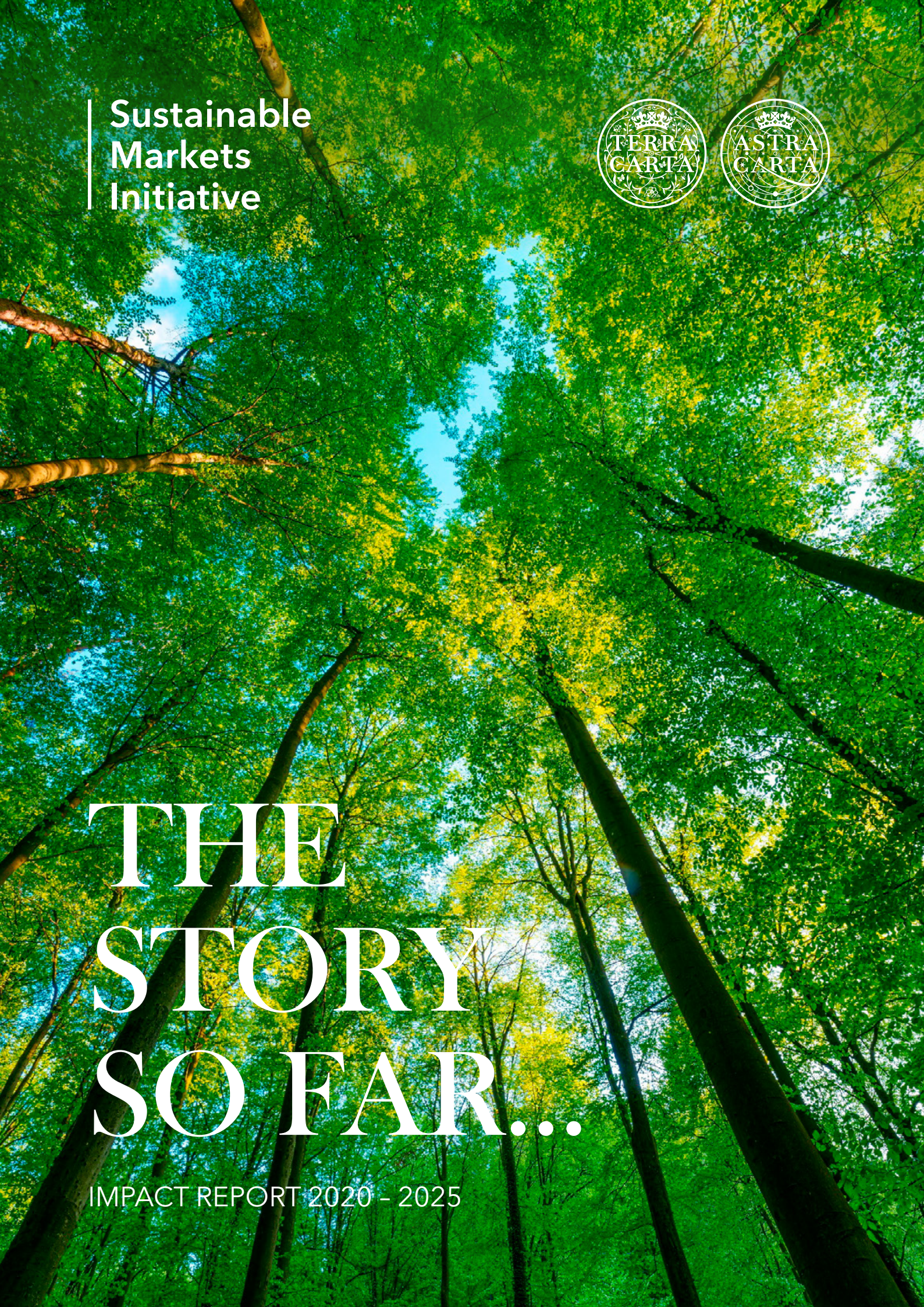
Sustainable
Markets
Initiative



THE STORY SO FAR...

IMPACT REPORT 2020 - 2025

Our Vision

A Sustainable Future for All.

Our Mission

To serve as the world's 'go-to' private sector organization for the transition to a sustainable future.

Our Mandates 2020 - 2030

Our Mandates, the Terra Carta and the Astra Carta, offer private sector roadmaps designed to help the world seize The Growth Story of Our Time.

Learn more about His Majesty's call to action

Watch the video →

@TheSMI **Sustainable Markets Initiative** www.sustainable-markets.org

"The 'Terra Carta' offers the basis of a recovery plan that puts Nature, People and Planet at the heart of global value creation – one that will harness the precious, irreplaceable power of Nature combined with the transformative innovation and resources of the private sector."

His Majesty King Charles III
then The Prince of Wales

Terra Carta

For Nature, People and Planet

Launched by His Majesty, as the Prince of Wales, at the One Planet Summit in January 2021, the Terra Carta is the guiding mandate for the Sustainable Markets Initiative, providing a private sector roadmap to 2030 that puts Nature, People and Planet at the heart of global value creation.

More than 800 years ago, the Magna Carta inspired a belief in the fundamental rights and liberties of people. As we strive to imagine the next 800 years of human progress, the Terra Carta reminds us that the fundamental rights and value of Nature must represent a step-change in our 'future of industry' and 'future of economy' approach.

Read the Terra Carta

Article 1
Create Sustainable Industries

Article 2
Default Sustainable

Article 3
The Power of Consumers

Article 4
Accelerate & Align Industry Roadmaps

Article 5
Game Changers & Barriers

Article 6
Sustainable Investing at Scale

Article 7
Nature, the True Engine of Our Economy

Article 8
Create Market Incentives

Article 9
Adopt Common Metrics & Standards

Article 10
Catalyze Science, Technology & Innovation

Astra Carta

To Care for The Infinite Wonders of the Universe

As we embark on this journey to the stars, we must not forget to preserve and protect our origins on Earth. Inspired by the Terra Carta, the Astra Carta, launched by His Majesty in 2023, extends these principles to the 'next frontier' and the realms beyond our world.

Read the Astra Carta

Article 1
Nature & Life Beyond Earth

Article 2
Realizing Infinite Possibility

Article 3
Default Sustainable in Space

Article 4
Science, Technology & Innovation as a Human Trait

Article 5
Creating Sustainable Markets in Space

Article 6
Space Tourism

Article 7
Human Space Flight & Deep Space Life Support Systems

Article 8
Space Debris Mitigation

Article 9
Adopting Universal Sustainability Metrics & Standards

Article 10
Peaceful Exploration, Cooperation & Use of Outer Space

Article 11
Equitable Access

Article 12
Legal Frameworks for Space

Article 13
Space Education & Public Outreach

Brian Moynihan
Chair & CEO, Bank of America
Chair, Sustainable Markets Initiative

In 2024, the Sustainable Markets Initiative further demonstrated the power of the private sector as it advances the transition to a sustainable, secure, and prosperous future. Member company CEOs from around the world helped lay the groundwork to drive our Climate, Nature, and SDG goals.

For example, SMI companies are active in renewable energy, sustainable agriculture, climate resilient infrastructure, and innovative financing to help mobilize the trillions of investment dollars needed for this work. That's why we published a detailed "best practices in blended finance" playbook to help support its expanded use.

We also helped put more private capital to work in the debt-for-Nature market, previously dominated by public finance. Debt-for-Nature swaps enable countries to refinance their debt obligations, allocating the net savings to environmental and social goals. Developing alternative financial tools like this is key to achieving our goals.

Buildings account for more than 40% of global emissions, so we called on G20 governments to prioritize decarbonizing buildings in their countries. At the same time, the Sustainable Buildings Taskforce provided a roadmap on how to align the interests of tenants and owners in energy efficiency investments, while challenging SMI CEOs to have at least one net zero building at their organizations.

In addition, we sought direct CEO engagement with G20 leaders in updating our G7/G20 market signals. We encouraged governments to continue to work with the private sector to broaden and accelerate the deployment and commercialization of clean energy solutions to meet our goals.

Looking forward, we have passed the mid-point in our efforts, which means we have less than five years to achieve the outcomes established in the Terra Carta, the Astra Carta, and other goals SMI companies have set. I remain honored to chair the work and grateful to His Majesty King Charles III for his continued leadership and inspiration. I thank the CEOs in the SMI – and their organizations and task force members – for their valuable contributions. With our collective leadership and commitment, I am confident we will continue to advance toward the goals we have set.

Brian Moynihan
Chair & CEO, Bank of America
Chair, Sustainable Markets Initiative

Jennifer Jordan-Saifi
CEO, Sustainable Markets Initiative

At the Midpoint of Our Journey

Five years ago, inspired by the unwavering leadership of His Majesty King Charles III, the Sustainable Markets Initiative was launched to place Nature, People, and Planet at the heart of global value creation. Today, as we reflect on our progress, we do so with clarity of purpose and a renewed sense of urgency.

We have entered a decisive decade. The next five years will determine whether we seize the extraordinary opportunity before us—or fall short in our duty to future generations. The facts are now unequivocal: the transition to a sustainable economy is not only essential for the survival of our planet, it is the most significant economic and industrial transformation since the Industrial Revolution.

This is 'The Growth Story of Our Time'. For companies and countries alike, competitiveness and sustainability are now inextricably linked. The question is no longer *if* we transition, but *how quickly, how fairly*, and ***who*** *will lead*.

Through the SMI, we have forged a powerful coalition of private sector leaders—across finance, energy, fashion, shipping, aviation, healthcare, buildings, technology, and more—committed to making sustainability profitable and profitability sustainable. We have mobilized capital, launched pioneering action and championed the Terra Carta and Astra Carta as guiding frameworks for long-term value.

But we must now move from momentum to transformation. Like any great mobilisation, this must be a campaign of purpose—anchored in execution, not aspiration.

We must:

- **Deploy capital at scale**, as strategic investment in resilient, future-fit markets;
- **Hardwire sustainability into core business strategy**, risk frameworks, and supply chains;
- **Use innovation and AI to outcompete old models**, driving clean growth and inclusive prosperity;
- **Forge public-private alliances** that accelerate policy alignment, enabling regulation, infrastructure, and demand signals; and
- **Ensure measurement, transparency, and accountability**, so that trust and impact move together.

The economic and business case is clear. The cost of inaction is rapidly overtaking the cost of action. Markets are shifting. Consumers are choosing. Investors are reallocating. Regulation is tightening. Those who lead this growth story will not only thrive—they will shape the rules of the new economy.

As we enter this next chapter, let us be bold, decisive, and united. We carry forward the vision of His Majesty: a future where our economies work in harmony with Nature, where enterprise serves society, and where leadership is measured not by short-term returns, but by long-term legacy.

Let history say we rose to the challenge. That we saw what was possible—and delivered it.

Jennifer Jordan-Saifi M.V.O., MBA
CEO, Sustainable Markets Initiative

Our Global Reach

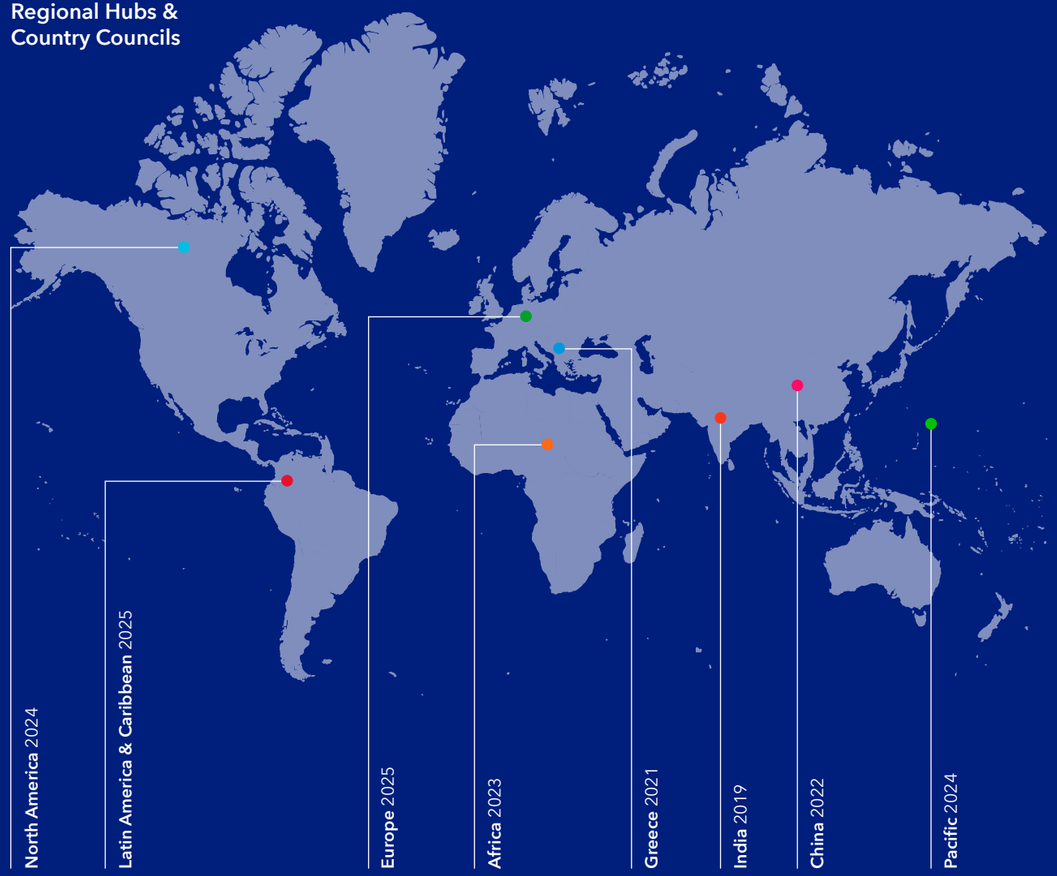
Since 2020, the SMI has brought the private sector together on Nature, People & Planet.

250+

CEOs & Partners engaged

8

Regional Hubs & Country Councils



12

Industry Transition Hubs

- **Agriculture** 2020
- **Energy Transition*** 2020
- **Media & Telecommunications** 2024
- **AI & Advanced Technology** 2025
- **Fashion** 2020
- **Shipping** 2024
- **Aviation** 2020
- **Health Systems** 2020
- **Space** 2023
- **Buildings** 2020
- **Hospitality & Tourism** 2020
- **Sport** 2025

*Inclusive of all energy technologies

6

Financial Task Forces

- **Asset Managers & Asset Owners** 2020
- **Financial Services (Banking)** 2020
- **Legal** 2020
- **Blended Finance** 2020
- **Insurance** 2020
- **Private Equity** 2020

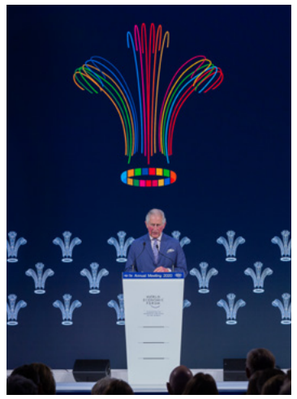
Our Journey So Far

2019

NOVEMBER 2019

As part of **His Majesty's**, then Prince of Wales, official visit to India, he met with Indian CEOs to launch the **SMI's India Council**.

2020



JANUARY 2020

Founded by **His Majesty King Charles III**, then the Prince of Wales, the **Sustainable Markets Initiative** was established as the world's 'go-to' private sector organization on sustainable transition.

FEBRUARY 2020

The SMI hosted its **first industry roundtable** focused on Aviation, bringing together CEOs of airlines, airports, fuel providers, innovators and manufacturers. This launched the SMI's industry task forces.

MARCH - DECEMBER 2020

Over the course of the pandemic which emphasized the delicate balance between human health, planetary health and economic health, **His Majesty**, as Prince of Wales, held **over 30 virtual roundtables** to mobilize government leaders and global CEOs across industries and topics including: Agriculture, Asset Managers and Asset Owners, Banking, Blended Finance, Carbon Pricing, CCUS, Circularity, Electric Vehicles and Battery Storage, Fashion, Forests and Land Management, Indigenous Peoples, Insurance, Hydrogen, Multilateral Development Banks, Oil & Gas, and Shipping.

2021

JANUARY 2021

His Majesty, as Prince of Wales, launched the **Terra Carta** during his virtual participation in the **One Planet Summit** hosted by **President Emmanuel Macron** at the Élysée Palace.

APRIL 2021

His Majesty, then Prince of Wales, hosted regional roundtables with Commonwealth Leaders and SMI CEOs to discuss how the private sector can help governments deliver on their Nationally Determined Contributions in the lead up to the **Commonwealth Heads of Government Meeting** in Rwanda.

JULY 2021

For the first time, **His Majesty**, as Prince of Wales, brought together global CEOs and world leaders at the **G7 Summit** in Cornwall, U.K.

JULY 2021

The **Terra Carta Design Lab** was launched in collaboration with the **Royal College of Art**, inviting design students to develop credible and sustainable solutions to tackle the climate crisis through design and innovation.

OCTOBER 2021

At the invitation of **Prime Minister Draghi**, **His Majesty**, as Prince of Wales, and SMI Co-Chair Brian Moynihan joined G20 leaders to discuss the **SMI's market signals** aiming to accelerate a sustainable future. Later that day, His Majesty, then Prince of Wales, joined the launch of the **SMI Fashion Task Force**.

NOVEMBER 2021

At **COP26**, **His Majesty**, as Prince of Wales, delivered an opening address and hosted SMI CEOs and Commonwealth leaders to discuss the critical role of the private sector in mobilizing the trillions required to achieve the world's climate targets. His Majesty also hosted the three-day **Terra Carta Action Forum** at Kelvingrove, where the inaugural **Terra Carta Seal**, designed by **Sir Jony Ive**, was presented to 45 global recipients.

2022

MAY 2022

Alongside then Canadian Prime Minister, **Justin Trudeau**, in Ottawa, **His Majesty**, then Prince of Wales, hosted SMI and wider Canadian CEOs on the role of the Canadian private sector in accelerating a sustainable future in Canada and around the world.

JUNE 2022

At the **Commonwealth Heads of Government Meeting** in Kigali, Rwanda, **His Majesty**, then Prince of Wales, and the President of the Republic of Rwanda hosted a roundtable of CEOs and Commonwealth leaders focused on delivering on climate and Nature targets across the Commonwealth. **His Majesty** further hosted a reception with SMI CEOs and the new leaders of the Commonwealth and invited CEOs to join a dynamic Rwandan fashion show. The SMI also hosted **19 unique events**, including a reception with **His Majesty**, at the first ever Terra Carta House. Here, the SMI convened over **400 leaders** from government, business, and NGOs across the Commonwealth.

JULY 2022

His Majesty, then Prince of Wales, convened SMI CEOs, philanthropists, the U.K. government, and farmer representatives at his **Sandringham Estate** for a discussion on how to accelerate sustainable and regenerative agriculture.

AUGUST 2022

The **SMI China Council** was launched, attended by 150 Chinese delegates.

SEPTEMBER 2022

During **New York Climate Week**, the SMI convened 80+ global CEOs for its bi-annual summit.

NOVEMBER 2022

His Majesty hosted a reception at **Buckingham Palace** for world leaders and global CEOs to mark **COP27**.

NOVEMBER 2022

The SMI hosted a two-day **Terra Carta Summit at COP27** in Sharm El-Sheikh, Egypt, including a reception with Commonwealth leaders.

2023

FEBRUARY 2023

The SMI hosted a Biodiversity Investment Summit with the **UK Government** followed by a reception hosted by **His Majesty** at Buckingham Palace.

MAY 2023

The SMI marked the **Coronation of our Founder, His Majesty King Charles III** and joined the Coronation Garden Party and Coronation Concert.

JUNE 2023

The **Astra Carta** was launched by **His Majesty** at **Buckingham Palace** alongside astronauts, space agencies, UN leaders, space industry CEOs and other stakeholders. The Astra Carta builds on the foundation of the Terra Carta to shape a future of responsible and sustainable space exploration, development, and cooperation.

JULY 2023

His Majesty hosted SMI CEOs and **U.S. President Biden** to reinforce the private sector's commitment to achieving climate targets alongside governments. Together with the U.K. and **then U.S. Climate Envoy Secretary John Kerry**, the SMI convened CEOs and leading philanthropists for a Climate Finance Mobilization Forum. The Forum highlighted how further private sector and philanthropic investment can be unlocked to accelerate the transition.

SEPTEMBER 2023

As part of **His Majesty's** State visit to France, SMI CEOs, alongside His Majesty and **President Macron**, attended a Climate and **Nature Finance Mobilization Forum** at the Museum of National History in Paris.

DECEMBER 2023

As the strategic delivery partner, the SMI led the **COP28 Business and Philanthropy Climate Forum**, convening more than 1,000 CEOs, world leaders, and philanthropists from over 80 countries.

2024

APRIL 2024

At the invitation of the **Government of Antigua & Barbuda**, the SMI joined a **Trade and Investment Mission** in Antigua, demonstrating SMI's unique value in supporting countries in pursuit of green economic growth. The three-day event centred on expanding key sectors including renewable energy and eco-tourism.

APRIL 2024

SMI CEO, Jennifer Jordan-Saifi M.V.O., brought a delegation of investors to meet with **His Holiness Pope Francis** to present the alignment of the SMI's Terra Carta mandate with His Holiness' principles and calls to action outlined in the **Laudato Si** and **Laudate Deum**.

JUNE 2024

On the margins of the G7, a delegation of CEOs led by SMI CEO Jennifer Jordan-Saifi M.V.O., presented **His Holiness Pope Francis** with the SMI's G7 market signals. The SMI also participated in G7 Energy Transition roundtables.

JULY 2024

SMI CEO Jennifer Jordan-Saifi M.V.O. met with leading Japanese CEOs. The SMI also attended the **Space Sustainability Summit** in Tokyo, participating in a panel that advocated for collaboration over competition in the space sustainability sector to deliver complementary outcomes.

JULY 2024

Together with SMI member **Fortescue**, the SMI hosted a Seeing is Believing experience, inclusive of Commonwealth member states, in Singapore to launch the **Green Pioneer Ship**, the world's first dual-fuelled ammonia-powered vessel.

SEPTEMBER 2024

During **New York Climate Week**, SMI united global CEOs, innovators, and stakeholders for an action-oriented programme of activity, addressing key topics including: sustainable finance, green infrastructure, energy, space, advanced technology and AI, and the role of female CEOs.

OCTOBER 2024

During **His Majesty King Charles III's** visit to Australia, the SMI co-hosted a round-table with Australia's Governor General, **Her Excellency Ms. Sam Mostyn AC**, at Admiralty House in Sydney. The event highlighted Australia's private sector climate and biodiversity initiatives and promoted global collaboration with SMI.

OCTOBER 2024

The SMI joined **His Majesty King Charles III** for the **Commonwealth Heads of Government Meeting and Business Forum** in Samoa, showcasing initiatives that demonstrate the vital role of the private sector in promoting sustainability, resilience, and inclusive growth.

OCTOBER 2024

At **CBD COP16** in Cali, Colombia, the SMI showcased its convening power with a series of round-tables and panel discussions at the British Embassy's GREAT Casa Británica attended by **over 90 participants** from public, private and philanthropic sectors.

NOVEMBER 2024

At the invitation of the **SMI's China Council**, SMI CEO Jennifer Jordan-Saifi M.V.O. attended the **2024 CEO Dialogue** held during the **2nd China International Supply Chain Expo** hosted by the **China Council for the Promotion of International Trade**. While in Beijing, the SMI China Council met and established four new working groups dedicated to Energy Transition, Green Finance, Carbon Capture, Utilization and Storage (CCUS), and Water.

2025

MARCH 2025

To mark the **SMI's five-year Anniversary**, the SMI hosted the inaugural **Terra Carta Roundtables and Exhibition** at Hampton Court Palace in London, U.K.

Terra Carta Roundtables & Exhibition

Marking Five Years of Private Sector Action

In March 2025, the Terra Carta Roundtables & Exhibition brought together CEOs, innovators and government leaders at Hampton Court Palace, London, U.K., to lay out the economic case for transition and continue efforts to accelerate a sustainable future.

Marking five years since His Majesty King Charles III, then Prince of Wales, founded the Sustainable Markets Initiative – the central message from the summit was clear: sustainable transition is The Growth Story of Our Time.

Watch the event highlights →

400
CEO attendees

25
exhibits

19
roundtables

16
plenaries

"Markets are not bound by geographic boundaries and political cycles. We take a confident long-term view, while innovating and adapting to the rapidly changing environment."

Jennifer Jordan-Saifi M.V.O.
CEO, Sustainable Markets Initiative

Agriculture

Advancing Sustainable & Regenerative Practices

Since 2020, the private sector has made measurable progress in promoting sustainable agriculture, particularly through investments in regenerative practices and sustainable supply chains.

Major food and beverage companies, including McDonald's, Nestlé, and Nespresso, have launched initiatives aimed at improving soil health, increasing biodiversity, and reducing greenhouse gas emissions. For example, McDonald's has committed to reducing agriculture-related emissions by 16% by 2030 and is piloting regenerative agriculture projects across multiple regions[8].

The uptake of regenerative agriculture has also expanded in commodity supply chains. In Brazil, Nespresso-supported coffee farms have implemented soil-restorative practices that enhance productivity and reduce environmental impact[9]. Additionally, sustainability certification is growing globally; organic and other certified agricultural areas increased by 13.7% in 2022 after a COVID-19-related dip in 2020, now encompassing over 96.6 million hectares[10].

Financial commitments have paralleled these efforts. A coalition of financial institutions and agribusinesses pledged $3 billion to support the transition to sustainable agricultural models, seeking to de-risk sustainability investments and scale regenerative outcomes[11].

Programmes to support farmers with technical assistance and financial incentives for adopting climate-smart practices like no-till farming and crop rotation, contributing to carbon sequestration and sustainable land use have been undertaken by many private sector companies.

Despite this progress, key challenges persist. While the private sector has taken important steps toward sustainable agriculture since 2020, especially through regenerative practices and financial mobilization, much work remains to align ambition with measurable, system-wide transformation.

"We have the opportunity and responsibility to build a more resilient global food system - one that supports the environment, our economy and society. With leaders across the agriculture industry, we're transforming farming for the better while supporting the needs of our global population."

Anastasia Volkova
CEO and Co-Founder
Regrow Ag

Agriculture Hub

In 2024, the SMI Agriculture Hub achieved a major milestone with the ongoing Basmati Rice Project in Northern India. Building on successful pilot programmes from the previous year, efforts focused on scaling the project by applying lessons learned and adding new strategies to address barriers in the regenerative agriculture transition. To date, the project has reached 5,000 smallholder farmers, transitioning over 30,000 acres using regenerative techniques including water management, direct-seeded rice, and monitoring technologies.

"Our vision is to scale regenerative agriculture through collaborative action by empowering farmers, industry partners, and communities to work together. Only through collective efforts we can achieve the sustainable transformation needed for a climate-resilient, future-proof food systems."

Rodrigo Santos
President
Bayer Crop Science Division

September 2024 – The SMI Agriculture Hub held a workshop with farmers Northern India to create an action plan for scaling regenerative agriculture in basmati rice farming.

18%
reduction in water usage

9%
yield increase

20%
revenue increase

Sahel Consulting is Empowering Nigerian Farmers with Advanced Weather Forecasting Tools

Smallholder farmers are the backbone of food systems in Nigeria and across Africa, relying heavily on rainfed agriculture. Limited infrastructure makes them vulnerable to climate change, facing frequent floods, droughts, and pest outbreaks. Traditionally, they relied on their innate ability to predict weather patterns for planting and harvesting, but climate change has disrupted this.

Sahel Consulting's '*Building Agricultural Systems Resilience*' project empowers Nigerian farmers with crucial weather information, enhancing early warning systems and local forecasts. By improving climate monitoring infrastructure and information delivery, the project ensures farmers receive timely, actionable climate advisories in their local languages. This helps them make informed decisions about planting, harvesting, and crop protection, improving productivity and protecting livelihoods.

Source: *Sahel Consulting*

"As a national supermarket, we recognize our unique position to influence and inspire better choices across the entire food supply chain. Our responsibility reaches far beyond our shelves; it's about leading by example, guiding our suppliers, and empowering our customers to prioritize sustainability in every purchase."

James Bailey
Executive Director and CEO
Waitrose

Amini is Digitizing Ghana's Cocoa Supply Chain

Climate tech startup Amini is digitizing the cocoa supply chain in Ghana, the world's second largest cocoa producer. This effort aids in gathering essential data for European Deforestation Regulation compliance, while also integrating regenerative agriculture practices and market stabilization techniques.

As of 2024, the project's initial scope has been expanded to achieve several key goals, including:

50,000
cocoa farmers trained in regenerative practices over 3 years

20%
of participating farmers to secure long-term contracts with cocoa processors and chocolate manufacturers within the first year

30%
of cocoa production made traceable via blockchain system implementation within two years

10,000
cocoa farmers offered weather-indexed insurance within 3 years

50%
of cocoa produced under the initiative certified within 3 years

"Every cocoa farmer deserves access to fair contracts, resilient practices, and a stable market. The integration of AI & blockchain into agriculture empowers farmers, secures livelihoods, and ensures transparency from seed to shelf."

Kate Kallot
CEO and Founder
Amini

Source: *Amini*

Lloyds Banking Group and Soil Association Exchange Conduct Landmark Farming Review

As the UK's biggest bank for farmers, Lloyds Banking Group partnered with Soil Association Exchange to create the most comprehensive review of UK farms' environmental performance. This resulted in the first data-set large enough to engender real change - focusing on soil health, carbon, biodiversity, animal welfare, water, and people & society.

The partnership has created a de facto standard for sustainable farming decision in the UK, encompassing:

238,494
hectares of farmland

4,000
bespoke recommendations for 685 UK farmers

Source: *Lloyd's Banking Group*

"Agriculture is a sector on which we all depend. Yet it is both a contributor to global emissions, and highly vulnerable to the consequences of a warming planet. It is in everyone's interest to solve this challenge – ensuring greater food security, a strong agricultural industry, and a more sustainable future. Through our partnership with Soil Association Exchange, we have created the largest baseline of environmental farm performance data in the UK. We want to give farmers the clear, timely information that they need to make more sustainable choices – protecting food production, the environment, and the resilience of their livelihoods."

Charlie Nunn
CEO
Lloyds Banking Group

Yara Drives Decarbonization of the Food Value Chain

In June 2024, Yara opened a 24-megawatt renewable hydrogen plant in Norway, marking a major milestone towards decarbonizing the food value chain, shipping fuel, and energy-intensive industries.

The plant replaces natural gas with water electrolysis and renewable energy. Consequently, Yara has delivered the first tonnes of lower-carbon fertilizers under the Yara Climate Choice™ portfolio, accompanied by agronomic advice and precision farming tools to increase nutrient efficiency, boost yields, and reduce crop carbon footprints for farmers and food companies.

"Lower carbon fertilizers are the biggest opportunity to reduce emissions from food production. Together with agronomic advice and precision tools, they support farmers and food companies to reduce the carbon footprint of food and improve soil health."

Svein Tore Holsether
President and CEO
Yara International

41,000
tonnes annual carbon dioxide reduction*
*once plant is fully operational

10
tonnes per day hydrogen capacity

Source: *Yara*

Visit the SMI's video content platform, RE:TV, to learn more about regenerative agriculture progress around the world

Go to the RE:TV site here →

- Decarbonizing global supply chains with regenerative agriculture ↗
- Creating nutritious new products from unwanted fresh food ↗
- How agroecology makes farming Nature positive ↗
- Promoting healthy soils and biodiversity through seaweed farming ↗

Aviation

A Vision for Sustainable Skies

Aviation has a critical yet challenging role to play in meeting global climate goals. The industry accounts for around 2.5% of global carbon dioxide (CO_2) emissions, but its total warming impact rises to approximately 4% when its non-CO_2 effects, such as contrails and nitrogen oxides, are included[12].

More than 300 airlines globally have pledged to reach net zero by 2050[13], but the path ahead is challenging. The sector faces strict safety standards, long innovation cycles, and the high cost and limited availability of low carbon solutions, such as Sustainable Aviation Fuels (SAF).

While each new generation of aircraft has improved fuel efficiency by 15-20%[14], these gains alone are not sufficient. SAFs, which are compatible with today's aircraft and infrastructure, could deliver up to 65% of the emissions cuts required for the industry to reach net zero by 2050[15]. Global SAF production jumped from 100 million litres in 2021[16] to over 1.3 billion litres in 2024[17] - an increase of over 1,150%. In the U.S., daily output grew from 2,000 in early 2024 to 30,000 barrels by year-end[18].

Despite this growth, SAF accounted for only 0.3% of global jet fuel in 2024[19]. Adoption is constrained by high costs - typically three to five times higher than conventional jet fuel - and by limited raw materials availability[20]. The rate of SAF facility announcements also fell sharply between 2022 and 2023, declining by 50% to 70%, raising concerns regarding the industry's ability to scale in line with demand[21]. To reach the International Air Transport Association's (IATA) goal of 30 billion litres of SAF annually by 2030, robust policy frameworks, greater investment incentives, and closer cooperation between governments, fuel producers, and airlines are essential.

Beyond SAF, the sector is exploring zero-emission propulsion technologies. Airbus unveiled its ZEROe hydrogen-powered aircraft concepts, aiming for commercial introduction by 2035[22], while ZeroAvia, backed by United Airlines and Airbus, has conducted hydrogen-electric test flights[23].

"The Aviation sector and IAG are committed to delivering net zero emissions by 2050 with a range of technologies including Sustainable Aviation Fuels, hydrogen powered aircraft and carbon removals and where the SMI Aviation Hub is providing a significant opportunity to support the acceleration of these solutions"

Luis Gallego
CEO
International Airlines Group

Sustainable Aviation Hub

Throughout 2024, the SMI Sustainable Aviation Hub continued to support the transition through Sustainable Aviation Fuels (SAF), Sustainable Airports, Transformative Technologies and Fuels, and Contrails Management.

In 2024, the Aviation Impact Accelerator (AIA) - a global initiative led by the Whittle Laboratory and the University of Cambridge's Institute for Sustainability Leadership (CISL) - launched its ambitious plan *'Five Years to Chart a New Future for Aviation'*. The report sets out four clear Sustainable Aviation Goals for 2030, outlining specific, actionable steps that must be initiated immediately and completed within five years if the aviation sector is to be on track to achieve net-zero by 2050.

Read the report here →

May 2024 - The SMI joined the Sustainable Skies World Summit to highlight the importance of cross-industry collaboration in achieving net zero aviation.

LanzaTech and LanzaJet are Transforming Carbon into Sustainable Aviation Fuel

LanzaTech and LanzaJet have launched CirculAir™, a new solution that turns waste, carbon, and renewable power into sustainable aviation fuel (SAF). CirculAir offers an economical and commercialized alternative to produce eFuels and recycled carbon fuels using the already ASTM-approved pathway that converts ethanol into SAF and Renewable Diesel (RD).

500,000+
metric tonnes of carbon dioxide abatement enabled by LanzaTech technology

300,000+
metric tonnes of ethanol produced

6
commercial ethanol plants operational

**all figures correct as of the end of 2024*

Source: *LanzaJet*

"Our vision is to rethink how we use and dispose of carbon. By transforming carbon waste into valuable resources, we're not just reducing emissions - we're creating circularity. Using local resources, we aim to empower countries and communities, building resilience while scaling global solutions. Together, we'll shape a cleaner, and more equitable future."

Dr Jennifer Holmgren
CEO
LanzaTech

Virgin Atlantic's Achieves First Commercial Flight Powered by 100% SAF

Virgin Atlantic's Flight100 marked a historic milestone as the first transatlantic flight powered entirely by Sustainable Aviation Fuel (SAF). The Boeing 787 flew from London Heathrow to New York JFK, showcasing SAF's potential to significantly cut carbon dioxide (CO_2) emissions, improve air quality, and reduce contrail formation. The flight also demonstrated that SAF can safely power long-haul travel without requiring any modifications to engines, aircraft, or fuel infrastructure.

64%
CO_2 emissions reduction*

95
tonnes of CO_2 saved

40%
reduction in non-CO_2 particulate emissions

Source: *Virgin Atlantic*[24]

**versus a standard flight from London Heathrow to New York JFK*

Airbus and Partners Take Inspiration from Migratory Birds to Reduce Aviation Fuel Consumption

Airbus is developing fuel-saving 'wake energy retrieval' (WER) operations through its fello'fly initiative, with flight trials planned for 2025 within the frame of the GEESE project. Inspired by birds flying in formation, GEESE, in collaboration with Air France, Delta, French Bee, and Virgin Atlantic, aims to scale WER for long-distance flights. The €10 million GEESE project, partially funded by the EU's SESAR JU, involves the ATM ecosystem to allow two aircraft flying 1.2 nautical miles apart, with the trailing jet harnessing lift from the lead aircraft's vortices to save fuel, calculated as the direct measurement of instantaneous fuel burn reduction (from 5% to 8% depending on the flight condition).

Source: *Airbus*

"Aviation drives approximately $4.1 trillion in annual economic activity and supports 86.5 million jobs worldwide. To preserve these benefits, our industry has set an ambitious goal of achieving net-zero carbon emissions by 2050, underpinned by accelerated innovation, efficiency measures and the energy transition. Decarbonization has triggered unprecedented cooperation among airlines, airports, manufacturers, energy providers, and governments around the world. The SMI Aviation Hub serves as an important platform, extending collaboration to other sectors beyond aviation, including the investor community, to deliver actionable projects and meet these ambitious targets."

Guillaume Faury
CEO
Airbus

SATAVIA Achieves Significant Reductions in Climate-Warming Contrails

SATAVIA has achieved significant reductions in climate-warming contrails during a 10-month test programme on 65 flights operated by 12 airlines, with backing from the UK and European Space Agencies.

Using its DECISIONX software, SATAVIA optimized flight routes to cut carbon dioxide equivalent (CO_2e) emissions with minimal impact on fuel consumption and flight times. Contrails, or condensation trails, form in specific meteorological conditions known as ice supersaturated regions (ISSRs). When contrails persist, they can trap heat and worsen aviation's climate impact. SATAVIA's software uses extensive atmospheric modelling data to help flight planners identify and avoid these conditions.

~2,200
tonnes of CO_2e surface warming prevented

40
tonnes of CO_2e avoided on average per optimized flight

Source: *SATAVIA*

Investcorp Corsair's $5.1 Billion Transformation of LaGuardia's Airport B Terminal Embraces Circular Principles

Through its Vantage Group holding, Investcorp Corsair spearheaded the transformation of LaGuardia Airport's Terminal B. The project embodies circular principles, for example by reusing existing materials to rebuild its parking structure and thereby reduce the environmental impact. The new terminal also features a rooftop solar hot water system, saving 78% on hot water, and has increased organic waste diversion for composting by 500% year-on-year.

90%

of existing materials used to rebuild the terminal

69,000

tonnes of building material saved

Source: *Investcorp Corsair*

RE:

Learn more about sustainable aviation initiatives around the world by visiting the SMI's video content platform, RE:TV:

Go to the RE:TV site here →

Using bacteria to create Sustainable Aviation Fuel from captured carbon ↗

Redesigning turbomachines to reduce the environmental impact of power generation and aviation ↗

Buildings

Embracing Default Sustainable

The built environment and construction sector accounts for 39% of global carbon emissions[25], with urban development growing at a rate equal to constructing a city the size of Paris every week[26]. As the global population approaches 10 billion by mid-century, the global building stock is set to double[27] - significantly increasing emissions and resource use unless major changes are made.

Historically, efforts have focused on reducing operational carbon - emissions from a building's energy use during operation. However, there is now growing emphasis on embodied carbon, which includes emissions across a building's entire lifecycle, from material extraction to demolition.

Since 2020, green building certifications like LEED have increased by 179%[28], with over 195,000 projects certified across 186 countries[29]. Compared to conventional buildings, LEED-certified structures emit 34% less carbon dioxide, use 25% less energy, and divert more than 80 million tonnes of waste from landfills[30]. Green certifications also offer financial benefits, with BREEAM-certified buildings seeing an average of 21% higher capital value[31].

The industry is also moving away from the traditional linear economy, through which over 90% of materials are lost or wasted[32], towards a circular economy that reduces raw material demand, reuses materials, and lowers costs. In contrast to the cement industry, which contributes 8% of global carbon dioxide emissions[33], alternative materials like Ferrock, made from 95% recycled content[34], and bamboo, a regenerative, fast-growing material, are gaining interest for sustainable construction. Technological innovation is also playing a key role, as smart appliances and digital technologies like artificial intelligence are optimizing energy and water use, enabling predictive maintenance, and improving overall building efficiency[35].

Despite these advancements, sustainable construction is still perceived as more expensive than traditional methods. As demand for sustainable buildings grows, there is also an urgent need to upskill the workforce in areas such as retrofitting and green certifications to ensure the industry is equipped to deliver the transition.

Sustainable Buildings Hub

In 2024, the SMI Sustainable Buildings Hub advanced its goal of delivering energy efficient buildings and reducing industry-wide emissions with the release of a key report titled *'Narrowing the Split Incentive Gap to Decarbonize the Built Environment'*. This roadmap aims to speed up the decarbonisation of buildings by tackling the issue of split incentives - where landlords or developers pay for energy efficiency upgrades, but tenants benefit through lower energy bills. Because of this mismatch, property owners often lack motivation to invest in efficiency efforts. The report offers practical examples to help both the public and private sectors address the gap and accelerate implementation efforts.

Read the full report here →

By 2030, a key ambition for the SMI is to have each of our members showcase at least one green building in their respective portfolios.

September 2024 – During New York Climate Week, Chairman and CEO of Johnson Controls, George Oliver, hosted SMI CEOs on a tour of Pfizer's office space at The Spiral in Hudson Yards. Part of the SMI's 'Seeing Is Believing' programme, the tour showcased how innovative technologies can reduce costs and emissions through connected systems and optimized energy use.

AECOM & Robertson Create a Blueprint for Zero-Carbon Communities

The SMI Buildings Hub are leading a programme to deliver a low carbon community in Newhaven, UK, by 2030 led by AECOM, Robertson and Lewes District Council (project initiator). The initial technical feasibility enjoyed great multi-stakeholder collaboration led by AECOM, Robertson & Lewes District Council working with other SMI members and local partners to identify opportunities to decarbonize buildings, industry, transport and to create and store low carbon energy locally. The study analyses clean energy solutions for both buildings and transport, including heat networks, renewable energy sources like solar and wind, microgrids, energy storage, and low-carbon heating systems. The scheme identified a number of solutions which could either be self-funded or benefit from grant schemes and these are now being progressed to the next stage.

The study emphasizes balancing energy supply and demand, reducing demand across the community, selecting suitable heat sources, managing the phasing of the demand, along with sustainable transport solutions and aligning solutions with community needs. An implementation strategy highlights partnerships, community engagement, and scalability for broader applications. The community engagement is ongoing to clarify the areas of priority for the community ensuring that they receive both low carbon infrastructure and the lowest possible energy prices.

Source: *AECOM and Robertson*

Accelerating the Transition to Clean Tech Homes

Aiming to drive greater investment in the UK's cleantech housing sector, the SMI launched a report titled *'Cleantech Homes: Lower Bills, Healthier Living'*, in collaboration with some of the UK's leading businesses and organizations, including SMI members Octopus Energy and Lloyds Banking Group, as well as Rightmove, major housing developers, registered providers, surveyors, and electricity grid firms.

The report highlights the urgent need to transition away from gas-powered homes, emphasizing the economic and environmental benefits of adopting new-build clean tech housing. It also features commitments from key market participants to accelerate this shift, underscoring their dedication to advancing sustainable and innovative housing solutions.

Source: *Sustainable Markets Initiative*

Access the full report here →

Johnson Controls Launches Circular Steel and Aluminium Programmes

Johnson Controls is partnering with Nucor Steel to recycle 100% of steel scrap from five major US manufacturing locations. Additionally, their circular aluminium programme returns all aluminium scrap to their supplier. This initiative reduces embodied carbon and enables the purchase of low-carbon steel products, thanks to Nucor's low-emission electric arc furnace technology.

Source: *Johnson Controls*

100%

of steel scrap recycled into new purchased products*

100%

of aluminium scrap returned to supplier

** from five major manufacturing locations*

"At Johnson Controls, we pride ourselves on building smarter, healthier, and more sustainable tomorrows. By tackling embodied carbon emissions in hard-to-abate sectors like steel, we are making immediate, impactful changes to save resources, energy, and emissions."

George Oliver
Retired Chairman and CEO
Johnson Controls

"We are taking bold action to decarbonize the built environment by reducing energy demand and emissions through our sophisticated thermal management systems capable of simultaneous electric heating and cooling, and enabled with digital solutions to optimize energy use. The SMI plays an important role in fostering collaboration to accelerate our shared vision for a sustainable future."

Dave Regnery
Chair and CEO
Trane Technologies

Paris 2024 Olympics Goes Green

Paris 2024 achieved its ambitious goal of reducing carbon emissions by 55% compared to London 2012 and Rio 2016. This was achieved through measures in construction, operations, and travel, including using existing or temporary infrastructure and building only two new low-carbon venues. The Games prioritized renting infrastructure, such as 200,000 stand seats, and used eco-design principles, with 40% of spectator areas built from wood. Nearly all venues were connected to the electricity grid, with 98% of energy needs met by renewable electricity from France, certified by EDF.

Source: *The Olympic Studies Centre*[36]

95%

of competition venues pre-existing or temporary

6,000

new homes created from the Olympic village infrastructure

AECOM and SMI Launch the SMI Nature Risk Tool

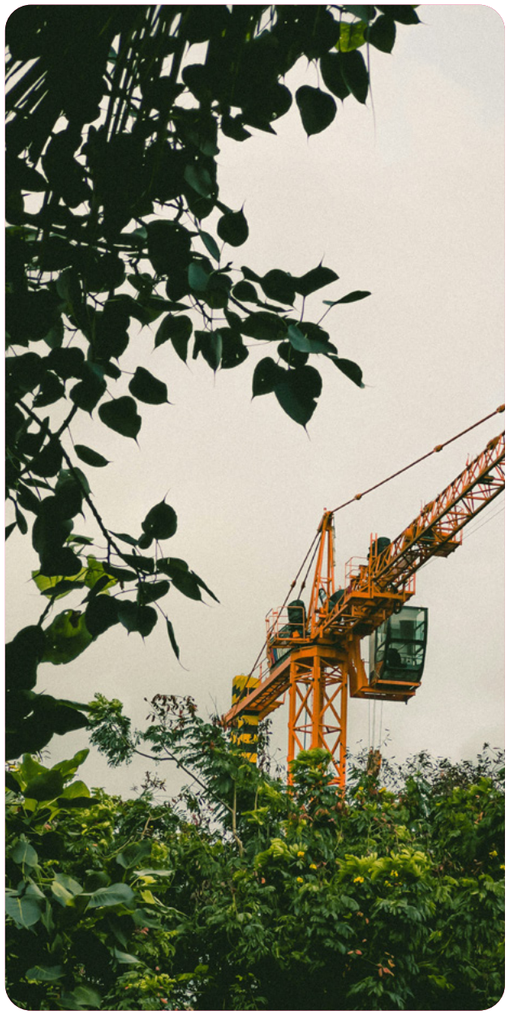
The SMI Nature Risk tool is an AI-powered solution for project investors and promoters to make early assessments on how Nature will impact or be impacted by infrastructure development. The tool processes and delivers large-scale data in a clear format, identifying issues that require attention to prevent project delays and unlock new opportunities for value creation and innovation.

Learn more about the tool →

"As the world grapples with the challenges of climate change and biodiversity loss, this tool provides a much-needed solution for making informed decisions about Nature and financial risks at the earliest stages of project development. We're proud to support SMI in developing this first-of-its-kind resource to arm users with clear, actionable insight to drive Nature-positive outcomes."

Troy Rudd
CEO
AECOM

Source: *AECOM*



RE:

Learn more about sustainable buildings and infrastructure around the world by visiting the SMI's video content platform, RE:TV

Go to the RE:TV site here →

- Using regenerative design and smart technology to turn cities into healthy ecosystems ↗
- Training fungi to consume construction waste ↗
- Re-imagining concrete through the conversion of carbon ↗
- Setting a new standard for sustainable timber construction in Sweden ↗

Energy

Clean Energy Abundance

The global energy system is rapidly transitioning to renewables, now generating over 30% of the world's electricity[37]. 2024 saw clean energy investment rise 11% to surpass $2 trillion for the first time - more than double 2020 levels[38]. The year also marked another major milestone, with clean energy investment outpacing fossil fuels at a ratio of 2:1[39].

Despite record renewables growth, fossil fuels still make up 84% of the global energy mix[40]. The latest data shows fossil fuel subsidies reached $1.1 trillion in 2023[41] - the second-highest year on record – weakening incentives for clean energy and slowing the pace of transition.

Clean energy investment also remains uneven across regions, with 85% of funding since 2020 concentrated in advanced economies and China[42]. China continues to lead in renewables, housing nearly 50% of all operational solar and wind capacity[43] and is expected to account for 60% of global renewable installations through 2030[44].

In contrast, emerging and developing economies (excluding China) have received less than 15% of clean energy investment since 2020[45], despite being home to two-thirds of the global population.

While solar and wind dominate today, momentum is building around fusion energy. There are over 50 fusion startups worldwide, and private investment in fusion exceeded a cumulative $7 billion in 2024[46], up from $1.8 billion in 2021[47]. The world's first commercial fusion plant is also set to break ground in Virginia, U.S., aiming to provide clean power by the early 2030s[48]. China is leading fusion research and investing up to $1.5 billion annually - more than any other country[49]. Notably, China recently achieved a 1066-second sustained fusion reaction at temperatures hotter than the sun, more than doubling its previous record of 403 seconds[50].

To keep a 1.5°C scenario in reach, global renewable capacity must triple and energy efficiency double by 2030[51] - requiring $12 trillion in total, or $2 trillion annually from 2024[52]. With current plans set to deliver $6.6 trillion, a $5 trillion shortfall remains, while $6 trillion is still allocated to fossil fuels[53]. Redirecting this funding towards clean energy is critical, particularly in emerging and developing economies projected to drive 85% of demand growth by 2027[54].

Energy Transition Hub

Recognizing that transition energy solutions will vary around the world, in early 2024, the SMI's Energy Task Forces were restructured into a single Energy Transition Hub. Here, the diverse range of energy technologies and solutions come together to accelerate the transition including: Renewable Generation (Solar and Wind); Small Modular Reactors; Grids and Batteries/ Storage, Hydrogen; Carbon Removals; Mining; Oil and Gas; Hydropower; Geothermal; Bioenergy; and Fusion. The central goal of the Energy Transition Hub is to accelerate systems-level change, with a focus on: emissions reduction; increasing renewable energy share; enhancing energy efficiency; phasing out fossil fuels; and, ensuring universal access to clean energy.

April 2024 - At the G7 Ministers' Meeting on Climate, Energy, and Environment in Italy, SMI participated in a roundtable, hosted by Zhero, exploring how G7 nations and emerging countries can collaborate to promote the development of electric interconnectors and e-fuels production, particularly between North Africa and Europe.

"Launching the SMI Africa Council's first-ever Energy Entrepreneurship Competition has been an incredible honour. Entrepreneurs are the driving force behind Africa's sustainable future and through this initiative we've seen so many talented innovators. We're looking forward to working with these visionary businesses as they unlock access to affordable and clean energy to transform their communities."

Zoisa North-Bond
CEO
Octopus Energy Generation

Learn more about the Energy Entrepreneurship Competition

Visit the competition site here →

Constellation and Microsoft Partner to Support a 100% Carbon-Free Data Centre

Constellation, the largest producer of clean energy in the U.S., has partnered with Microsoft to reduce the carbon footprint of its data centre in Boydton, Virginia. The centre will now be powered by up to 35% nuclear energy, complementing Microsoft's investments in wind and solar, aiming for nearly 100% carbon-free electricity. Using Constellation's hourly carbon-free energy matching platform, Microsoft will track performance in real-time, ensuring sustainable and accurately accounted energy use.

Source: *Constellation Energy*[55]

Carbon Clean, ADNOC and Fertiglobe Reach Milestone in Carbon Capture

Carbon Clean, in collaboration with ADNOC and Fertiglobe, has reached 3,000 operating hours for the world's first modular CycloneCC unit at Fertiglobe's nitrogen fertilizer plant in Abu Dhabi. The unit captures carbon dioxide (CO_2) from a reformer flue gas stack for use in Fertiglobe's urea production, continuously operating and meeting CO_2 purity requirements. Installed in under a week, this mobile unit sets a record in the carbon capture sector and offers valuable insights for designing a demonstration-scale unit.

Source: *Carbon Clean*

"Our collaboration with ADNOC and Fertiglobe for this first-of-a-kind project is a major step towards CycloneCC's full commercialization, so it can be deployed at scale globally. Installing a carbon capture plant in under a week is a feat never achieved before, and we're excited to deliver this industry first."

Aniruddha Sharma
Chair and CEO
Carbon Clean

UK's Last Coal Power Station Closes and Successfully Transitions Workforce

In September 2024, the UK became the first G7 nation to phase out coal power by decommissioning its last coal power station, Ratcliffe-on-Soar. Uniper, the plant's owner, collaborated with unions to support workers through job transfers, external employment opportunities, training, and enhanced redundancy packages. This move demonstrates that with careful planning, workers in traditional energy sectors can successfully be redeployed into alternative roles.

Source: *Business Green*[56]

154
workers successfully redeployed into new employment

Pattern Begins Constructing Largest Clean Energy Infrastructure Project in U.S. History

Pattern Energy has secured $11 billion in financing and begun construction on the SunZia Transmission and SunZia Wind projects, the largest clean energy infrastructure project in US history. The 550-mile SunZia Transmission line, spanning from central New Mexico to south-central Arizona, will deliver clean, reliable and affordable power from the 3,515-megawatt SunZia Wind facility across Western U.S. states.

"SunZia Wind and Transmission stands as a testament to the power of community engagement and lasting partnerships with our stakeholders, which are the key drivers of the progress and success of this flagship project."

Kristina Lund
President
Pattern Energy

3 million
North American citizens to gain access to clean power

$20 billion
in expected economic impacts

Source: *Pattern Energy*

"The SMI is an important business collaboration mechanism in global climate and environmental governance, playing an instrumental role in advancing global sustainable development. The SMI China Council will support the Chinese business community in fostering synergies with global business leaders and supporting China's contribution to a fair and equitable system of global climate governance for win-win cooperation."

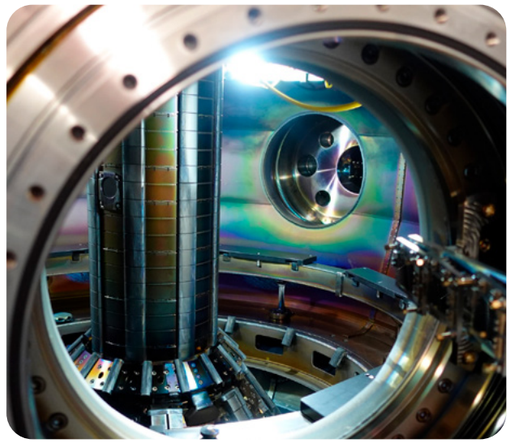
Mr. Yu Jianlong
Vice Chairman of China Council for the Promotion of International Trade (CCPIT) and China Chamber of International Commerce (CCOIC)
Chair of SMI China Council

"The SMI and its members are playing a key role in innovating, accelerating and delivering a sustainable future through real results and tangible action. As a global clean energy leader with ambitions to reach 100GW of capacity by 2030, Masdar is proud to be a member of the SMI, working to advance its critical mission and build a more sustainable future for Nature, people, and planet."

Mohamed Jameel Al Ramahi
CEO
Masdar

Tokamak Energy Partners with U.S. And U.K. Governments to Accelerate Fusion Development

Tokamak Energy has partnered with the US Department of Energy (DOE) and UK Department for Energy Security and Net Zero (DESNZ) to advance crucial technologies for future fusion power plants through a $52 million upgrade of its record-breaking ST40 spherical tokamak. The initiative will focus on using lithium as a plasma facing material to improve performance and advance designs for its fusion pilot plant, which will demonstrate net power by the mid-2030s. This pioneering research is key to driving the innovation needed to achieve fusion and deliver clean, limitless, affordable energy all over the world.



85 megawatts

net electricity pilot plant in design as part of DOE Milestone-Based Fusion Development Programme

Equivalent to

70,000

homes provided with clean power and heat

Source: *Tokamak Energy*

"Tokamak Energy's mission is to deliver limitless, clean fusion energy. This ground-breaking new programme with the US and UK governments will advance fusion science and technology in pursuit of our common goal of fusion for all."

Warwick Matthews
CEO
Tokamak Energy

"SMI brings businesses together to drive sustainability around the world, led by the private sector but able to work with governments to deliver results. The Energy Hub has worked on everything from expansion of clean tech homes to Africa's energy revolution, and we're deeply committed to keep helping with Octopus' vision and breadth of global expertise."

Greg Jackson
Founder and CEO
Octopus Energy

"Global trade, global investment and the global economy are all based on confidence. We have the technology, and we have the capital to decarbonize – what we need is the leadership to get it done. If we can make mining, steel and shipping go green this decade, we're living a worthy life as leaders."

Dr Andrew Forrest
Executive Chairman and Founder
Fortescue

Climeworks Launches World's Largest Direct Air Capture Facility

The IPCC emphasizes that limiting global warming to 1.5°C requires both drastic emissions reductions and active carbon dioxide removal from the atmosphere.

In 2024, Climeworks launched Mammoth, its second Direct Air Capture plant, advancing high-quality carbon removal to support global net-zero targets. As the world's largest Direct Air Capture facility, Mammoth is designed to capture up to 36,000 tonnes of CO_2 annually, powered exclusively by renewable energy.

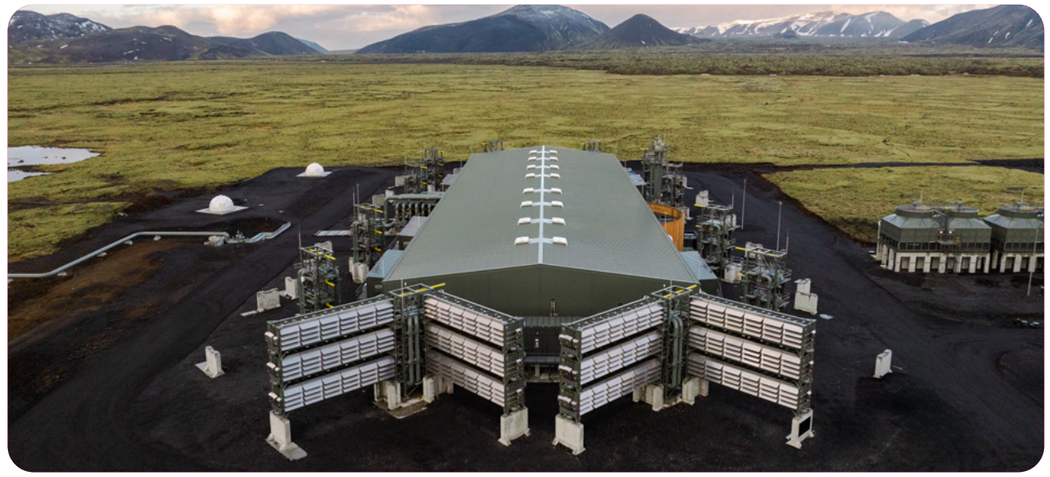
36,000

tonnes annual carbon dioxide capture capacity

Source: *Climeworks*

"Climeworks has always been committed to technology leadership. By blending cutting-edge R&D and on-the-ground experience, Climeworks has built more Direct Air Capture plants than any other company and we're focused on scaling the technology by driving down costs and pushing innovation. Our plants Orca and Mammoth represent just the beginning of a future trillion-dollar carbon removal industry."

Dr. Jan Wurzbacher
Co-founder and Co-CEO
Climeworks



RE:

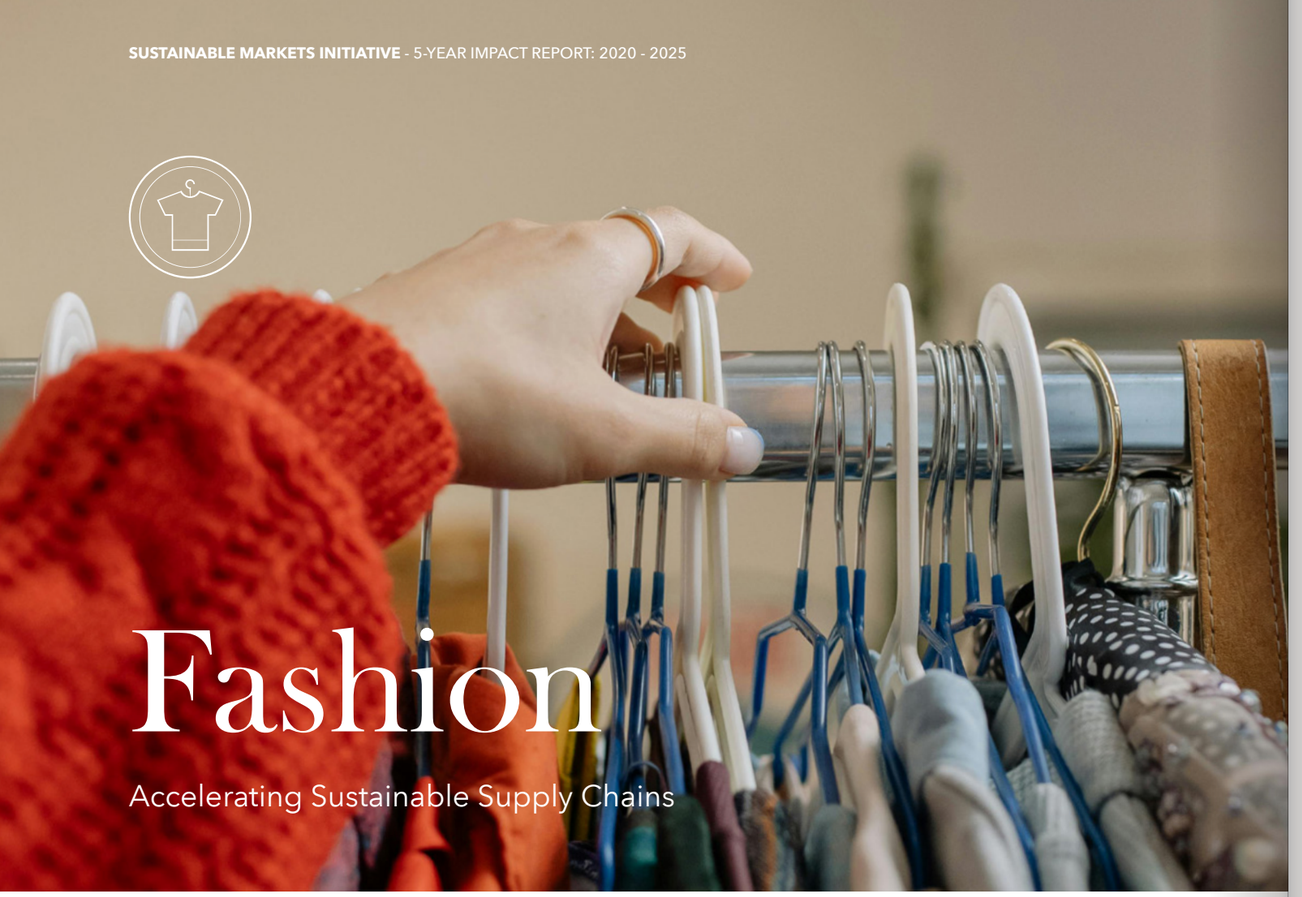
Learn more about enery transition progress around the world by visiting the SMI's video content platform, RE:TV

Go to the RE:TV site here →

Realising fusion's potential ↗

How green ammonia is helping to drive the hydrogen transition ↗

Geothermal technology with a key part to play in the clean energy transition ↗



Fashion

Accelerating Sustainable Supply Chains

The global fashion industry produces over 100 billion garments annually[57], fuelling a high-turnover culture where items are worn an average of only seven times before being discarded. This model contributes to 10% of global carbon dioxide (CO_2) emissions, 20% of global wastewater, and a fifth of the world's plastic waste[58]. In response, the private sector is shifting towards circular and sustainable practices across the value chain.

Since 2020, major private sector developments include the rise of second-hand and resale markets, now adopted by mainstream retailers through branded platforms. For certain categories like premium and outdoor apparel, resale could cut annual carbon emissions by up to 16% by 2040[59]. Clothing rental services are also scaling, with a single rental reducing water use by 24%, energy by 6%, and CO_2 emissions by 3% compared to buying new[60].

Brands are increasingly embedding circularity into their operations through repair services and take-back schemes. Studies show that five clothing repairs can offset the need to purchase four new garments[61], and take-back initiatives encourage resale, repurposing, and recycling, diverting waste from landfills. Yet, only 50% of used clothing is collected for reuse or recycling, and a mere 1% is recycled into new apparel[62], highlighting a critical infrastructure gap.

To address traceability and consumer engagement, fashion houses - particularly in the luxury segment - are rolling out Digital Product Passports (DPPs), enabling access to information on materials, carbon footprint, and disposal options. DPPs support both customer awareness and brand accountability. Concurrently, 86% of the top 60 global luxury brands are now investing in regenerative agriculture to reduce upstream emissions in raw material sourcing[63].

"The Fashion Task Force has successfully implemented two major regenerative agriculture projects worth several million euros in just a couple of years, progressing from the initial idea to the first harvest and finally to finished products in boutiques. This marks a true revolution for the fashion industry."

Federico Marchetti
Tech Entrepreneur
Chair of SMI Fashion Task Force

Fashion Task Force

In 2024, the SMI Fashion Task Force continued supporting local communities in Ladakh, India, through the Himalayan Regenerative Fashion Living Lab. Following progress from the previous year to implement agrosilvo-pastoral systems, create water retention structures, and conduct training workshops with the Changpa community, a milestone was reached in 2024 with the first shipment of 200kg of pashmina to Brunello Cucinelli headquarters, resulting in the first handcrafted item from the project's first harvest of pashmina.

The Armani Group's Apulia Regenerative Cotton project in Italy was launched in June 2023 and further expanded in 2024. The area under cultivation increased from one to three hectares, with poplar and pomegranate trees growing alongside peach trees and with cotton. The project aims to develop sustainable agroforestry-based cotton production that enhances landscape diversity, water, and soil quality as well as biodiversity. Production of the first finished item, a blue T-shirt with a QR code for full traceability using a Digital Product Passport, began in 2024.

Progress also continued on the Digital Product Passport (DPP) rollout, which aims to increase product traceability across the value chain. Brands working on the DPP implementation include: Chloé, Brunello Cucinelli, Giorgio Armani, Gabriela Hearst, Dries van Noten (Puig Group), Prada and Miu Miu.

Local communities in Ladakh, India, supported by the Himalayan Regenerative Fashion Living Lab

The Armani Group's Regenerative Cotton Project in Italy
Image credits: Gaetano Alfano/EFI

Stella McCartney Pioneers in Sustainable Materials Innovation

At their Summer 2024 runway show, Stella McCartney introduced Kelsun™, a new seaweed-based fabric by Keel Labs. Kelsun™ is a 100% bio-based, biodegradable material made from alginate, an abundant seaweed biopolymer, offering a lower environmental footprint than conventional fibres and is free from petrochemicals.

100%
fewer pesticides used versus traditional cotton

70%
less water required versus traditional cotton

100%
biodegradable at its end of life

Source: *Stella McCartney*[64]

Pandora Shifts to 100% Recycled Metals

Pandora, the world's top jeweller by product volume, now uses only recycled silver and gold in its products. Aiming to reduce reliance on mined materials, Pandora also uses synthetic diamonds and lab-created gemstones, investing $10 million into this strategy and absorbing the costs to maintain stable prices for customers.

58,000
tonnes of annual indirect carbon dioxide emissions cut through adoption of recycled materials

Equivalent to:
Annual power consumption of 11,000 households
Annual emissions of 6,000 cars

Source: *Pandora*[65]

Spain's Top Fashion Retailers Launch Textile Waste Pilot

Ten of Spain's major fashion retailers, including Zara, Mango, H&M, Decathlon, and Primark, are testing the country's first textile waste collection programme called RE-VISTE.

This initiative aims to collect and manage discarded clothing ahead of new EU regulations set for 2026. The retailers will place containers throughout Spain to separate textiles and shoes from other waste, with a goal of increasing the current 12% separation rate and promoting more recycling and reuse of clothing. The companies will cover the management costs during the one-year trial. At the end of the trial, they plan to create a guide with best practices to help local authorities implement effective textile collection in their areas.

6
municipalities covered

300,000
citizens participating

Source: *Mango Fashion Group*[66]

Explore more sustainable fashion initiatives around the world by visiting the SMI's video content platform, RE:TV

Go to the RE:TV site here →

- Transforming textiles to create a regenerative industry ↗
- Designing sustainable supply chains for fully circular textiles ↗
- Growing materials from mycelium ↗
- How solar-powered silk-reeling machines transform the lives of India's rural workers ↗

Financial Services

From Billions to Trillions

Global climate finance has demonstrated remarkable growth, with investments nearly doubling since 2020 to surpass $1.5 trillion in 2023[67]. At the centre of this progress is the private sector.

Clean energy and transport, sectors where private investment leads, are drawing the majority of investment[68], proving the market's ability to drive large-scale decarbonization. In 2024 alone, a record $2 trillion was invested in clean energy, twice as much as was spent on fossil fuels[69]. This success represents a clear opportunity to expand this momentum into underfunded sectors such as agriculture and industry, which currently receive less than 4% of total mitigation-related climate finance[70].

The majority of current climate finance remains concentrated in developed economies[71]. Concurrently, less than 2% of total climate finance has reached the ten countries most vulnerable to climate change[72], highlighting the need for innovative, risk-sharing solutions to unlock capital in emerging markets and developing economies.

Meanwhile, sustainable finance tools are gaining ground. Green bonds, ESG funds, and other instruments are bringing climate into the financial mainstream. Sustainable funds now manage $3.5 trillion - around 7% of all assets – and have delivered better median returns (1.7%) than traditional funds (1.1%)[73]. The sustainable bond market reached $5.7 trillion in 2024, making up 14% of the global bond market, with green bonds comprising 57% of total sustainable issuance[74]. China is leading these efforts as the largest green bond market in the world by annual issuance volume[75].

Nature financing has grown elevenfold since 2020, from $9.4 billion to over $102 billion[76], but is still largely reliant on public funding. Private finance is crucial to meet the $200 billion annual target for biodiversity by 2030[77]. Tools like debt-for-Nature swaps are gaining traction, with a record $2.6 billion in deals completed in Q4 2024 alone - more than double the total from 2021 to 2023 combined.

The private sector has a vital role to play in mobilizing capital for the transition. The resources exist – what is required now is leadership to turn ambition into real-world action.

"The Sustainable Markets Initiative mobilises members from across financial services to drive the collective effort needed to deliver a transition that is inclusive, resilient, and economically sound."

C.S. Venkatakrishnan
CEO, Barclays
Chair of SMI Financial Services Task Force

Asset Managers and Asset Owners Task Force

In 2024, the Asset Managers and Asset Owners (AMAO) Task Force collaborated with GFANZ and the Institutional Investor Group on Climate Change (IIGCC) as part of an Advisory Group with the Climate Bonds Initiative (funded by Climate Arc) to develop a practical methodology for allocating corporate investment in investment portfolios to appropriate categories of transition, which published in May 2024. This builds on the creation of the *'Transition Categorization Framework'*, launched in January 2023.

Read the methodology →

In partnership with the SMI's Agriculture Hub and Financial Services Task Force, the AMAO Task Force has developed a report and model intended to help mobilize institutional capital to provide necessary large-scale financing to farmers. This proposed financing structure is to be developed and tested in conjunction with local government, banks, multilateral development banks (MDBs) and insurers.

Read the full report →

The AMAO Task Force also interviewed a dozen Chief Investment Officers to produce a Lessons Learnt document which outlines how asset owners integrate climate risks and opportunities into their investment decisions.

Access the full report →

"We must finance the reduction of carbon by directing capital to high-emitting regions and sectors where real-world change is needed. Institutional investors' investment in emerging markets has been largely focused on public listed equities and sovereign debt. However, much of the investment in the energy transition – particularly in middle-income emerging markets – is required in private equity, private debt, project debt, and corporate debt. Ninety One's Emerging Market Transition Debt strategy is a mechanism to allocate capital to the emerging market energy transition and catalyze further investment. We believe this is a crucial opportunity to have significant real-world impact for both climate and development goals. A successful global energy transition is not possible without a successful emerging markets transition."

Hendrik du Toit
CEO
Ninety One

"Africa's green industrial age is becoming an investment reality. The SMI Africa Council is making development investable—establishing the continent as a global hub for green manufacturing and integrating natural capital into national balance sheets. By aligning institutional investor-public partnerships with the Nairobi Declaration (Africa's green investment deal), we are establishing African green industrial infrastructure as a globally competitive, investable asset class that delivers sustainable value for Africa, the world, and investors."

Dr. Hubert Danso
CEO and Chairman, Africa Investor;
Co-Chair of SMI's Africa Council

September 2024 - As part of the Sustainable Markets Initiative 'Seeing is Believing' programme, CEOs toured the New York Stock Exchange, attending the Opening Bell Ceremony and experienced a curated tour of NYSE Trading Floor and historic venue.

State Street Global Advisors Launch Climate Transition Equity Fund

State Street Global Advisors, the asset management business of State Street Corporation, has launched the State Street Global Climate Transition Equity Fund, an SFDR Article 8 fund investing in a concentrated portfolio of companies designed to capitalize on an anticipated transition to a low carbon economy.

Designed for investors seeking to integrate climate considerations while generating alpha, the fund holds 30-40 companies selected based on their transition planning and commitment to emissions reduction. The fund will be available in Austria, France, Finland, Germany, Ireland, Italy, Luxembourg, Netherlands, Sweden, the UK, and Spain.

Source: *State Street*

"As one of the world's largest investment servicers and managers, our success is dependent on the success of our clients, employees, investors, and communities. Supporting stakeholders and the industry at large for over 230 years, we view sustainability through the lens of creating and preserving long-term value - guided by our purpose: to help create better outcomes for the world's investors and the people they serve."

Ron O'Hanley
Chairman and CEO
State Street

Climate Asset Management Raises Over $1 Billion For Natural Capital Projects

Climate Asset Management, a joint venture between HSBC Asset Management and Pollination, has raised over $1 billion for natural capital projects. A significant proportion has been deployed into projects that aim to improve more than two million hectares of landscapes globally, including the transformation of a 1,800 hectare sugar cane farm in Queensland into one of the world's largest sustainable Macadamia orchards. The project will focus on restoring native species, improving soil health, and boosting biodiversity.

50%
target reduction of chemical input use versus industry standard

10%
of land area dedicated to natural habitat restoration and conservation

Source: *Climate Asset Management*

Blended Finance Hub

In 2024, the SMI Blended Finance Hub reached a significant milestone with the publication of *'Best Practices in Blended Finance: Case Studies and Lessons Learned'*. The document is a key resource for investors and policymakers looking to accelerate their sustainable investments through blended finance. By sharing these success stories, the Hub seeks to inspire broader adoption of best practices in this field to maximize benefits for communities and the environment. Co-launched with the Investor Leadership Network, the publication features 13 case studies of successful funds and 3 spotlights on critical enablers. It highlights best practices and provides templates to speed up the design and deployment of future projects.

Read the Blended Finance Playbook →

October 2024 – SMI CEO Jennifer Jordan Saifi M.V.O participated in a leader's dialogue roundtable at the Berlin Global Dialogue titled: *The Road to Baku and Belém: Mobilizing Private Sector Capital Towards Climate Goals.*

"As illustrated by the set of best practice case studies the Blended Finance Hub published this past September, blended finance is becoming mainstream with many large financial institutions launching their own funds and vehicles. But each of these has been designed and built from scratch. The Blended Finance Hub is working towards the standardization of such vehicles and the development of derisking tools with a view to help scale the mobilization the private capital required to attain the Sustainable Development Goals and the objectives of the Paris Agreement."

Marc-André Blanchard
Former Executive Vice-President and Head of CDPQ Global
Former Chair of SMI Blended Finance Hub

BlackRock and MAS Lead Decarbonization Investment in Asia

BlackRock and the Monetary Authority of Singapore (MAS) are leading a collaboration with IFC, MUFY, NEXTI, and AIA to explore a blended finance debt initiative for global investors. Announced at COP29, this initiative aims to support the financing of large-scale decarbonization projects in Southeast Asia. It builds on BlackRock's success with blended finance partnerships in Emerging Markets, such as the Climate Finance Partnership (CFP) and the Insurance Development Forum (IDF) Blueprint for Blended EM Infrastructure Debt.

Source: *BlackRock*

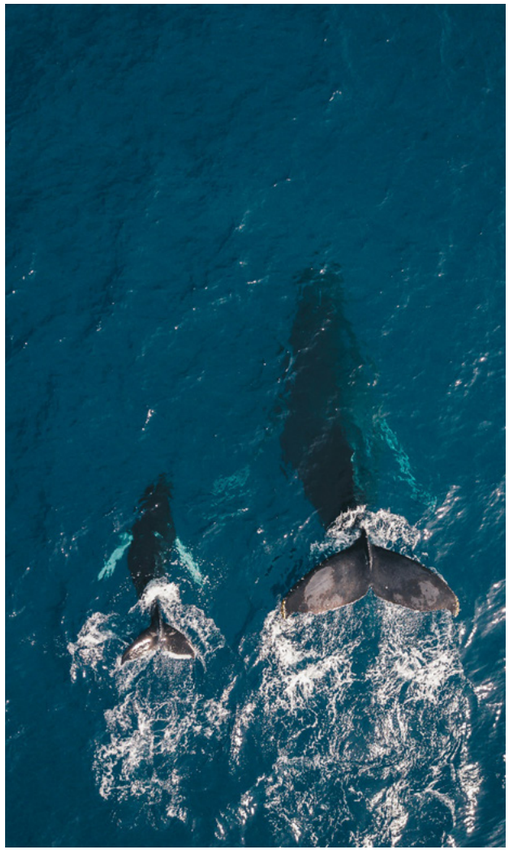
EY collaborates with Nature Positive Initiative as it launches a global pilot of draft 'State of Nature' metrics

EY is collaborating with Nature Positive Initiative (NPI) and the Biodiversity Consultancy in launching a global pilot of its 'State of Nature' metrics, which provide a standardized way of measuring progress towards the goal of halting and reversing nature loss by 2030. The pilot follows a consultation period which involved 700 individuals worldwide, and will see over 30 companies and financial institutions apply the metrics, which EY helped to design, in real world scenarios.

The metrics have been designed with leading standard setters such as GRI, TNFD, and SBTN to be integrated seamlessly within their respective frameworks. This effort has involved the 27 Nature Positive Initiative members, including major conservation organizations like WWF, GRI, the Nature Conservancy and IUCN, backing the metrics with comprehensive expertise and support.

The first phase of the process to build consensus around terrestrial State of Nature metrics was kicked off by the Nature Positive Initiative in May 2024 and culminated in the launch of the public consultation at the Nature Positive Summit in Australia and CBD COP16 in Cali. The final set of metrics is expected to be ready for adoption in 2026.

Source: *EY; Nature Positive Initiative; The Biodiversity Consultancy*



Financial Services Task Force

In 2024, the SMI Financial Services Task Force (FSTF) has focused on unlocking private capital and scaling finance for transition and for Nature.

In 2024, this included country engagement on National Biodiversity Strategies and Action Plans (NBSAPs). In partnership with UN-WCMC, the FSTF published three country fact sheets at CBD COP16, calling for regulatory and policy mechanisms that can support the flow of private capital towards Nature-positive activities.

The Environmental Crimes Financial Toolkit was launched as an open-source, on-line resource at COP16 in October. Developed by WWF and Themis, and funded by HSBC, the Environmental Crimes Financial Toolkit equips financial institutions to better understand and mitigate illicit activity related to land conversion and deforestation, highlighting red flags and risks connected with different types of environmental and financial crimes.

Access the toolkit →

Bank of America and Harvestone Low Carbon Partners ("HLCP") Close Landmark $205 Million Carbon Capture & Sequestration Financing

In 2022, U.S. Senator Kevin Cramer from North Dakota and Bank of America CEO Brian Moynihan discussed the future of energy at the Sustainable Markets Initiative CEO Summit in New York City.

In 2024, Bank of America working with HLCP, closed a first-of-its kind, $205 million tax equity financing transaction supporting a carbon capture and sequestration ("CCS") project at HLCP's wholly owned subsidiary, Blue Flint Ethanol and associated Blue Flint companies (BFE), located near Underwood, North Dakota. This transaction is the first CCS transaction following the August 2022 passage of the Inflation Reduction Act.

200,000

metric tonnes of expected annual carbon dioxide capture

Equivalent to: Emissions of approximately 42,000 vehicles

Source: *Bank of America*

BNP Paribas Accelerates Shift to Low Carbon Energies

In 2024, BNP Paribas continues reinforcing its financing to low-carbon energies, strengthening its stance on reducing oil and gas financing and advancing key low-carbon energy targets. The Group aims for 90% of its energy production financing to be low-carbon by 2030, with 65% already focused on low-carbon energies at the end of September 2023, marking a significant departure from its historical portfolio.

"Our impact is strongest when we're playing the role of catalyst and accelerator for the energy transition of our corporate and individual customers. We're stepping up action on this front, alongside our clients from all sectors, to support the immense and essential transformation that the entire economy must make, while doing our utmost to contribute to a just transition."

Jean-Laurent Bonnafé
Director and CEO
BNP Paribas

€32 billion

currently allocated to low-carbon energy production at end of September 2023

+14% increase

in the credit exposure compared to end of September 2022

Source: *BNP Paribas*

Emirates NBD Pioneers Global Sustainability-Linked Loan Financing Bond

In November 2024, Emirates NBD issued a $500 million Sustainability-Linked Loan Financing Bond, the first globally to fully align with the new ICMA/LMA framework. Nearly four times oversubscribed, it achieved the tightest spread for a senior unsecured bond issued by a regional financial institution in 2024, reflecting strong ESG-focused investor demand. This landmark issuance will finance and refinance Sustainability-Linked Loans, supporting Emirates NBD's goals in climate change mitigation, diversity, and inclusion. By setting a global benchmark, the bond underscores Emirates NBD's commitment to sustainable finance and leadership in environmental and social progress.

Source: *Emirates NBD*

"Emirates NBD is proud to issue the world's first Sustainability-Linked Loan Financing Bond, fully aligned with the new ICMA/LMA framework. This milestone improves the calibre of our sustainability loans, creates new funding opportunities, and directly links our sustainable financing efforts to our funding strategy. It reinforces our commitment to driving meaningful impact and setting a higher standard for the industry."

Shayne Nelson
Group CEO
Emirates NBD

Barclays Boosts Green Hydrogen Innovation with Geopura

Climate tech is essential for decarbonizing the economy, but a financing gap prevents high growth companies scaling. Barclays' work with GeoPura, a green hydrogen power firm, demonstrates how public finance can be leveraged to boost capital flow into innovative technologies. Barclays invested in GeoPura, acted as financial advisor to support raising capital from the UK Infrastructure Bank and mobilized capital from other investors. This will increase the manufacture and supply of GeoPura's hydrogen power units.

£30 million

commitment raised from the UK Infrastructure Bank

Source: *Barclays*

Octopus Energy and Perenna Offer World-First 'Zero Bills' Mortgage

Octopus' *'Zero Bills'* initiative allows customers to move into homes equipped with green energy technology, eliminating energy bills for at least ten years. Perenna is the first bank to factor this initiative into its affordability calculations, offering a 'Zero Bills Mortgage' with a lower rate that provides potential homeowners with greater purchasing power and reduces barriers to buying sustainable homes.

Source: *Octupus Energy*

100,000

'Zero Bills' homes globally by 2030

1,200

'Zero Bills' homes already built, in construction, or accredited

Insurance Task Force

The SMI Insurance Task Force (ITF), chaired by Lloyd's, brings together leaders from several of the world's largest and most influential global insurance and brokerage firms. Together, the ITF addresses climate resilience and works to develop innovative insurance solutions that can help businesses and governments respond to the impacts of a changing climate. In 2024, the ITF successfully ran its second cohort of the Global Risk and Resilience Fellowship, an initiative which seconds insurance professionals into city leadership teams around the world to help enhance urban resilience.

Aon Provides Groundbreaking Insurance for IFRC's Disaster Response Fund

The International Federation of Red Cross and Red Crescent Societies' (IFRC) Disaster Response Emergency Fund (DREF) provides vital funding when disasters strike – especially smaller-scale emergencies that may not attract global attention.

Previously, the fund could deplete before year-end, leading the IFRC to secure a groundbreaking indemnity insurance policy with Aon and reinsurers. In September 2024, the insurance payout was triggered for the first time as disaster relief demands exceeded the deductible threshold, ensuring up to $16.9 million in coverage for the rest of the year.

Image credits: International Federation of Red Cross and Red Crescent Societies

"At Aon, we believe funding should not stop emergency aid. The IFRC-DREF insurance policy shows that the private sector can do more to support humanitarian organizations and our world's most vulnerable populations."

Eric Andersen
Former President
Aon

30

funding allocations/ operations supported by IFRC-DREF in 2024*

Equal to:

$15 million in disaster response costs covered by the insurance policy

1.52 million disaster victims supported by the insurance policy

**as of December 2024*
Source: *Aon*

Lloyd's Launches a Global Disaster Resilience Vehicle to Deliver Disaster Risk Financing to SIDS

In partnership with the United Nations Capital Development Fund (UNCDF) and Aon, Lloyd's has launched a disaster resilience vehicle to provide disaster risk financing to Small Island Developing States (SIDS) in the Pacific. Supported by Lloyd's Disaster Risk Facility, the Global Disaster Resilience Vehicle will enhance recovery and resilience, utilizing the global reinsurance market as a capacity provider. The vehicle will leverage donor funds and local networks to deliver exposure-based payments directly to climate-vulnerable communities, supporting the Insurance Task Force's commitment at COP26 to build resilience in climate-vulnerable countries. Initially covering Fiji, Papua New Guinea, and Samoa, the vehicle will respond to natural disasters like cyclones, earthquakes, tsunamis, and floods, with long-term plans to expand to other regions.

Up to 100%

compensation per event

Source: *Lloyd's*

"2024 was the warmest year on record, with climate-related disasters escalating globally. It is against this troubling backdrop that the work of the Insurance Task Force - to drive risk mitigation, adaption, and recovery from the impacts of climate change - is more critical than ever."

John Neal
Former CEO
Lloyd's

Legal Task Force

Since forming in March 2023, the Legal Task Force has developed an exciting portfolio of projects and workstreams focused on how law can support transition efforts.

A key example is the April 2024 launch of the SMI Climate Training Course for Government Officials, pioneered by DLA Piper, designed to support government officials in reaching their Nationally Determined Contribution (NDC) targets. The free-to-access programme has attracted over 850 participants from over 90 countries on topics such as energy transition, carbon markets and biodiversity, earning the *'ESG Initiative of the Year'* award at the African Legal Awards 2024.

Visit the learning platform →

The Legal Task Force also focuses on cross-collaboration across the SMI's finance, industry and country efforts. Member firms advise on regulatory landscapes, climate -aligned contracting, governance best practices, incentives, and more, helping companies collaborate effectively and safely. The Legal Task Force also partners with the Africa Council on initiatives like integrating Nature onto the balance sheet, establishing green industrial cities, and developing an innovative sovereign impact fund.

"Convening top organizations from industry and the legal services, alongside government, is the key to unlocking delivery of a sustainable transition. This training course is a powerful example of how industry and governments can work together to deliver a better future for all."

JP Douglas-Henry
Managing Director for Sustainability and Resilience
DLA Piper

Private Equity Task Force

In 2024, the Private Equity Task Force continued supporting firms to improve the sustainability of portfolio investments.

A key achievement was the release of the Private Markets Decarbonization Roadmap (PMDR) 2.0, in partnership with Initiative Climate International (iCI) and Bain & Company. This updated version, launched a year after the initial roadmap, incorporates insights and feedback from over 40 adopters and industry stakeholders, while maintaining the core framework. The PMDR provides a common language for firms to accelerate progress on disclosing and reducing greenhouse gas emissions.

Learn about the PMDR roadmap →

"The SMI has an extraordinary collective reach, and by bringing together CEOs from right across the private sector, it is able to act decisively and facilitate the transition to a more sustainable future."

James Brocklebank
Managing Partner and Co-Chair of Advent International's Global Executive Committee
Chair of SMI Private Equity Task Force

"The complex challenges that we face today can only be confronted by the private sector through dialogue and leadership. The CEO Task Forces of the SMI provide a unique forum for this, with the common objective to accelerate sustainable solutions and innovation."

Peter Wilson
Managing Director
HarbourVest Partners

RE:

Explore more sustainable finance initiatives by visiting the SMI's video content platform, RE:TV

Go to the RE:TV site here →

Restoring wetlands through investment in natural capital ↗

Encouraging investment in indigenous restoration projects in Australia ↗

Health Systems

Building the Future of Sustainable Healthcare

Climate change is the biggest health threat of the 21st century, projected to cost healthcare systems an additional $1.1 trillion by 2050[78]. Rising temperatures are driving disease, food insecurity, and pollution-related deaths, straining systems already burdened by the impacts of COVID-19.

At the same time, the healthcare industry itself contributes nearly 5% of global greenhouse gas emissions[79]. To address this, the private sector is leading much of the innovation, resilience, and progress toward decarbonising global healthcare systems.

Pharmaceutical and life sciences companies are leading sustainability efforts, with many aiming to cut emissions by 30% or more by 2030[80]. As AI and robotic technologies enhance patient care but raise energy use[81], firms are responding by investing in renewables, energy-efficient equipment, and smart infrastructure. Meanwhile, digital health tools like telemedicine are reducing emissions from travel and improving patient access and convenience[82].

Pharmaceutical companies are increasingly embracing sustainable production by adopting green chemistry and cleaner manufacturing to reduce their environmental footprint. A key innovation is the development of next generation propellants, which deliver the same therapeutic benefits as traditional versions but with a 99.9% lower global warming potential[83] - a major advancement in low-carbon respiratory care.

In parallel, the industry is moving toward circular economy principles, addressing the environmental impact of single-use medical products, which account for an estimated 5–10% of global plastic waste[84]. To combat this, companies are investing in durable materials and device designs that can endure multiple sterilization cycles, enabling a transition to low-waste, circular supply chains without compromising medical performance.

To drive meaningful change, the health sector must now scale proven solutions like energy-efficient equipment and reusable devices. Crucially, this transition must be equitable, as vulnerable regions often lack the infrastructure to adapt. Stronger public-private partnerships are essential to build climate-resilient healthcare systems and ensure sustainable innovation is accessible to all.

Health Systems Task Force

In 2024, the SMI Health Systems Task Force made significant progress in accelerating the transition towards net zero health systems.

Building on progress from 2023 and an agreement launched in January 2024, the Task Force expanded renewable power procurement opportunities for suppliers in China. This unlocked 425 gigawatt-hours (GWh) of renewable energy in China, equivalent to cutting 250,000 tonnes of carbon dioxide equivalent (CO_2e) or taking 50,000 cars off the road. At the same time, a renewable energy agreement was advanced with suppliers in India. Together, the initiatives in China and India could deliver over 250 GWh of green power starting in 2025, creating new renewable capacity in these markets. The group is further exploring green power procurement in Singapore and Japan and identifying opportunities to switch from fossil-based gas to clean heat solutions. Members engaged major suppliers, responsible for 20% of their collective Scope 3 emissions, to meet joint climate and sustainability targets set in 2023, with twice as many suppliers committing in 2024 compared to 2023.

Together with the University of Glasgow and Columbia University, the Health Systems Task Force launched the European Network on Climate and Health Education (ENCHE), a network of 25 medical schools from across Europe committed to embedding sustainability in core medical curricula. This network grew to over 30 universities by the end of 2024 and it aims to train 10,000 students over the next three years.

Furthermore, the Task Force advanced frameworks and tools to measure the environmental impacts of health systems interventions, aiming to increase transparency and highlight areas where the environmental footprint of healthcare can be reduced. Members collaborated with the Pharmaceutical Environmental Group (PEG) through a consortium including NHS England and the British Standards Institute (BSI) to deliver a sector-wide standard for medicines Life Cycle Assessment (LCA). The standard, PAS2090, is based on technical guidance developed in 2024 and will launch in late 2025 after public consultation.

Efforts to model the environmental impacts of the type two diabetes care pathway progressed in 2024 and were presented at the ISPOR health economics conference, highlighting that prevention and early treatment reduce the environmental impact of healthcare. The group with the Industry Low Carbon Clinical Trials Group (iLCCT) also made progress on developing a standardized measurement framework and carbon calculator tool for clinical trial emissions, completing beta testing and preparing for its launch in early 2025 to help reduce emissions in clinical trials.

The Task Force's Working Group on consumer health and wellbeing also defined an approach to city-level interventions for preventative health and developed a public-private pilot concept to improve air quality and respiratory health in Camden, London, launching in 2025.

> "Bold, scalable action is needed if we are to secure a liveable and sustainable future. Our work through the SMI in China to establish and then expand an industry-leading renewable power agreement sends a positive demand signal for green power and provides a blueprint for others to follow so that change can happen at an even greater pace."

Pascal Soriot
CEO
AstraZeneca

Bupa's Healthy Cities Initiative Drives Global Health and Urban Regeneration

Over the past nine years, Bupa's Healthy Cities initiative has catalyzed a global movement to support people's health and regenerate urban environments.

In 2024, participants worldwide took part in the programme and adopted healthier behaviours, leading Bupa to invest in urban health and climate resilience projects, including planting 28,000 trees in Spain, fostering urban biodiversity in urban centres in Australia, and planting 40,000 trees in neighbourhoods with the highest level of deprivation and lowest canopy cover in UK cities.

"At Bupa, we know that where you live has a significant impact on your overall health. To keep people healthy in a changing climate, we must create environments that support their wellbeing. Our Healthy Cities programme brings people together to do something that is good for their health, while also regenerating Nature in urban environments, making cities healthier and climate resilient."

Iñaki Ereño
CEO
Bupa

62,000+
people participated in the Healthy Cities challenge, adopting healthier behaviours in 2024

£2.9 million
invested in urban health and climate resilience projects

1 million
people to be supported by 2025

500,000
people supported across 24 countries in 2024, including those indirectly benefited by Bupa investments in Nature regeneration activities

Source: *Bupa*

GSK Champions Water Resilience in India's Godavari Basin

As the Water Resilience Coalition Basin Champion for the Godavari Basin, GSK aims to improve local water security by optimizing water management and supporting community water projects. In collaboration with the Watershed Organization Trust, GSK is involved in a water replenishment initiative to enhance the ecosystem, strengthen agricultural climate resilience, and help villages manage water resources effectively. It is also a founding partner of the Women + Water Collaborative in India working with the Water Resilience Coalition and WaterAid. This programme brings together companies from different sectors to leverage women's leadership to improve access to clean water and sanitation, ultimately supporting the health of local communities.

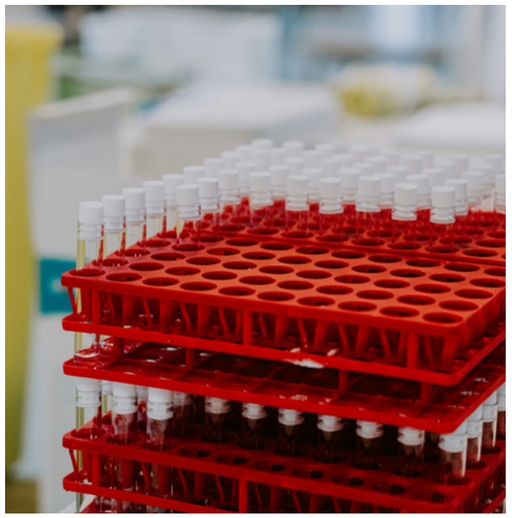
Source: *GSK*

AstraZeneca Achieves Breakthrough in Respiratory Medicine

AstraZeneca is transitioning its pressurized metered dose inhaler (pMDI) medicines to a next-generation propellant with near-zero global warming potential. In 2024, they achieved a major milestone with the European Medicines Agency accepting their industry-first regulatory submission for this transition with additional submissions underway.

99.9%
reduction in global warming potential compared to currently available inhaled medicines

Source: *AstraZeneca*



"In collaboration with other Health Systems Task Force members, Samsung Biologics has been actively supporting our suppliers to strengthen their ESG management and working together to build a greener and circular future."

John Rim
CEO
Samsung Biologics

Philips Takes Major Steps to Decarbonizing Global Healthcare

Philips has achieved significant greenhouse gas emissions reductions by collaborating with customers to assess and mitigate their carbon footprints. A Life Cycle Assessment at three Jackson Health System hospitals in Florida showed that switching to Philips' monitoring platform could reduce patient monitoring carbon emissions by almost half over 10 years, equating to a 685-tonne carbon dioxide equivalent (CO_2e) reduction from more efficient monitors and reduced battery and paper use.

47%

projected reduction in CO_2e emissions by updating old patient monitors

$1.2 million

saved over a 10-year device lifetime

177 tonnes

CO_2e saving from decreased battery and paper use

Equivalent to:
420,000 disposable AA batteries

6.5 million sheets of paper

Source: *Philips*[85]

Tourism & Hospitality

From Niche to Norm

As international tourism rebounded to 99% of pre-pandemic levels in 2024, with 1.4 billion global travellers, sustainability has become central to the sector's future[86]. Over 75% of travellers now consider environmental impact when selecting destinations[87], pushing the hospitality and tourism industries to adopt more responsible practices.

Private sector leaders have begun to implement impactful sustainability measures. With energy use accounting for up to 60% of a hotel's emissions[88], many operators are investing in renewable energy, smart HVAC systems, and LED lighting, using occupancy sensors to balance efficiency and guest comfort. Hotels are also addressing water use - averaging 1,500 litres per room per day, often exceeding local residential use[89] - by installing low-flow fixtures, greywater recycling, and drought-tolerant landscaping, achieving up to 50% water savings in some cases[90].

In waste management, where hotels generate nearly 300,000 tonnes annually, 87% of which goes to landfill[91], the private sector is moving towards zero-waste goals. Actions include phasing out single-use plastics, installing biodigesters, donating surplus food, and using data to optimize menus and reduce food waste. Guest engagement efforts, such as digital check-ins, linen reuse programmes, and eco-friendly amenities, further support these goals while enhancing the guest experience.

Looking ahead, the sustainable tourism market is expected to triple by 2034[92], with 1 in 5 travellers already willing to pay more for greener options[93]. To remain competitive and resilient, private operators must continue investing in energy and water efficiency, circular waste systems, and experiential sustainability. These actions not only reduce operational costs but also strengthen brand loyalty, improve guest satisfaction, and safeguard the ecosystems and communities on which the industry depends.

Tourism & Hospitality Hub

2024 was a landmark year for the industry, as the United Nations Framework Convention on Climate Change (UNFCCC) hosted its first-ever Tourism & Hospitality Day during a Climate COP, highlighting the industry's vital role in reversing carbon dioxide emissions. The SMI Tourism & Hospitality Hub was represented in at COP29 in Baku by its Champion, Glenn Mandziuk.

In 2024, the SMI Tourism & Hospitality Hub focused on advancing the adoption of a 'Nature Positive Pathway' across the industry and its member companies. In Q2 2024, the Hub released a report outlining frameworks for Nature Positive Tourism. This vision for the tourism industry was showcased at COP16 in Colombia, where Gloria Fluxà, VP of Iberostar, represented the Hub on the main CBD stage. The SMI also hosted a session on '*Nature Positive Industries*,' with a special focus on tourism.

The Hub concentrated on four key workstreams, including the development of Universal Criteria to standardize data collection and harmonize sustainability metrics. These criteria streamline reporting and enable industry benchmarking. An updated Hotel Carbon Measurement Index (HCMI) is set to launch in late 2025, aiming to accelerate progress toward carbon neutrality and simplify reporting for hospitality businesses, addressing staff shortages and efficiency challenges.

Download the report →

In December 2024, the Hub published a White Paper titled 'Decarbonizing Hotel Food Systems', addressing the industry's role in emissions and waste from food production. The paper followed a series of industry consultations, roundtables during New York Climate Week, and in-depth market research with partner Systemiq.

Read the whitepaper →

The Hub also worked with the SMI's Sustainable Buildings Hub to advance a Net Zero pledge for member portfolios. Members committed to setting targets to achieve net-zero buildings by 2030, guided by the Sustainable Buildings Hub's criteria.

Global Business Travel Association launches Sustainable Procurement Standards

Launched with the GBTA Foundation, the Sustainable Procurement Standards aim to drive the $1.5 trillion corporate travel market towards sustainable suppliers. These open-source standards provide unified language for corporate travel buyers to enhance supply chain sustainability in airline, hotel, and ground transportation RFPs and evaluations, developed over two years with industry input.

Access the Standards along with educational guides →

Source: *Global Business Travel Association*

"GBTA's vision is one in which every company finds a way to accelerate the market for more sustainable business travel suppliers. Our Sustainable Procurement Standards provide common, global language to shift $1.5 trillion in global collective purchasing power towards technologies and solutions in need of strong demand signals in order to scale up. These solutions include Sustainable Aviation Fuel (SAF), renewable energy, handling of food waste and water, and electric vehicles."

Suzanne Neufang
CEO
GBTA

Iberostar Finds Solutions for Coral in the Caribbean

Iberostar Group launched its third land-based coral nursery at its beachfront resort in Jamaica, expanding a coral reef restoration programme that spans the Caribbean. Guided by a team of in-house scientists and marine biologists, Iberostar's reef restoration work aims to study coral adaptation to climate change, build resilience, and raise guest awareness about the vital role coral reefs play in coastal and ocean health.

3

land-based coral labs established across the Caribbean

8

underwater coral nurseries maintained by Iberostar's science team

Source: *Iberostar Group*

"Iberostar Group is proud to be a part of the Sustainable Markets Initiative, working to champion responsible tourism and sustainability through the SMI Tourism & Hospitality Hub. By leveraging scale and fostering cross-sector collaboration, we can drive transformative change aligned with the Terra Carta's vision for resilient, regenerative hospitality systems for generations to come."

Gloria Fluxà
Vice-Chairman
Iberostar Group

Intrepid Travel Enables Greener Choices for Travellers

Intrepid Travel, the world's largest B Corp-certified travel company, is driving positive change by designing tours that uplift local communities and support conservation projects. In 2024, they reduced trip emissions by eliminating 18 short-haul flights across 14 tours, introduced train-only itineraries, and added carbon footprint labels for over 100 popular tours to help travellers make informed choices.

Source: *Intrepid Travel*[94]

500 trips

feature carbon labels to help travellers evaluate their travel impact

£6 million

donated to support over 135 community organizations

IHG Launches Low Carbon Pioneers Programme

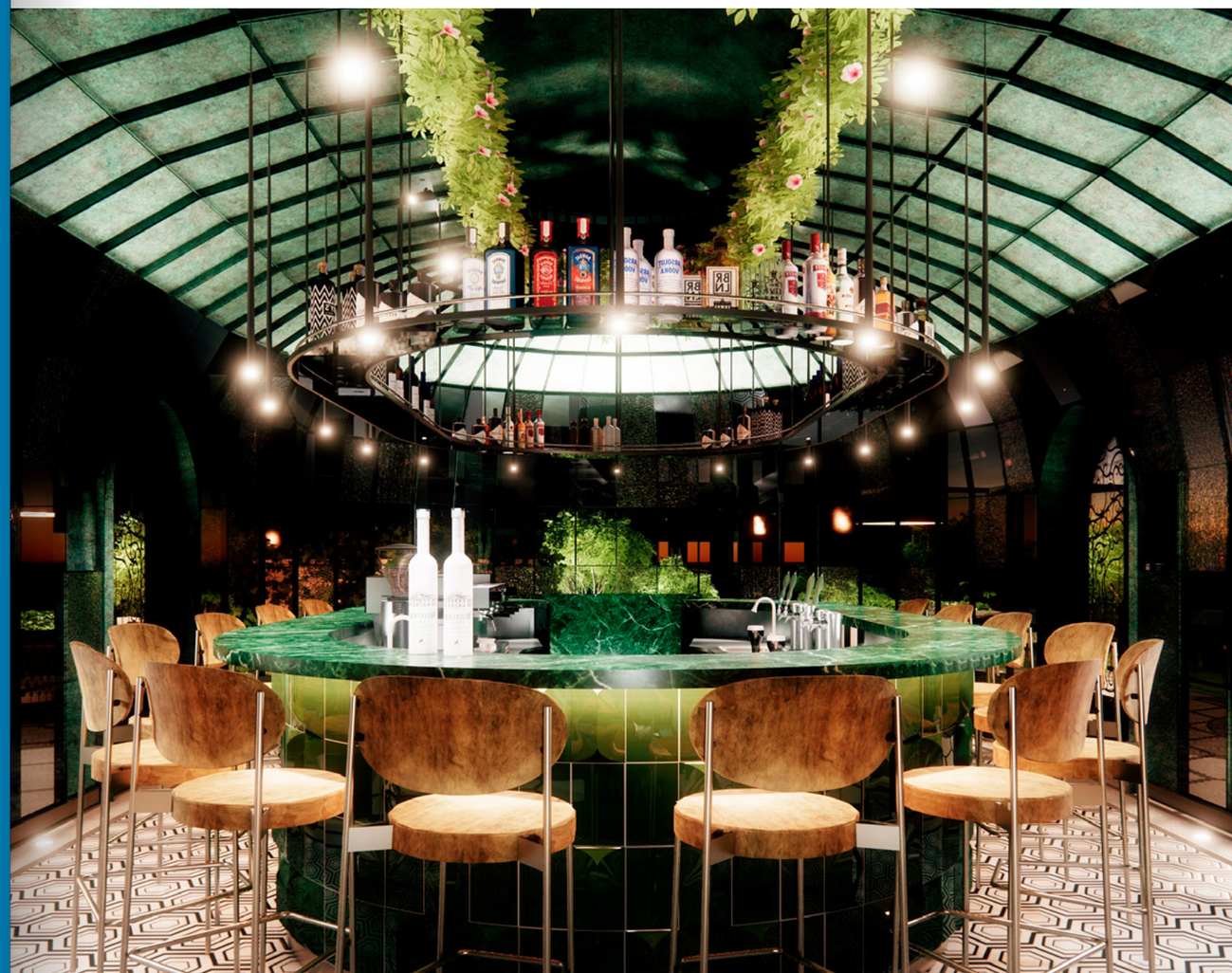
The first-of-its-kind programme brings together energy-efficient hotels with no fossil fuels combusted on-site and backed by renewable energy. This group of low operational carbon hotels will test, learn, and share findings on sustainability measures, aiming to encourage wider adoption of carbon reduction practices across IHG's estate. Each hotel has an operational sustainability certification or a sustainable building certification and must meet specific criteria for aspects such as energy efficiency and renewable energy sources.

The full criteria for a Low Carbon Pioneer hotel are available on **www.ihgplc.com**

Source: *IHG Hotels & Resorts*

"The Low Carbon Pioneers programme is another innovative way in which we're meeting evolving guest expectations, helping our hotel owner's future-proof their businesses and reducing carbon across our estate. This is an important next step in IHG's sustainability journey, but it remains one of many we must continue to take."

Elie Maalouf
CEO
IHG Hotels & Resorts

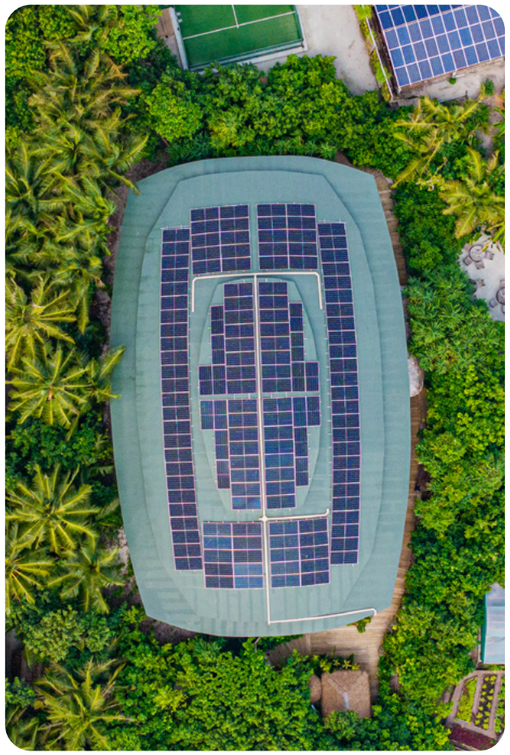


Soneva Expands Solar Power Development at its Resorts in the Maldives

Soneva Fushi and Soneva Jani, located on remote Maldivian islands without public utility services, rely entirely on self-generated electricity and water systems. In 2024, both resorts installed solar photovoltaic systems covering 40% of their electricity needs. The $9 million investment with a 5- to 6-year payback, supports Soneva's carbon-neutral status since 2012 and highlights the alignment of sustainability with economic value.

"Companies can drive meaningful change with the right focus. Time and again, we've seen that sustainable investments not only create substantial benefits for people, communities and the planet, but also strengthen our business."

Bruce Bromley
Deputy CEO
Soneva



5.2 megawatts
peak total power generated from new solar photovoltaic systems

$1.6 million
in annual energy cost savings

Source: *Soneva*

Learn more about sustainable hospitality and tourism initiatives around the world by visiting the SMI's video content platform, RE:TV

Go to the RE:TV site here →

Realizing the vast potential of Nature-based solutions ↗

Shipping

Charting a Greener Course

The shipping industry, crucial to global commerce, accounts for 3% of global greenhouse gas emissions[95]. To reduce emissions, the International Maritime Organization (IMO) aims to eliminate greenhouse gas emissions by 2050[96]. The private sector is also driving significant progress, responding to growing consumer demand for sustainable options, with over 80% of customers willing to pay a premium for greener shipping[97].

The industry remains largely reliant on fossil fuels, consuming 5% of global oil[98], but is making strides with alternative fuels such as green hydrogen, e-methanol, and green ammonia. In 2024, orders for hydrogen-powered vessels increased by 30%, with 154 new ships planned[99]. Among these, green ammonia shows the most promise, potentially meeting 60% of global shipping fuel demand by targeting key regional refuelling ports[100].

However, transitioning to cleaner fuels requires significant retrofits to existing vessels and port infrastructure upgrades, including fuel handling systems and renewable energy integration. In 2024, the first dual-fuel ammonia loading trial was successfully completed at the Port of Singapore, proving the viability of alternative fuels[101].

The private sector is also advancing green corridors, collaborations that facilitate the deployment of zero-emissions vessels and infrastructure. In 2024, 18 new green shipping corridors were launched, increasing global efforts by 40% compared to 2023[102]. These corridors create critical knowledge, regulations, and incentives for wider adoption.

Despite progress, scaling green fuel production and ensuring supply remain challenges, with investment gaps and demand uncertainty hindering growth. The acceleration of development of green corridors also requires collaboration across the supply chain, with the private sector driving innovation and market confidence. Private finance and carbon pricing are key to bridging investment gaps, de-risking investments, and providing early-stage funding.

Shipping Hub

The SMI Shipping Hub is driving action to decarbonize the maritime sector. Actions include: green ports and infrastructure; retrofitting existing fleets; default sustainable and higher efficiency new builds; increasing the supply and demand for sustainable fuels; and supporting efforts to protect the marine environment.

July 2024 – The SMI and Fortescue hosted a 2-day 'Seeing is Believing' event in Singapore, showcasing Fortescue's 'Green Pioneer', the world's first green ammonia capable dual-fuel ship.

Fortescue Conducts World's First Use of Ammonia as a Marine Fuel Onboard Ammonia-Powered Vessel

Fortescue made history in July 2024 with the Fortescue Green Pioneer, a retrofitted offshore supply vessel now running two of its four diesel engines on ammonia. It is the first dual-fuel ship in the Port of Singapore approved to use both ammonia and diesel, showcasing the potential of converting existing ships to ammonia and highlighting its importance in future fuel discussions.

Source: *Fortescue*

DP World Partners to Launch World's Largest Multipurpose-Built Reef Development

DP World, as a strategic partner with Dubai Reef, launched phase one of deploying 20,000 reef modules contributing to recover marine life and promote their conservation in the UAE. These modules, varying in height from 1.60 to 6.5 metres and placed at depths of 15 to 25 meters, aim to create diverse habitats for reef fish and other aquatic fauna, including corals.

20,000

purpose-built reef modules deployed over the next three years

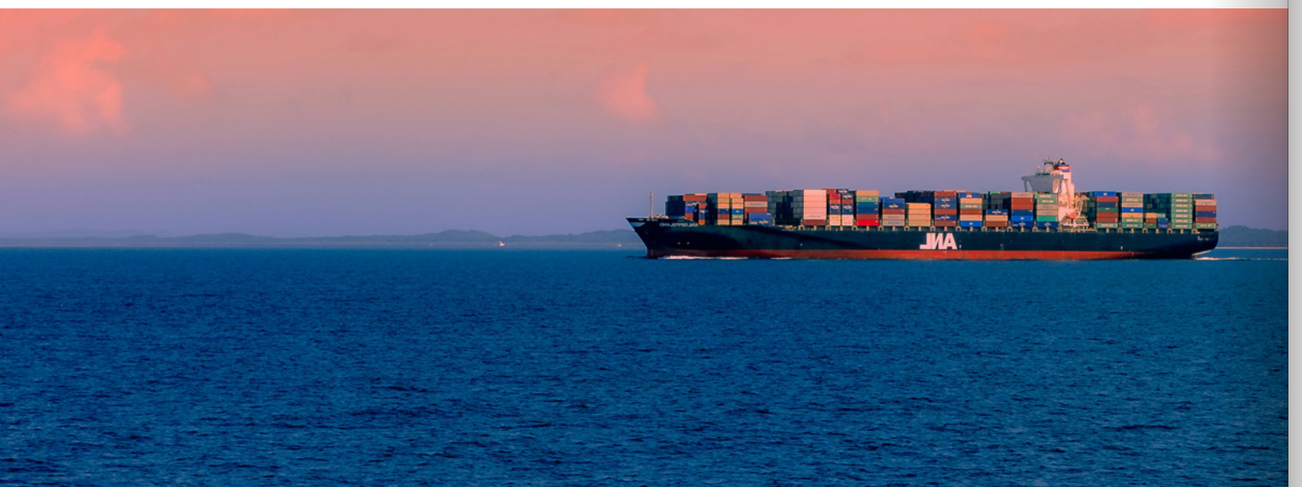
600

square kilometres covered

Source: *DP World*

"As shipping navigates the challenges of the green transition, Diana Shipping remains steadfast in our commitment to innovation and sustainability. The SMI empowers bold collaboration and actions across industries, driving transformative progress toward a greener future for all sectors."

Semiramis Paliou
CEO
Diana Shipping



Maersk and Danone Partner to Reduce Logistics Emissions

Maersk is partnering with Danone, one of the world's leading food and beverages companies, to reduce its logistics greenhouse gas (GHG) emissions by using Maersk ECO Delivery Ocean, a product based on reduced GHG emission fuels like bio-diesel or bio-methanol which are produced solely from waste feedstocks. These fuels are then used on vessels across the Maersk fleet. With the applied version of ECO Delivery Ocean by Danone the GHG emissions are reduced by more than 40% compared to conventional fossil fuels.

Source: *Maersk*[103]

40%+

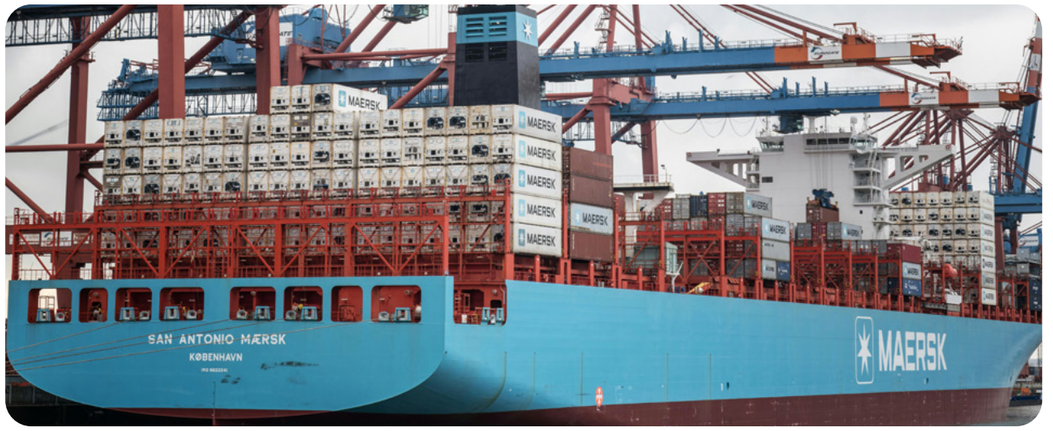
reduction in greenhouse gas emissions with ECO Delivery Ocean compared to conventional fossil fuels

660,000

standard containers (TEU) transported using green fuels in 2023

683,000

tonnes of greenhouse gas emissions prevented by using green fuels for container transport in 2023



RE:

Learn more about sustainable shipping progress around the world by visiting the SMI's video content platform, RE:TV

Go to the RE:TV site here →

Navigating net zero shipping ↗

A pathway to decarbonise the shipping sector by 2050 ↗

Space

From Orbit to Opportunity

The global space economy is experiencing rapid growth, with investment increasing by 30% in 2024 alone[104]. Venture capital is leading the charge, with a record 601 deals for space tech start-ups in 2024, a 50% increase from the previous year[105]. This surge is largely driven by private companies such as SpaceX, whose innovations such as reusable rockets have reduced launch costs by more than ten times in the past decade[106], making space more accessible for commercial ventures and attracting new market players.

With greater flexibility in launch options and rocket sizes, satellite launches are growing by 50% each year[107]. This growth is driven by demand for small satellites and mega-constellations to support broadband internet, Earth observation, and other services. However, this rapid expansion also brings challenges regarding space debris. There are now an estimated 170 million pieces of debris orbiting Earth[108], many of which are defunct satellites and spent rocker boosters. These objects pose serious risks to active and future missions, as collisions can create even more hazardous fragments. In response, several companies are developing technologies to actively remove debris and protect the long-term viability of space activities.

Looking ahead, the space sector is set for an even more transformative decade. The global space economy is projected to reach $1.8 trillion by 2035, growing at an average rate of 9% per year - far outpacing global GDP[109]. By this time, key sectors such as supply chain and transport, food and beverage, defence, retail, and digital communications are expected to make up 60% of space-related economic activity[110].

Space technology is also playing an increasingly vital role in mitigating major global challenges, including disaster response, climate monitoring, and humanitarian aid. Advancements in artificial intelligence, robotics, and 3D printing are revolutionizing space exploration, enabling autonomous spacecraft, in-orbit manufacturing, and resource extraction from celestial bodies. As access improves and costs fall, these technologies will pave the way for entirely new industries, including space-based healthcare, solar power generation, asteroid mining, and commercial space travel.

Space Task Force and Astra Carta Advisory Board

The SMI Space Task Force and Astra Carta Advisory Board were launched to deliver on the ambition of the Astra Carta.

"The Astra Carta plays a vital role in mainstreaming sustainability across the space sector. Tangible implementation of these principles will not only promote responsible practices, complementing the UN Guidelines for the Long-Term Sustainability of Outer Space Activities, but it will ensure the preservation the space environment for future generations."

"With some 10,000 active satellites in low Earth orbit, and more expected, we need to take decisive steps to address the growing issue of space debris and ensure we can continue to benefit from the critical capabilities provided by space."

Aarti Holla-Maini
Director, United Nations Office for Outer Space Affairs
Chair of the Astra Carta Advisory Council

Colonel Chris Hadfield
Former Commander, International Space Station
Astra Carta Ambassador

March 2024 – As a Strategic Partner to SPACEtalks 4.0, the SMI highlighted the Astra Carta's vision through two sustainability panels, focusing on the opportunity for pan-industry collaboration to ensure sustainable space activities and the use of space to benefit sustainability on Earth.

June 2024 - Addressing the Committee on the Peaceful Uses of Outer Space (COPUOS) in Vienna, hosted by the United Nations Office for Outer Space Affairs, SMI CEO Jennifer Jordan-Saifi M.V.O. presented the Astra Carta's vision and ambition for sustainable space activity and the responsible use of space to improve sustainability on Earth.

Space Solar to Deliver Space-Based Solar Power to Iceland By 2030

Space Solar has partnered with Transition Labs to provide Reykjavik Energy with electricity from the first-ever space-based solar power plant, set to be operational by 2030 with an initial capacity of 30 megawatts.

This innovative plant will orbit Earth, harnessing solar energy and transmitting it wirelessly to ground-based stations, providing clean, renewable energy 24/7. It will offer consistent power regardless of weather, with costs similar to intermittent renewables.

"Space-based solar power can be transformational in delivering continuous, affordable energy from space to markets on Earth and have a huge impact in democratizing energy access. The SMI is an incredible partner with its drive, reach, and influence in bringing people together to deliver material change."

Sam Adlen
Co-CEO
Space Solar

30 megawatts

of energy delivered by first plant within five years

£4 billion

annual reduction in system costs by integrating 8 gigawatts of space-based solar energy in the UK's energy mix*

Source: *Space Solar*

**based on an independent analysis by Imperial College London*

Prada and Axiom Space Design the New Spacesuits for NASA's Artemis III Mission

Prada and Axiom Space have revealed the flight design of the spacesuit that will be used for NASA's Artemis III mission, marking the first crewed lunar landing since 1972 and featuring the first woman and person of colour on the lunar surface.

Leveraging its knowledge and experience in materials and production processes, Prada's design and product development team worked alongside Axiom Space engineers on customized material recommendations, innovative sewing methods and features that would both protect astronauts from the unique challenges of the lunar environment and visually inspire future space exploration.power regardless of weather, with costs similar to intermittent renewables.

Source: *Prada Group*

"Going beyond our limits is one of the company's values that perfectly reflects the spirit of the Prada brand and my parents' vision. I'm very proud of the results we are achieving through our long-term collaboration with Axiom Space. We've shared our expertise on high-performance materials, features, and sewing techniques, and we learned a lot. I'm sure that together we will continue to explore new challenges, broaden our horizons and build new scenarios."

Lorenzo Bertelli
Head of Corporate Social Responsibility
Prada

Learn more about sustainable space initiatives around the world by visiting the SMI's video content platform, RE:TV

Go to the RE:TV site here →

Harnessing the power of space to regenerate Earth ↗

Powering Earth from space ↗

Technology, Media & Telecommunications

Rewiring the Future

The Technology, Media, and Telecommunications (TMT) private sector have made significant strides in addressing sustainability challenges since 2020 by reducing their carbon footprints, advancing energy-efficient technologies, and embracing circular economy principles.

In the technology space, companies such as Google and Microsoft have already achieved carbon neutrality, with many others setting ambitious goals for net-zero emissions by 2030 or earlier[111].

Artificial Intelligence (AI) has emerged as a key enabler, optimizing energy consumption across operations, reducing waste, and improving resource efficiency. For example, AI algorithms are being used to optimize server loads in data centres, resulting in significant reductions in energy usage and operational costs[112]. Its ability to quickly process large data sets and extract actionable insights could help cut global emissions by 5 to 10% by 2030[113]. Additionally, AI-driven tools are helping industries better manage supply chains, improving transparency, and facilitating more sustainable practices across global operations[114].

Companies are transitioning to green data centres powered by renewable energy and are investing in technologies to extend the lifespan of devices, aiming to minimize their environmental footprint. Meanwhile, telecom companies have also increased their focus on 5G networks, which, while energy-intensive in deployment, offer significant efficiencies in the long term, enabling more energy-efficient infrastructure and reducing emissions through smarter, connected systems[115]. AI technologies are also enabling more accurate climate modelling, improving disaster response, and advancing environmental monitoring[116].

In the media and telecommunications sectors, sustainability efforts have focused on reducing electronic waste and promoting eco-friendly digital content delivery.

Media is using its platforms to spotlight climate issues and promote responsible choices. This shift is backed by strong public demand: online searches for sustainable products are up 71%[117], and over 80% of consumers are willing to pay a nearly 10% premium for sustainably produced goods[118].

Younger audiences are especially attuned to these issues - 71% of Gen Z and 73% of Millennials view traditional advertising as environmentally harmful, while 91% of all consumers expect brands to clearly show their environmental commitments[119].

AMD Develops World's First Sustainable Chip

The AMD Instinct MI300 series accelerators and the AMD EPYC 4th Gen processors, exemplify a significant leap in sustainable computing.

These chips are engineered for higher energy efficiency, reducing the power consumption per computation, which is crucial in minimizing the environmental impact of IT operations. By optimizing performance-per-watt, the MI300 series contributes to a more sustainable computing landscape, aligning with global efforts to lower energy usage and carbon footprints in data centres and other computing environments.

4.3 billion

potential kilowatt-hours of annual energy consumption savings

Equivalent to:

400,000

households' equivalent energy consumption*

2.2 million

tonnes of annual carbon dioxide emissions reduction*

Source: *AMD*

**based on replacing one million US servers with EPYC processors*

Genesys Cloud Operations Achieve Carbon Neutrality

As of 2024, Genesys Cloud operations are carbon neutral, highlighting the company's commitment to sustainability. This was achieved by adopting energy-efficient cloud solutions and investing in carbon credits for residual emissions. Transitioning to cloud-based solutions can significantly reduce emissions compared to on-premises software, thanks to energy-efficient data centres that adjust resources based on demand.

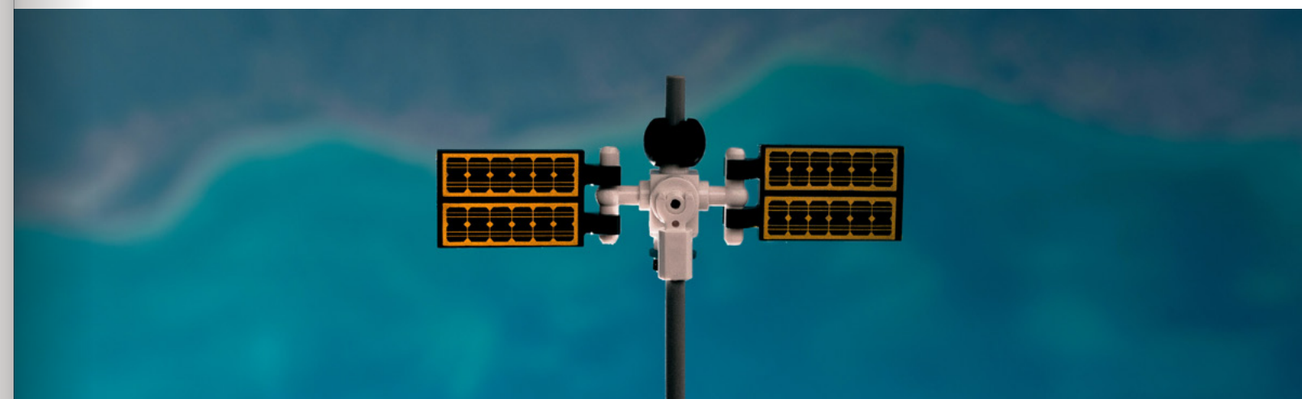
88%

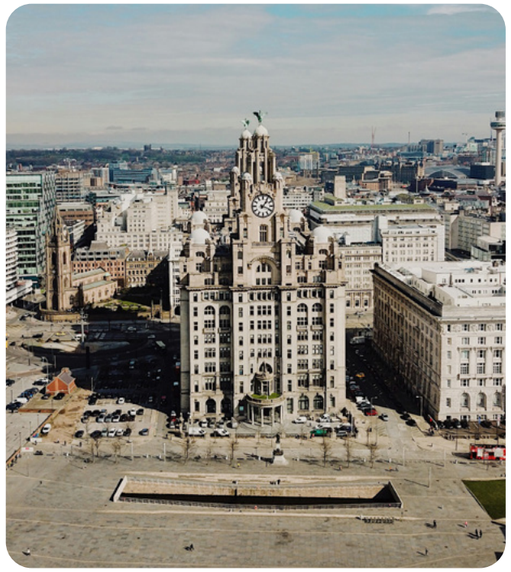
emissions reduction potential by transitioning to cloud-based solutions compared to on-premises software

Source: *Genesys*

"With a sustainability foundation rooted in empathy, inclusion, engagement and innovation, Genesys strives to positively impact the environment and society while driving responsible innovation. We're committed to advancing sustainable business practices for our organization and customers through our cultural values and company strategy working in synergy."

Tony Bates
Chairman and CEO
Genesys





Liverpool Becomes World's First UN Accelerator City for Climate Action

The SMI is proud to be a strategic partner of Liverpool, UK, the world's first 'Accelerator City' for climate action under the UN Climate Change's Entertainment and Culture for Climate Action (ECCA) programme. The city is leading the charge to decarbonize the live music and TV/film production sectors. Building on the work of ACT 1.5 and the Tyndall Centre for Climate Change Research, Liverpool will serve as a testing ground for innovative decarbonization strategies. The programme will trial solutions in policy, technology, infrastructure, and transport. In 2025, key events will showcase live shows and TV/film productions created in in the greenest and most sustainable ways possible.

Source: *United Nations Framework Convention on Climate Change*[120]

Lenovo Creates Rentable and Repairable Tech to Reduce E-Waste

Lenovo, the world's largest laptop company, is introducing new ways for consumers to repair their devices at home and reward them for recycling old tech, aiming to rreduce the global e-waste issue which currently stands at 62 million tonnes annually. Focused on providing longer-lasting devices, Lenovo now offers a "device-as-a-service" programme, allowing customers to use devices on a subscription basis instead of purchasing them. Additionally, Lenovo has consumer trade-in programmes in many markets, enabling customers to receive value for their old devices.

94,000

tonnes of products recycled or reused by Lenovo since 2020

84%

of repairs to be completed by customers at home by 2025

Source: *Lenovo*[121]*; The Cool Down*[122]

Microsoft and Partners are Using AI to Protect Amazon Biodiversity

Microsoft's AI for Good Lab and partners are working on *'Project Guacamaya'* to monitor deforestation and protect biodiversity using AI, satellite imagery, camera traps, and bioacoustics. The project employs machine learning and cloud technology to quickly identify deforestation patterns, enabling prompt action. Additionally, AI is analyzing a significant volume of bird and non-bird sounds from the Amazon, allowing researchers to respond swiftly to ecological changes.

100,000

bird and non-bird sounds from the Amazon analyzed

80%

reliability in species identification

Source: *Microsoft*[123]

Sky Studios Elstree Sets New Standards in Sustainable Film and TV Production

Completed in 2023, Sky Studios Elstree is the UK's newest, state-of-the-art film and TV studio. Awarded an 'Outstanding' mark by Albert in the 2024 Studio Sustainability Standard Report, it stands out for its commitment to sustainability. The studio operates entirely on renewable electricity and boasts features like rainwater harvesting, LED lighting, EV charging points, and an all-electric operations vehicle fleet.

100%

renewable electricity

25%

of electricity comes from 2.9 megawatts of solar capacity across studio's rooftops*

**Figures based on current annual consumption of electricity compared to on-site generation from installed solar and design drawings*

Source: *Sky*

SMI, Rotary International and SpaceX Open Marine Mangrove Sanctuary in Samoa

In partnership with Rotary International and SpaceX, in November 2024 on the margins of CHOGM, the SMI launched a Marine Mangrove Sanctuary in Samoa to restore and protect the mangrove ecosystem, mitigating the onset of sea level rise. The project aims to prevent mangrove damage, educate on their cultural and ecological importance, and address the impact of overfishing. Supported by SpaceX's Starlink, the sanctuary will also benefit from satellite internet service, highlighting the importance of remote connectivity for underserved communities across the Commonwealth.

Source: *Sustainable Markets Initiative*

Sky Media Inspires Positive Behavioural Change

As one of Europe's leading media and entertainment companies, Sky uses its reach and voice to empower its customers, partners and industry peers to drive positive behavioural change. By leveraging their platform for storytelling, Sky connects with audiences through popular interests like sports. An example is Sky Sports' 'Summer of Sustainability' campaign, which urged fans to walk, bike, ride-share, or take public transport to sporting events through TV ads, pop-ups at sporting events and on-screen coverage.

Source: *Sky*

"Climate change is impacting our communities and the world in which we operate. For those of us leading change within a business, tackling climate change is an important part of our decision-making, and our organization's operational health. So at Sky, we're transforming how we do business today to contribute to a low carbon economy."

Dana Strong
Group CEO
Sky

Vodafone Recycles Over 1.5 Million Mobile Phones

Vodafone's 'One for One' initiative, in partnership with Closing the Loop, is running one of the largest mobile phone recycling programmes globally. For every new phone purchased in Germany, an old one is recycled in countries like Ghana, that lack safe recycling infrastructure. This initiative prevents landfill contamination, recycles valuable materials, and creates new sources of income and jobs in socially disadvantaged regions.

1.5 million+
mobile phones collected

80+
tonnes of e-waste collected for reuse in the tech industry and jewellery production

3,800
living wages secured for people in collection locations

Source: *Vodafone*[124]

RE:

Explore more about the TMT progress around the world by visiting the SMI's video content platform, RE:TV

Go to the RE:TV site here →

- Increasing the pace and efficiency of solar installations with AI design tools ↗
- Restoring biodiverse ecosystems at scale using AI and drones ↗
- Livestreaming our changing planet ↗

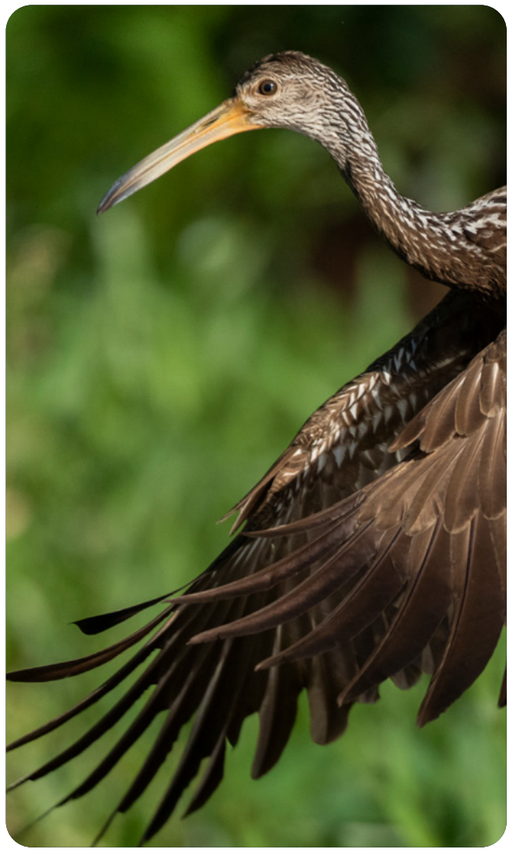
Delivering on 30x30

Examples of progress under SMI's 5x5 Challenge

The 30x30 target is a cornerstone of the Kunming-Montreal Global Biodiversity Framework, committing to conserve at least 30% of the world's land and marine areas by 2030. This global effort aims to reverse biodiversity loss, protect critical ecosystems, and support climate resilience. The target emphasizes not only expanding protected areas but also ensuring they are equitably governed, effectively managed, and ecologically representative. Central to its success is the recognition of Indigenous Peoples and local communities as key stewards of biodiversity. With less than five years remaining, urgent, coordinated action is required across policy, finance, and implementation to meet this milestone.

The SMI aims to showcase five land-based and five marine-based efforts by the private sector to support the world's 30x30 target.

Land



AstraZeneca: AZ Forest Programme

PROJECT DESCRIPTION
Through AZ Forest, AstraZeneca aims to plant and monitor 200 million trees by 2030, helping to mitigate the effects of climate change, foster biodiversity, strengthen natural ecosystems and support sustainable livelihoods. AZ Forest is active across six continents, delivered through partnerships with scientific and local partners. One example is the "Corridors for Life" project in Brazil.

GEOGRAPHIC LOCATION
São Paulo state, Brazil (additional projects include Australia, Ghana, India, UK and the US).

IMPACT
Globally, over 40 million trees planted since 2020. In Brazil, AstraZeneca is planting 11 million trees to reconnect remaining segments of Atlantic Forest. This project in Brazil will restore 6,000 hectares, generate 400 direct jobs, and plant 100 native tree species, creating ecological corridors for vulnerable and endangered species such as the black lion tamarin, jaguars and pumas.

INVESTMENT SIZE
$400 million for AZ Forest (global)

Source: *AstraZeneca[125], Ambipar Group[126]*

Bank of America: Sovereign Debt Conversion for Conservation in the Ecuadorian Amazon

PROJECT DESCRIPTION
In December 2024, Ecuador, with Bank of America as lead agent and in partnership with TNC, DFC, and IDB, completed a $1 billion sovereign debt conversion. This refinanced $1.53 billion of debt, saving Ecuador over $800 million by 2035 and generating an estimated $460 million for conservation." This debt conversion was made possible through TNC's Nature Bonds Program, which combines debt refinancing, ecological and social science, conservation planning and policy to support countries in achieving their conservation and climate goals, close the Nature finance gap, and support local communities.

GEOGRAPHIC LOCATION
Funds support the Amazon Biocorridor Programme which conserves terrestrial and aquatic ecosystems and empowers local communities in the Amazon.

IMPACT
Environmental: The initiative expected to generate $400 million in new cash funding plus an estimated $60 million in endowment returns for conservation over the next 17 years.

Social: Includes strong Indigenous and local community engagement, recognizing their vital role in ecosystem stewardship.

Global Climate Benefit: Helps preserve one of the world's largest carbon sinks, advance biodiversity conservation and build resilience to climate change.

INVESTMENT SIZE
Total financing package: $1 billion sovereign debt conversion refinancing approximately $1.53 billion of sovereign debt.

Political Risk Insurance: $1 billion provided by DFC.

Liquidity Guarantee: $155 million provided by IDB.

Conservation funding generated: $400 million in new cash funding plus an estimated $60 million in endowment returns over 17 years, held in a local Conservation trust (Fondo del Biocorredor Amazónico, Fondo BCA (BCA Fund) managed by the TNC along with a local board of directors.

Investors: Debt Conversion transactions are becoming more standardized with BofA leading the only two 144A / Reg S debt conversion transactions completed to date in the international capital markets (e.g. Ecuador and Gabon). The combination of investment grade rating, economic returns, capital markets execution and impact benefits has broadened out the investor base across banks, asset managers, pensions, and insurance companies.

Source: *Bank of America[127]; The Nature Conservancy[128]; U.S. International Development Finance Corporation[129]; Inter-American Development Bank[130]*

HSBC: World Bank Outcome Bond Supports Amazon Reforestation

PROJECT DESCRIPTION
Structured by HSBC, the outcome bond is the first bond linking investors' financial returns to carbon removal units (CRUs). The bond provides investors with a fixed guaranteed coupon, and a variable component linked to the generation of CRUs from reforestation projects in the Brazilian Amazon rainforest region. It's an innovative bond structure that introduces a new model for mobilizing private capital to support reforestation finance. Proceeds from the bond are used to support the World Bank's sustainable development activities globally. Through the transaction, investors help mobilize another $36 million to support Brazilian company Mombak's reforestation initiatives locally.

GEOGRAPHIC LOCATION
Brazilian Amazon rainforest region and other global regions.

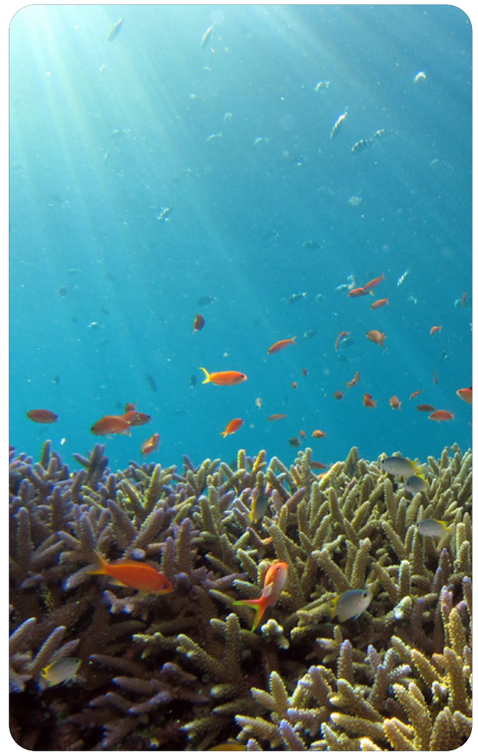
IMPACT
$36 million mobilized to support the reforestation activities of Mombak.

INVESTMENT SIZE
$225 million bond principal for sustainable development globally.

Source: *HSBC[131], World Bank[132], Mombak[133]*

Marine

DP World: First Company in the Middle East to Issue a Blue Bond



PROJECT DESCRIPTION
DP World has issued a groundbreaking Blue Bond to fund sustainable projects cutting across marine transportation, port infrastructure, marine pollution, as well as Nature and water positive initiatives. This is the first Blue Bond issuance from a corporate in Central and Eastern Europe, Middle East and North Africa, reflecting the company's aim of leading the logistics sector and region toward a more resilient future.

GEOGRAPHIC LOCATION
Global.

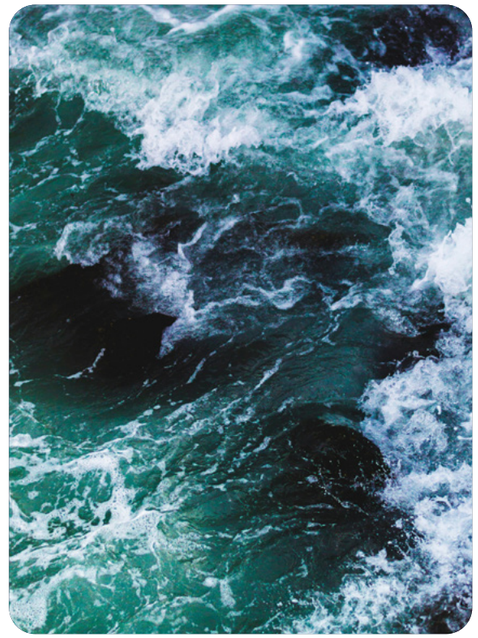
IMPACT
Through this issuance, DP World will contribute to closing the significant funding gap for UN SDG 14 (Life below water) and SDG 6 (Clean water and sanitation), as well as increasing transparency to meet investors' growing interest in blue assets.

INVESTMENT SIZE
$100 million.

TENURE
5 years.

Source: *DP World[134]*

NatWest and Ørsted: First Blue Bond by an Energy Company



PROJECT DESCRIPTION
NatWest acted as the Sole Arranger for Ørsted's Blue Bond, making Ørsted the first energy company in the world to issue such a bond. This milestone helps grow and diversify the sustainable ocean finance market, which is vital for protecting ocean health.

GEOGRAPHIC LOCATION
Various offshore locations.

IMPACT
Proceeds will finance projects to protect and restore marine and coastal biodiversity, and sustainable shipping through the development of green ocean fuels.

INVESTMENT SIZE
Proceeds will finance projects to protect and restore marine and coastal biodiversity, and sustainable shipping through the development of green ocean fuels.

Source: *NatWest[135], Ørsted[136]*

Standard Chartered: Inaugural Debt Conversion for Nature in the Bahamas

PROJECT DESCRIPTION
Standard Chartered has partnered with the Government of The Bahamas, The Nature Conservancy, the Inter-American Development Bank (IDB), and other financial partners to launch an innovative debt conversion for Nature and climate. As the sole lender, Standard Chartered will help unlock millions in funding over the next 15 years for marine conservation in The Bahamas. This project exemplifies the impact achievable through collaboration with ecosystem partners.

GEOGRAPHIC LOCATION
The Bahamas.

IMPACT
$124 million in savings unlocked for marine conservation.

INVESTMENT SIZE
$300 million loan from Standard Chartered; $300 million in guarantees from IDB, Builders Vision and AXA XL.

Source: *The Nature Conservancy[137], Standard Chartered[138], Inter-American Development Bank[139], Builders Vision140, AXA XL[141]*

"If we're to seriously address plastic pollution, we need solutions to operate at scale and to be geographically appropriate. At Polymateria, we believe real scale is enabled by partnerships and we're building these with leading players across applications & markets. The SMI can play a key role by convening core parts of the value chain. We're proud to have a been founding signatory of the Terra Carta."

Richard Horne
CEO
Polymateria

Terra Carta Design Lab

"Multidisciplinary collaboration has never been more important. It is incredibly rewarding to see an even broader group of students use deep creative collaboration to develop thoughtful ways of tackling the multifaceted challenges of the climate crisis."

Sir Jony Ive
Chancellor of the Royal College of Art

The Terra Carta Design Lab, launched in 2021 by His Majesty King Charles III, as Prince of Wales, and designer Sir Jony Ive, is is a global competition for art and design students to create impactful solutions to the climate and biodiversity crisis.

Building on the global success of the inaugural competition in 2022, the Terra Carta Design Lab expanded its reach in 2023/24 to include students from the Royal College of Art, Dubai Institute of Design and Innovation, National Institute of Design Ahmedabad (India) and Rhode Island School of Design (USA).

The 2024 competition announced eight winners from a shortlist of 40 finalists. These winners presented creative solutions to urgent issues such as air pollution, wildfires, and circular fashion. Each winner has received funding to further develop their ideas, helping to bring their designs to market and address the identified challenges.

DESIGN SCHOOL PARTNERS

DIDI
DUBAI INSTITUTE OF DESIGN AND INNOVATION

राष्ट्रीय डिज़ाइन संस्थान
NATIONAL INSTITUTE OF DESIGN
AHMEDABAD

Royal College of Art
Postgraduate Art & Design

RHODE ISLAND SCHOOL OF DESIGN
RISD
1877

Past Winners - 2022

Aerseeds

Aerodynamic nutrient and seed pods made from food waste, that work with Nature to accelerate regeneration up to ten times. Mimicking natural processes, Aerseeds are carried by the wind to cover large areas and reach difficult terrains where they deliver nutrients and seeds to soils depleted by human activity, for ecological restoration and reforestation.

Amphitex™ by Amphico

Current performance outdoor textiles are impossible to recycle and use many harmful chemicals. AMPHITEX is the first 100% recyclable and chemicalfree outdoor performance textile, made from a combination of recycled and plant-based feedstock, resulting in a world-first carbon negative performance textile.

The Tyre Collective

Tyre wear is the second largest microplastic pollutant in our environment. The Tyre Collective is developing the first patent-pending device to capture tyre wear at the wheel, accelerating the shift to zero-emission mobility. As well as spearheading the capture and monitoring of tyre wear, the team is exploring upcycling it into various applications, creating a circular system.

Zelp

1.6 billion cattle, each exhaling 400 litres of methane per day, are one of the single leading causes of global warming. ZELP has designed a wearable device for cattle to neutralise methane emissions in real time.

2024 Winners

Airofi

Airofi is a smart device for patients with chronic respiratory disease that collects real-time data on air pollution. The aim is to revolutionize health monitoring technology, empowering individuals wwith chronic lung disease and those seeking a healthier lifestyle to take control of their health, advocate for environmental sustainability, and contribute to global efforts against air pollution.

BIOPOD

BIOPOD develop customized educational and instructional kits that enable local communities to construct, deploy, and study bio pods tailor-made for their locales. These human-scale ecosystem modules are designed to remediate water quality, rewild vital fringe marshes into urban environments, and engage the public in citizen science.

BlueNose

BlueNose is innovating a fuel-efficient future for the shipping industry by creating algorithmically guided optimised structures added to the front of ships to reduce their air-drag and improve aerodynamics. This leads to fuel savings of up to 5%.

FUZE

FUZE's bicycle power harnessing system efficiently converts cycling movement into clean electricity, which it stores and then distributes for use. The FUZE system includes an energy harnessing attachment fitted to a bicycle, and an energy storing station attached to a mini grid.

Pyri

Pyri is an innovative, low-cost wildfire detection system designed with remote, unprepared, and vulnerable communities in mind. Pyri is eight times more affordable than the nearest wildfire sensing competitor and practicality makes it well suited to cover vast areas in comparison to others.

ShellfLife

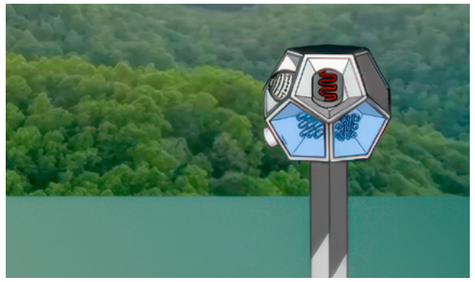
ShellfLife transforms discarded mollusc shells into a versatile and sustainable biomaterial, offering a sustainable alternative to conventional materials across diverse applications, redefining the relationship between the built environment and Nature.

Statement Denim

Statement Denim is an emerging denim brand that rescues and repurposes post-production denim waste by upcycling to create exclusive, eco-friendly products, reducing both cost and environmental impact.

WildWatch

WildWatch is an intelligent speed control and wildlife detection system for animal crossing corridors on forest roads during low visibility situations. It uses modern technology to prevent human-wildlife vehicle accidents by combining an illumination system with wildlife proximity sensors.



Progress on Transition: 2020 - 2025

*Reporting on sustainability is now 'business as usual' for the world's top companies**

96%
report on sustainability

95%
publish carbon targets

78%
publish materiality assessments

56%
have a sustainability leader

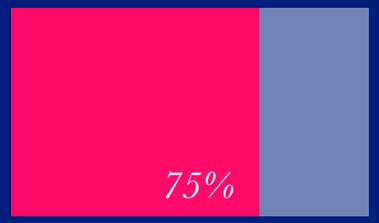
Source: *KPMG*

GRI
Global Reporting Initiative

The leading framework for sustainability reporting that promotes transparency and accountability in disclosing environmental, social, and economic impacts.

Used by 10,000 organizations across 100+ countries

GRI adoption rate among the G250



Source: *Global Reporting Initiative*

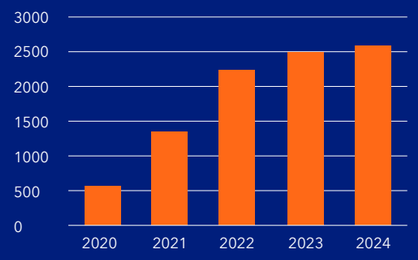
SASB
Sustainability Accounting Standards Board

A framework for providing financially material sustainability information to investors.

Used by 3,200 companies in 80+ jurisdictions

Adopted by 75% of S&P Global 1200 Index

Number of SASB reporting companies, 2020 to 2024



Source: *Sustainability Accounting Standards Board*

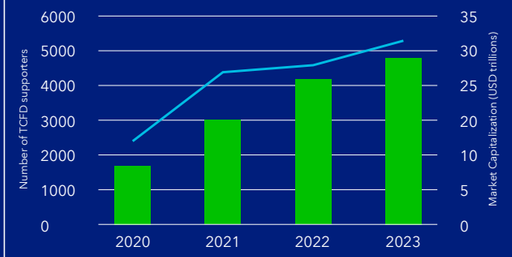
TCFD
Task Force on Climate-Related Financial Disclosures

A framework for reporting and managing climate-related risks and opportunities.

4,900 supporters in 103 jurisdictions

$32 trillion in market capitalization

Number of TCFD supporters and their market capitalization, 2020 to 2023*



*TCFD was officially disbanded in October 2023 after successfully establishing a widely adopted climate reporting framework.

Source: *Task Force on Climate-Related Financial Disclosures*

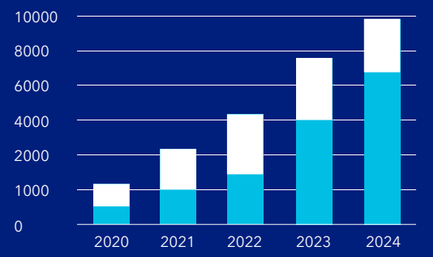
SBTi
Science-Based Targets Initiative

A framework for setting measurable, science- based emissions reduction targets aligned with climate goals.

8,000+ companies and financial institutions have set SBTi-approved targets

Representing 39% of global market capitalization

Number of SBTi-approved targets and commitments, 2020 to 2024



Source: *Science-Based Targets Initiative*

*Based on the top 250 companies by revenue listed in the 2023 Global Fortune 500 ranking

Nature and biodiversity are becoming recognized as key factors in business decisions

$125 trillion

contributed annually to the global economy through ecosystem services

85%

of the world's largest companies depend on Nature in their direct operations

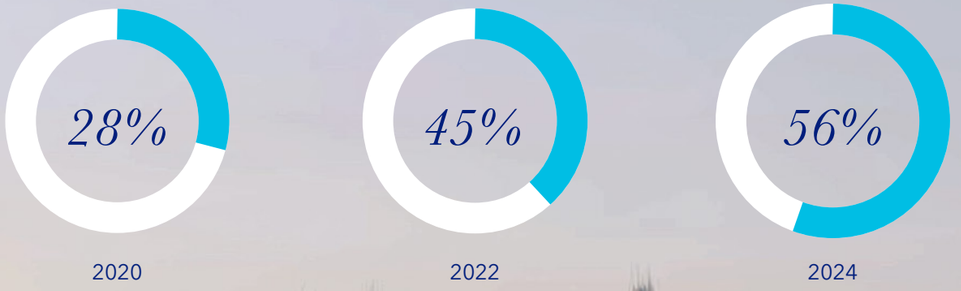
30%

of climate mitigation measures needed to stay within 1.5°C could be delivered by Nature-based solutions

Source: *European Investment Bank; S&P Global; International Union for Conservation of Nature*

Biodiversity and Nature reporting has doubled amongst the world's largest companies since 2020

COMPANIES REPORTING ON BIODIVERSITY IN G250



Source: *KPMG*

Taskforce on Nature-related Financial Disclosures (TNFD)

*502 TNFD adopters worldwide**

**as of October 2024*

$6.5 trillion

combined market capitalization

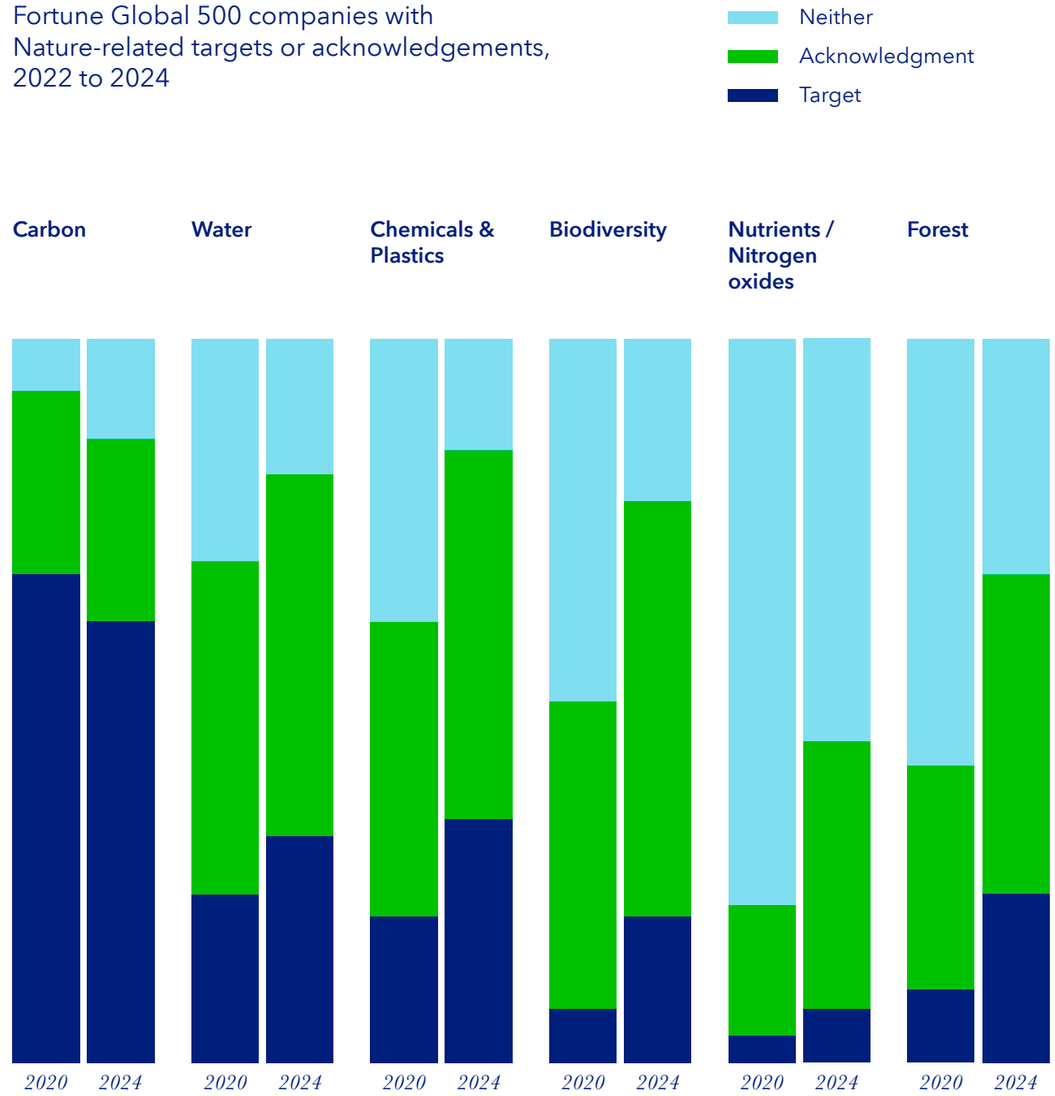
$17.7 trillion

Assets under Management

Source: *Taskforce on Nature-related Financial Disclosures*

There is growing recognition of Nature-related impacts beyond carbon, but target setting is limited

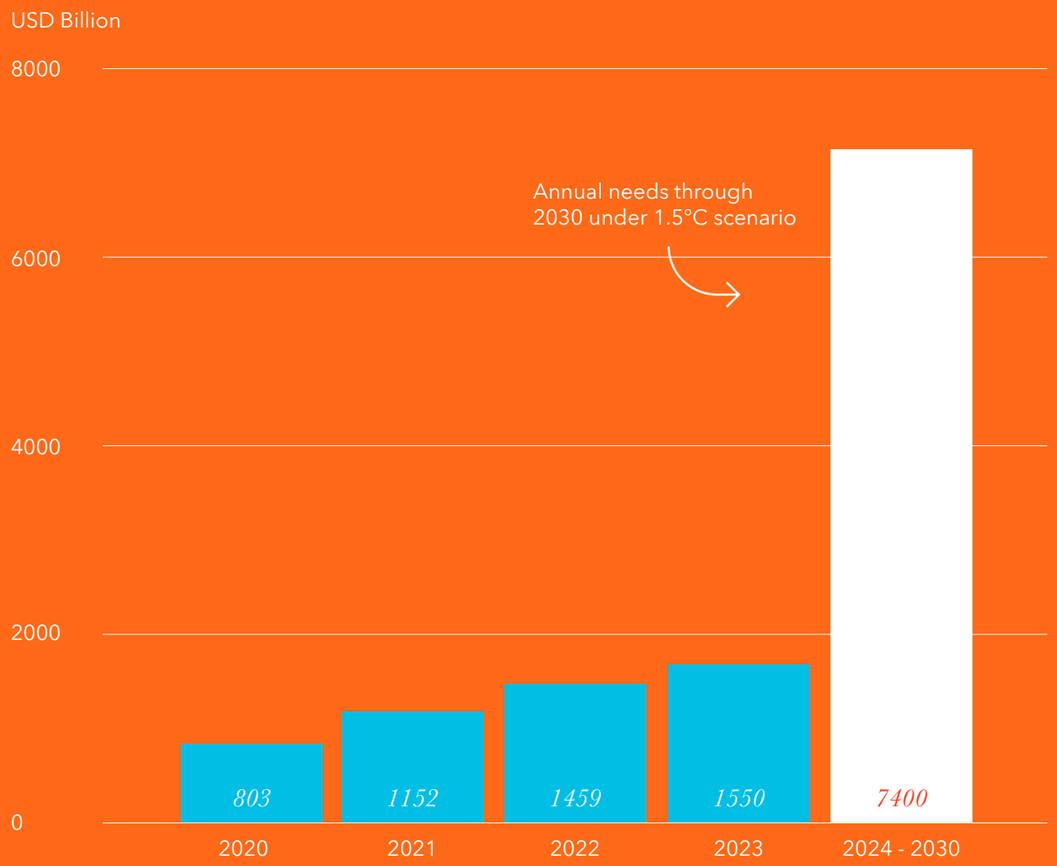
Fortune Global 500 companies with Nature-related targets or acknowledgements, 2022 to 2024



Source: *McKinsey & Company*

Climate finance has continued to rise amid market volatility, but is still falling behind target

Climate finance almost **doubled** from 2020 to 2023, exceeding $1.5 trillion, but still remains **far below** the $7.4 trillion needed by 2030.



Global climate finance in 2018-2023 and finance needs in 2024-2030 (USD Billions)

Climate finance flows

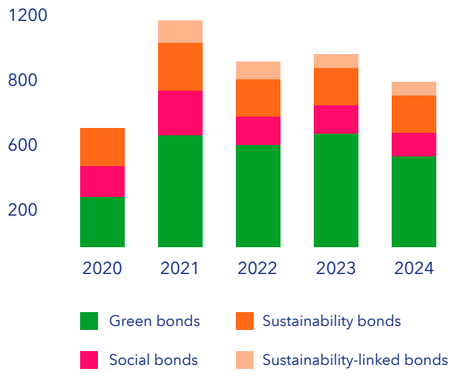
Climate finance needs

Source: *Climate Policy Initiative*

Sustainable finance instruments saw record growth

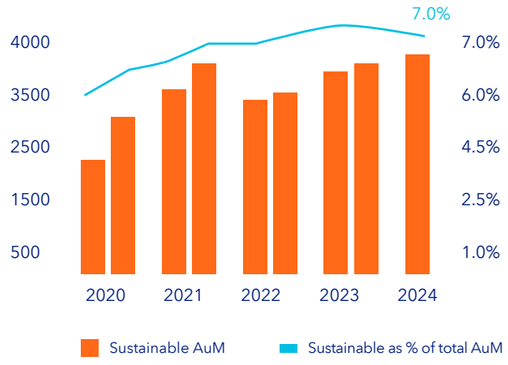
Sustainable bond issuance reached a cumulative $5.7 trillion in 2024

Global sustainable bond issuance, 2020 – Q3 2024 (USD Billions)



Sustainable funds outperformed traditional funds, despite a decline in inflows

Sustainable Funds' Assets under Management, 2020 to 2024 (USD Billions)



57%
of total sustainable bond issuance were **green bonds**

14%
of the global bond market represented by **sustainable bonds**

Source: *Climate Bonds Initiative*

$3.5 trillion in assets held by sustainable funds:

7% of total AuM
in sustainable funds

1.7% median return
for sustainable funds (versus traditional funds' 1.1% return)

Source: *Morgan Stanley*

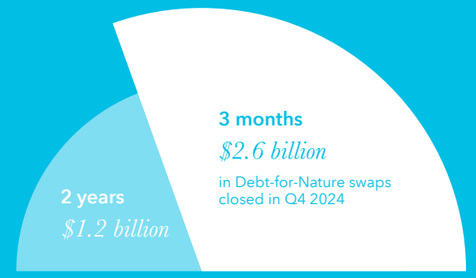
Debt-for-Nature swaps emerged as a growing trend in conservation finance

Deals closed in Q4 2024:

Country	Amount	Bank Lead
Bahamas	$ 300 million	Standard Chartered
Barbados	$ 300 million	CIBC Caribbean
Ecuador	$1 billion	Bank of America
El Salvador	$1 billion	J.P. Morgan

Source: *Standard Chartered; CIBC Caribbean; Bank of America; J.P. Morgan*

Over 2X Debt-for-Nature swaps closed in Q4 2024 versus 2021-2023



The renewable energy revolution demonstrated unstoppable growth

The cost of renewables continued to drop

↓ 89%

decrease in the cost of solar photovoltaic

↓ 70%

decrease in the cost of onshore wind

↓ 90%

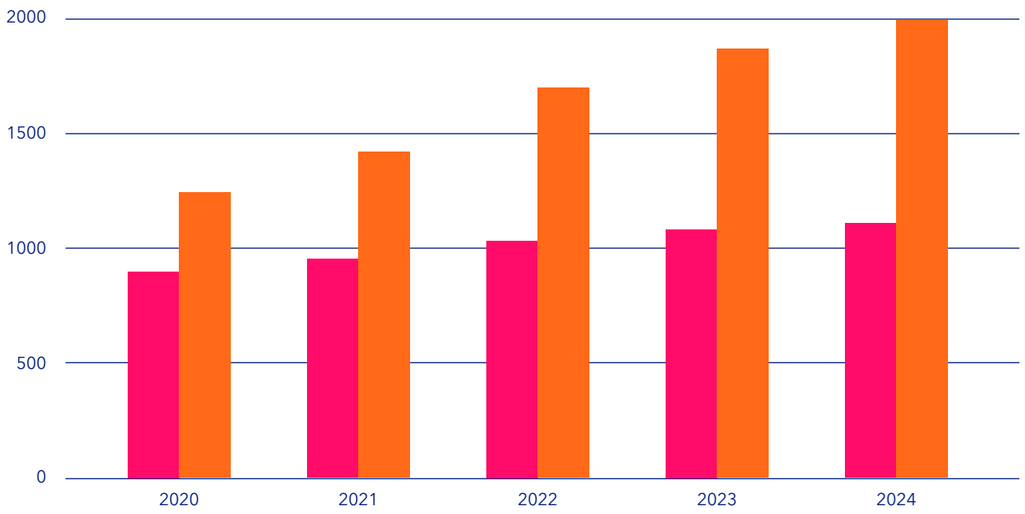
decrease in the cost of battery storage

Source: *Our World in Data*

Global clean energy investment reached $2 trillion - twice the amount spent on fossil fuels

Fossil fuels Clean energy

Global energy investments, 2020 to 2024 (USD Billions)



Source: *International Energy Agency*

Despite record renewable growth, fossil fuels still dominate the global energy mix

84%
of the global energy mix comprised of fossil fuels

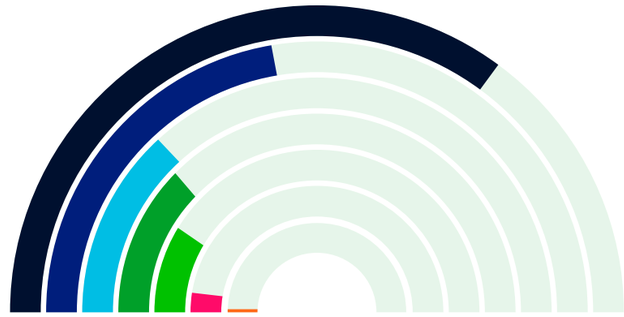
16%
of the global energy mix is made up of renewables

Global primary energy consumption by fuel, 2023 (EJ)

196	*164*	*144*	*51*	*40*	*25*
Oil	Coal	Natural gas	Other renewables	Hydro electric	Nuclear energy

Source: *Energy Institute*

But renewables are rising to meet global electricity demand



Total global electricity generation by source, 2023

35%	*23%*	*16%*	*14%*	*9%*	*2%*	*1%*
Coal	Natural gas	Renewables	Hydro electric	Nuclear energy	Oil	Other

Global renewable power generation capacity: **3,870GW**

Equivalent to:

Charging **50 billion electric vehicles** for a year

Powering **2.9 billion average households** per year

Supplying energy to **all of Europe and Africa combined** for a year

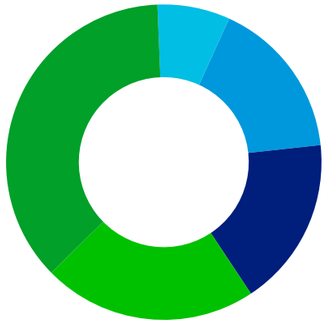
Source: *Energy Institute*

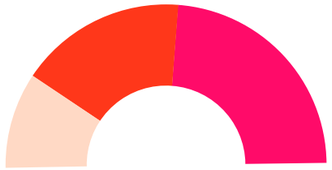
EJ *= Exajoule (unit of energy in the International System that is equal to 10 18 joules)*
GW *= Gigawatt (unit of measurement of electrical power equal to one billion watts)*

Transition Trends: 2025 - 2030

A 5X increase in climate finance is critical to limit warming to 1.5°C

$7.4 trillion in climate finance is required annually by 2030





Climate finance needs by region:

- *$2.7-2.8 trillion* Advanced economies
- *$2.3-2.5 trillion* EMDCs
- *$2.3-2.5 trillion* China

Climate finance needs by sector:

- *$2.8 trillion* Energy
- *$1.7 trillion* Transport
- *$1.1 trillion* Buildings
- *$1.1 trillion* AFOLU
- *$560 billion* Industry

Source: *AO Shearman; High-Level Expert Group on Climate Finance*

EMDEs require the largest surge in investment

Key drivers:

Investment Gap: High funding needs that remain unmet.

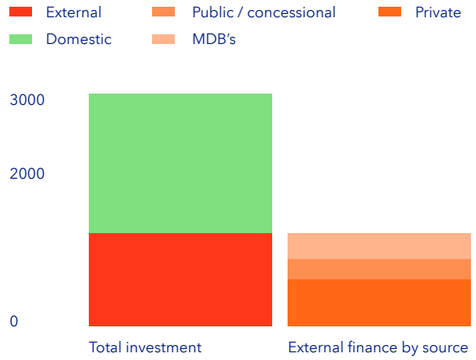
Climate Risks: Most vulnerable to extreme weather and the impacts of climate change.

Natural Wealth: Rich in biodiversity and critical resources.

Emission Projections: By 2030, EMDEs are expected to contribute over 50% of global emissions.

EMDEs need $1.3 trillion annually from external sources by 2030

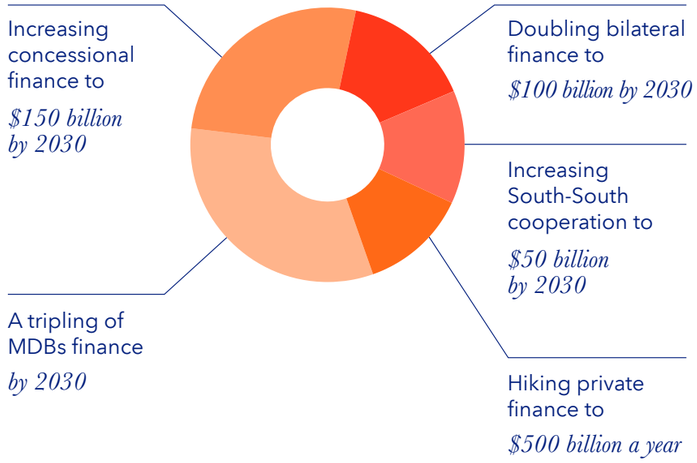
Climate finance needs for EMDEs by source in 2030 (USD Billion)



AFOLU *= Agriculture, Forestry & Other Land Use.*
******EMDEs*** *= Emerging Markets and Developing Economies (excluding China)*

Source: *S&P Global*

Private finance could meet up to 50% of the $1.3 trillion needed for EMDEs



Potential private finance sources to meet the $1.3 trillion requirement
MDBs *= Multilateral Development Banks*

Source: *High-Level Expert Group on Climate Finance*

MDBs alone could increase lending by 2.5X while retaining AAA ratings

11%
current share of funding MDBs receive from private investors, demonstrating significant growth potential through blended finance.

$1.2 trillion
potential financing that could be unlocked if MDBs double their lending, while still maintaining AAA ratings.

$1-1.2 trillion
additional financing capacity achievable by operating with an AA rating.

Source: *King's College London*

Carbon pricing momentum is growing, but broader adoption is needed.

Global Reach:
53 countries & 40 regions
have implemented carbon pricing

Coverage:
24%
total global greenhouse gas emissions covered by carbon pricing

Pricing:
$0.46 to $167
price range per tonne of CO_2e

Revenue:
$104 billion
total revenue generated by global carbon emissions trading systems in 2023

Source: *World Bank*

Benefits of carbon pricing

Incentivizes investment and **drives innovation** in clean technology

Generates revenue for reinvestment in the green economy

Channels financing towards sustainable development projects

Delivers co-benefits for environmental, health, economic, and social wellbeing

A $100/tonne carbon tax on shipping could generate $60-80 billion annually, decreasing as emissions decline.

The cost of climate inaction goes beyond financial losses

Economic Costs

GLOBAL SCALE

12% of GDP
at risk for every 1°C increase

LOSS & DAMAGES

$38 trillion
annually by 2050

PRODUCTIVITY LOSSES

3.8% loss
of global working hours by 2030

~136 million
full-time jobs

~$2.4 trillion
in economic losses

BIODIVERSITY & NATURE

1 million species
at risk of extinction

Social Costs

HEALTH & WELLBEING

14.5 million additional deaths
caused by climate change by 2050

CONFLICT & MIGRATION

1.2 billion refugees
from climate change by 2050

GLOBAL INEQUALITIES

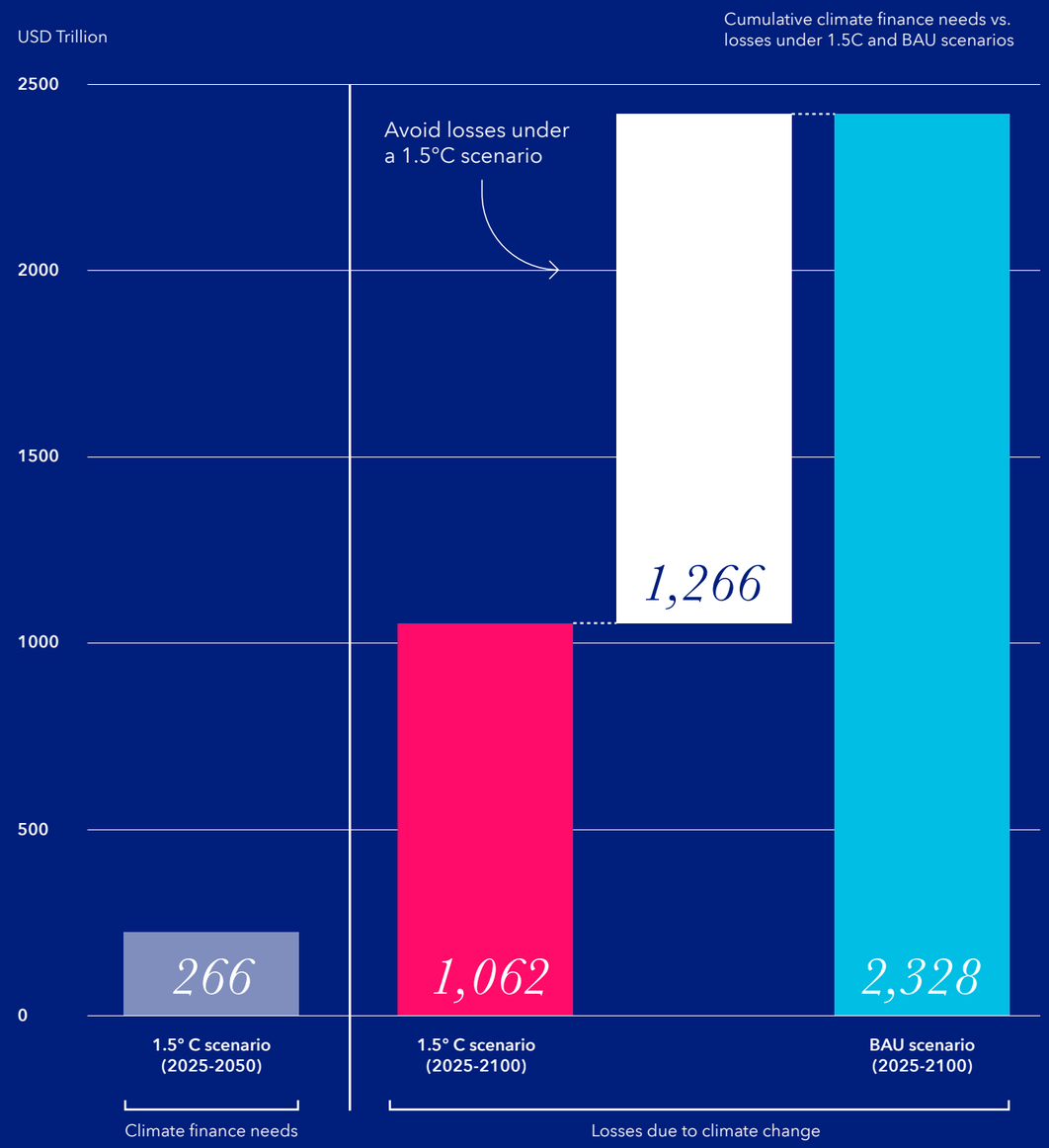
5.4 billion people
will face severe water stress by 2040

3.5 billion people
will be affected by food insecurity by 2050

Source: *World Economic Forum; United Nations; Institute for Economics & Peace*

Delaying action now will only lead to escalating costs later

Although annual climate investment needs are significant, they are only a fraction of the expected losses if we continue with business-as-usual (BAU) investments that cause global temperature rises above 1.5°C.



Source: *Climate Policy Initiative*

Decarbonization will reshape the economy, opening new markets and threatening others

Reinvention is the key to competitive advantage and growth

45%
of CEOs believe their business won't be viable in 10 years without reinvention

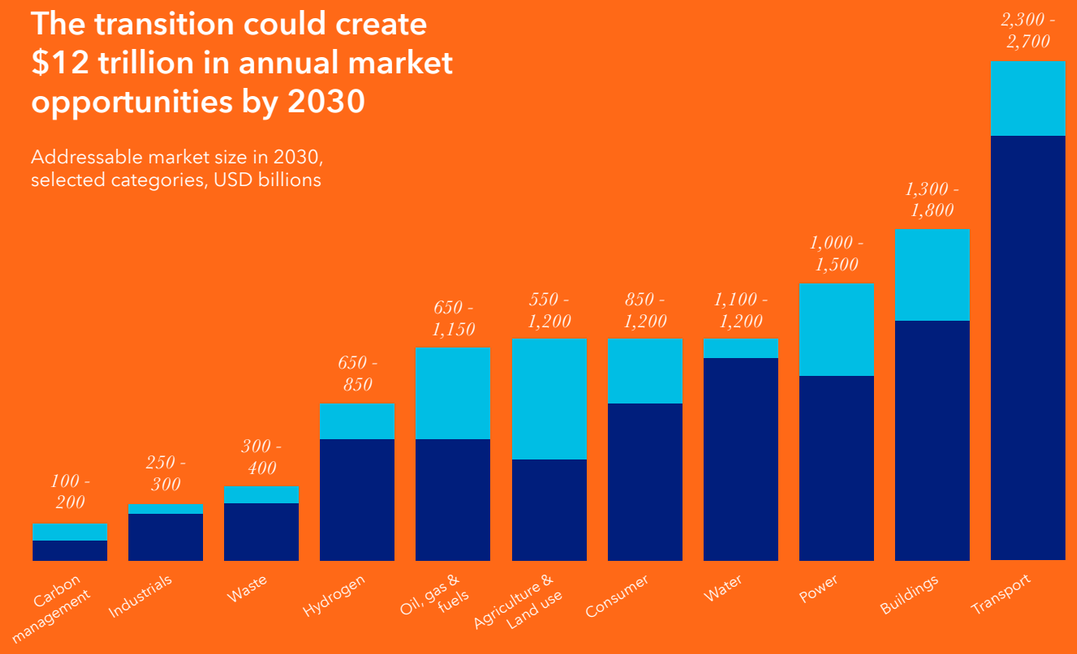
75%
say sustainability drives better business results

72%
see sustainability as a revenue enabler, rather than a cost centre

Source: *PwC; IBM*

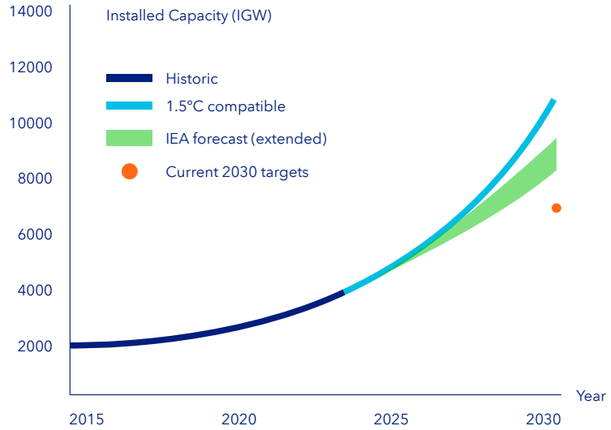
The transition could create $12 trillion in annual market opportunities by 2030

Addressable market size in 2030, selected categories, USD billions



Source: *McKinsey & Company*

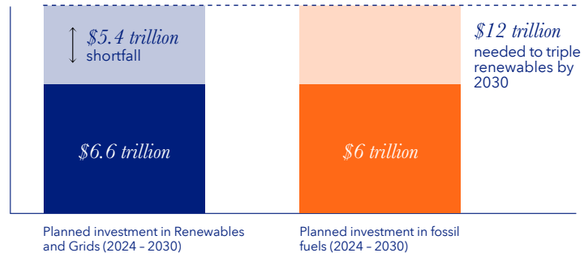
Tripling renewable energy capacity and doubling energy efficiency by 2030 is needed to stay within 1.5°C



The required pace of renewable capacity growth for 1.5°C, compared to current policy forecasts and the capacity reached under existing 2030 targets.

$12 trillion is needed to triple renewables by 2030

- *$8 trillion* for renewable installations
- *$4 trillion* for grid and storage infrastructure



Redirecting fossil fuel investments towards clean energy can close the investment gap

Source: *Climate Analytics*

Beyond solar and wind, emerging alternatives will transform renewable energy

Alternative energy source	Investment to date	Benefits	Expected availability
Geothermal	*$8.8 billion*	• Reliable, 24/7 renewable power • Low emissions and minimal land use • Long operational life and low maintenance costs	Currently available
Nuclear Fusion	*$7.1 billion*	• High energy yield • Virtually limitless fuel supply • No greenhouse gas emissions	Expected on the grid by the 2030s, with commercial plants by 2050
Small Modular Reactors	*$6.9 billion*	• Compact and scalable • Lower capital cost and quicker construction than traditional nuclear • Flexible, grid-stabilizing power	Expected to be part of the global energy mix by the 2030s

Source: *Straits Research; Fusion Industry Association*

Investing in Nature could unlock a 20X return on investment

50%

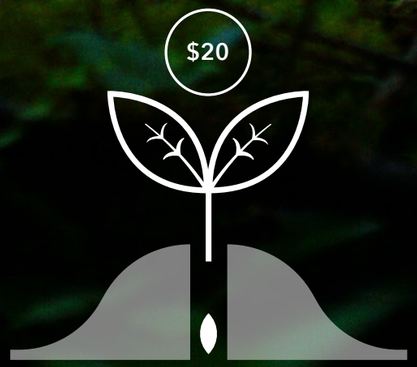
of the global economy depends on Nature

12%+

of global GDP generated by food, land and ocean systems

$7.4 trillion

investment required by 2030 to meet Nature-related SDGs



A return of $20 for every $1 spent

$152 trillion

potential return on investment from investing in Nature-related SDGs

Benefits of investing in Nature by 2030:

4.5 million deaths avoided

each year

27 million hectares

of deforestation avoided

18 billion tonnes

reduction in natural resource extraction

250 million hectares

of agricultural land restored

396,000 hectares

of terrestrial areas protected

218,000 hectares

of marine areas safeguarded

32 million jobs

created globally

Source: *United Nations Environment Programme*

GPS

AI will transform how we understand and mitigate climate change

$15.7 trillion
expected contribution of AI to the global economy in 2030

70% of CEOs
expect Generative AI to transform how their company creates value in the next 3 years

87% of CEOs
state that AI is an essential tool in the fight against climate change

Unlocking the power of AI

- Advanced Climate & Extreme Weather Predictions
- Data-Driven Climate Policy & Risk Insights
- Sustainable Transport & Traffic Efficiency
- Smart Energy & Renewable Innovation
- Precision Agriculture & Sustainable Land Management
- Consumer Behaviour Insights

AI is emerging as a critical enabler to accelerate the transition

Scaling AI responsibly is key to maximizing its benefits

1-2% of global power
is consumed by data centres

283 tonnes of CO_2e
generated by training a single AI model

X2 increase
in AI data centre energy demand estimated by 2030

Key Priorities for the Private Sector:

Smart Investments:
Prioritize AI-driven solutions that address climate challenges.

Energy Efficiency:
Use low power models and optimize data centres with renewables.

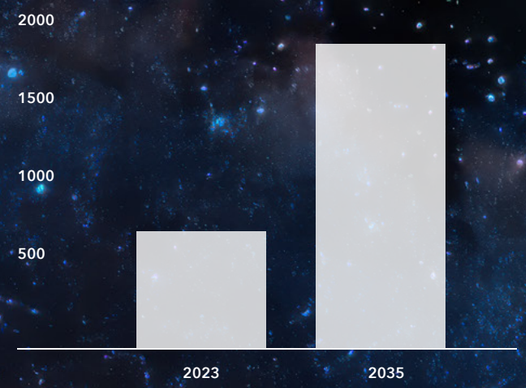
Responsible Data Management:
Minimize data to reduce storage and processing needs.

Ethical AI & Governance:
Promote transparency, prevent bias, and ensure regulatory compliance.

Collaboration & Innovation:
Work across industries, support open-source AI, and share knowledge.

Source: *PwC; BCG; Goldman Sachs*

The space economy will outpace global GDP growth over the next decade



Global space economy (USD Billions)

$1.8 trillion
market opportunity by 2035

9% annual growth
on average

X2 GDP growth
projected over the next decade

The growing space economy will supercharge climate action

Environmental Monitoring:
Satellites provide data to track climate change, deforestation, and natural disasters.

Space Debris Management:
With more space activity, there is growing focus on cleaning up space debris to protect future missions and Earth's environment.

Resource Management:
Space technology helps manage resources like water and agriculture more efficiently to reduce waste.

Technological Innovation:
Space missions lead to new technologies that benefit sustainability on Earth, such as in renewable energy or waste management.

Space-based Renewable Energy:
Concepts like space-based solar power could provide clean energy by capturing solar energy in space and sending it to Earth.

Source: *McKinsey & Company*

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