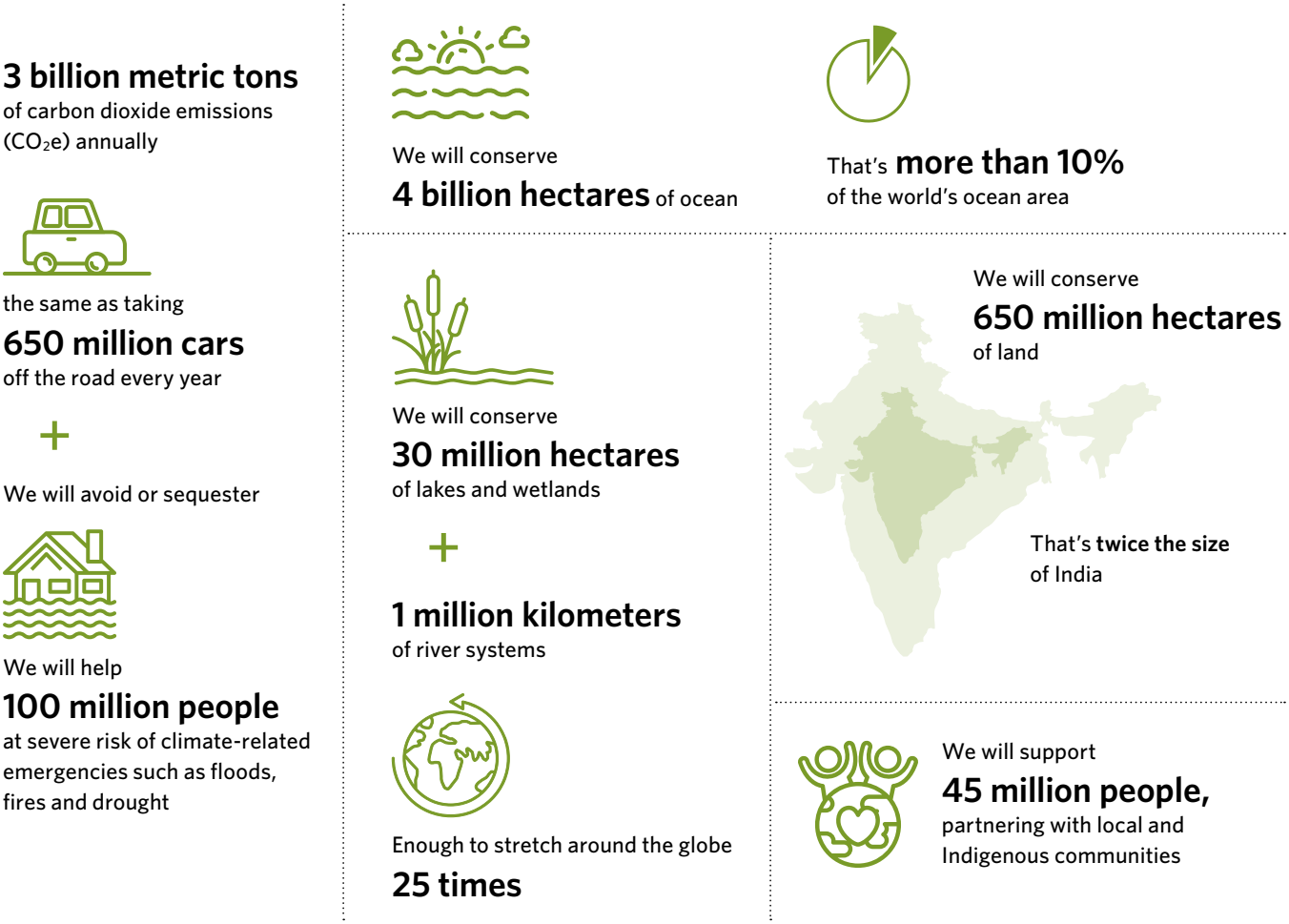
The Nature Conservancy (TNC) is a global conservation organization dedicated to conserving the lands and waters on which all life depends. Guided by science and decades of local on-the-ground experience, we are tackling the dual threats of accelerated climate change and unprecedented biodiversity loss. Since our founding 70 years ago, we have contributed to improved conservation and management of more than 225 million acres of land and 275 million acres of ocean across more than 70 countries. Our work is made possible by a global staff of over 4,500 (including over 600 scientists); generous donors, supporters, volunteers, and members (numbering in the millions); and a sizeable balance sheet of almost $9 billion (including a long-term investment portfolio of $3.5 billion).

ABOVE: © KA LOK WONG/TNC PHOTO CONTEST 2018
COVER: © SEVAG MEHTERIAN/TNC PHOTO CONTEST 2018

Earlier this year, recognizing the urgency of the existential crisis facing our planet, we unveiled our biggest, most ambitious plans, yet. Our audacious "2030 Goals" will have TNC directly responsible for removing or sequestering 3 billion metric tons of carbon dioxide emissions (CO_2e) per year over the next decade. In the process, we will be helping 100 million people who are most affected by climate-related emergencies. We also plan to conserve 4 billion hectares of ocean, representing more than 10% of the world's ocean area. Within freshwater habitats, we plan to conserve 1 million kilometers of river systems and 30 million hectares of lakes and wetlands—enough river length to circumnavigate the globe 25 times. In addition, over the next decade, TNC plans to conserve 650 million hectares of healthy lands, an area twice the size of India. These actions will support 45 million people who depend on ocean, freshwater and lands for their wellbeing and livelihoods.

As laudable as these landmark conservation achievements and future goals are, our stakeholders want to know how much of TNC's balance sheet is aligned with our mission. Specifically, how much of TNC's long-term investment assets (subsequently generically referred to as "endowment") is aligned with the organization's mission? At $3.5 billion, TNC's endowment is, by far, the largest among global environmental nonprofits. The primary goal of the endowment is to generate market-rate financial returns to support our critical mission. TNC's journey towards achieving this fiduciary endowment goal while embracing Environmental, Social and Governance (ESG) integration and a reasonable carbon emissions reduction target is an important case study for institutions looking to achieve similar goals. In this paper, I share that uneven journey, culminating in today's data-based practical approach to portfolio decarbonization.

EXHIBIT 1: TNC's 2030 Goals



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ESG Leader, Skeptic or Bystander?

With global ESG investment strategies growing 55% in the last four years and projected to grow to $53 trillion (a third of all global investment assets) by 2025, it seems clear that subpar performance, a major reason for their slow adoption for several decades, is no longer much of a concern.[1] Today's concerns revolve around authenticity, data quality, disclosures, implementation, and greenwashing. All are credible concerns. A heartening story would be one where environmental nonprofits—the chief purveyors of a cleaner, healthier planet—were the first to embrace sustainability in their investment portfolios, thus helping to accelerate today's astronomical adoption. I wish I could tell that story. Unfortunately, the evidence suggests otherwise, at least for U.S.-based environmental nonprofits.

Depending on the source, at the onset of the movement to integrate ESG into investment portfolios in the early 1990s, TNC was either the lone shining star among environmental organizations or an uninspiring bystander. Most other environmental organizations were skeptics. Divestment or negative screening was often the means to achieve this alignment in those early days. Environmental nonprofits, like several other institutions with endowments and pension funds, believed divestment was an inefficient means to achieve environmental sustainability, often arguing that there is almost always a willing buyer of divested securities. Therefore, the impact is rarely felt by the targeted company—in fact, to the contrary, they may prosper because new holders now have a higher expected return threshold. Besides, divestment, in their view, is antithetical to the entrenched belief that market forces should decide the flow of capital in a capitalist society. Proponents of divestment, on the other hand, argue that divesting from a company should ultimately

1 Bloomberg: "ESG assets may hit $53 trillion by 2025, a third of global AUM", February 23, 2021 https://www.bloomberg.com/professional/blog/esg-assets-may-hit-53-trillion-by-2025-a-third-of-global-aum/.

increase its cost of capital, hopefully to a point where it becomes unprofitable to continue in the environmentally harmful business. This boycott could spur innovation into more environmentally friendly solutions, ushering in new entrants and forcing incumbents to either adapt or die.

In his memoir—*North Star: A Memoir*—published in 2010, two years after his death, Peter Camejo writes about how he unsuccessfully tried to convince environmental groups with endowments to become socially responsible by embracing environmental and economic justice in the way they managed their portfolios.[2] A Venezuelan-American political activist, author, and civil rights leader whose claim to fame included marching in Selma, Alabama, with Rev. Dr. Martin Luther King and serving as Ralph Nader's vice-presidential running mate in the 2004 U.S. presidential election, Camejo was a socially responsible investment pioneer. In 1987, he founded an investment consulting and brokerage firm, Progressive Asset Management (PAM), which grew its network of registered investment managers into the largest group of socially responsible investment professionals in the U.S. Camejo canvassed the country, pitching these investment managers and their strategies to environmental groups. As he put it, "While they advocated opposing pollution, they invested in polluters, from Exxon and Enron to Waste Management, Inc… they all rejected caring about the environment in how they invested their endowment funds."

There was, however, "one major exception" Camejo writes,—"John Wood "Woody" Bolton of The Nature Conservancy." From 1986 to 2002, Bolton served as TNC's Director of Investments, charged with the strategic oversight and day-to-day management of the organization's endowment. A Yale graduate with a diverse and entrepreneurial background, including, paradoxically, as an oil analyst with Bank of New York, Bolton left an indelible mark on TNC by helping grow the endowment beyond $1 billion in the late 1990s. It was around this time that Camejo was introduced to Bolton. Camejo was serving a 3-year term on the investment committee of the Contra Costa County Employees Retirement Association (CCCERA) board of trustees and gaining important insights into the often opaque and complex inner workings of large endowments, foundations, and pension funds. He urged Bolton to invest in one of PAM's socially responsible investment managers. Surprisingly, after several meetings and analysis, Bolton agreed—the lone environmental nonprofit investment chief that Camejo was able to convince. Whether this decision stemmed from Bolton's appreciation for the manager's strong sustainability credentials or simply his knack for identifying investment managers with superior stock selection skills, we don't really know. Nor does it matter. What we do know is that according to Camejo, Bolton added to this investment manager over time, and it "became The Nature Conservancy's most successful investment" at the time.

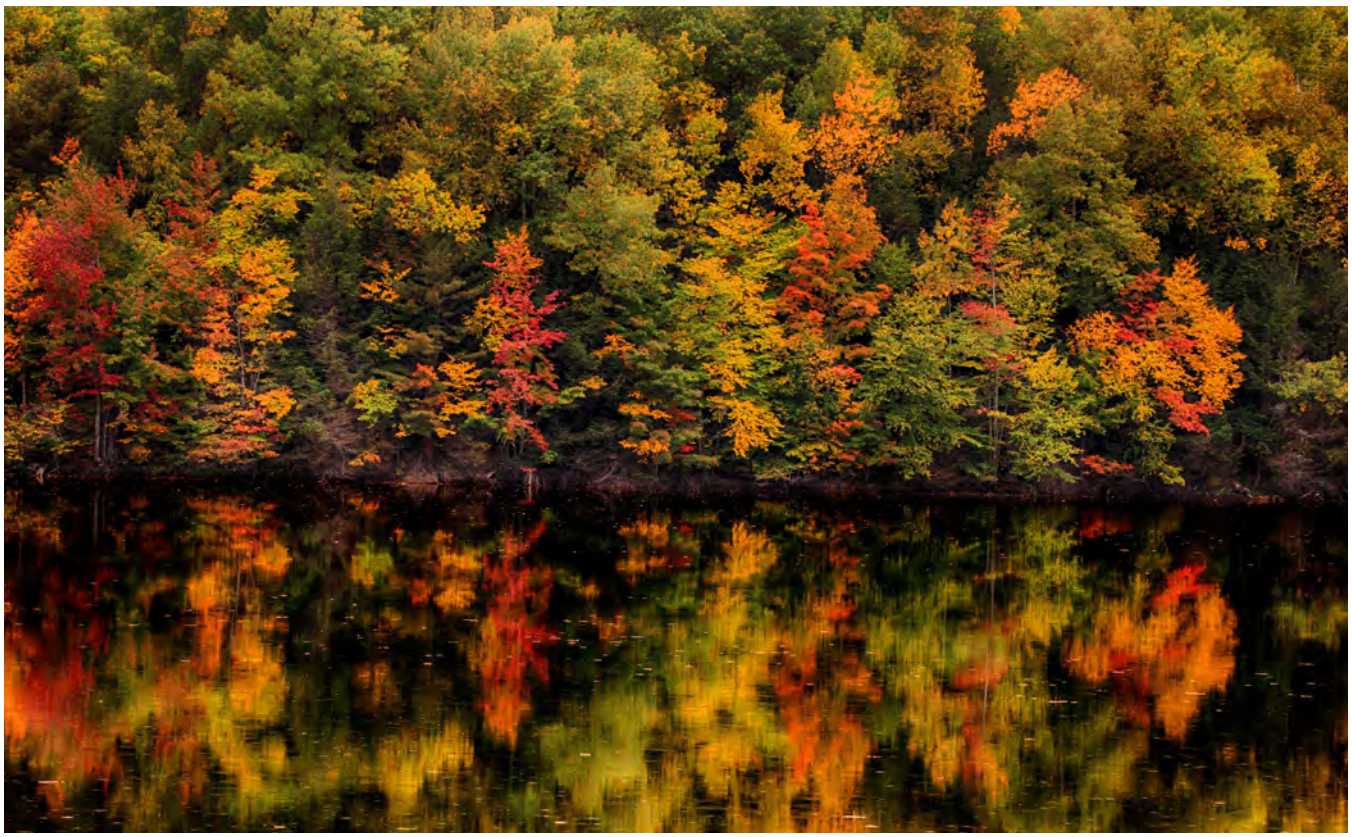
A less flattering narrative of TNC comes from Dr. Matthew J. Kiernan's book, "*Investing in a Sustainable World—Why Green is the New Color of Money on Wall Street*." Like Peter Camejo, Dr. Kiernan was an early pioneer of sustainable investing. In 1995, he co-founded Innovest Strategic Value Advisors, Inc. (Innovest)[3], an environmental investment research advisory firm which became the top-ranked[4] sustainable investment research firm in the world. Under Dr. Kiernan's leadership, Innovest provided advice on $1.3 billion in assets on behalf of some of the world's largest investors at the time, including Brown Brothers Harriman, ABN-AMRO, Mellon Capital, Schroders, State Street Global Advisors, Rockefeller & Co., CalPERS and Dutch pension giant, ABP. In 2009, Innovest was acquired by RiskMetrics, which was ultimately acquired by MSCI. Innovest's original sustainability research efforts is part of the foundation of today's MSCI ESG ratings. It was this same year that Dr. Kiernan published his book, where he proclaimed quite prophetically in the first chapter: "Welcome to the Sustainable Investment Revolution!"

2 Camejo, P. (2010). *North Star: A Memoir.* Chicago: Haymarket Books.

3 The Social Origins of ESG: An Analysis of Innovest and KLD, Article in SSRN Electronic Journal · January 2019, published by Robert Eccles, Linda-Eling Lee and Judith Stroehle.

4 Ranked by Institutional Investor.

It's in the book's third chapter that Dr. Kiernan throws down the gauntlet. Selecting six examples from "the most important subsets of the world of institutional asset owners and investors," he contrasts the excellent and praiseworthy work in their primary areas of focus with their indifference, often willful reluctance, when it came to aligning their investment portfolios with their missions. Joining TNC in this ignominious group were The United Nations Joint Staff Pension Fund, The World Bank, The State of Connecticut Pension Fund, The Gates Foundation and The Yale Endowment. Dr. Kiernan admits that it was somewhat unfair to pick on these institutions—he could have picked thousands of similar organizations. He only picked them because they made for "arresting—and sobering—reading." In the case of TNC, he rhetorically asks: "So, what percentage of the $2 billion [endowment] is currently invested in any one of the top-performing sustainability funds…?" To which he infers the negative. Other environmental organizations like Environmental Defense Fund and World Resources Institute were not spared from rightful criticism. The silver lining is that today, Dr. Kiernan would be mostly proud to see the ESG integration progress that has been made by many of these institutions, including TNC. As they say, "better late, than never."



> There was one major exception: John Wood "Woody" Bolton of The Nature Conservancy… He chose a very aggressive manager… This investment became The Nature Conservancy's most successful."
>
> — **Peter Comejo**, Author, *North Star: A Memoir*

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Taking Baby Steps

By 2014, there was clear and mounting evidence that embracing sustainability within the endowment would not negatively impact investment returns. Yet, for TNC, there remained the complex question of strategy and message consistency. A core part of TNC's ethos is our belief that environmental conservation and advocacy should be nonpartisan, non-confrontational, and collaborative, as an effective means of galvanizing changes in the private sector and governments. This apolitical stance is essential to delivering conservation and climate solutions. It has made TNC a strong partner of choice with global corporates, governments, and wealthy and influential individuals, helping to unlock billions of dollars for conversation projects. At the time, embracing blanket fossil fuel divestment risked alienating important stakeholders in the race to combat the daunting climate and biodiversity challenges. So, we found a middle ground—divest from the most egregious environmental polluters. We defined these as companies that generated 5% or more of their revenues from the production of coal or oil sands (the highest emitting fossil fuels). Our Board of Directors also prohibited investments in companies that approve new coal-fired electric generating capacity, unless equipped with carbon capture and storage technology to mitigate CO_2 emissions. We implemented this new set of rules over a 12-month period, and in the process, exited some relationships where the investment managers were either unwilling or unable to acquiesce to our requirements.

As we were implementing these changes within the endowment, we knew our work would be incomplete without engaging private capital to rapidly scale critical conservation work around the world. So, in the same year—2014—with founding sponsorship from JPMorgan Chase & Co., we created an in-house impact investment team to pursue programmatic goals through impact investing structures. The team, called NatureVest, structures investments using innovative conservation finance instruments like debt-for-nature swaps, raises capital from investors looking to generate both financial returns and conservation outcomes, and provides

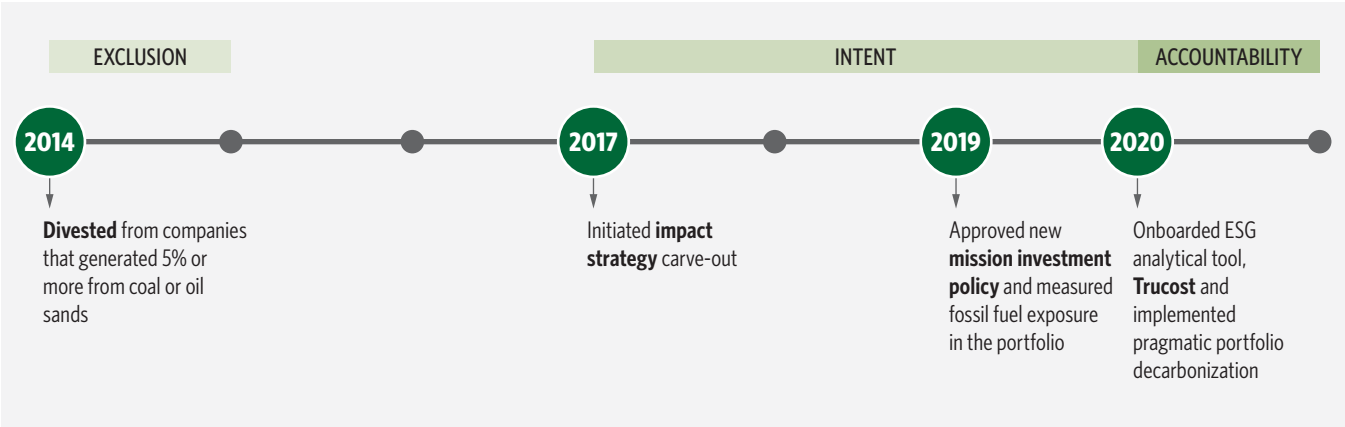
technical expertise and experience to the investment and conservation communities to accelerate the growth of the conservation investing marketplace. To date, NatureVest has helped catalyze more than $1.3 billion into global projects with measurable conservation outcomes.

In the subsequent two years, ESG and Impact Investing continued to gain traction as dire warnings of the worsening climate crisis juxtaposed with the increased velocity of natural disasters caused by the warming planet. It was clear to us that our narrow divestments (or divesting in general) were no longer sufficient. We needed to be more proactive and intentional. We needed to put a portion of our endowment to work in investments that would have the greatest impact in accelerating the transition to renewable energy, those focused on climate change adaptation and mitigation strategies. We were also convinced that these investments need not be concessionary—in fact, a prerequisite for making them was that they would generate market rate investment returns. We also needed to have a way to incontrovertibly quantify their impact, focusing on additionality—the true outcomes that would not have been achieved without these investments. As a result, in 2017, TNC initiated a private equity impact carve-out strategy from within the endowment, wherein we made $25 million commitments each year to market-rate mission-aligned investment strategies. As of 2021, the total commitments to this strategy has grown to $150 million.[5]

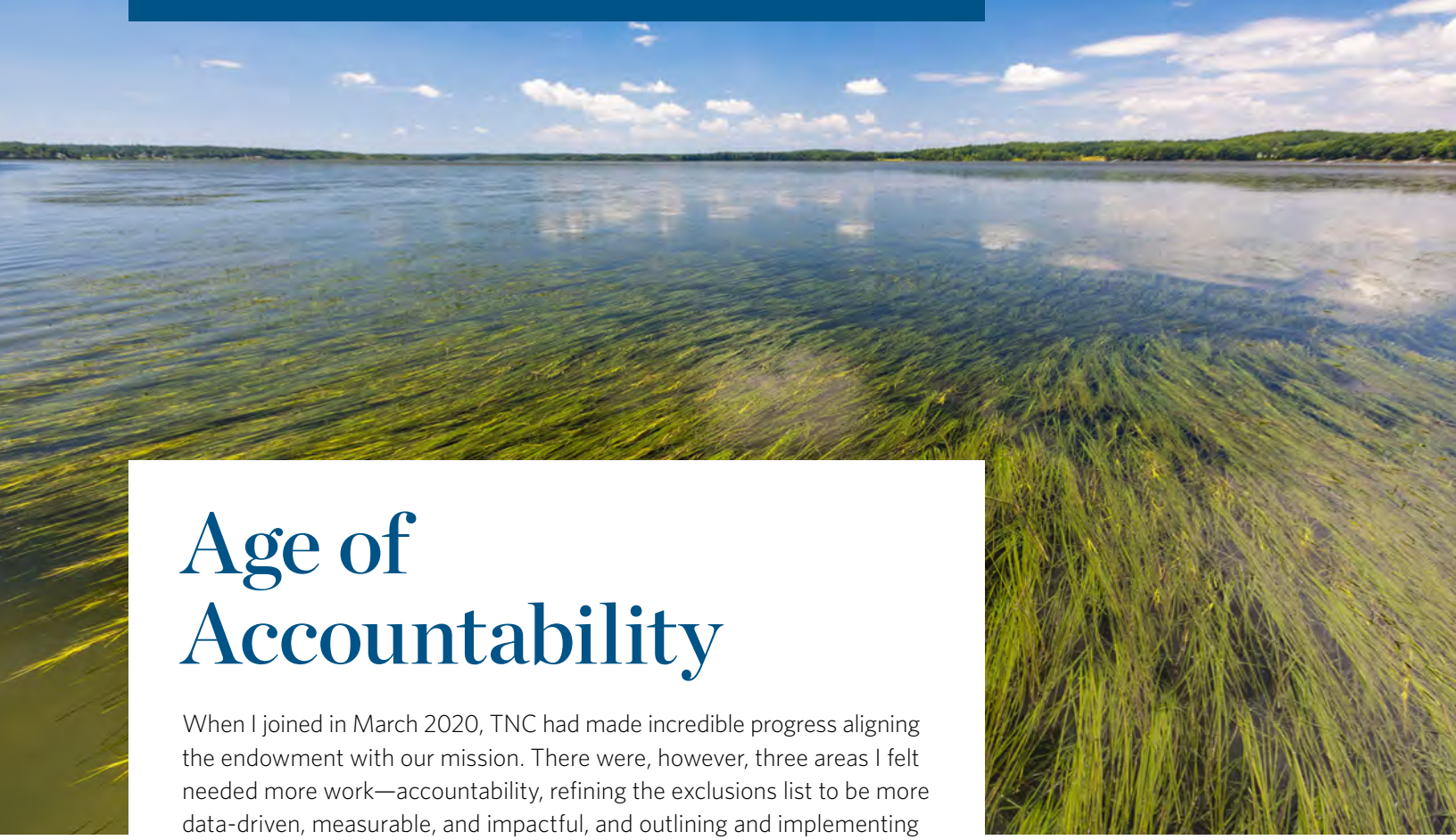
With the wind at our back, we knew that a comprehensive approach to integrating our investment strategy with our mission was inevitable. So, in 2019, we updated our Investment Policy Statement (IPS) to include a "Mission Investment Policy (MIP)" statement while retaining the coal and oil sands exclusions from 2014 (see Exhibit 2). Some of the highlights of the MIP statement include:

- We will proactively seek sustainable and mission-aligned investment opportunities. All investments are held to the same high diligence standards for inclusion on both economic and mission criteria.
- We strive to employ managers who use ESG criteria to inform investment decisions, thereby helping to direct investment dollars toward companies positively integrating sustainability measures and who can generate acceptable financial and mission-aligned outcomes.
- Investing with the intention to increase mission alignment and impact is not a static pursuit, nor does it replace best practices and deep experience in investment management. This policy is designed to be both progressive with respect to integration of mission and sustainability factors, but also allows for prudent implementation and best execution of an institutional investment portfolio.

EXHIBIT 2: TNC ESG Implementation Timeline



5 About half of the $150 million has been deployed in actual investments. The remaining portion will be deployed over time.



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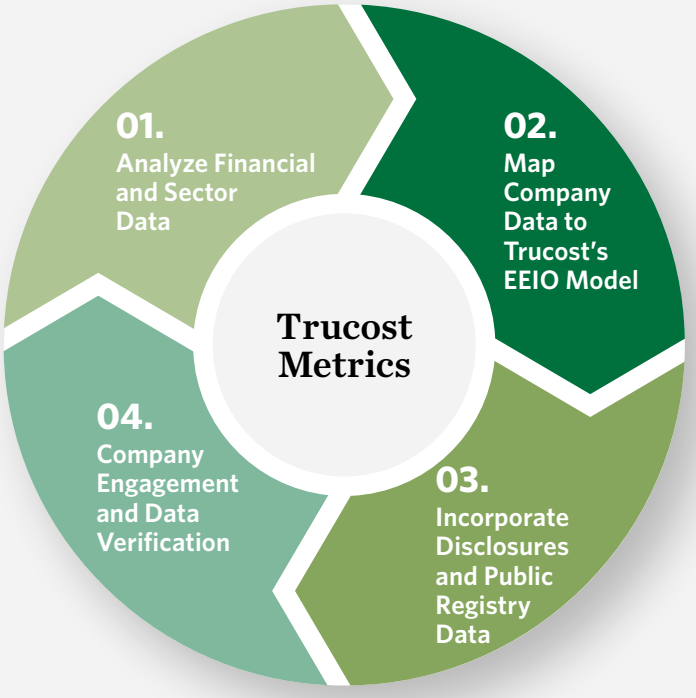
Age of Accountability

When I joined in March 2020, TNC had made incredible progress aligning the endowment with our mission. There were, however, three areas I felt needed more work—accountability, refining the exclusions list to be more data-driven, measurable, and impactful, and outlining and implementing a practical decarbonization plan. With the support of our new CEO, Jennifer Morris, CFO, Leonard Williams, and members of the Finance Committee of the Board of Directors, my team and I had our marching orders. Jennifer Morris, in particular, made practical decarbonization of our endowment, one of her requirements for joining TNC. At Conservation International (CI), Jennifer rose through the ranks during a career that spanned over two decades to become President, overseeing the organization's programs across 29 countries, and helping to conserve more than 600 million hectares of land. Importantly, she was directly involved in CI's portfolio decarbonization efforts and understood the challenges of successfully executing such a program for TNC with an endowment ten times the size of CI's and the attendant complexity.

On accountability, our process when I joined relied on an honor system, where investment managers attested (in writing) to their compliance with our restrictions and MIP at the end of each calendar year. While a good initiative, not every investment manager agreed to this attestation. There was also no easy way to compute absolute greenhouse gas (GHG) emissions (Scopes 1, 2 and 3), carbon intensity or any other environmental damage costs (e.g., air pollutants, land and water pollutants, waste, and ecosystem service costs due to land and water usage) embedded in our portfolio at any given point in time. Independent verification is a must-have for an impactful decarbonization plan. To be able to do this, we needed to capture every underlying security owned by TNC either directly via separately managed accounts or indirectly via commingled funds and/or limited partnerships. We also needed a rich dataset for underlying environmental metrics to analyze our portfolio's carbon footprint.

We found the solutions for both requirements with S&P Capital IQ. To capture and analyze all the underlying securities (equities, fixed income, and hedged funds via 13F filings) held by TNC, we went with a fledgling product called Portfolio Analytics (PA). PA provides us with a centralized platform to perform complex ad hoc analyses on TNC's investments, providing valuable insights for portfolio positioning and risk management. PA's main limitation is that it focuses exclusively on public markets, so we are in the process of onboarding a similar tool for our private investments. For comprehensive carbon and environmental data and risk analytics, we turned to Trucost, which has more than two decades' experience capturing and analyzing environmental data. The Trucost platform researches, standardizes, and evaluates environmental performance data for tens of thousands of listed companies, representing 99% of global market capitalization (see Exhibit 3). The database extends back to 2005 for large cap developed markets and 2016 for mid-, small-, and micro-cap companies. Trucost uses a model that estimates operational environmental impacts associated with more than 450 distinct sectors and over 165 environmental Key Performance Indicators (KPIs). In addition, Trucost uses a science-based climate change physical hazard characterization methodology drawing on public, private, and proprietary datasets to estimate physical risk for thousands of companies. To cap it all, Trucost and PA are integrated, providing TNC a single platform to efficiently conduct our analyses.

EXHIBIT 3: Trucost Metrics System: A Robust, Data-Driven and Practical Exclusions List



1. Financials are analyzed, collecting consolidated revenues for all companies.
2. Trucost assigns different proportions of each company's revenue to one or more of the 450+ sectors in the environmentally extended input-output (EEIO) model. Trucost then estimates company emissions, resource use, and associated environmental costs in accordance with each business activity/revenue stream.
3. Public company disclosures are analyzed to find usable environmental data to override model estimates.
4. Data is quality controlled and shared with companies to solicit feedback regarding the veracity of the Trucost estimates.

Once we had a robust platform to work with, we turned our attention to defining what our expanded restricted list should look like. We set out with four broad goals in mind:

The selected metrics must be **easily quantifiable, reasonably available**, and **unbiased**.

These metrics must be **consistent** and **aligned** with TNC's mission.

The selected metrics, when applied, must **substantially reduce the carbon intensity** of our portfolio while having minimal disruptions but providing additionality (e.g., we wanted to avoid excessive portfolio turnover and any negative expected returns impact while still building a decarbonized portfolio).

Last but not least, our selected metrics should allow for **qualitative insights** from TNC experts in our Global Science and Corporate Engagement teams.

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Setting Realistic Targets Without Offsets

We set realistic goals and substantial targets to decarbonize TNC's endowment by considering acceptable and successful outcomes. While we were tempted to establish a carbon-neutral or net zero target, especially given its rise in popularity among endowments and foundations, we resisted this trend on its merits. We believe it is nearly impossible to be carbon-neutral without some portfolio carbon offsetting mechanisms and, once implemented, the impact of such offsetting is questionable.

The idea of offsets appears sustainable: companies or individuals can buy and trade credits to offset their carbon emissions with the revenue paid to those abating or mitigating carbon, a meaningful incentive to protect and restore the environment. Such offsets can theoretically be purchased by institutional allocators to offset their underlying holdings emissions profile. In practice, carbon offsets are quite nuanced and range drastically in quality. The three main indicators of a high-quality offset are additionality, permanence, and lack of leakage.

1. **Additionality:** A quality offset leads to the reduction of greenhouse gas emissions that would not have happened otherwise.
2. **Permanence:** To limit climate change, carbon offsets need to keep greenhouse gas emissions out of the air indefinitely.
3. **Leakage:** Leakage can occur when an area of forest is designated for protection and leads to increased deforestation in unprotected areas.

Many of the portfolio carbon offsetting ideas we reviewed seem disingenuous at best. We do not believe purchasing offsets at the aggregate portfolio level represents the best use of capital for a long-term endowment portfolio. Such practices can further encourage holding or incentivizing carbon intensive companies to maintain their emissions profile by transferring the economic costs to financial investors. Further, some asset owners are considering netting their portfolios' carbon intensity by using derivatives or accounting for short interests in carbon-intensive companies. Theoretically, short selling can create selling pressure, and therefore contribute to a fall in securities' prices and an increase in the cost of capital for the target company. Such investment approaches are not particularly helpful to the ultimate goal of reducing GHG emissions and fail to demonstrate additionality, permanence, and lack of leakage. Of note, we do not believe the short interest in the market is sufficient, either in volume or in investable time horizon, to permanently alter a company's cost of capital. While this investment approach may prove to be a lucrative hedged strategy, we have concluded the emissions reduction is not direct or impactful enough to be factored into our decarbonization goals.

When considering the sustainability of TNC's endowment, we see the most value in long-term investments whose impacts have a compounding effect over time. We believe our endowment dollars have a quantifiable impact that is consistent with our mission when invested in funds and portfolio companies that are developing and scaling climate solutions and sustainable business practices. After several debates, we settled on a target—**to reduce the direct or (Scope 1) GHG emissions of TNC's endowment by 90% relative to our global equity benchmark, the MSCI All Country World Index (ACWI)**.

To determine the appropriate exclusion metrics, we created a global equity market universe consisting of 9,500+ listed companies. This universe comprised a total market capitalization of $94.3 trillion, representing 99% of the global equity market capitalization. We then ran these companies through the Trucost database to understand how best to optimize for our four broad goals.

After weeks of intense data crunching, we arrived at the following four metrics to determine our restricted list (see Exhibit 4):

- **Companies that generate 5% or more of their annual revenues from extractive activities.** Specific extractive activities include oil sands extraction, bituminous coal underground mining, bituminous coal and lignite surface mining, drilling oil and gas wells, natural gas liquid extraction, crude petroleum and natural gas extraction and support activities for oil and gas operations.
- **Companies where the Trucost estimated environmental damage costs for direct (or Scope 1—sources that are owned or controlled by the company) GHG emissions are 5% or more of annual revenues.** We chose Scope 1 emissions for accuracy and to avoid double counting, which would occur when Scope 2 (emissions for consumption of purchased electricity, heat, or steam) and Scope 3 (upstream and downstream activities) emissions are factored in. Damage costs include, but are not limited to, carbon dioxide, methane, and nitrous oxide (tons).
- **Companies where the Trucost estimated environmental damage costs for natural resource use are 5% or more of annual revenues.** This metric attempts to capture the environmental damage due to biodiversity loss. Damage costs include the costs due to the removal of all native vegetation, resulting in a loss of habitat and food for local wildlife as well as significant soil erosion. This could be as a result of mining and exploration activities.
- **Companies with quantifiable future emissions from proven and probable fossil fuel reserves.** This metric is an attempt to capture how future activities are likely to impact GHG emissions and the idea that companies that own fossil fuel reserves are likely to explore them in the future, adding to future carbon emissions. For this metric, we compute future emissions due to coal, oil, and gas reserves.

EXHIBIT 4: TNC Customized Restrictions

Customized restrictions offer optimal decarbonization effect and alignment with TNC's mission

EXTRACTIVE ACTIVITIES

Companies that generate 5% or more of their annual revenues from **extractive activities**

GHG EMISSIONS

Companies where estimated environmental damage costs, for **direct greenhouse gas (GHG) emissions**, are 5% or more of annual revenues

NATURAL RESOURCE USE

Companies where estimated environmental damage costs, for **direct and indirect (or supply chain) natural resource use**, are 5% or more of annual revenues

FUTURE EMISSIONS

Companies with quantifiable future emissions from proven and probable **fossil fuel reserves**

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Comparing the Old and the New

We aggregated financial and environmental data from Trucost for 9,500+ listed companies across global equity markets (the "global equity universe") to test the impact of our new investment restrictions against the ones adopted in 2014 (see Exhibit 5). The goal of this exercise was to ensure that we were adopting a set of metrics that would materially reduce the endowment's carbon intensity, while being minimally disruptive in terms of implementation. Although many companies are flagged across multiple screens, our new restrictions identified 547 unique companies—10 times more than our previous restrictions (see Exhibit 6). These restricted companies accounted for 78% of the direct GHG and natural resource damage costs of the global equity universe, representing only 7.8% of the universe's market capitalization (see Exhibit 7). We were also able to demonstrate that this universe of restricted securities significantly underperformed the benchmark by an annualized 6% between 2016 and 2020 (see Exhibit 8). Admittedly, the period under review saw carbon-intensive sectors struggle. Nevertheless, our analysis provided additional comfort that decarbonization could be a return booster.

An excellent way to test how practical it would be to implement our new restrictions is to apply them to passive, benchmark-tracking portfolios, the reason being that such portfolios present an optimization challenge that attempts to balance the low tracking error constraints with emission reduction targets. Within the endowment, TNC maintains benchmark-tracking separately managed public equity accounts that are "carbon efficient." These accounts seek to underweight companies within their respective industries that have relatively higher carbon profiles. They are implemented with a targeted tracking error of 50 bps and active sector exposures of no more than +/-45 bps relative to their benchmark sector weights. For our "carbon efficient" Russell 1000 account, three options were considered:

1) apply the new restrictions without any constraints,

2) apply the new restrictions while maintaining the minimum active sector weights at -1%, and

3) apply the new restrictions but re-weight the remaining universe such that the max sector over/underweights reflect the Russell 1000 ex-restricted securities universe compared to the normal Russell 1000.

Ultimately, we selected the third option, which resulted in an additional 13 bps of ex ante tracking error (from 38 bps to 51 bps) but yielded an additional 21 percentage points of carbon reduction (see Exhibit 9). We felt the additional tracking error was an acceptable tradeoff given the disproportionate reduction in carbon intensity.

EXHIBIT 5: TNC Global Equity Markets Company Screen

TNC screened 9,500+ listed companies across 11 global equity markets to determine exclusion criteria

Companies screened totaled **$94.3T** in market capitalization, representing **99%** of global listed market capitalization

EXHIBIT 6: Restriction Analysis

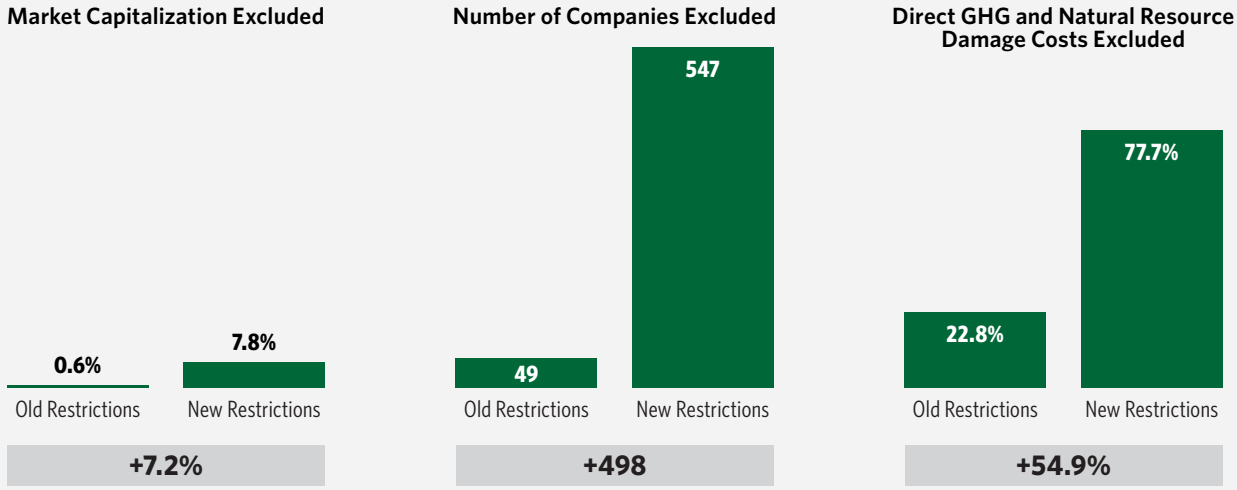
Restrictions were analyzed across these companies, representing 99% of global listed market capitalization

Exclusions	Total Companies	Unique Companies Excluded	Industries Represented*
Companies that generate 5% or more of their annual revenues from **extractive activities**	217	217	Energy 88% Materials 6%
Companies where estimated environmental damage costs, for **direct greenhouse gas (GHG) emissions**, are 5% or more of annual revenues	338	298	Utilities 53% Materials 35% Industrials 8%
Companies where estimated environmental damage costs, for **direct and indirect (or supply chain) natural resource use**, are 5% or more of annual revenues	63	14	Materials 91% Consumer Discretionary 7% Utilities 2%
Companies with quantifiable future emissions from proven and probable **fossil fuel reserves**	161	18	Energy 73% Materials 22% Utilities 5%
		547	

* Market-Cap Weighted; Industries according to GICS classifications

EXHIBIT 7: Restriction Eliminations

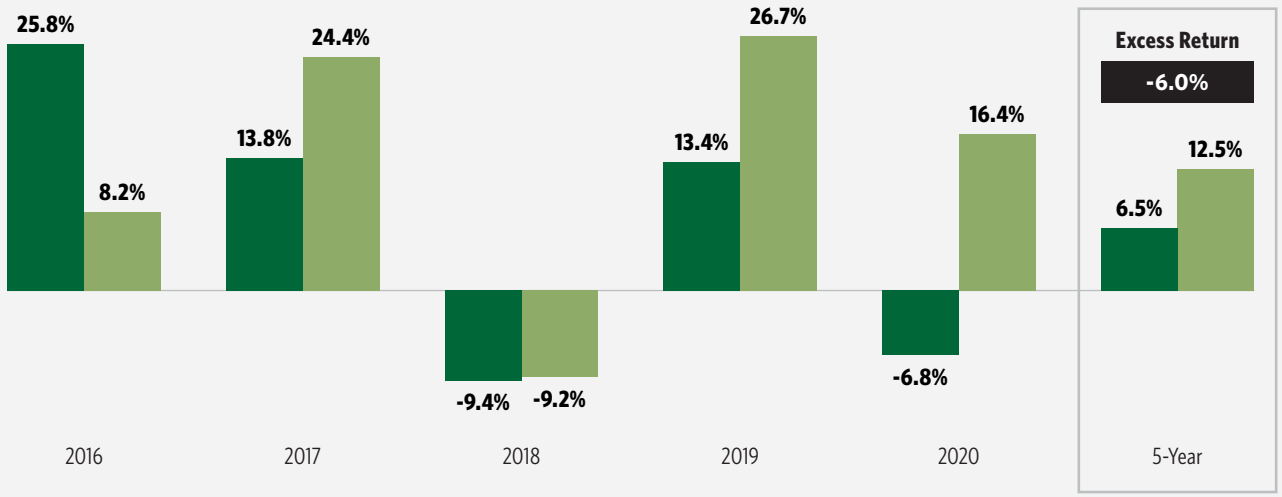
New restrictions eliminate the most carbon intensive companies within the global equity universe



New restrictions exclude an additional **7.2%** of market capitalization from the investable global equity market, but an additional **498** companies and **54.9%** of total environmental damage costs

EXHIBIT 8: Exclusion Securities Performance

Proposed excluded securities have underperformed global equities



Portfolio Statistics ▶	TNC Restricted List	Global Equities
Energy Weight (5-yr Average)	**56.1%**	**5.6%**
Materials + Utilities Weight (5-yr Average)	**37.4%**	**8.0%**
Standard Deviation	**16.7%**	**15.7%**
Beta	**0.9**	**–**
Tracking Error	**9.18%**	**–**

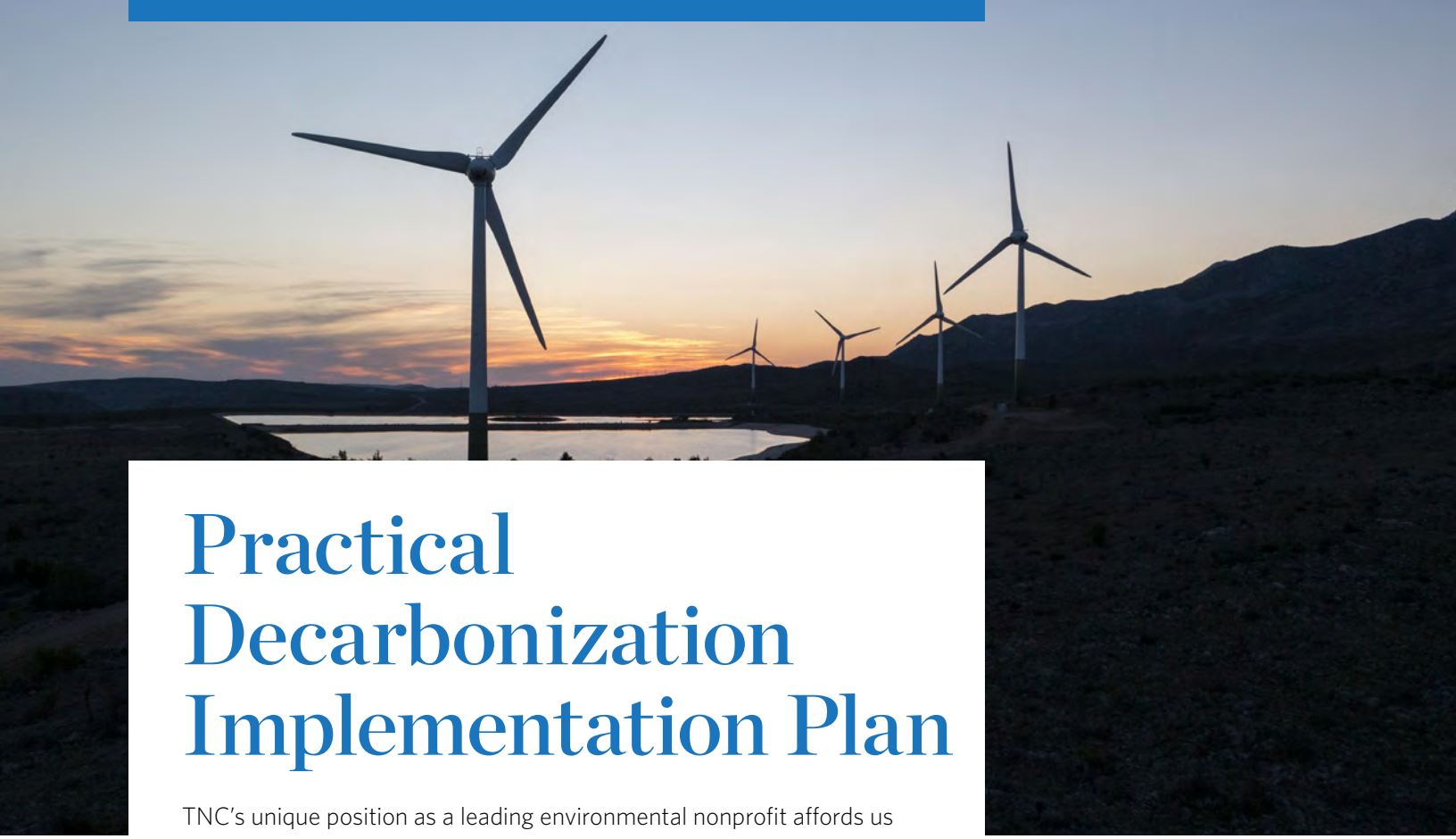
Over the last **5 years**, the universe of restricted securities has underperformed the global equity market by **6.0%** annualized

TNC Restricted List

MSCI ACWI

EXHIBIT 9: Optimized Portfolio Scenarios

TNC – Russell 1000	Tracking Error (bps)	Carbon Reduction	Realized Sector Constraints
Current Portfolio	0.38	43%	+ / -0.45%
Optimized Portfolio Scenarios			
1. Sectors Unconstrained	0.46	52%	+1.25% / -0.85%
2. Sectors Constrained: -1.0% to +0.45%	0.43	49%	+0.45% / -0.84%
3. Sectors Constrained: Maintain Ex-List Bias	**0.51**	**64%**	**+0.45% / -1.73%**



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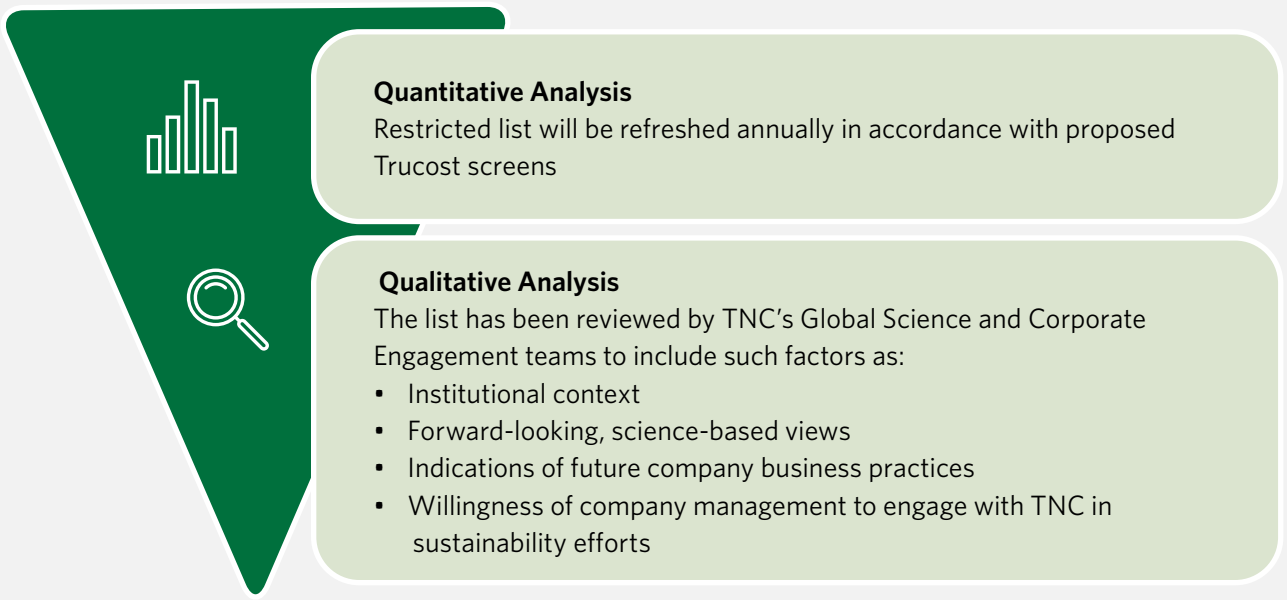
Practical Decarbonization Implementation Plan

TNC's unique position as a leading environmental nonprofit affords us invaluable insights into the latest thinking in climate science. This enables us to engage with corporations, providing decades of experience and case studies on how best to decarbonize several industries. We leverage these insights by socializing our decarbonization metrics and their corresponding restricted list with our Global Science and Corporate Engagement teams (see Exhibit 10). Further, while restrictions help increase alignment between TNC's endowment and mission, we recognize they are one part of the holistic process towards complete mission alignment. Future efforts will center around constructively engaging with our investment partners to ensure mutual alignment in understanding regarding the environmental considerations of their portfolio holdings (see Exhibit 11).

EXHIBIT 10: TNC Qualitative Overlay

TNC Global Science and Corporate Engagement teams will provide qualitative overlay to improve restricted list

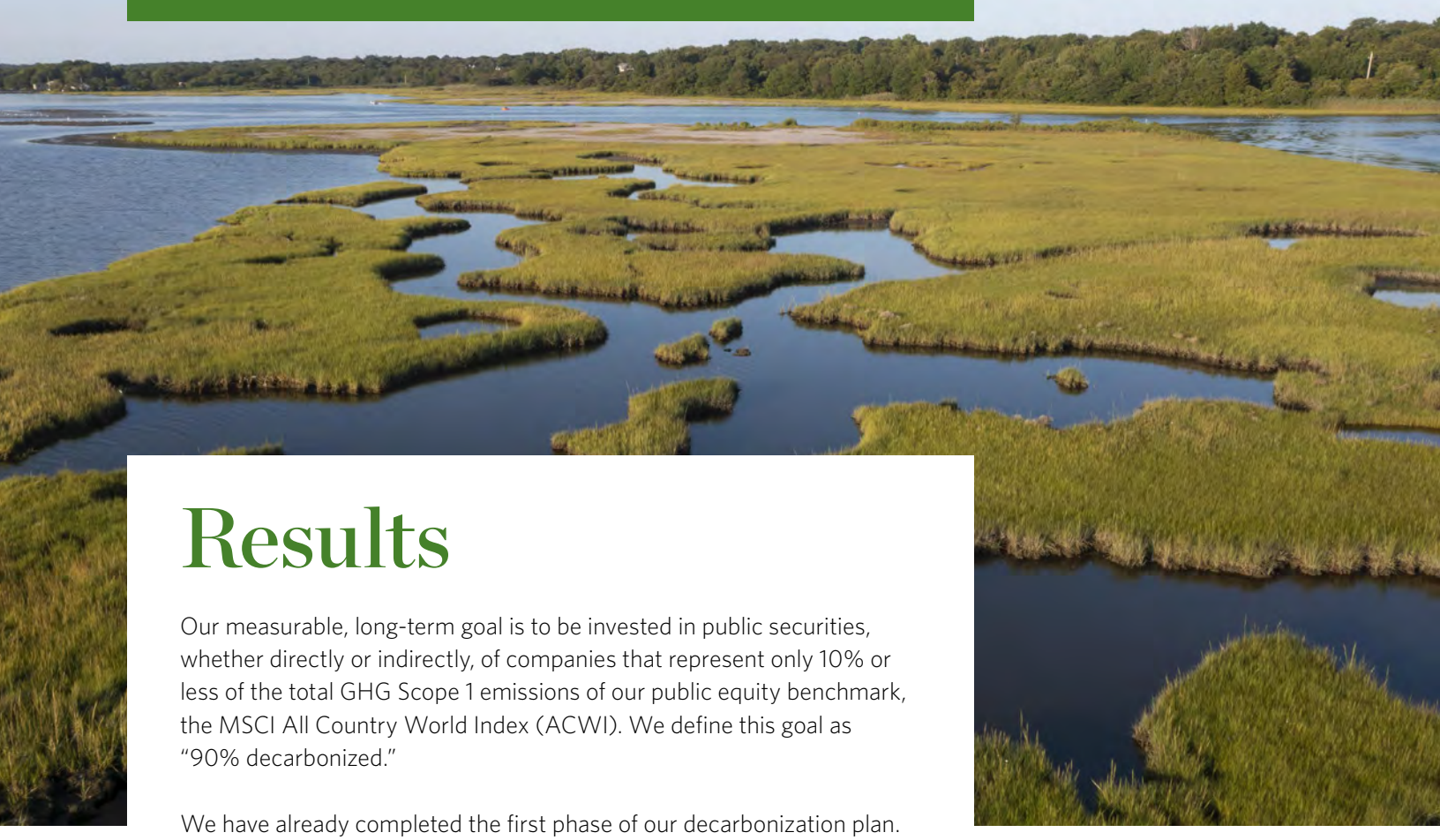


Incorporating insights from TNC experts ensures broad organizational alignment and adds to the rigor of our exclusionary approach

EXHIBIT 11: A Customized Decarbonization Plan

A customized decarbonization plan, with a sufficiently long-term horizon, is appropriate given the size and complexity of TNC's endowment

	Separately Managed Accounts	ESG Integrated & Impact Managers	Non-ESG / Non-Impact Managers
Goal	Exclude equity and debt securities in companies/issuers that operate in the most carbon intensive industries	Actively monitor portfolio holdings to understand any changes in carbon intensity, either direct or indirect	Work constructively to have them understand and reduce the carbon intensity of their portfolios
Actionable Measures	• **Exclude:** Incorporate language into Investment Management Agreements (IMAs) outlining new investment restrictions in adherence to TNC's customized exclusions	• **Measure:** Utilize Trucost analytics to monitor portfolio carbon intensity (both in equity managers' portfolios and hedge fund managers' long books) • **Engage:** Meet with ESG/impact managers as needed to discuss unintended carbon exposures in their portfolios	• **Communicate:** Indicate to managers our expectation that they take steps to exclude or reduce positions in the most carbon intensive companies within their portfolios • **Measure:** Utilize Trucost analytics to monitor portfolio carbon intensity (both in equity managers' portfolios and hedge fund managers' long books) • **Engage:** Meet with managers, on at least an annual basis, to discuss progress towards stated goals • **Assist:** Connect managers to TNC resources (Science and Corporate Engagement members) to understand the environmental risks inherent in specific holdings
Endowment (%)	**29%**	**11%**	**60%**
	0-6 months (Re-draft IMAs)		
	0-1 Year (Initial meetings with managers, then ongoing monitoring)		
	0-2 Years (Initial meetings with managers, follow-up meetings to establish reporting frameworks, then ongoing monitoring)		



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Results

Our measurable, long-term goal is to be invested in public securities, whether directly or indirectly, of companies that represent only 10% or less of the total GHG Scope 1 emissions of our public equity benchmark, the MSCI All Country World Index (ACWI). We define this goal as "90% decarbonized."

We have already completed the first phase of our decarbonization plan. Our new restrictions eliminated exposure to companies that account for about 2 billion tons of carbon dioxide emissions (CO_2e), equivalent to removing 435 million cars off the road in a year. This resulted in TNC achieving an 82% decarbonization level, slightly short of our 90% decarbonization target (see Exhibit 12). Future initiatives would focus on engagement with our investment managers to ensure their portfolios are decarbonized, especially as it relates to exposure to outsized carbon emitters (see Exhibit 13). Once implemented, these initiatives would have immense multiplier effect because TNC represents just a tiny fraction of the assets managed by these managers.

EXHIBIT 12: Current Emissions Exposure

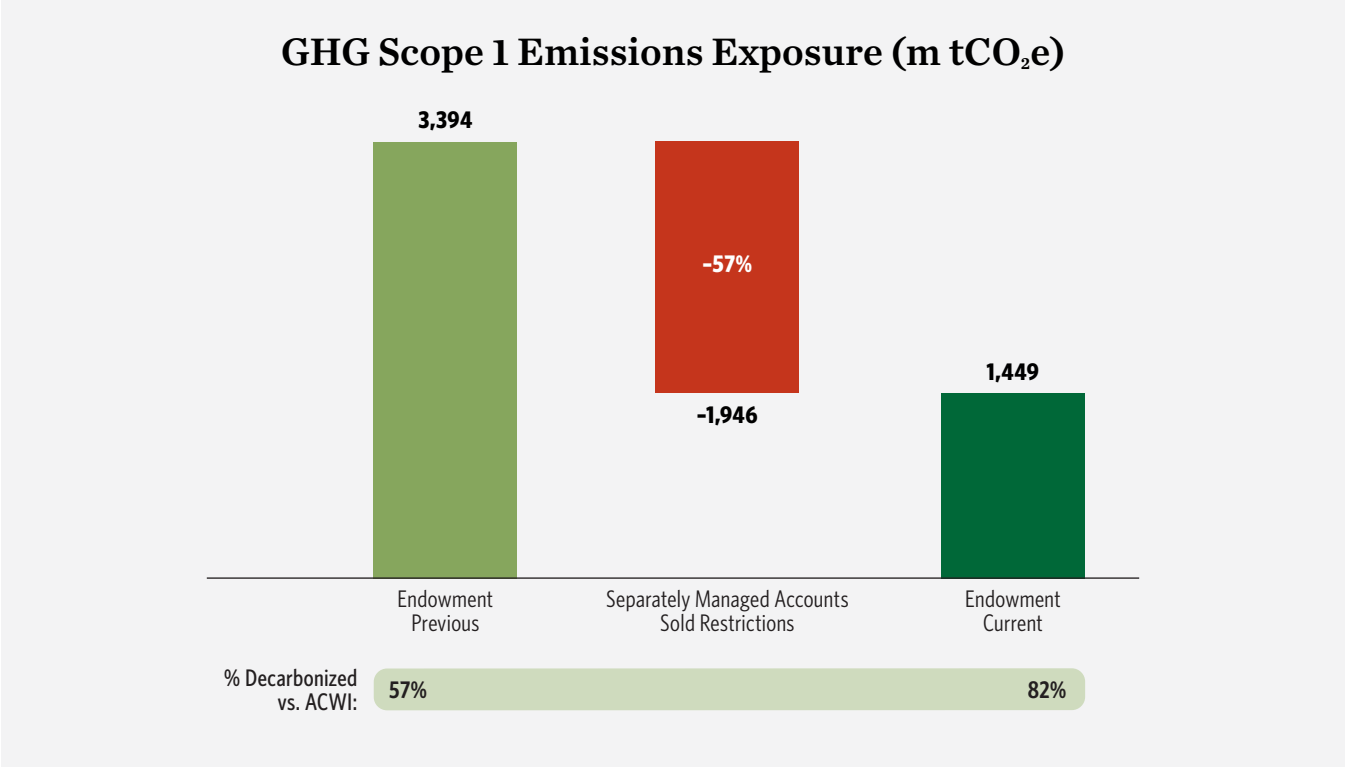
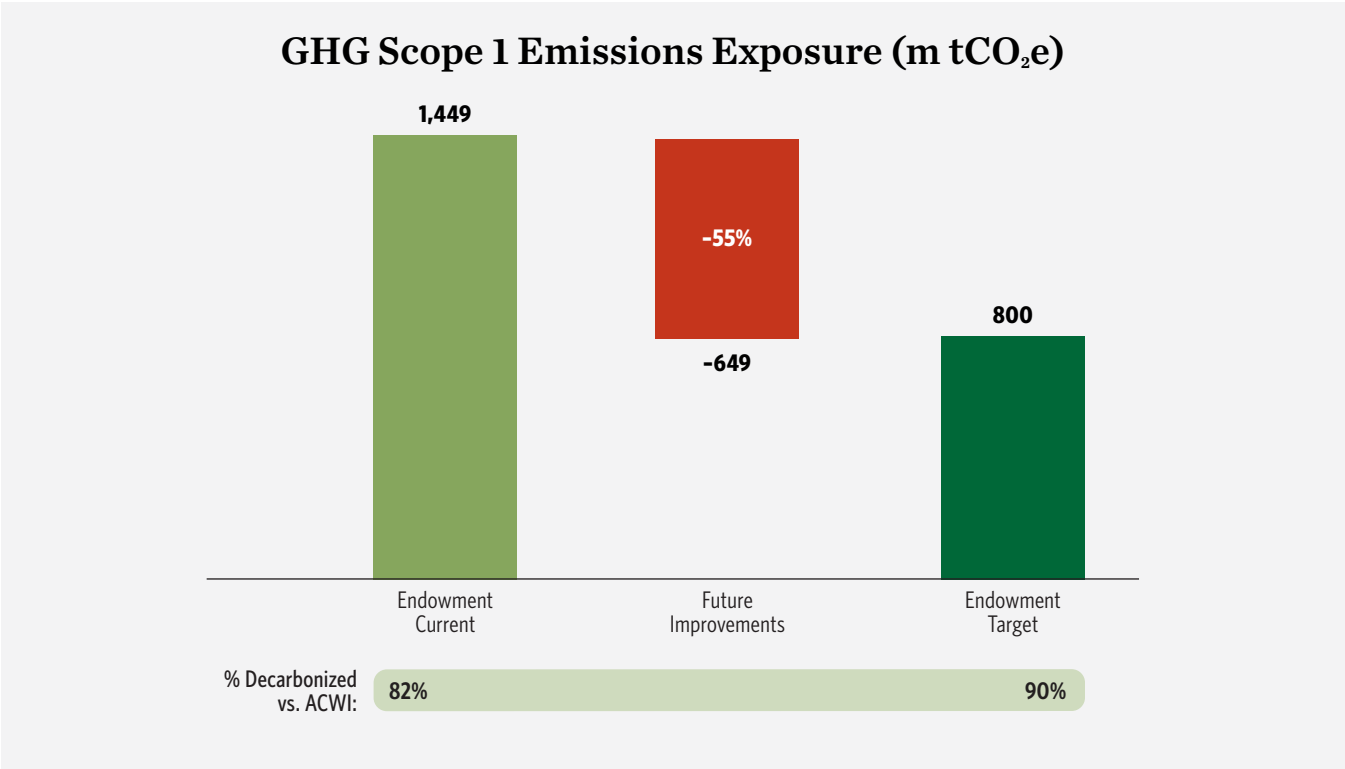
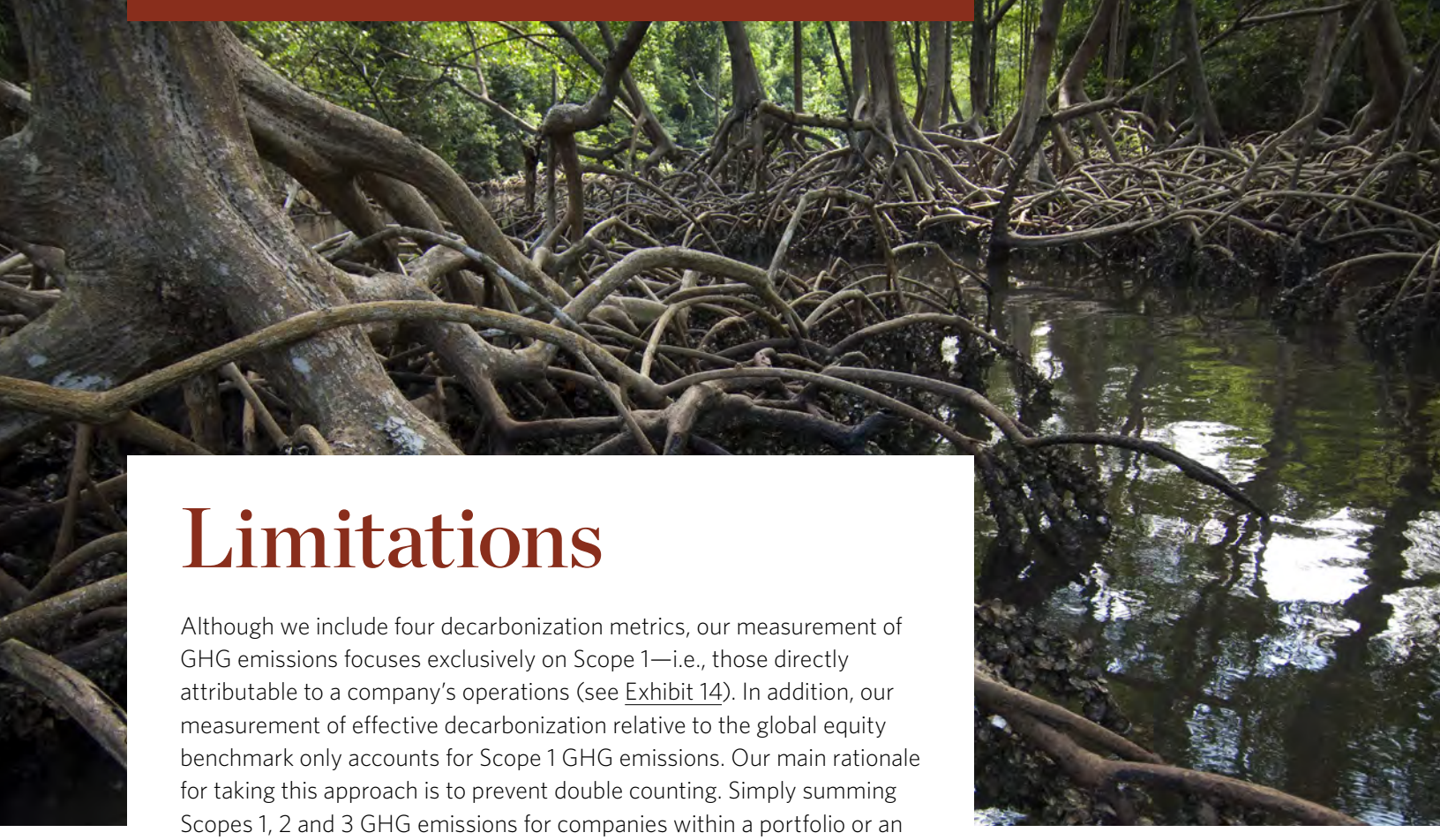


EXHIBIT 13: Target Emissions Exposure





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Limitations

Although we include four decarbonization metrics, our measurement of GHG emissions focuses exclusively on Scope 1—i.e., those directly attributable to a company's operations (see Exhibit 14). In addition, our measurement of effective decarbonization relative to the global equity benchmark only accounts for Scope 1 GHG emissions. Our main rationale for taking this approach is to prevent double counting. Simply summing Scopes 1, 2 and 3 GHG emissions for companies within a portfolio or an index would significantly inflate the aggregate GHG emissions because this would not control for the true "ownership" of GHG emissions across a company's supply chain. For example, a publicly traded electric utility's Scope 1 GHG emissions is also captured in the Scope 2 emissions of a manufacturing company that it supplies electric power to. By focusing only on Scope 1 for both companies, we avoid double counting the electric utility's GHG emissions.

A more robust approach would be to isolate and include the portion of Scope 2 and 3 emissions for each company that is incremental (i.e., not captured by any other publicly listed company). This is very difficult to do and involves a number of assumptions beyond the scope our methodology. Besides, a recent research by global investment firm, Generation Investment Management, titled "Listed Company Emissions,"[6] where they isolated incremental Scope 2 and 3 emissions, reveals that incremental Scope 2 emissions are de minimis. However, according to their research, incremental Scope 3 emissions are about the same as Scope 1 emissions. This implies that our methodology may be missing 50% of the aggregate GHG emissions by excluding incremental Scope 3 emissions.

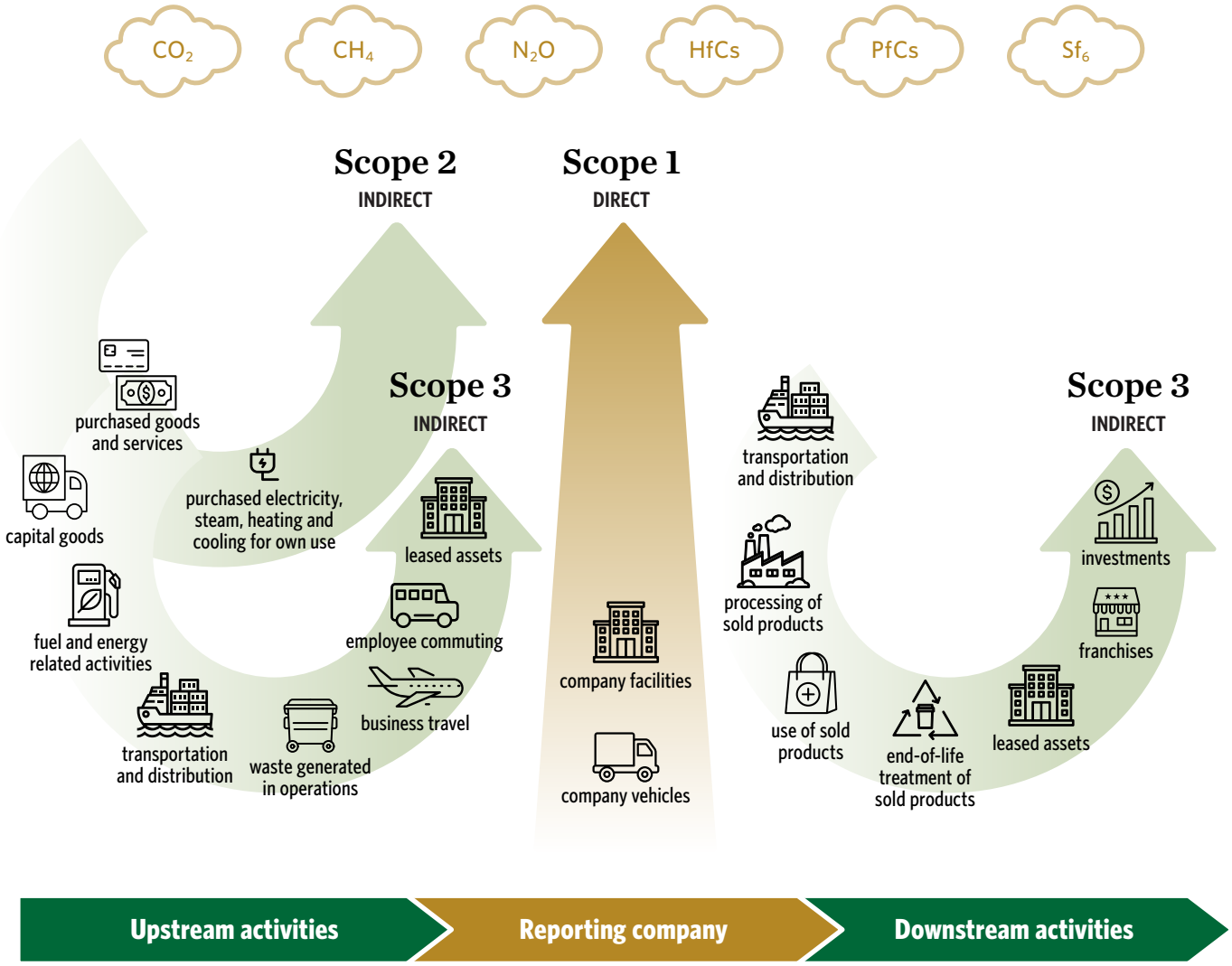
We believe that our inclusion of the other three decarbonization exclusion metrics (extractive activities, natural resource use and future emissions) should help offset some of this omission. Over time, we hope to revisit and enhance our methodology to mitigate this limitation.

6 Felix Preston, J.W. (2021). *Listed Company Emissions.* Generation Investment Management.

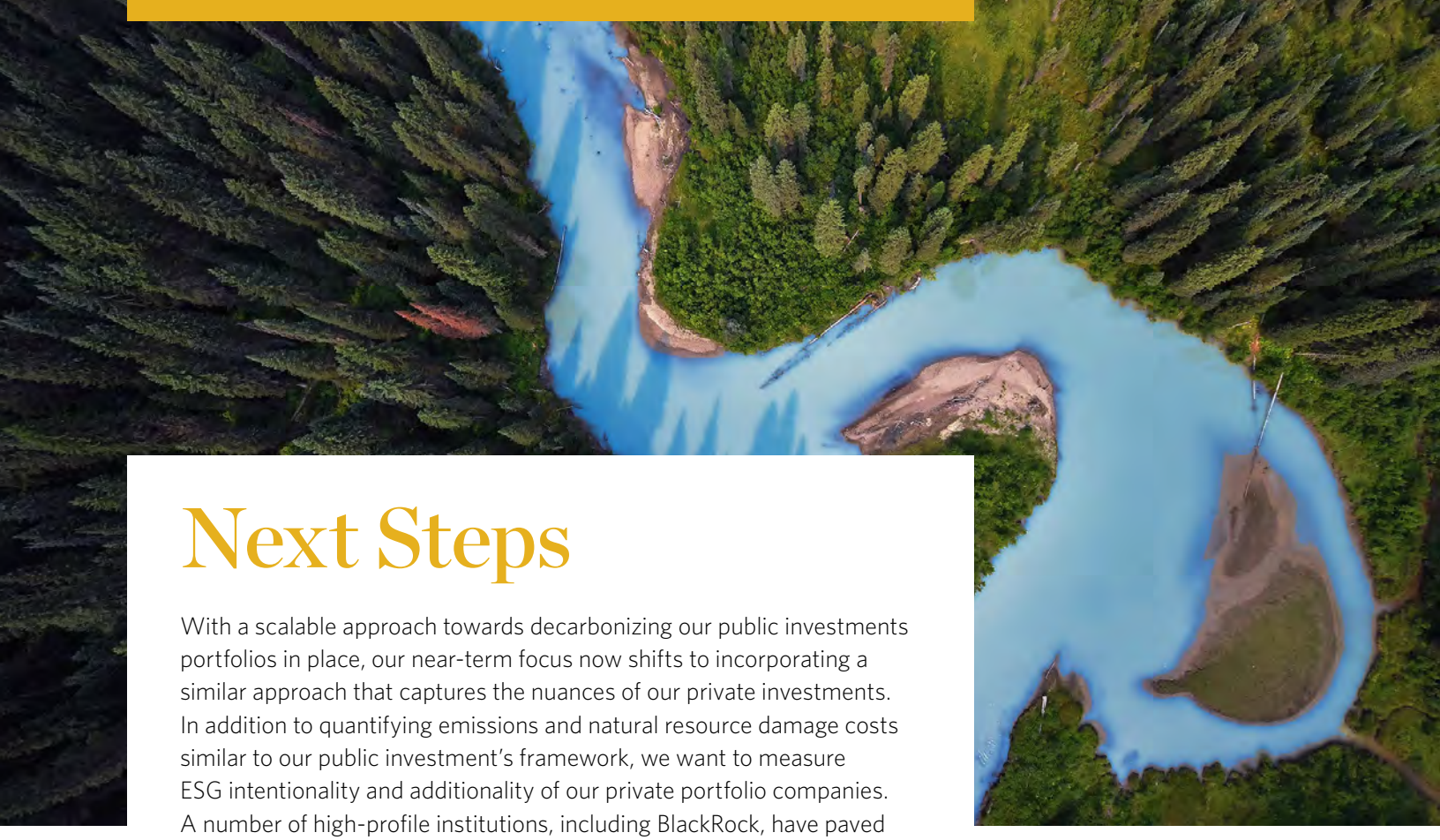
Another limitation is that our methodology relies exclusively on data from Trucost. While there are several other data providers, our choice of Trucost was informed by the length of history, depth and robustness of data and the varied sources of data, which includes company financial statements and environmental data sources (corporate social responsibility, sustainability or environmental reports, the CDP, EPA filings etc.).

Our choice of a 5% threshold for environmental impact and/or damage costs to determine our exclusions list is not based on any scientific study. We chose this from a purely practical standpoint. Recall that a key objective of our approach (in addition to decarbonization) is to be practical and reduce unnecessary portfolio churn. Using a 5% threshold allows us to do this, without compromising our primary decarbonization goals.

EXHIBIT 14: GHG Emissions Scopes 1, 2 and 3[7]



7 Alumni for the Planet, Understanding an Organization's Carbon Footprint.



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Next Steps

With a scalable approach towards decarbonizing our public investments portfolios in place, our near-term focus now shifts to incorporating a similar approach that captures the nuances of our private investments. In addition to quantifying emissions and natural resource damage costs similar to our public investment's framework, we want to measure ESG intentionality and additionality of our private portfolio companies. A number of high-profile institutions, including BlackRock, have paved the way for rigorous measurement in this regard. These institutions marry more qualitative considerations articulated through the Impact Management Project's "Five Dimensions of Impact" framework with quantifiable project-level ESG metrics as defined by the Global Impact Investing Networks' IRIS+ system. Our goal at TNC is to adapt these two frameworks, as needed, to monitor our private portfolio companies.

Finally, our dedication to rigorous ESG and impact monitoring is borne not just out of a desire to hold ourselves accountable. We want to use these metrics as the foundation for continuous and constructive engagement with our investment managers. We believe these conversations can help unearth new perspectives and planes of understanding for both parties. Further, we recognize that TNC has a unique repository of climate science research and insights at our disposal that we believe can be additive to investment managers seeking to identify both the environmental risks and opportunities within their existing holdings. We remain committed to sharing these insights with our investment managers, thus creating a mutually beneficial and enduring partnership.

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Conclusion

With the benefit of hindsight, it is clear that the evolution of ESG acceptance and integration into investment processes has been non-linear. As with any prospective financial strategy, the bear case often runs parallel to the bull case, and nonprofit organizations have historically taken a skeptical approach to integrating sustainability into their investment portfolios, pointing to perceived downside risks to expected returns. However, initial headwinds and muted adoption have given way to explosive growth in recent years. The overwhelming body of evidence in support of ESG strategies has led to a precipitous rise in sustainably managed assets. The expanding opportunity set and social will, coupled with robust ESG analytics, have coalesced into an undeniable opportunity to achieve philosophical alignment without sacrificing financial returns. The current challenge, however, lies in the ability to do this in a manner that does not just signal intent, but through a framework that ensures accountability.

The difficulty in creating a robust, yet authentic, decarbonization plan is that such a process is inherently personal and inexact. Attempting to express the qualitative considerations of an organization's mission and values into a traditionally quantitative risk/reward framework can lead to seemingly conflicting objectives. With the overarching goal of accountability in mind, we believe that mission-driven organizations should focus on three primary objectives when designing their decarbonization plans: objectivity, scalability, and flexibility. We believe it is critical for organizations to onboard an independent, third-party ESG data provider, and then identify the discrete, unbiased set of quantitative metrics that best reflect the organization's mission and values. Further, we believe these metrics should be reasonably scalable across the portfolio to facilitate adoption and bottom-up measurement while mitigating near-term portfolio disruption and turnover. Lastly, recognizing that a systematic quantitative process is not infallible, it is important to continue to socialize such metrics and ESG factors with internal or external subject matter experts. This will allow for the incorporation of emergent insights in line with new sustainability research.

While we believe we now have the right framework in place to implement a thorough and accountable decarbonization plan, we recognize that the truly hard work comes next. Achieving our goals going forward will be predicated on our ability to expand upon our existing framework to capture the environmental impact of our private holdings as well as constructively engage with our investment partners to ensure mutual understanding of the ESG considerations and opportunities within the portfolios they manage on our behalf. While the old adage, "better late, than never," may characterize how we arrived at the present day, we recognize that the luxury of time is no longer on our side. By committing the upfront work to establish a practical, long-term decarbonization plan, we can lay the foundation for knowledge compounding and future improvements necessary to achieve the ever-increasing alignment between TNC's endowment and our mission.

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