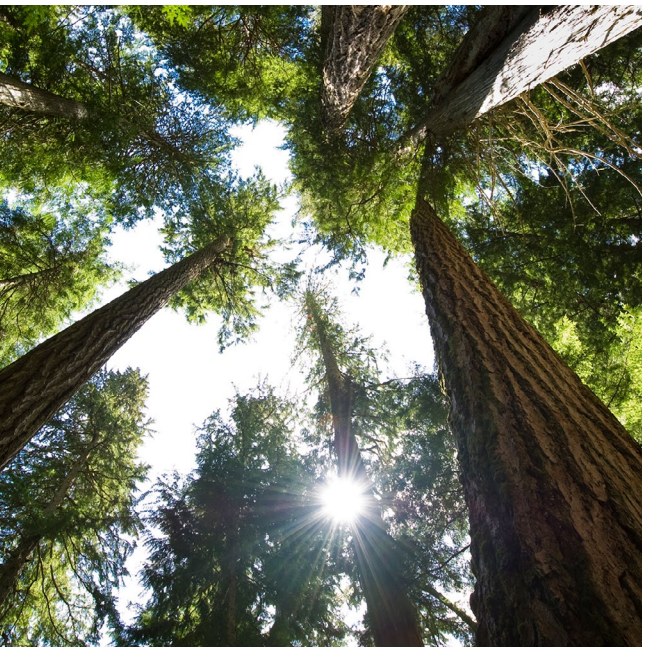
Morgan Stanley

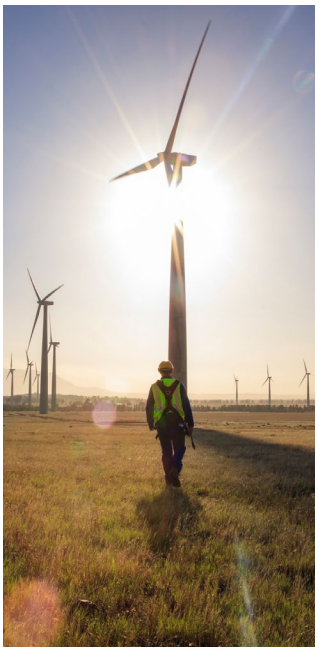
INSTITUTE FOR SUSTAINABLE INVESTING

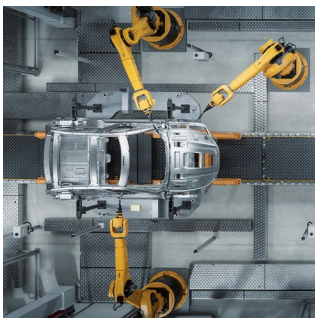
10 YEARS
Institute for Sustainable Investing

Navigating the Next Decade

10 Demand Signals for the Next 10 Years of Sustainable Finance







A Letter from Chief Sustainability Officer and CEO of the Institute for Sustainable Investing

Over the past decade, sustainability has fundamentally reshaped the investment landscape with environmental and social issues now integral to capital allocation decisions.

Morgan Stanley has been at the forefront of this structural trend, with the Firm's CEO and Chairman James Gorman announcing the establishment of the Institute for Sustainable Investing back in 2013. The goal was to accelerate the adoption of sustainable finance by supporting innovative ideas, empowering investors with industry-leading insights and investing in the next generation of sustainable finance leaders.

While we are proud of what we have accomplished to date, we are also keenly aware that the next ten years will be critical. By 2030, the world will have passed many significant milestones for the well-being of the planet and society. The Sustainable Development Goals (SDGs), the Paris Agreement's climate commitments, the Global Biodiversity Framework's 30 by 30 goals and many countries' and companies' interim net-zero targets will all come due.

At that time, we will need to answer for what we have accomplished and what remains unfinished.

And it will not be an easy pathway to achieving the goals. Scientists agree that we are not on track to limit warming to 1.5°C whilst social inequalities, both within and between countries, remain evident for all to see. It will take cross-sector collaboration and finance at scale to develop transformative solutions that ensure a prosperous global economy and a more sustainable world for people and all life on Earth.

As the Institute has done since 2013, we will continue to help investors and corporates navigate the complex terrain of sustainable finance over the next decade. To that end, I'm excited to share our views on ten essential demand signals to watch over the next ten years.

Jessica Alsford

JESSICA ALSFORD
Chief Sustainability Officer and
CEO of the Morgan Stanley Institute
for Sustainable Investing

SUMMARY

The Last Ten Years: Setting the Stage

The past ten years have seen growing interest in sustainable finance and investing. The concept has moved from early momentum prior to 2015 to increasingly formalized mechanisms for identifying and measuring both impact and risk. The next decade will determine the future role of sustainability in the world of finance and in society at large.

PRE–2015

Early Momentum

Demand and supply for sustainable finance solutions begin emerging.

- The Principles for Responsible Investment (PRI) launch in 2006 to promote sustainable investment.
- The first green bond is issued by the World Bank in 2008.
- The United Nations Conference of the Parties (COP) 15 in Copenhagen in 2009 fails to end with an agreement on global climate goals.
- Morgan Stanley's Institute for Sustainable Investing is established in 2013 to help accelerate the adoption and growth of sustainable finance and drive capital toward investments promoting sustainable economic growth.

2015–2017

Emerging Frameworks

Key events in 2015 raise global awareness of sustainability issues and the need to finance solutions.

- COP 21 ends with the landmark Paris Agreement, setting goals to guide all nations to substantially reduce global greenhouse gas emissions to limit the global temperature rise to 2˚C above pre-industrial levels.
- The United Nations Sustainable Development Goals (SDGs) are established to meet the urgent environmental, social and economic challenges facing the world.
- Financial standards bodies work to standardize disclosures and guidance, notably the Task Force on Climate-Related Financial Disclosures (TCFD), founded by the Financial Stability Board (FSB) in 2015.
- The number of specialist sustainability data providers proliferates, changing the landscape for data availability.

2018–2020

Rapid Growth

Sustainable investing grows rapidly with new fund launches.

- Assets under management (AUM) in sustainable funds around the world double between Dec. 2017 and Dec. 2020 to ~ $1.6 trillion, with record monthly inflows reaching ~30% of starting AUM.[1]
- PRI signatories grow by more than 75%, reaching over 3,000 by the end of 2020.
- Corporates step up to make decarbonization commitments while in 2020 the EU approves its Green Deal to make the region carbon neutral by 2050.
- The global COVID-19 pandemic and social justice movements put a spotlight on issues including worker health and safety, and diversity, equity and inclusion.

2019–2023

Increased Scrutiny

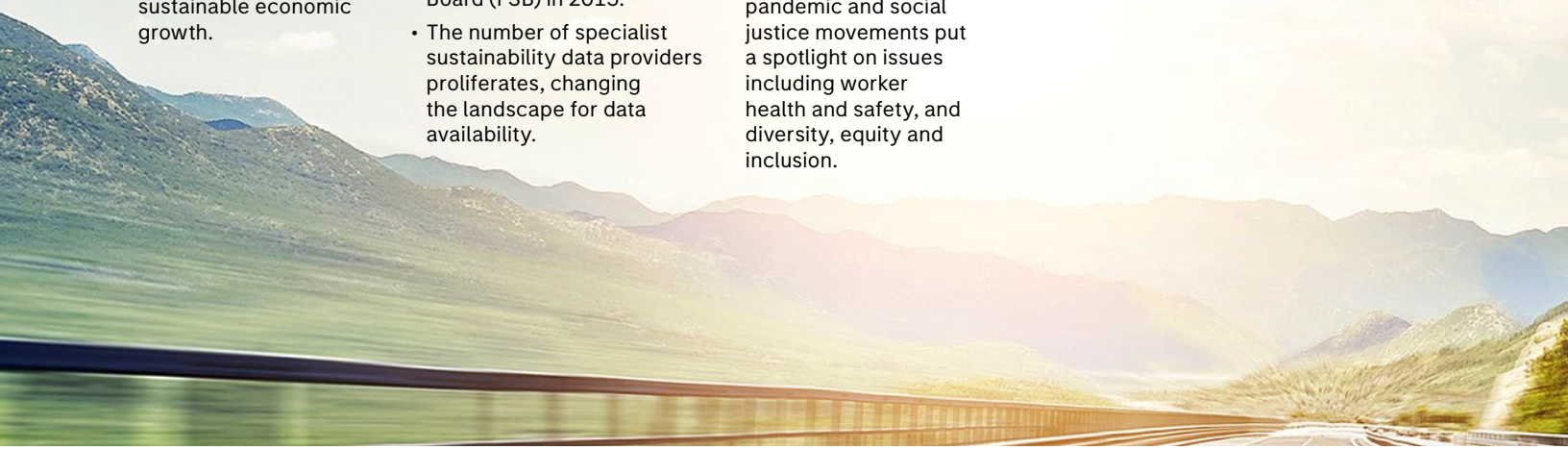
Regulators begin to establish clearer sustainability disclosure requirements.

- The EU leads the way with regulations including the Sustainable Finance Disclosure Regulation and Corporate Sustainability Reporting Directive.
- Terms such as "green washing" grow in prominence with a heightened focus on the authenticity of sustainability claims.

2023–2033

From Ambition to Real-World Impact

The ability to achieve tangible outcomes and the level of investor demand will define the next decade of sustainable finance. The following ten demand signals indicate how these factors are progressing.



[1] Morgan Stanley Research, "ESG Monthly Market Trends: Record Inflows for ETFs" (March 1, 2021)

01 Demand for New Sustainable Investment Options

With growing interest in sustainable investing, especially among younger generations, new investment opportunities and instruments across asset classes and themes are likely to proliferate to meet diverse demand.

Transfer of Wealth Boosts Sustainable Investing

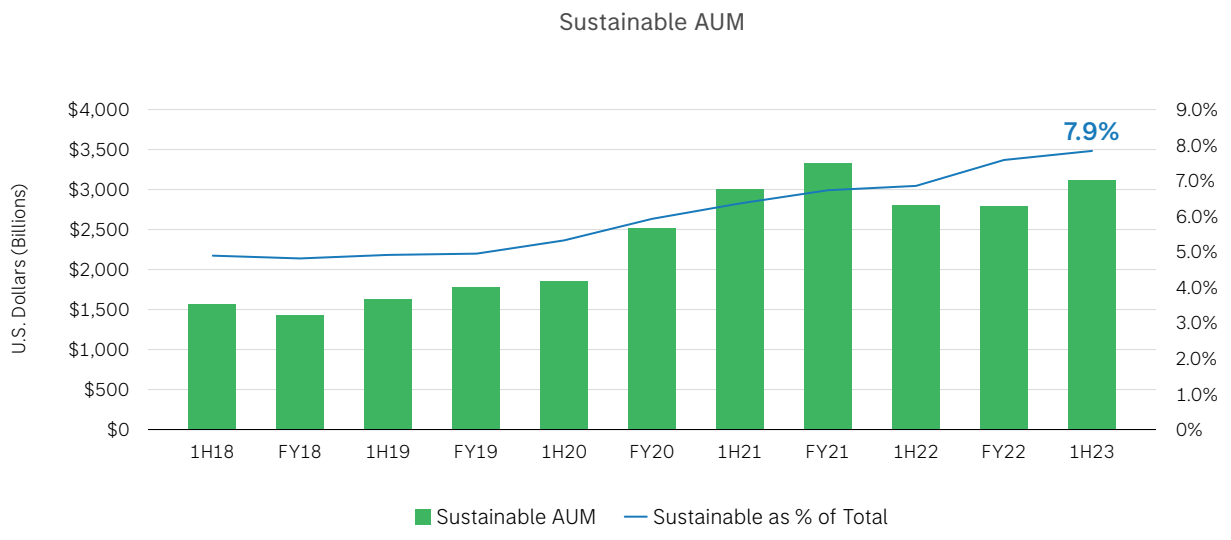
In the first half of 2023, investor demand for sustainable equity and fixed income funds hit record highs with sustainable AUM reaching 7.9% of the global total.[2] Currently, Europe drives much of the demand and investor interest, with 21% of European AUM classified as 'sustainable,' according to Morningstar. In North America, 'sustainable' funds comprised just 1.3% of regional AUM, while in Asia it is just 1.5%.

However, growing interest among younger generations—99% of surveyed U.S. Millennials in 2021 indicated they were interested in sustainable investing[3]—will likely drive global growth in the coming decade. If sustainable AUM reached 15% of total AUM outside Europe, total global sustainable AUM would double to over $5 trillion (Figure 1).

"Wealth transition to Millennials will increasingly redefine the investment industry, and we expect to see growing demand for sustainable investing opportunities," says Emily Thomas, Head of Investing with Impact, Morgan Stanley Wealth Management. "Financial advisors and investment managers, increasingly part of the Millennial generation as well, will continue to drive this growth as more clients demand sustainable investing options."

FIGURE 1

Sustainable AUM continued to grow as a proportion of total AUM in 1H2023, reaching record levels



Source: Morgan Stanley Institute for Sustainable Investing analysis of Morningstar data.

[2] Data as of June 30, 2023

[3] Morgan Stanley Institute for Sustainable Investing, Sustainable Signals: Individual Investors and the COVID-19 Pandemic (October 27, 2021)

01 Demand for New Sustainable Investment Options

Shift in Focus to Private Markets

At the same time, the next decade will likely also see a proliferation of sustainable options across more asset classes, especially in the private markets. According to Morgan Stanley Investment Management, there are both "push and pull factors" that will help drive the evolution of sustainability as part of the investment process in private markets. Growing scrutiny from regulators will "push" investors towards sustainability, while the "pull factor" will come from clients looking for greater transparency around their investments and more influence with their capital.

"Climate investing will be especially compelling for private equity investors in the years ahead," says Vikram Raju, Head of Morgan Stanley Investment Management's Climate Impact Team. "Not only does it represent an area of key growth, with 62% of younger generations in the U.S. preferring to buy from sustainable brands, but efficient use of energy, inputs and materials directly impact the bottom-line. Traditional companies are also driven to diversify into new areas, making acquisitions of sustainability-oriented companies more promising."

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VIKRAM RAJU
Head of Morgan Stanley Investment Management's Climate Impact Team

[4] Morgan Stanley Investment Management, Push and Pull Factors Drive the Evolution of Sustainable Investing in Private Markets (January 26, 2023)

02 Demand for More Specific and Reliable ESG Data

Accurate and reliable data are critical to support ESG-related claims and inform decisions around environmental, climate and social risk. Advancing technologies and regulation would further drive data supply and demand.

New Regulations Increase Data Collection and Disclosure

Organizations will need to navigate an increasingly complex terrain of regulations and policy directives. Regulators worldwide seek standardization and disclosure to drive the transition to a more sustainable global economy.

For example, starting in 2024, the EU's Corporate Sustainability Reporting Directive (CSRD) will mandate more than 50,000 public and private companies disclose on ESG factors, including more than 10,000 non-EU headquartered companies around the world (Figure 2). Companies will be required to conduct a double materiality assessment to disclose matters that are significant for both the business (financial materiality) and the environment or broader society (impact materiality).

"With these more robust disclosure rules coming online, particularly in Europe, investors and other stakeholders will have access to more specific data in the public domain," says Jamie Martin, Head of the European Sustainability Office at Morgan Stanley. "In the coming decade, it will be interesting to see how this information will allow investors to better evaluate a company's sustainability performance, including revenues, corporate practices and supply chain. Such transparency could have wide-ranging impacts on companies, fund flows, data providers, rating agencies and index providers."

Rapidly Advancing Technologies Help Fill Data Gaps

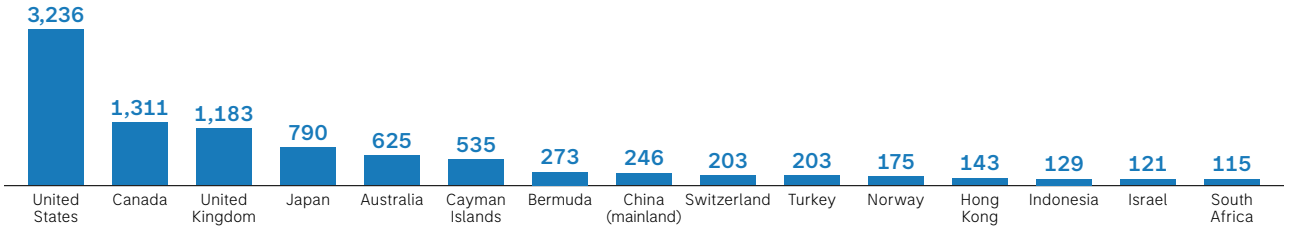
The integration of artificial intelligence (AI)[5] could create a turning point in meeting investors' demand for specific and reliable ESG data. Predictive modeling could analyze historical ESG data, industry trends, revenue breakdown and types of products and services to better forecast a company's future ESG performance. Natural-language processing tools might allow investors to analyze thousands of sources daily to help identify companies with controversial ESG practices that may be undisclosed but potentially material for investment decision-making.

Beyond AI, new satellite technologies could determine companies' exposure to physical risks or allow assessments of natural capital and ecosystem services impacts. These solutions could quickly and accurately analyze many inputs beyond what companies disclose to detect patterns and inform investor decisions.

"ESG data is still in its infancy. Many of the complaints we hear about ESG data from the market are the lack of transparency or the time lag, which are likely to improve significantly over the coming years either from better and faster disclosures or improved modeling techniques and other technologies which could be applied to the space," says Andrew Ford, Head of Sustainable Insights Lab at Morgan Stanley.

FIGURE 2

Estimated non-EU headquartered companies required to disclose on ESG factors to align with new CSRD rules



Source: Refinitiv

[5] Morgan Stanley Institute for Sustainable Investing, How AI Can Bolster Sustainable Investing (July 31, 2023)

03 Demand for Land for Decarbonization Efforts

The competition for land is poised to surge. In addition to demand from agriculture, housing and industrial development, the net-zero transition will create new needs, from renewable energy to nature conservation efforts.

Decarbonization Efforts Require Lots of Land

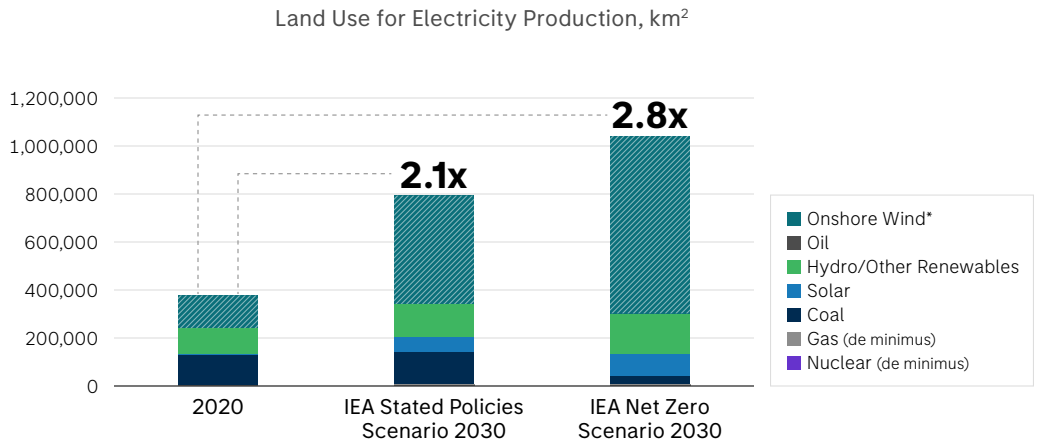
Transitioning to renewable energy sources such as wind and solar can require large land areas for installation. Hydro and some types of solar power can demand up to twice the land needed for coal power and as much as 30x the land needed for gas power.[6] Using the International Energy Agency's (IEA) Stated Policies and Net Zero scenarios, as well as some broad assumptions on land use by energy type, we estimate that the area used for electricity production globally could increase between 2.1x and 2.8x the 2020 levels by 2030 (Figure 3). Most of this increase comes from onshore wind, which can co-exist with other activities, but there could still be significant tension with existing land uses.

Another demand for land comes from reforestation and afforestation projects that are central to carbon credit markets. Oxfam estimates that offsetting carbon emissions via tree planting alone could require more than 15% of the world's habitable land.[7] With nearly half of the world's habitable land used for agriculture today, there is a risk that increasing the amount of land dedicated to carbon-absorbing vegetation will present new challenges for food production globally.[8]

>15% **of the world's inhabited land could be needed for tree planting to offset carbon emissions.**

FIGURE 3

Land use for electricity production could change significantly in the coming years



Source: Our World In Data, International Energy Agency, Morgan Stanley Institute Institute for Sustainable Investing.

* Onshore wind is not an exclusive land use, as it can be combined with other uses like agriculture.

6 Our World in Data, How Does the Land Use of Different Electricity Sources Compare?, Hannah Ritchie (June 16, 2022). The article considers land use throughout the life cycle of the power source, so from raw material extraction to manufacturing, in-use phase and end of life.

7 Oxfam Policy & Practice, Tightening the Net: Net Zero Climate Targets - Implications for Land and Food Equity (March 8, 2021)

8 Our World in Data, How Does the Land Use of Different Electricity Sources Compare?, Hannah Ritchie (June 16, 2022)

03 Demand for Land for Decarbonization Efforts

Strong Environmental and Social Risk Management Will Be Needed

As competition for land grows, increased investments in sustainable land use efforts, including reforestation and afforestation, landscape restoration and biodiversity protection, will be needed to ensure long-term climate-positive outcomes.

Similarly, companies and investors will likely expect renewed environmental and social risk policies to ensure a balance between the land demand needed for climate mitigation and other sustainability issues and the risks such claims present to biodiversity and local communities.

The Nature Conservancy estimates that industrial development from rising demand for food, renewable energy, minerals and infrastructure could threaten over 60% of Indigenous Peoples' lands, or roughly 22.7 million square kilometers—an area nearly seven times the size of India.[9] However, assessing such risks is challenging due to limited data and methodologies.

"It is important that risk screening and due diligence processes prioritize impacts to ecologically sensitive areas and vulnerable communities, including Indigenous Peoples," says Aaron Rosenberg, Head of Environmental and Social Risk Management at Morgan Stanley. "With growing importance in managing the risks land use presents to nature and society, we expect strong community engagement and more localized data to help."

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AARON ROSENBERG
Head of Environmental and Social Risk Management at Morgan Stanley

[9] The Nature Conservancy, Amid Industrial Development Threats to Lands, Major Opportunities to Support Indigenous Stewardship (August 8, 2023)

04 Demand for Metals and Minerals to Power the Energy Transition

Decarbonization efforts could see demand for critical minerals rise sixfold. The wide range of environmental and geopolitical implications may be challenging to manage.

The transition to a low-carbon economy will put the metals and mining sector to the test with copper, lithium, nickel, manganese, cobalt, graphite, zinc and rare earth minerals becoming some of the most sought-after raw materials on the planet.

An onshore wind plant, for example, requires nearly nine times more mineral inputs than a gas-fired plant.[10] A typical electric vehicle (EV) requires almost six times more mineral inputs than a conventional car. As a result, EVs will become the largest consumer of lithium and take over stainless steel as the largest end-user of nickel by 2040.[11] Resource extraction and supply chain projects may have broad geopolitical and economic repercussions.

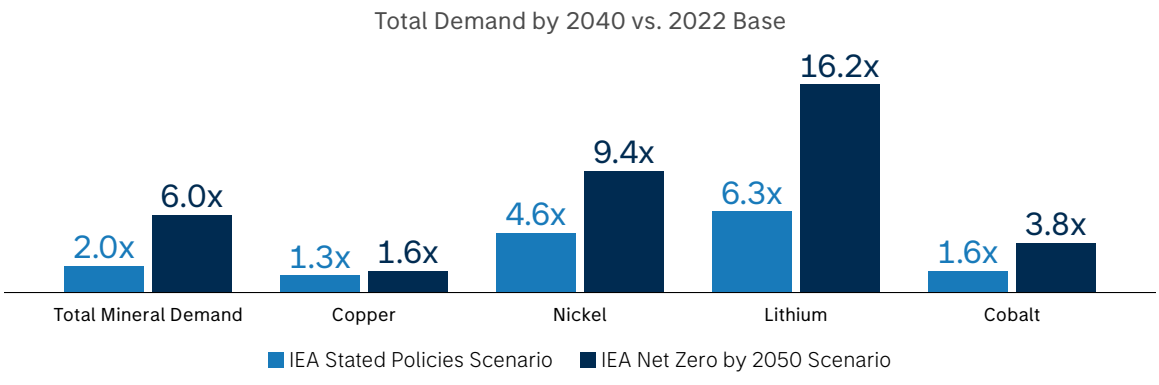
According to the International Energy Agency (IEA), the demand for minerals used in clean energy technologies will increase between two and six times by 2040, depending on how the path to decarbonization plays out.[12] The range of potential demand growth is even broader for some individual commodities, notably lithium and nickel (Figure 4).

Meeting this demand in a responsible and timely manner presents new challenges for the metals and mining sector. There will be a battle for access to the limited sources of key commodities, and the range of potential demand outcomes will be difficult to navigate. Rapid demand growth from the energy transition could lead to a shortage of key mineral and metals unless investments in mining exploration and outputs are increased. The Energy Transitions Commission (ETC) estimates $70 billion is needed a year through 2030 to expand supply, yet annual capital investments averaged just $45 billion over the last two decades.[13]

"The growing demand for mineral and metal inputs will provide important economic opportunities for resource-rich countries and companies alike, but challenges will emerge if the climate-driven energy transition is not managed responsibly and sustainably," says Sean Wright, Head of Climate Transition at Morgan Stanley. "As investments increase and industries like automotive manufacturing continue transitioning, appropriate environmental and social standards will be needed to limit the negative impact on the physical environment and local communities."

FIGURE 4

Clean energy growth should drive increased demand for critical minerals regardless of the potential demand scenario



Source: IEA, Morgan Stanley Institute for Sustainable Investing

10 IEA, The Role of Critical Minerals in Clean Energy Transitions
11 IEA, The Role of Critical Minerals in Clean Energy Transitions
12 IEA, The Role of Critical Minerals in Clean Energy Transitions. Delta is between the IEA's 2040 projections in its Stated Policies Scenario and Net Zero by 2050 Scenario.
13 Energy Transitions Commission, Material and Resource Requirements for the Energy Transition (July 20, 2023)

05 Demand for Proof and Scale of New Technology Solutions

The International Energy Agency (IEA) forecasts that to cut emissions and meet global net-zero targets, more than one-third of the reductions need to come from innovative technologies.[14] However, many of these technological solutions are in preliminary stages. They are not ready for the market today, are too expensive to manufacture or are unproven at scale. The coming decade may change this.

Can the "Green Shoots" Finally Grow?

Carbon capture, utilization and storage technology (CCUS) has yet to live up to its promise despite the long-standing recognition of its crucial role in reaching climate goals. But momentum has grown significantly in recent years. Carbon-intensive sectors are eager to reduce hard-to-abate emissions, while new government subsidies make investments more attractive. The IEA estimates that there are currently over 500 projects in development, compared to 40 in operation as of 2023.[15]

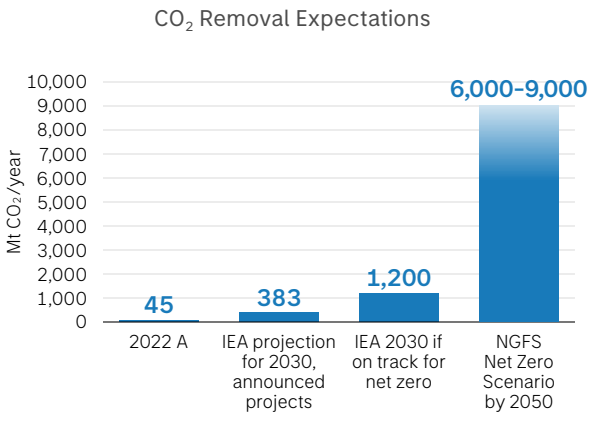
But, even with this progress, the estimated capacity of these commitments will not achieve net-zero requirements. Announced projects, if delivered, would remove 383 metric tons per year (t/yr) by 2030,[16] compared to at least 6,000 t/yr needed by 2050, according to Network for Greening the Financial System (NGFS) net-zero scenarios.[17] More investments in expanding and scaling CCUS technologies are needed in the next ten years if these target removal rates are to be achieved (Figure 5).

Similarly, there is still a lack of sufficient investments in hydrogen technology. Hydrogen has significant potential for helping to decarbonize heavy industry and transport and enable domestic energy production. Since 2019, more than 34 countries have formulated national hydrogen strategies,[18] with more than 680 announced large-scale hydrogen projects.[19] However, while the U.S.[20] and EU[21] have committed funding towards hydrogen development, a significant investment gap of roughly $460 billion remains.[22]

For these "Green Shoots" to grow to sufficient levels in the next decade, cost curves will need to keep falling. Better access to qualified talent and improved permitting processes and access to raw materials will also be required. In many cases, both "carrots" and "sticks" would need to be in place to enact faster and broader adoption. The U.S. Inflation Reduction Act (IRA) is one prominent example, where tax credit expansions and enhancements are creating a market for carbon capture and incentivizing a broad array of investors and developers.[23]

FIGURE 5

Carbon capture projects are still growing but cannot meet net-zero requirements



Source: IEA, NGFS, Morgan Stanley Institute for Sustainable Investing

14 International Energy Agency, The path to limiting global warming to 1.5 °C has narrowed, but clean energy growth is keeping it open (September 26, 2023)
15 IEA, Carbon Capture, Utilisation and Storage
16 IEA, Carbon Capture, Utilisation and Storage
17 NGFS, Scenarios Portal
18 RMI, Reality Check: Green Hydrogen Can Scale This Decade (October 11, 2022)
19 McKinsey Sustainability, Five Charts on Hydrogen's Role in a Net-Zero Future (October 25, 2022)
20 Energy.gov, DOE Announces $52.5 Million to Accelerate Progress in Clean Hydrogen (July 7, 2021)
21 CNBC, EU Approves Up to $5.2 Billion in Public Funding for Hydrogen Projects (September 21, 2022)
22 McKinsey Sustainability, Five Charts on Hydrogen's Role in a Net-Zero Future (October 25, 2022)
23 Morgan Stanley Research, Earthshots (November 30, 2022)

05 Demand for Proof and Scale of New Technology Solutions

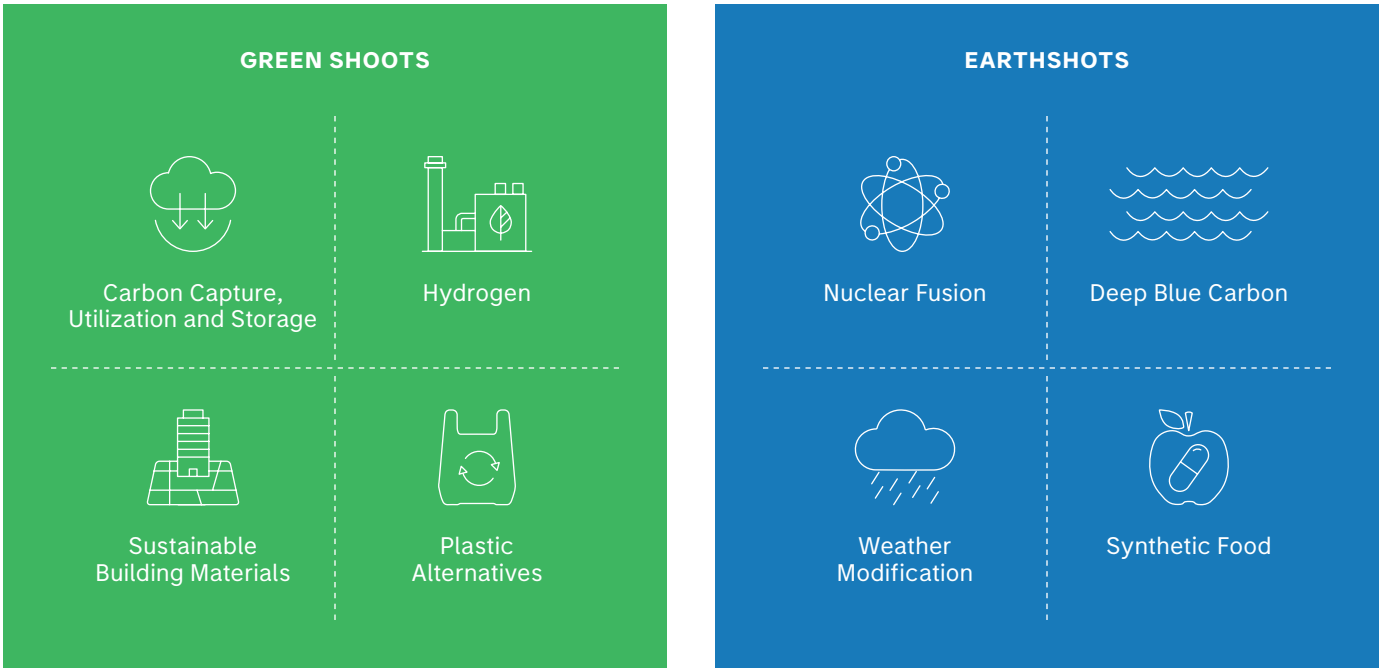
Can the "Earthshots" Land?

Radical breakthrough technologies, or what Morgan Stanley Research calls "Earthshots," could deliver large-scale decarbonization benefits in the next decade but must overcome multiple technical and commercial hurdles. After a breakthrough ignition in 2022, nuclear fusion suggests a limitless supply of clean energy for the planet without radioactive waste. Some experts believe initial commercialization could happen by 2030, but feasibility and scale have not yet been determined.[24] Similarly, innovations around synthetic foods, lab-grown meats, weather modification (e.g., cloud seeding) and deep blue carbon have yet to see activity at scale. Still, they could deliver substantial benefits to sustainability goals.

"There is no single metric that can spot Earthshot potential, but there are leading indicators for investors," says Stephen Byrd, Head of Sustainability Research at Morgan Stanley. "Academic publications can reinforce the technology's value and patent quality and quantity can be proxies for corporate or start-up innovation spending. From there, venture funding can then be a strong precursor to where public market AUM flows towards over the long run."

However, the potential of innovative technologies comes with an important caveat. Can we rely on these technologies to help our transition without fundamentally changing and rethinking business and economic models? Anticipation has already enabled delays in more substantive, meaningful progress, with the hope that technology will "save us" in the future.

GREEN SHOOTS AND EARTHSHOTS TECHNOLOGY SOLUTIONS



[24] Morgan Stanley Research, Thoughts on Fusion Energy Breakthrough (December 2022)

06 Demand for Voluntary Carbon Offsets

The need to achieve carbon neutrality targets will drive further growth in the voluntary carbon offset market. Challenges will need to be overcome to ensure transparency and verification.

Corporate Commitments and Technological Innovations Drive Growth

The voluntary carbon offset market is poised for growth as governments and companies use offsets to help mitigate the impact of their emissions while working on longer-term abatement. Recent estimates suggest that the voluntary carbon offset market could grow from $2 billion in 2020 to more than $250 billion in 2050.[25]

In 2023, concerns about project quality and associated reputational risks have driven a sharp sell-off in voluntary carbon market prices. The pause in demand could continue in the short term, as corporates adjust their approach to carbon offsetting and high-integrity projects take time to build. If the actions taken on market integrity this year are successful, interest from corporates could recover further in the years ahead.

Similarly, technological innovations could help spur growth. Sustainable aviation fuel is an expensive but attractive way to offset emissions from air travel while demand for removal-based offsets, such as direct air capture, continues to grow. Corporate investments into new technologies through research and development initiatives will be critical to drive down prices and increase demand.

Regulation Could Provide Transparency and Incentives

As demand for voluntary carbon offsets grows, ensuring transparency and verification for offset claims will be important for maintaining credibility, guaranteeing genuine emissions reduction and fostering trust among stakeholders. This has already begun to occur through initiatives such as the Integrity Council for the Voluntary Carbon Market beginning to assess projects according to its Core Carbon Principles framework.[26]

“Establishing a credible carbon market will be an important driver in the energy transition,” says Iain Mackay, Head of Environmental Markets at Morgan Stanley. “Improved project integrity is key, and the convergence of compliance and voluntary carbon markets, such as with the introduction of the European Carbon Border Adjustment Mechanism (CBAM), will improve both liquidity and global comparability.”

Recent estimates suggest that the voluntary carbon offset market could grow from $2 billion in 2020 to more than $250 billion in 2050.[25]

[25] Where the Carbon Offset Market is Poised to Surge | Morgan Stanley (2023)
[26] Morgan Stanley Research, Carbon Offsets: A Reckoning, then Progress (September 6, 2023)

07 Demand for Definitions and Progress Across Social Themes

In the next decade, social criteria are poised to become both a much more important component of managing and understanding long-term risk and an area of increased investor interest for mobilizing capital.

Social Issues Reemerge on the Investor Agenda

Climate has dominated sustainable investing over the last decade. However, in 2020, the global COVID-19 pandemic and social justice movements in the United States put a spotlight on how companies approach issues such as employee well-being and diversity, equity and inclusion. According to a survey by the Institute for Sustainable Investing, 61% of U.S. individual investors expressed more interest in investing in public health and supporting small businesses due to the pandemic. 50% said they made investment changes or planned to do so in response to social justice movements.[27]

Looking ahead, social issues will continue to gain prominence on investor agendas with growing attention on issues such as: the privacy and ethical implications of artificial intelligence; racial, gender and LGBTQ+ diversity; financial inclusion and affordable housing solutions; access to basic services such as healthcare and education; and the disproportionate social implications of physical climate events.

Additionally, a focus on delivering a just and equitable transition will be important for governments, businesses and investors as economies shift away from fossil fuels and high-carbon industries. There will be a growing need to ensure the well-being of workers, communities and vulnerable populations are safeguarded and taken into consideration.

New Definitions and Frameworks for Understanding Social Issues

To date, it has been more difficult to invest in social themes relative to environmental ones due to challenges around standard definitions and measurement, as well as a lack of so-called "solution stocks." The decade ahead is likely to see new attempts at addressing these challenges with the introduction of new outcomes-based frameworks that help standardize and quantify social issues and investment criteria. Similar to climate frameworks, it will likely take time for these frameworks to be tested and adopted.

Ultimately, this would help provide uniformity for reporting that allows investors to better assess social impacts and risks relative to returns, while driving greater attention on the role of private investment capital to support social outcomes as seen with climate. In the meantime, new "double materiality" disclosure requirements for corporates under the EU's Corporate Sustainability Reporting Directive (CSRD) could help investors to assess the effects of company practices and products on society.

> "The investor interest in social issues reflects a growing recognition that a company's impact on society is an important factor in its long-term success. Whether that's diversity, equity and inclusion, fair labor practices or the emerging focus on inclusive finance, investors want opportunities to actively manage social risks and mobilize capital towards solutions that empower people and uplift segments of society."
>
> **COURTNEY THOMPSON**
> Head of Sustainable Products and Solutions at Morgan Stanley

[27] Morgan Stanley Institute for Sustainable Investing, Sustainable Signals: Individual Investors and the COVID-19 Pandemic (October 27, 2021)

08 Demand for Nature-Positive Investments and Financing

More than half of the global GDP is dependent on nature and the services it offers, which is at risk due to widespread degradation. There will be increased attention across the public and private sectors on halting biodiversity loss and restoring ecosystems. Investors will have an opportunity to help finance these efforts.

In 2022, the 15th Conference of the Parties to the Convention on Biological Diversity adopted the Kunming-Montreal Global Biodiversity Framework. It includes ambitious global goals for slowing and ultimately halting the extinction of species and degradation of natural habitats. Signatory countries must designate 30% of the world's land and 30% of the world's oceans as protected areas by 2030. This '30 by 30' commitment would nearly double the amount of land and triple the safeguarded area of oceans.[28]

The financing gap to meet this goal has been estimated at over $700 billion annually.[29] Closing this gap and stopping biodiversity loss will require backing ambitious financing plans to direct capital to nature-positive efforts.

Currently, just 17% of current investments in biodiversity come from the private sector.[30] Lowering the investment barriers for private investors would help kickstart nature-positive investments and help finance previously unattainable goals.

"Despite the clear economic and financial risks posed by nature and biodiversity loss, maintaining healthy natural ecosystems has historically been the role of the public sector," says Matthew Slovik, Head of Global Sustainable Finance at Morgan Stanley. "Nature-positive investments need to come into play so that investors can help scale solutions and mitigate potential risks. This will require long-term planning, capital and collaboration between public and private stakeholders."

THREE OPPORTUNITIES FOR DEVELOPING SCALABLE NATURE-FINANCING MECHANISMS

1

Incorporating nature-related risks into existing investment strategies, including better understanding how a company's dependencies and impact on nature could affect financial performance.

2

Integrating nature considerations within more established climate markets, such as carbon credits, to help attract existing pools of climate-oriented investment capital.

3

De-risking nature-positive investments via flexible and patient capital from development institutions, philanthropic organizations and government agencies to help bridge the risk-return profile of nature-based projects to match the expectations of market-rate investors.

[28] Convention on Biological Diversity, Kunming-Montreal Global Biodiversity Framework (October 4, 2023)
[29] The Nature Conservancy, A New Deal to Close the Nature Finance Gap (September 22, 2021)
[30] Morgan Stanley, How Investing Can Protect Global Biodiversity (May 19, 2023)

09 Demand for Sustainable Supply Chains

A supply chain reset driven by new regulations and geopolitical tensions will likely gain momentum as stakeholders increasingly hold companies accountable for environmental considerations as well as human rights and labor practices.

Circularity and Environmental Considerations

To date, most sustainability efforts have concentrated on direct operations. However, companies will need to increasingly look further afield to ensure their supply chains are adhering to the same sustainability principles. This includes the environmental impact of sourcing raw materials, or the carbon footprint of transporting goods. These initiatives will require strong supplier partnerships and technology that allows companies to track inputs, trace products and monitor their direct and indirect environmental impact.

Human Rights and Labor Practices

Companies are also likely to conduct enhanced due diligence on human rights and labor practices within their supply chains.

While some industries are already tackling the impact of human rights concerns in their supply chain, others have been slower to recognize the risks such issues pose. Expanding legislative and policy efforts, such as the EU's proposed Corporate Sustainability Due Diligence Directive (CSDDD), can help to end the use of forced labor and other egregious abuses in the years ahead. New blockchain solutions could also help ensure greater transparency, ensuring companies are aware of instances of forced or child labor, discrimination or challenges to freedom of expression.

This heightened visibility encourages companies to closely scrutinize their suppliers to ensure compliance with these regulations.

> "Global supply chains have experienced unprecedented pressure and disruption, including the lingering impacts of COVID-19, geopolitical tensions, armed conflict, changing trade policies and mounting sustainability concerns. These forces are driving companies to rethink their supply chains and operating models."
>
> **MELISSA JAMES**
> Vice Chairman of Global Capital Markets and
> Head of the ESG Center of Excellence at Morgan Stanley

10 Demand for Qualified Talent

Sustainability skills and ESG expertise are in high demand across corporates and investors, with a talent gap already emerging. Cross-sector collaboration will be needed to ensure a strong pipeline of talent with the appropriate credentials and skillsets to meet growing demands.

The Sustainability Talent Gap

In recent years, there has been a significant increase in demand for sustainability skills and ESG experts. Between 2021 and 2022, sustainability-focused hires in finance rose by 17%, with skills related to carbon accounting and carbon emissions experiencing the highest growth in the U.S. and EU (Figure 6).[31]

At the same time, a critical talent crunch is emerging. In 2022, only 39% of asset managers and 23% of asset owners said they could find qualified individuals to meet their sustainable investing needs.[32] Without proper training through universities and professional development, employers could still face a skills gap in meeting sustainability demands.

We expect cross-sector collaboration between academic institutions and the private sector to close that gap by producing graduates with the requisite skills for succeeding in sustainable finance. Recruitment pipelines from universities with rigorous sustainability programs could also become a talent differentiator.

"Over the last two years, the Morgan Stanley Global Sustainability Office has doubled its headcount to meet growing demand for sustainability expertise," says Jessica Alsford, Chief Sustainability Officer and CEO of the Institute for Sustainable Investing. "It's important that a new generation of leaders can help create and support scalable sustainable finance solutions. This is the driver behind the Institute's Sustainable Investing Fellowship and Kellogg-Morgan Stanley Sustainable Investing Challenge, which give students the opportunity to develop sustainability skills that can further grow the field and help close the emerging talent gap."

Sustainability as a Recruitment and Retention Strategy

Even for jobs that do not directly include sustainability, employees of all age groups want to work at companies with firm commitments to ESG factors. For example, a 2022 survey of 18–24-year-old office workers in the UK found that at least half would consider leaving a job because of the company's net-zero policies. Roughly one-third of employees in age groups over 24 would do the same.[33]

FIGURE 6

Fastest growing sustainable finance skill, % increase from 2021-2022

	UNITED STATES	
#1	Carbon accounting	+241%
#2	Carbon credits	+157%
#3	Carbon emissions	+141%
#4	Energy audits	+122%

	EUROPEAN UNION	
#1	Carbon emissions	+131%
#2	Carbon accounting	+130%
#3	Sustainability reporting	+88%
#4	Impact assessment	+75%

Source: Global Green Skills Report 2023

31 LinkedIn Economic Graph, Global Green Skills Report 2023
32 Morgan Stanley Institute for Sustainable Investing, Sustainable Signals: Opportunities for Asset Managers to Meet Asset Owner Demands (November 29, 2022)
33 McKinsey & Company, Mind the Gap: Curated Reads for Gen Z-and their Z-Curious Colleagues

Conclusion

Continued efforts to create a more sustainable and inclusive global economy makes it inevitable that investors will pay increasing attention to sustainability over the next ten years. However, it won't be an easy route ahead. All stakeholders will need to collaborate to find appropriate ways to finance the transition in a manner that considers the complex interdependencies of many key environmental and social issues.

The ten signals in this report help identify where progress is occurring, what remains to be done and how stakeholders must come together to overcome obstacles. We will continue to track these signals over the next decade to identify emerging trends and ways in which we can help realize opportunities in ways that satisfy the criteria of all stakeholders. We are both optimistic and realistic about what is possible, and the role financial solutions can play in making a more sustainable and resilient world for people and all life on Earth.

The Morgan Stanley Institute for Sustainable Investing

Established by CEO and Chairman James Gorman in 2013, the Morgan Stanley Institute for Sustainable Investing aims to accelerate sustainable finance by driving innovation, empowering investors with insights and supporting the development of the next generation of sustainable investing leaders. The Morgan Stanley Institute for Sustainable Investing is guided by an advisory board of prominent leaders from business, academia and nongovernmental organizations, and is utilized to drive strategic internal sustainability-focused initiatives.

1

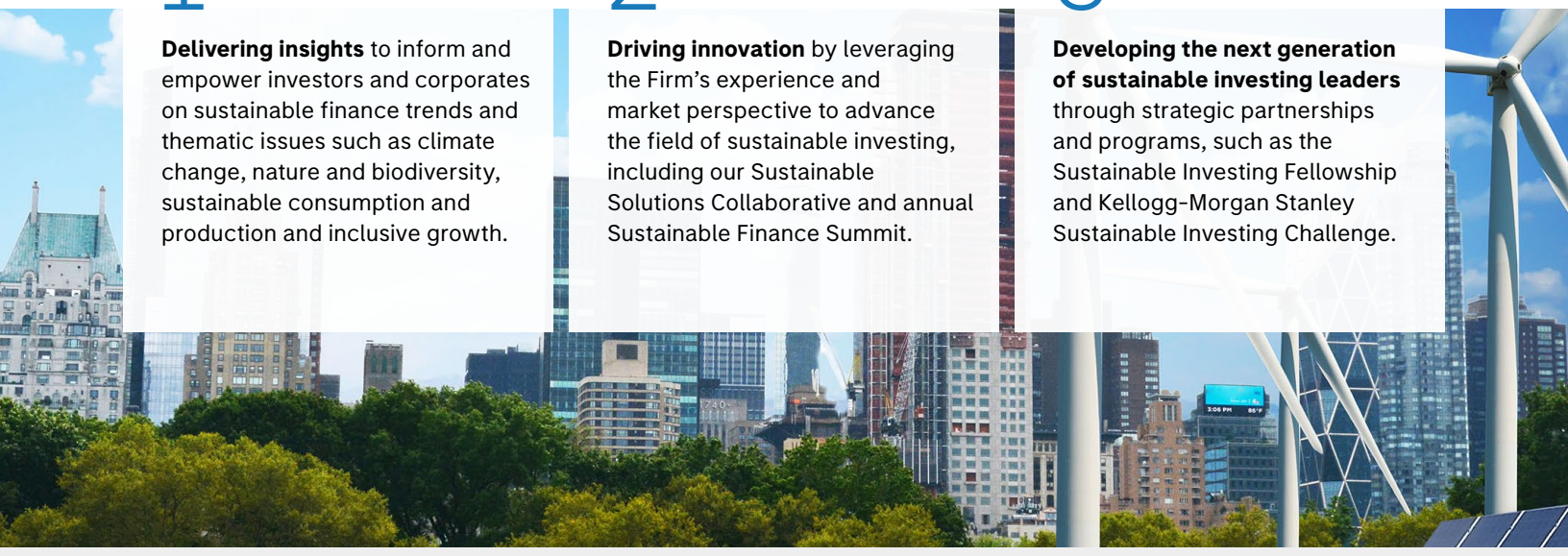
Delivering insights to inform and empower investors and corporates on sustainable finance trends and thematic issues such as climate change, nature and biodiversity, sustainable consumption and production and inclusive growth.

2

Driving innovation by leveraging the Firm's experience and market perspective to advance the field of sustainable investing, including our Sustainable Solutions Collaborative and annual Sustainable Finance Summit.

3

Developing the next generation of sustainable investing leaders through strategic partnerships and programs, such as the Sustainable Investing Fellowship and Kellogg-Morgan Stanley Sustainable Investing Challenge.



For more information about the Morgan Stanley Institute for Sustainable Investing, visit morganstanley.com/sustainableinvesting.

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