

# ESG Central

The Latest ESG News and Analysis

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## Is a just transition a realistic goal?

ESG investing in turbulent markets  
Green wrapping, not greenwashing

NEWS | TALKING POINTS | ANALYSIS

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# A transition for all

Climate change isn't fair. It's a refrain that will grow louder as the year goes on, especially in the lead up to the COP27 climate summit in Egypt this November.

Africa is home to 17% of the world's population but produces only 9% of greenhouse gas emissions, according to IPCC figures. In contrast, the 5% of the world's population living in North America produce 12% of GHG emissions.

This disparity is especially pronounced at different income levels, with the world's least developed countries contributing only a negligible amount of historic greenhouse gases.

It's no wonder that poorer nations want richer peers to contribute more to the costs of dealing with climate change.

This is a fractious topic in multilateral climate discussions, and one that is destined to be in sharp focus ahead of COP27 in Sharm El-Sheikh.

Calls for a 'just transition' focus on the need for future development to be inclusive – as well as clean.

Switching off the world's thermal power plants tomorrow, for example, would go a long way to restricting climate change, but it

would condemn many developing nations to decades of poverty, with serious implications for health and humanity.

A better solution involves accelerating investment in clean energy infrastructure to allow thermal power plants to be retired ahead of schedule. Someone, however, will need to foot the bill.

There are trickier transition questions to answer, too. What will become of emerging economies that depend on income from fossil fuel exports? Who will employ coal workers when the mines are no longer used?

These challenges, however, also present opportunities.

With clean energy and modern technology, less developed countries have a chance to leapfrog their peers by building sustainable infrastructure and investing in low-carbon industries. Economic development, as the IPCC points out in its latest assessment report, can also be sustainable.

The opportunities for investors are also more pronounced in less developed markets where the energy transition is at an earlier stage.

The fight against climate change may not be a fair one, but it is a battle that affects us all.

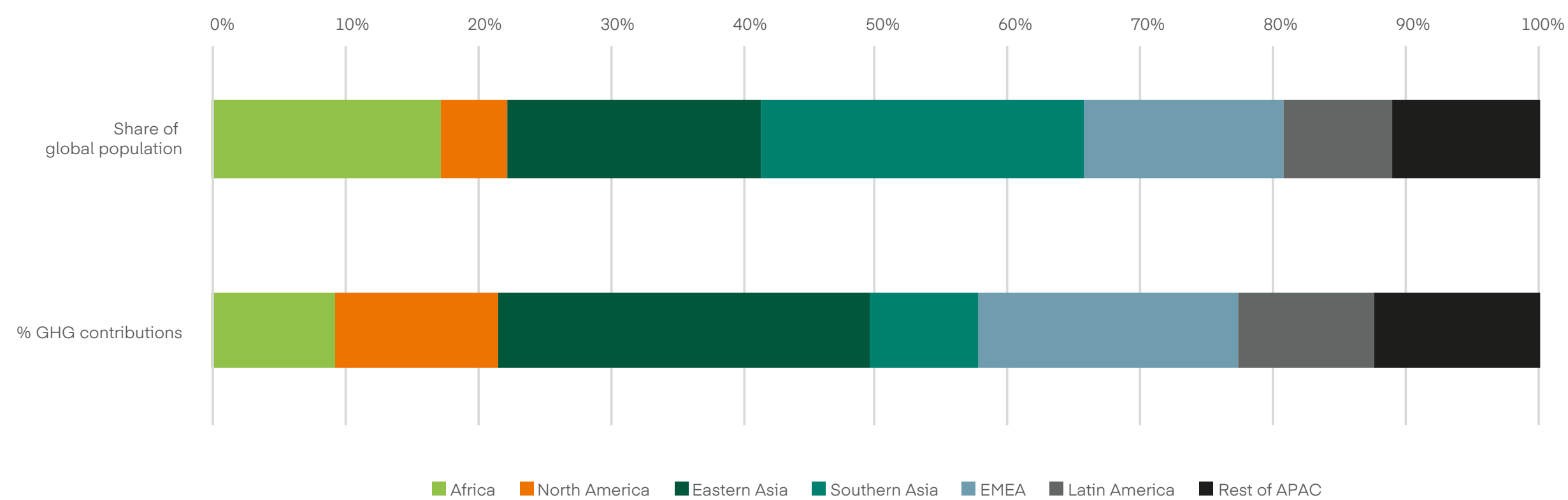
"With clean energy and modern technology, less developed countries have a chance to leapfrog their peers by building sustainable infrastructure and investing in low-carbon industries."



Steve Garton  
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## Abnormal distribution

Some regions produce more than their fair share of emissions



Source: IPCC, GHG data from 2019

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# After the **honeymoon**

Soaring energy prices and runaway inflation pose the biggest test yet for many ESG strategies. Can the momentum for ESG investing be sustained?

After a period of strong returns for ESG-focused funds, investors must now reckon with a new set of challenges. Rising interest rates, high inflation and the Russia-Ukraine war have tilted investor sentiment away from low-carbon growth stocks and rekindled interest in the traditional energy sector. Is the honeymoon over for ESG investing?

ESG-focused investors came out on top in 2021, despite a rally in traditional energy stocks as a result of rising oil and gas prices. According to MSCI, the index provider's flagship ACWI ESG indexes outperformed the global benchmark for a second year running: the MSCI World ESG Leaders index rose 21.3% in 2021, compared with a return of 19.0% for the MSCI World index.

Total assets held by sustainable funds and ESG-focused ETFs grew 53% in 2021 to US\$2.7 trillion, according to Morningstar.

Including all ESG-aligned investments, Bloomberg predicted in January that total assets, which it says surpassed US\$35 trillion in 2020, could reach US\$41 trillion by the end of 2022 and US\$50 trillion by 2025.

But changes to the macroeconomic and geopolitical environment threaten to put the brakes on this trend.

In the short term, soaring oil and gas prices, in particular, are complicating the outlook for ESG-aligned investors. As of March 21, the iShares MSCI global energy producers exchange-traded fund is up 21% so far this year, returning 40% over the past 12 months. By contrast, the iShares Global Clean Energy ETF is flat for 2022 and down 11% over the past year.

Over a longer horizon, investors must decide whether the renewed focus on energy security as a result of the Russia-Ukraine war will accelerate the transition to clean energy, or encourage more investment in oil production.

The end of near-zero interest rates poses another challenge. The US Federal Reserve raised interest rates in March for the first time since 2018 and has signalled that it is ready to do more to combat rising inflation.

In turn, as money becomes more expensive, investors may view ESG assets through a stricter lens. ESG will need to earn its keep in portfolios as macroeconomic factors favour other assets.

"Managers chasing optimal performance for their clients can't ignore these dynamics," said Patrick Kondarjian, HSBC's Head of EMEA Wealth Sales & Global ESG Product. "While volatility is a challenge for all investors in the short term, it is also creating opportunities for ESG investors who are able to take a long-term outlook."

## Measure for measure

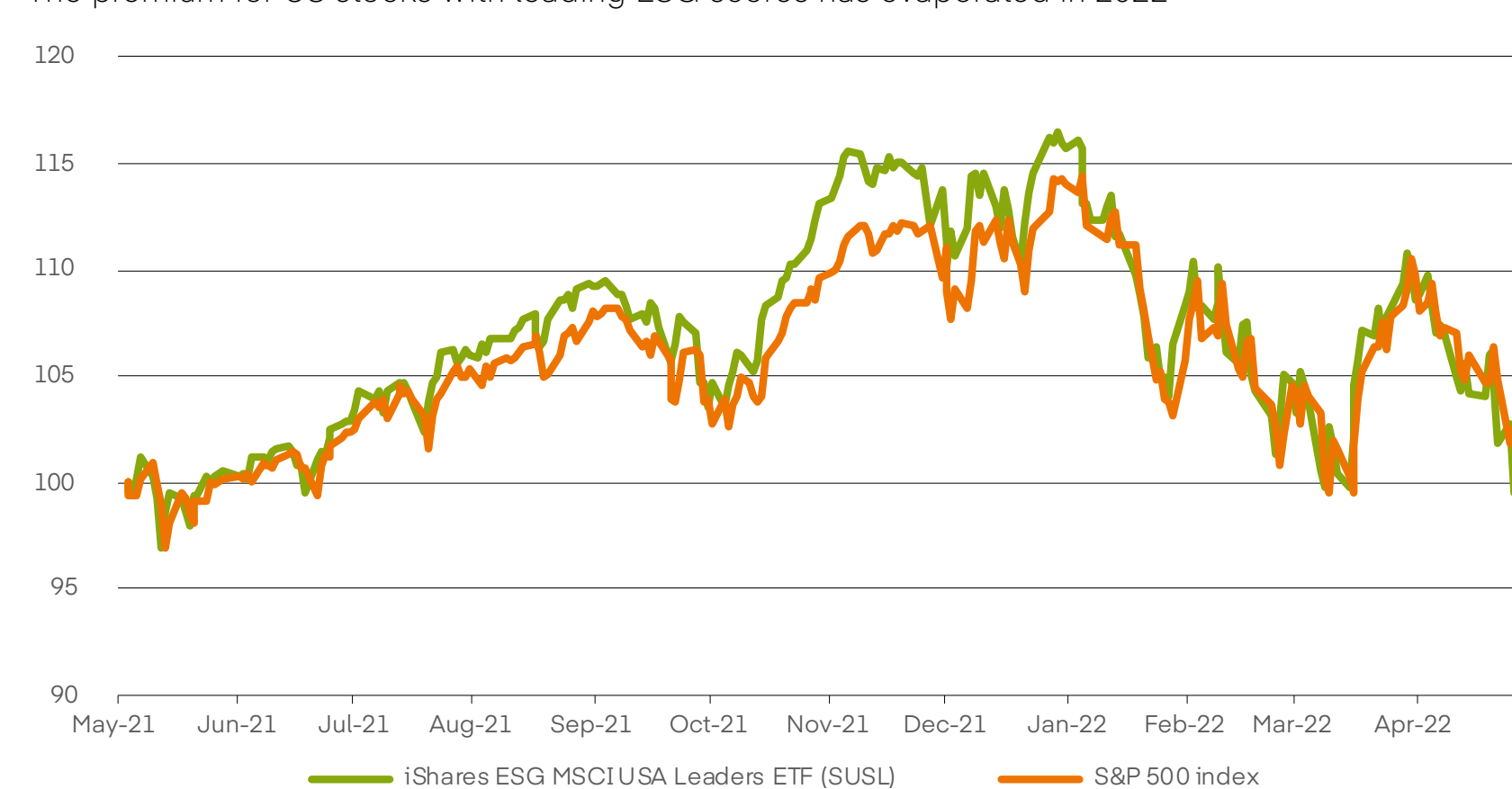
Whatever the direction of asset prices in 2022, the challenging backdrop places even more importance on reliable ESG data. Patchy and inconsistent disclosure gives active investors a reason to sell, while all investment managers need to decide whether their products live up to rising expectations.

The EU's Sustainable Finance Disclosure Regulation (SFDR), implemented in March 2021, is designed to clarify the credentials financial institutions' ESG-labelled funds – a step toward greater transparency. Morningstar removed more than 1,200 funds worth US\$1.4 trillion from its universe of sustainable funds after applying the SFDR's principles.

But on the supply side, there will be no shortage of sustainable projects looking for funding. The Climate Bonds Initiative notes that 2021 was the 10th consecutive year of growth for the green bond market, with US\$517.4 billion issued, and that this trajectory could continue this year, according to its annual market survey. The opportunity to diversify funding sources by tapping into a wave of capital from investors looking for quality ESG assets provides an engine for market growth.

## ESG outperformance has faded

The premium for US stocks with leading ESG scores has evaporated in 2022



Source: MarketWatch

## The S in ESG

Social causes are set to increase their share of ESG issuance, in part due to the continuing societal impacts from the Covid-19 pandemic, but also because COP26 delegates acknowledged that transitioning to a green economy has the potential to harm vulnerable populations.

More than 30 countries pledged to support workers and communities, in addition to the renewed commitment to supply US\$100 billion a year for developing economies to build resilience and adaptation.

"While governments must take the lead in providing these funds, there will be a role for private capital too," said Kondarjian.

## Back to nature

Closely entwined with adaptation and resilience, financing for the remediation of natural capital and biodiversity promises to be a strong emerging theme in the year to come. At COP26, 100 countries that are home to 85% of the globe's wooded areas pledged to reverse forest loss by 2030, with 12 countries providing US\$12 billion of capital from public funds and a further US\$7.2 billion from the private sector.

These commitments are driving capital markets activity: immediately after the conference, Belize issued 'blue' bonds to fund an ocean reserve covering 30% of its waters, while Fiji committed to raise up to US\$50 million this year to promote its marine economy and protect its ocean biodiversity. And with the UN Biodiversity Conference set to happen in Kunming, China later this year, new goals will be set to replace the 2020 measures from the 1992 Convention on Biological Diversity.

Despite a reality check in the early part of the year, then, ESG investing still has a strong set of fundamental drivers that will make it a continuing priority for asset allocators.

"As an investment class, ESG has come pretty far in a short time," said Kondarjian. "There may be periods when its progress is checked, but all the signs are that it's here to stay."



# \$517.4bn

green bond issuance in 2021, marking the tenth consecutive year of growth

"While volatility is a challenge for all investors in the short term, it is also creating opportunities for ESG investors who are able to take a long-term outlook"



# Climate **justice** for all

**Governments and companies are embracing the idea of the ‘just transition,’ or a shift towards net zero emissions that leaves nobody behind. But the ambition to be inclusive must not become an excuse for moving too slowly**

It is an unavoidable fact that the effects of climate change will be felt most severely by those that can least afford it. The response to global warming, however, need not be so fundamentally unfair.

The just transition concept calls for an inclusive approach to climate change and is gaining traction among key government and corporate decision makers. But this ambition can appear to sit awkwardly with the global push to accelerate the move to a low-carbon future. As countries ratchet up their nationally-determined contributions (NDCs) before the COP27 summit at Sharm el-Sheikh in November, they must also plan to support communities and households that will be affected by the transition. And at a global level, richer countries must be prepared to support less-developed nations whose economies are highly dependent on fossil fuels.

The term itself is far from new. The roots of the idea lie in the 1970s, when attempts to regulate polluting industries in the US and Europe triggered warnings from unions about the risks of lost jobs and forgotten communities. More recently, at the UN’s COP24 climate summit in Katowice, Poland, in 2018, parties signed up to the Silesia Declaration, recognising that “decent work and quality jobs” are crucial to climate-resilient development and to the long-term goals of the Paris Agreement.

This global consensus has continued to strengthen. Many resolutions emanating from COP26 last November had social justice very much in mind. The overarching Glasgow Climate Pact, signed by all 197 parties, included a commitment to provide financial support to the poorest and most vulnerable nations, “recognising the need for support towards a just transition”.

In a separate statement, the governments of 16 industrialised countries plus the EU pledged that their NDCs would connect climate action with social benefits. The Governments’ Just Transition Declaration outlined five principles for action: supporting workers, social dialogue, economic strategies, decent work, supply chains and reporting.

Scientists and non-governmental organisations have also added their weight to the just transition cause. In its latest assessment report in February, the Intergovernmental Panel on Climate Change (IPCC) noted that “opportunities for climate resilient development are not equitably distributed around the world”, an assertion it scored with very high confidence.

The idea of an inclusive transition also brings with it an inherent tension. Solutions requiring agreements between governments, unions, financial institutions and scientists threaten to add complexity and therefore time to the process of decarbonisation – at a juncture when the time in which the international community can limit climate change to below 2°C is running out.

Independent European climate change think tank E3G warns

that ensuring a just transition should not be a pretext to go slow on the transition: “If the Just Transition concept is used to delay change, the 1.5°C target will not be met, and everyone loses.”

## Life after coal

The most striking illustration of this tension is the global push to end coal-fired power generation – the single biggest source of greenhouse gas emissions.

The COP26 climate summit delivered a promise from more than 40 national governments, regional authorities and other organisations to end the use of unabated coal in developed economies during the 2030s and in developing economies in the following decade. Signatories also pledged to scale up the use of clean power and provide financial, technical and social assistance for workers and communities affected.

But a last-minute compromise also led to language being adopted on the need to “phase down” the use of coal power, rather than it being phased out. This change reflected concerns among major emerging markets that the pace of the transition to clean energy will restrain their economic development.

In many countries, shutting down coal-generated power stations will have far-reaching ramifications for jobs and associated businesses.

For example, South Africa is highly coal-dependent, with coal accounting for 70% of its energy mix and coal mining directly employing 90,000 people. In a country with an unemployment rate of over 30%, the prospect of rapidly transitioning away from coal implies unacceptable job losses, with associated impacts for families, communities and the economy.

South Africa is taking action to address the problem. It was the first country to include a just transition in its NDC and, at COP26, it announced an innovative blended finance solution for weaning itself off coal without punishing its poorest communities – or its economy.

## Blended finance

The Just Energy Transition Partnership brings together private institutions and philanthropies in conjunction with the EU, France, Germany, the UK and the US. Between them, the signatories will provide US\$8.5 billion for use as grants, concessions and risk mitigation measures that will support “a just transition to a low-carbon, climate-resilient society that promotes employment and livelihoods.”

This new-style climate financing agreement aims to shut South Africa’s coal power plants ahead of schedule, avoiding up to 1-1.5 gigatonnes of emissions over the next 20 years. It will also support

the reshaping of South Africa’s economy by mobilising financing for clean technology and investments, including electric vehicles and green hydrogen, to help create quality, green jobs.

Similar initiatives are underway in Asia, the source of more than half the world’s carbon emissions.

The Asian Development Bank is piloting a public-private initiative to retire coal plants early in key Southeast Asian markets, beginning with Indonesia and the Philippines. The Energy Transition Mechanism has been hailed by Indonesian Finance Minister Sri Mulyani Indrawati as an ambitious plan to “accelerate the clean energy transition towards net zero emissions in a just and affordable manner”.

“We need low-cost funding to build the new renewable energy and respond to growing demand,” she said.

HSBC is supporting the ETM initiative, alongside partners including insurer Prudential, the Bezos Earth Fund and others.

“Although renewable alternatives are becoming ever cheaper and more efficient, shutting down coal power plants overnight isn’t an option,” said Celine Herweijer, Group Chief Sustainability Officer, HSBC. “Over 3 billion people live in countries that still depend on coal for over two-thirds of their power consumption. This reliance is particularly acute in many Asian and developing economies.”

## Developed solutions

A just transition is not just a tool for transferring funds from developed to developing markets.

In the UK, the Financing a Just Transition Alliance, supported by the London School of Economics and more than 40 financial institutions, has called for the UK government to issue green sovereign bonds to support the just transition agenda by funding the creation of low-carbon jobs and housing.

It also recommended using a corporate carbon tax to help low-income households pay higher energy bills as a result of the energy transition, and calls on investors to incorporate the need for “good jobs” in their decision-making. HSBC is a founding member of the FJTA, which was created in 2020.

Austria recently introduced a “carbon dividend”, using money raised from a levy on carbon emissions to compensate households for higher fuel prices. It offers higher pay-outs to rural households who lack access to public transport alternatives.

These mechanisms, as well as many others, are a sign that governments, corporations and other stakeholders are increasingly determined that the world becomes not just greener, but also fairer. This determination to protect communities from a legacy of stranded jobs and economic woe, however, will be for nothing if the world fails to avert a climate disaster.





# Life on the brink

**The IPCC’s latest report warns it’s ‘now or never’ to take action against climate change, placing further pressure on nations and businesses to hasten their decarbonisation efforts. Investors will need to think about the long-term implications for their portfolios.**

The UN’s top climate scientists have concluded that, without immediate action, we are heading for 3.2°C of warming by 2100. There is a silver lining, though: the economic benefits of stepping up action against climate change will likely outweigh the costs.

Action taken so far has fallen short. The Intergovernmental Panel on Climate Change (IPCC) observed that the implementation of climate policies has not been deep or quick enough to reduce projected temperature rises. The latest climate models show higher projected emissions by 2030 and “later dates for reaching net zero”. As a result, the likelihood of limiting warming has fallen since 2018, when the IPCC issued its special report detailing the effects 1.5°C of warming would have on the planet.

The latest IPCC report, published 4 April, presents the findings of the third instalment of its sixth assessment cycle, studying the mitigation of climate change. The previous instalment, published in February, focused on impacts, adaptation and vulnerability, concluding that global warming is accelerating, putting nearly half of the global population at risk and many ecosystems on the brink of collapse. Increased heatwaves, droughts and floods are already causing widespread danger to human, animal and plant life. Climate change is set to intensify these hazards, which are compounded by global trends including the pandemic, the Russia-Ukraine war, social inequality, unsustainable use of natural resources, growing urbanisation and extreme weather events.

## Poor countries need not suffer

The IPCC touches on the burning issue of climate inequality. There is a wide variation in emissions by region and economic development, with per capita emissions diverging more than seven-fold between the least and most emissions-intensive countries.

Low-emissions countries, home to two-fifths of the world’s population, generate less CO<sub>2</sub> per head due to a lack of access to modern energy services, according to the IPCC. It dismissed the notion that improving their living standards would be incompatible with climate goals, however, claiming that sustainable economic development “can be achieved without significant emissions growth.”

Prospects for the fossil fuels industry are less sanguine. Net-zero energy systems would entail a substantial reduction in overall fossil fuel use, minimal use of unabated fossil fuels, and use of carbon capture and storage in the remaining fossil system, stressed the IPCC. Moreover, it found that investment risks are rising: limiting warming to 2°C would result in US\$1-4 trillion of stranded fossil fuel assets from 2015 to 2050 – and this number would be higher for a 1.5°C pathway.

The IPCC laid out decarbonisation options and strategies across

six key sectors including energy, transport and buildings.

And while advances in technology could help reduce emissions, this could be “counterbalanced by growth in demand”, according to the IPCC. After all, since 2010, the considerable efficiencies gained in energy have been “less than the emissions increases from rising global activity levels in industry, energy, supply, transport, agriculture and buildings”.

“All sectors must decarbonize, but doing less in one means compensating in another,” said Wai-Shin Chan, Global Head of ESG Research at HSBC. “Some sectors can contribute more, but this does not change the aggregate reduction required.”

The IPCC also highlighted the need to increase deployment of carbon dioxide removal (CDR) technologies – which include Bioenergy with Carbon Dioxide Capture and Storage and Direct Air Carbon Dioxide Capture and Storage – to limit global warming to 1.5°C or 2°C. CDR would counterbalance emissions from hard-to-abate sectors and is “unavoidable if net zero CO<sub>2</sub> or GHG emissions are to be achieved”, the IPCC said.

## Costs come with benefits

Behavioural change will also be an essential component of mitigation. The IPCC reckons GHG emissions could be cut by 40-70% by 2050 through “comprehensive demand-side strategies across all sectors”, noting that individuals with high socio-economic status have the greatest potential to reduce their carbon footprints.

These findings support calls for greater mobilisation of climate financing from developed to developing countries – both for mitigation and adaptation projects.

Overall, three to six times more investment above current levels is needed through 2030 to keep warming below 2°C or 1.5°C. Though there are large investment gaps to mitigation for all sectors, the IPCC found the gaps are widest for developing countries and for the AFOLU [agriculture, forestry and other land use] sector in relative terms.

“The IPCC believes that finance is a critical enabler of the low carbon transition, as well as addressing just transitions and inequality,” said Chan. “Governments, businesses and investors must plan more collaboratively for the longer term – assessing exposure across the entire value chain and working towards transformational adaptation.”

These shifts will require considerable financing, but they promise to yield benefits. The UN estimates that replacing the costliest 500 gigawatts of coal capacity with solar and wind would cut annual costs by up to US\$23 billion per year and yield a stimulus worth US\$940 billion, or around 1% of global gross domestic product.



The Global Commission on the Economy and Climate calculates that the world will need to spend \$90 trillion on infrastructure between 2015 and 2030 to replace ageing infrastructure in developed countries and expand infrastructure in developing ones. It would only cost an estimated \$4.7 trillion, or about 5% more, to make that infrastructure compatible with a low-carbon pathway. Separately, the World Bank finds that transitioning to a green economy yields US\$4 in value for every dollar spent, in the form of new economic opportunities and jobs.

As UN Secretary General António Guterres pointed out, “All development banks – multilateral, regional, national – know what needs to be done: work with governments to design pipelines of bankable adaptation projects and help them find the funding, public and private”.

The IPCC repeated that the long-term economic benefits of limiting climate change will outweigh the costs of doing so, and highlighted a number of low-cost options across key sectors. The final assessment report – due in October – will become the key reference point for international climate negotiations and is likely to inform discussions at the COP27 UN climate summit in Egypt this November.

Chan at HSBC also emphasised the role of the private sector in accelerating financial support for the transition.

“Mitigation options are widespread but sufficient deployment requires adequate finance and broad stakeholder involvement,” said Chan. “Investors should look for the most cost-effective strategies to decarbonise their portfolios and the economy.”

“It shows that climate change is a grave and mounting threat to our wellbeing and a healthy planet. Our actions today will shape how people adapt and nature responds to increasing climate risks”



Hoesung Lee, IPCC Chair

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ESG NEWS ROUNDUP



**This is ‘the epitome of ESG’**

Soon after Russia invaded Ukraine, the former Deputy Assistant to the President and Senior Director for European and Russian affairs on the US National Security Council (2017 to 2019), Fiona Hill, called divesting from Russia “the epitome of ESG”. She told Politico at the end of February: “Just like people didn’t want their money invested in South Africa during apartheid, do you really want to have your money invested in Russia during Russia’s brutal invasion?” Soon after, the BBC reported McDonald’s and Starbucks would close shops in the country. Separately, the Yale School of Management has been tracking corporate responses, compiling a list of firms that have announced plans to withdraw, suspend, scale back, or dig in. The initial list, published days after the invasion, included only dozens of companies. It’s now over 400.

**A world first for Chile**

In early March, the government of Chile issued a US\$2 billion, 20-year sustainability-linked bond that was reportedly four times oversubscribed with the final order book surpassing US\$8 billion. The bond’s key performance indicators are linked with the Paris Agreement on climate change, including targets for Chile’s greenhouse gas emissions to be capped at 95 million metric tons by 2030; and for the share of “non-conventional renewable energy generation” within the nation’s electricity grid to reach 60% by 2032. In recent years, Chile has earned a reputation for robust environmental protection commitments. About 28% of its central-government debt is ESG-themed, putting among the world’s leaders in this respect. Since 2019, including this new issuance, Chile has issued about US\$33 billion in ESG thematic bonds.

**Russia’s ESG ratings slashed**

Swedish sustainable finance expert Sasja Beslik, who the King of Sweden knighted for his extraordinary service in the field of sustainability and investments, criticised fund managers and ESG-analytics firms for not acting after Russia’s first attack on Ukraine in 2014. On February 28, 2022, MSCI downgraded Russia’s ESG Government Rating from BBB to B, and again on March 8 from B to CCC (its lowest rating). “This came eight years too late,” the Financial Times quoted Mr Beslik as saying about the move. Moral questions aside, “the promise of ESG is to manage the down and upside of risks,” he said.

**Fund labels in focus**

Morningstar has pulled ESG classifications from more than 1,200 funds that it reviews, representing about US\$1 trillion of assets. Bloomberg quoted the company’s Global Head of Sustainability Research, Hortense Bioy, as saying that targeted funds used “light or ambiguous ESG language”, better known as greenwashing. Aside from ESG definitions often being in dispute, the size of the market is too. Some estimates, including those from Bloomberg Intelligence or GSIA, peg global ESG investments at about US\$40 trillion, growing to US\$50 trillion within three years. By contrast, Morningstar has calculated the figure much lower, at just above US\$2.5 trillion. And that number could shrink further as Morningstar expects to purge more funds for misleading claims.

**Orange is the new green**

On the UN Sustainable Development Goals colour grid, goal number 5—Gender Equality—is orange. In early March, Singapore-based Impact Investment Exchange (IIX) launched its Orange Bond Initiative for “gender-lens” investing. The firm estimates orange bonds could reach US\$10 billion by 2030 and uplift 100 million women and girls. The Australian government’s Department of Foreign Affairs and Trade (DFAT), the United Nations Capital Development Fund (UNCDF), and global asset manager Nuveen are among the Initiative’s founding signatories. Orange Bond’s plans include the creation of standards and specific data analytics to ensure that proceeds match intentions. An open invitation to quarterly round tables, aimed at shaping the ecosystem around gender-lens investing, is available at the Orange Bond Pledge.

**A deeper shade of orange**

A new study says women could add over US\$3 trillion to global investments and prefer investing with positive environmental and social impact – especially women under age 50. According to The Pathway to Inclusive Investment, from Coleman Parkes Research and BNY Melon, if the finance industry wants to access the huge potential capital pool, ESG is likely the best path to get there. The study consulted 8,000 male and female respondents across 16 developed and developing markets. Over half of the women surveyed (55%) said they would invest – or invest more – if their money could be aligned with personal values; 53% said the same for investments with “a clear purpose for good”. But the survey results also revealed enduring pressures that prevent women from becoming investors in the first place. Income hurdles, perceptions about high risk and “a crisis of engagement” from the finance industry were highlighted as key barriers.

**Renewable energy hit an all-time high in 2021**

But so did CO<sub>2</sub> emissions, according to a new IEA report. After a pandemic-imposed hiatus, global energy consumption made a strong rebound in 2021, jumping 6% over 2020’s levels. That also makes last year the new record holder for year-on-year increases in CO<sub>2</sub> from energy production. Recent oil price spikes could drive more coal use in 2022. Coal emissions reached 15.3 gigatonnes in 2021, beating the previous record from 2014 with coal responsible for over 40% of the year’s overall emission’s growth. Still, it could have been worse: without 2021’s boosted renewable and nuclear contributions, the IEA estimates global CO<sub>2</sub> could have been 220 megatonnes higher. In a parallel story, surging sales of big-engine SUVs cancelled out emissions reductions from record electric-car sales in 2021.

**The data says data centres are a carbon issue**

Chinese technology firm Tencent says it emitted the equivalent of 5.111 million tons of CO<sub>2</sub> in 2021. The company estimates that Scope 3 emissions—from supply chain, infrastructure materials, or energy use in company-leased data centres—are the largest component, at about 53% of the total. But Tencent has a plan to get to zero. It calls for a significant jump in renewable energy use,

especially for basic electricity needs. Tencent will also participate in green power trading and explore investments in renewable energy projects. Data centres are power-hungry so many of Tencent’s net-zero tactics involve upgrades at leased and owned properties, including rooftop photovoltaics, exploration of new cooling technologies and leveraging AI to monitor energy use.

**What gets rewarded gets done**

The Financial Times reported that former Starbucks CEO Kevin Johnson can thank the company’s lower methane emissions for a portion of his 2021 bonus package. Financial metrics, such as profit margins or return on equity are more common in executive incentives, but as shareholders demand action on environmental and social fronts, a trend of factoring ESG goals into pay has accelerated. Institutional Shareholder Services ESG, a proxy advisory firm, reports that pay tied to corporate social responsibility at Russell 3000 companies has climbed from just 7% in 2018 to over 20% in 2021. Another study from proxy advisor Glass Lewis & Co, says as much as a quarter of U.S. companies now include some form of environmental or social metric in their executive incentives. Even the SEC has taken note as part of its work on “pay-versus-performance” rules, with one commissioner suggesting that ESG metrics should be included.

**Canada’s green transition**

Canada, the world’s fourth-largest oil producer, is also looking to green its bonds, publishing a new framework in early March. Its Green Bond proceeds will go to supporting the transition to net zero tin sectors including transportation and natural resources. The inaugural issuance targets US\$5 billion of funding, which could go toward transfer payments or subsidies for electric vehicles, tree planting, aquiculture restoration or hydrogen production. The framework is broad and seeks to support SDGs 6, 7, 9, 11, 12, 13, 14 and 15.



# Conservation starter

**UK-born Lee White has spearheaded a successful conservation effort in Gabon, one of the world's most heavily forested countries. Now in charge of the country's entire environmental agenda, he is bringing a focus on biodiversity to international climate negotiations**

**G**abon, on central Africa's Atlantic coast, is one of the few countries in the world that can legitimately claim to be carbon-negative.

Its over 240,000 square kilometres of forests and mangroves are home to thousands of species, including endangered gorillas and elephants, and are enormous carbon sinks. The country claims to sequester over 100 million tonnes of CO<sub>2</sub> each year more than it produces.

It is also a case study in conservation. Gabon has resisted deforestation more effectively than many of its neighbours and remains a High Forest Low Deforestation (HFLD) country with 88% of its territory still covered in forest.

Lee White, Minister of Water and Forests, the Seas and the Environment, can claim much of the credit for the country's successful conservation efforts. After 16 years as head of the Wildlife Conservation Society's Gabon programme, the UK-born scientist was named Director of the country's National Parks Agency (ANPN) in 2009. That made him responsible for running the country's 13 protected areas, including two that are now on the list of UNESCO World Heritage Sites: the Ivindo and Lopé National Parks.

White was promoted to his current position in the Gabon cabinet in 2019 and tasked with leading the country's climate change agenda. He has since assumed additional responsibilities for water, land-use planning and the Sustainable Development Goals.

His rise to prominence is symbolic of the importance Gabon attaches to conserving of its pristine tropical forests. The Congo Basin rainforest – which covers six countries including Gabon, the Democratic Republic of the Congo and Cameroon – is the world's second-biggest tropical rainforest after the Amazon. It is home to thousands of unique species and removes 1.2 billion tonnes of CO<sub>2</sub> from the atmosphere each year.

The government's conservation programme has grown since it set aside 10% of its land mass to establish the national park system in 2005. Today, 22% of Gabon's land and 27% of its seas are protected, and the government aims to reach 30% on both counts by 2030.

"We continue to underestimate the scale of the biodiversity crisis despite the millions of species at risk of extinction," White said in an address to the UN Environment Assembly event in March. "Without reconciling our development with nature, conditions on earth will deteriorate drastically."

## African voice

White's status as a respected scientist has elevated Gabon's standing in international environmental negotiations.

Gabon chaired the African Group of Negotiators at COP26 and is set to play a key role in COP27 in Egypt later this year. Already dubbed the "African COP", the UN's next climate summit will include a strong focus on the impact of climate change on Africa – and the cost of remediation.

"It's Africa and the small island states that are going to pay the biggest price from climate change – the small island states are disappearing, and Africa will fall into civil war and starvation in many places if we don't deviate from the trajectory," White said in an interview with Al Jazeera in October.

Gabon is also a leading voice in the work on the Post2020 Global Biodiversity Framework, which is due to be confirmed at the much-delayed COP15 biodiversity summit (CBD COP) later this year. At a round of negotiations in Switzerland in March, Gabon led new calls for developed countries to provide US\$100 billion a year of biodiversity finance from public and provide sources to developing markets, rising to US\$700 billion by 2030 – a new biodiversity financing framework that is separate from the US\$100 billion target in the UN's climate change negotiations.

"Three gruelling weeks of negotiations in Geneva saw modest progress towards a successful CBD COP later this year, but there is a long, long way to go and a large distance between developing and developed nations to bridge!", White Tweeted.

## Carbon credits

Gabon is now exploring ways to connect its formidable natural assets with economic development.

In September, Gabon passed laws that will allow it to begin trade in carbon credits, providing a legal framework for a scheme that will incentivise companies to reduce emissions. Once carbon trading is rolled out, oil and forestry companies, for instance, will have to follow emissions caps or purchase credits to offset their carbon footprints.

Gabon aims to use this funding model to maintain its carbon-negative status beyond 2050. This has already become an asset in itself: last year, Gabon became the first African country to be paid for reducing its carbon emissions by preserving its rainforest, receiving the first US\$17 million of a US\$150 million programme from the UN-hosted Central African Forest Initiative.

White welcomed that deal as recognition of the data and monitoring infrastructure Gabon had put in place.

"It also paves the way for Gabon to finalize the systems that will be required to enable the country to formally sell carbon credits in the future," he said.

Carbon credits could also be used by companies in Gabon to fund sustainable development projects. The African Conservation Development Group, which holds a concession of over 7,300 square kilometres in southern Gabon, has been exploring ways to raise money in the capital markets based on its ability to generate carbon credits, essentially securitising the area's environmental value rather than a future revenue stream.

That project has yet to take off, and international investors remain wary of committing large sums of capital in a country that ranks 124th out of 180 countries on Transparency International's Corruption Perceptions Index.

But the second half of this year will bring with it more opportunities for Gabon to raise its profile as an international leader. The UN Convention on Biodiversity's COP15, now scheduled for Kunming, China, in the third quarter, will provide another reminder of the natural capital held by biodiverse countries such as Gabon, ahead of the COP27 climate summit in Egypt in November. That meeting is likely to be a contentious one, where Gabon and other African nations press home their case for greater distributions of climate finance from richer nations.

White was clear about the challenges ahead for Gabon and its heavily forested neighbours in his remarks to the UN Environment Assembly.

## 1.2bn

tonnes of CO<sub>2</sub> removed from the atmosphere each year by the Congo Basin rainforest

"We continue to underestimate the scale of the biodiversity crisis despite the millions of species at risk of extinction"

# Circular economics

**A less linear approach to manufacturing and consumption can benefit corporate business models and will become more important as governments impose tougher rules on waste management**

The transition to a circular economy will require sweeping changes to business models and consumer behaviour. It means replacing the current take-make-waste model with a new approach, where products are designed to remain in circulation for as long as possible and production processes are re-engineered to reduce the consumption of virgin materials.

As daunting as this sounds, there is reason to believe that circularity is both an achievable goal and good for business.

Dame Ellen MacArthur, a champion for sustainability and founder of the Ellen MacArthur Foundation, has linked the supply chain problems that have plagued global trade throughout the Covid-19 pandemic to current, linear practices, where the economy is constrained by resources.

“A circular economy plays a really key role in solving many of the problems around climate change,” she said. “What it also does is it builds a more resilient economy.”

Circularity revolves around four key principles: using fewer resources, using resources for longer, recycling and regenerating. Though the term is most often associated with recycling, circularity covers everything from reducing food waste to sustainable forestry.

Policymakers recognise the benefits, and many are coming on board.

The European Union’s Green Deal includes a Circular Economy Action Plan requiring all packaging to be re-usable or recyclable in an economically viable way by 2030. The UK is introducing a plastics tax in April 2022 to encourage greater use of recycled content in packaging.

In the US, the Save our Seas Act 2.0 made specific reference to circular economics in targeting plastic pollution, and circularity principles are appearing in other legislation. A 2021 executive order from President Biden supported giving consumers the right to repair their own electronics – thereby keeping smartphones and laptops in use for longer.

## Changing habits

Consumers have shown a willingness to change their behaviour in relatively short periods of time. Since the UK introduced a charge on single-use plastic bags in October 2015, the use of carrier bags has plummeted by 95%, according to government data, cutting out 7.4 billion bags a year from major supermarkets.

A HSBC survey conducted before the Covid-19 pandemic revealed that 53% of UK consumers claimed the amount of plastic packaging affects their purchasing decisions. Younger consumers aged 18 to 34 year olds are most concerned, implying that future

spending power will shift more heavily towards sustainable goods.

This has led to consumer-facing brands exploring a range of solutions to make their products and packaging more easily reusable, including the elimination of plastic packaging and working with recycling specialists to support the collection and reuse of their products.

TerraCycle, for example, aims to collect and recycle products that do not fit into current municipal recycling schemes, including medicine blister packs and beauty packaging. It launched in the UK in 2009 and has expanded to 12 European markets.

TerraCycle also launched Loop, a global initiative to promote circularity across a range of industries, from restaurants to retailers, by making reusable products as convenient and accessible as single-use alternatives. This includes cleaning and refilling services for beverage and cosmetics brands, all embedded into their offerings at the point of sale.

## Good for business

Companies are finding themselves under pressure to support more circular practices, both from consumers and from regulators.

Pull factors include the savings available from more efficient, less wasteful processes. Consultants at Accenture calculate that the consumer packaged goods industry could generate an additional US\$35-\$115 billion of cost savings by 2030 through redesigning products, reducing waste and embracing new business models.

The fashion and textiles industry loses US\$500 billion every year from the underuse of clothing and lack of recycling, according to the Ellen MacArthur Foundation.

Government incentives are also available to support costly technological changes to cut out unsustainable production methods, and many countries offer funding to promote innovation in circular businesses. Australia, for instance, has introduced a A\$100 million (US\$71 million) Australian Recycling Investment Fund, while the European Investment Bank is supporting a EUR 10 billion (US\$ 11.8 billion) loan and investment initiative dedicated to the circular economy

On the other side, stricter regulations are holding businesses accountable for the waste they produce. Many governments use Extended Producer Responsibility (EPR) regulations to incentivise corporate behaviour, and these rules are growing stricter. The UK, for example, is consulting on laws to shift the full net cost of managing packaging waste onto producers and aims to reach an overall recycling rate of 73% by 2030. The government also doubled its levy on single-use plastic bags in 2021.

The European plastics industry is supporting a mandatory

recycled content target of 30% for all plastic packaging used in the EU. Similarly, for the paper packaging industry, the 4evergreen Alliance is working across the entire value chain to raise the overall recycling rate of fibre-based packaging to 90% by 2030.

## Financing opportunities

Circular business models are also proving popular with investors, according to the Ellen MacArthur Foundation, which reports a “significant” increase in the creation of debt and equity instruments related to the circular economy. Public equity funds targeting circularity increased sixfold in the first eight months of 2020, from US\$0.3 billion to over US\$2 billion, according to the Foundation.

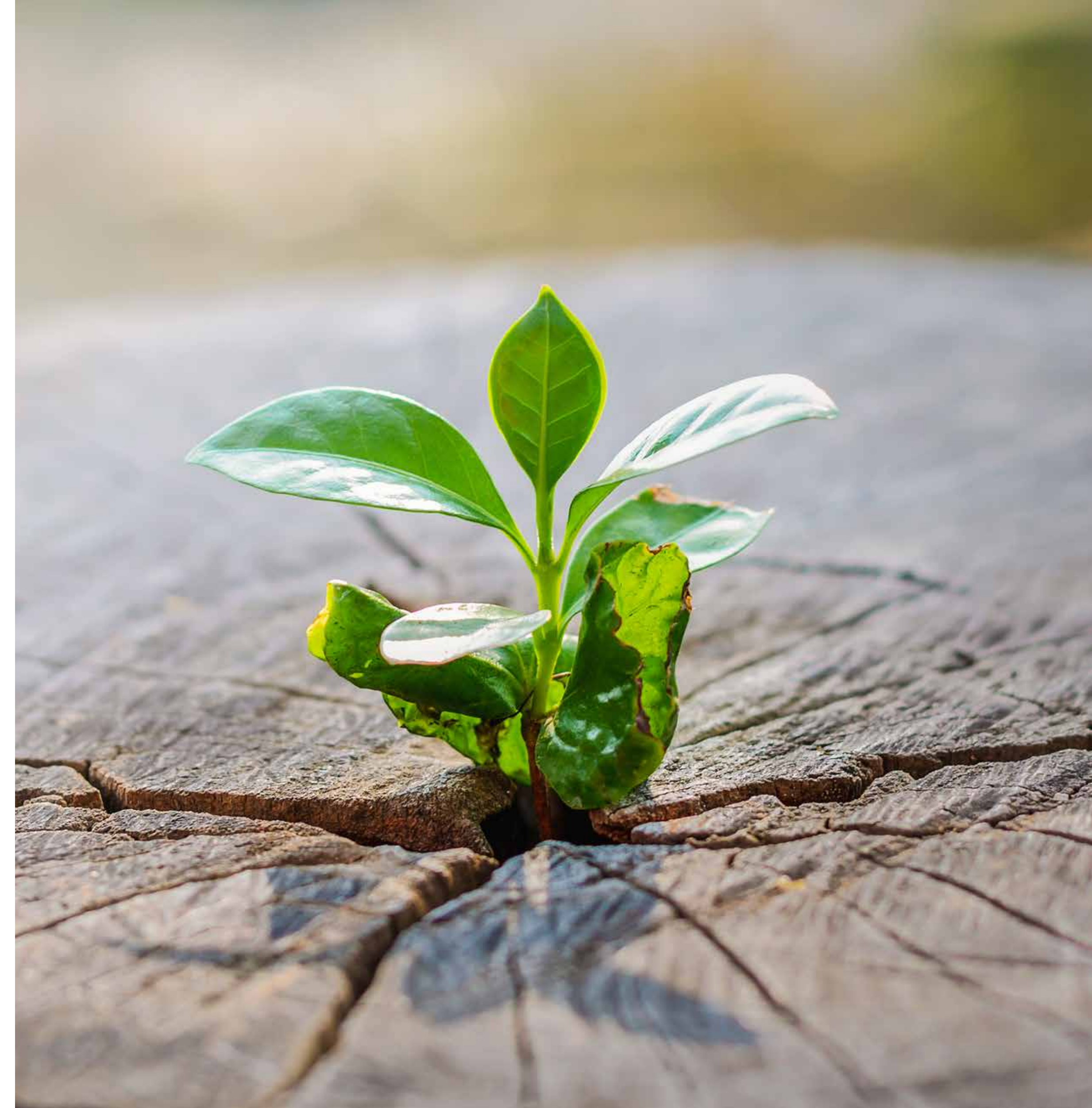
Examples of innovative financial products include a blended finance partnership launched by Singapore-based Circulate Capital with USAID to incentivise private capital investment in the recycling value chain in South and Southeast Asia.

“Finance has a critical role to play in building a more sustainable, healthy and resilient future. Scaling the circular economy helps to achieve this, while unlocking new and better growth opportunities for businesses of all sizes as they transition,” said Barry O’Byrne, Chief Executive of Global Commercial Banking at HSBC.

The world now consumes 100 billion tonnes of materials a year, with only 8.6% making it back into our economy, according to the Circularity Gap Report 2022. If unchecked, material extraction will reach 170-184 billion tonnes by 2050 as economies develop, putting more pressure on the world’s finite supply of raw materials.

Recent geopolitical shocks have underlined the risks of this dependence on natural resources, adding to the case for circular solutions. As the scale of the problem grows, so does the opportunity for businesses and investors who are prepared to challenge the status quo.

“Finance has a critical role to play in building a more sustainable, healthy and resilient future. Scaling the circular economy helps to achieve this, while unlocking new and better growth opportunities for businesses of all sizes as they transition”



Barry O’Byrne, Chief Executive of Global Commercial Banking at HSBC

©HSBC



# Green wrapping, not green washing

**Innovations from paper bottles to plant-based plastics are important steps towards a more sustainable packaging industry**

There is no shortage of initiatives to reduce the amount of packaging that ends up as waste, from municipal recycling schemes to nationwide plastic bag levies. A lasting solution to the world's packaging problem, however, will require a rethink of the materials and how they are used.

Plastics are the most pervasive problem. The UN Environment Programme found that less than 8% of all the plastic produced since 1950 has been recycled, and 11% incinerated. The rest still exists – mostly as plastic waste.

The environmental damage caused by plastics also includes the carbon emissions from the fossil fuels used in their production. In the US, plastic production is on track to emit more greenhouse gases than coal-fired power plants by 2030, according to NGO Beyond Plastics.

But plastic is lightweight, durable and cheap, making it ideal for many packaging applications. The packaging industry is the biggest user of plastics, accounting for 40% of production, according to industry group Plastics Europe.

Innovative alternatives, however, are starting to gain traction. Bio-based plastics offer a more sustainable approach, though the term itself is often loosely defined – particularly in consumer-facing applications. Some bio-based materials only partially replace petrochemical raw materials with biomass, and many bio-based plastics simply replicate the properties of conventional plastic, presenting the same pollution and environmental challenges after their (often limited) lifespan.

Biodegradable plastics, similarly, are not a universal solution. The European Commission's scientific advisory body noted in 2020 that many biodegradable plastic products only break down in certain specific environments, or only in industrial composting facilities, rather than in the open environment more generally. The scientists recommended limiting the use of biodegradable plastics to specific applications "for which reduction, reuse, and recycling are not feasible."

The European Commission is now consulting on a European policy framework around the labelling and use of bio-based plastics.

## Consumer innovations

Public outrage at the scale of plastic pollution has driven consumer brands to invest in alternative packaging that appeals to sustainability-minded buyers.

Vegan washing detergent brand OceanIQ, for example, sources its plastic bottles from recycled fishnets retrieved from oceans

around the world. Mineral water giant Evian has introduced a 'No Label' bottle with the logo embossed directly onto material made from recycled plastic.

While these concepts reduce the need for virgin plastic by recycling old material, others aim to go a step further.

Paboco, a Danish company that is developing bottles made entirely from paper, has won the support of cosmetics group L'Oréal and consumer goods giant Procter & Gamble, among others.

Storing liquid in paper is a challenge, but the company aims to deliver a scalable solution that is 100% bio-based and fully recyclable by 2023.

## Paper over plastic

Paper-based packaging has many advantages over plastic. Its production does not require the use of petrochemicals, and it is generally easier to recycle. In the food industry, a thin barrier layer – often made from recycled plastics – is typically added to prevent leakage.

Scandinavian company Stora Enso has developed biodegradable barriers that allow products such as coffee and ice cream to be stored in fully compostable paperboard packaging. Switching to paperboard saved 520 tonnes of plastic a year for Unilever's Carte D'Or ice cream brand in 2021 – or 10 tonnes every week.

Paper trays are increasingly used as alternatives to plastic punnets for fruit and vegetables in Europe. Since the beginning of this year, France has banned 30 types of fresh produce from being wrapped in plastic; Spain will follow from 2023.

The UK introduced a £200/tonne tax on plastic packaging with less than 30% recycled content manufactured or imported into the UK, including packaging on imported goods, on April 1.

But a full switch to paper-based packaging would also increase demand for virgin pulp and paper, potentially contributing to deforestation.

That's why consumers and environmental advocates are increasingly demanding less packaging, regardless of its substance.

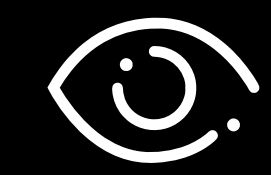
HSBC's ESG research team has highlighted how difficult it will be to find a solution to plastic pollution as alternative routes such as plant-based plastics still "need to develop in terms of technology and scale to be viable solutions. There is not yet an alternative that is as cheap and as useful as plastic, and which at the same time is less environmentally harmful."

"There is not yet an alternative that is as cheap and as useful as plastic, and which at the same time is less environmentally harmful."

**£200**

UK tax per tonne of plastic packaging with less than 30% recycled content, effective April 1





# Build with bio

Biotechnology is an exciting and fast-evolving area of science with a big role to play in the journey to a more sustainable future. Synthetic biology has the potential to provide limitless amounts of green fuel, better crops, as well as cheaper and more effective drugs – but there are limitations to this complex area of science. Can we really “grow” everything?

HSBC analysts led by **Sriharsha Pappu, Global Sector Head Chemicals Research, Energy Transition Coordinator, HSBC**, hosted a series of webinars that offered a deep dive into the potential applications of biology in transforming society.

Jenny Molloy, Senior Research Associate in the Department of Chemical Engineering and Biotechnology at the University of Cambridge, and Rahmi Lale, Senior Researcher at the Norwegian University of Science, provided academic insight into recent scientific breakthroughs, highlighting the importance of cheaper DNA testing and open-source data in facilitating research.

While biology is programmable, unlike computer code the results are not deterministic, given the vast number of potential pathways and possible outcomes, which means that we are still in the very earliest stages of figuring out what this technology can do. The other challenge will be scaling the technology to deliver commercial outcomes, converting strong lab results into successful commercial products.

Dr Calliope Panoutsou, Senior Research Fellow at Imperial College London’s Centre for Environmental Policy, joined an HSBC panel to discuss the growth in consumer demand for bio-based products. A noted biomass expert, Panoutsou highlighted the role of governments in supporting industries that need to make costly technological changes in order to eliminate unsustainable production methods.

The panel also examined the changes coming for industry sectors such as food and fashion that are the biggest sources of emissions and environmental threats. As regulation becomes more of a factor – such as the EU’s green agenda – start-ups will benefit from the shift towards bio-based products, while major corporations will have the resources to invest in new bio-based lines.

Heidi Yu Spurrell, CEO of sustainability consultancy Food Made Good, joined **Andrew Porteous, Co-Head European Consumer Retail Research, HSBC**, to share her views on the trends shaping the food industry.

Agriculture is directly responsible for over 10% of greenhouse gas emissions, and far more when logistics, packaging and waste are included. As well as reducing carbon emissions, the food industry is under pressure to support food workers’ welfare, deforestation-free commodities, and plant-rich food including alternative proteins. Regenerative agroecological farming, and farming methods that boost biodiversity are also hot topics: 75% of the world’s food sources come from only five animal species and 12 plants.

Urgent solutions are needed to reduce food waste and reduce meat consumption. Regionally, Europe, the UK and the US are more receptive to new business ideas, while Asia is more enthusiastic to try new foods. Scandinavian countries are leading in reducing carbon footprints, while individual Asian countries such as Japan, Taiwan and Korea are very advanced in recycling waste.

## Local insights from India and China

India’s renewable energy sector is emerging as one of the stars of the global energy transition, and the country’s ambitions match its enormous potential from wind, solar and hydro.

Sachin Jain, Head of Clean Energy at BCG Consulting joined **Puneet Gulati, Analyst – FIG, Industrial and Natural Resources & Energy, HSBC**, to explain the implications of recent regulatory developments on the outlook for the sector.

India has cleared many hurdles to increase investment in renewable energy though many still remain. A recent ruling in the high court in Andhra Pradesh lifted a big overhang in the minds of global investors by supporting solar and wind developers and making State governments honour power purchase agreements. India continues to see high competitive intensity while deploying capital which is bringing down the cost of projects.

On the other hand, the basic customs duty (25% on solar cells and 40% on modules, effective from April 2022) now has to be factored into projects.

Jain expects mergers and acquisitions to continue as the sector consolidates, but he sees new players entering the market in line with India’s ambitious energy agenda.

A number of recent projects include a battery component to ensure Round The Clock (RTC) power supply. These are not yet mainstream, but are likely to become more popular.

In China, **Evan Li, Director, Head of Energy Transition (Asia-Pacific), Head of Conglomerates (HK & China), HSBC**, hosted a discussion on the outlook for the waste-to-energy sector in the light of sweeping regulatory changes last year.

Wang Lele, Head of Industry Research, Biomass Energy Industry Branch of China Association for Promotion of Industrial Development (BEIPA) explained that the latest national plan for biomass power generation has become a focal point for the industry. The new policy provides more subsidies and incentives, but differentiates between “competitive and “non-competitive” projects. As a result, large-scale waste-to-energy operators and projects that combine heat and power generation have an advantage.

Waste-to-energy projects remain an important part of China’s energy transition, and at least four have been approved as sources of carbon credits – China Certified Emission Reductions (CCER) – for the country’s emissions trading scheme. While the exact mechanism of CCER is still to be explored, biomass power generation is expected to be recognised for quality carbon reduction.

## Tougher transition targets

HSBC has announced plans to cut emissions associated with loans to the oil and gas sector by 34% by 2030, as part of a wide-ranging package of measures aimed at aligning its portfolio with net zero emissions by 2050.

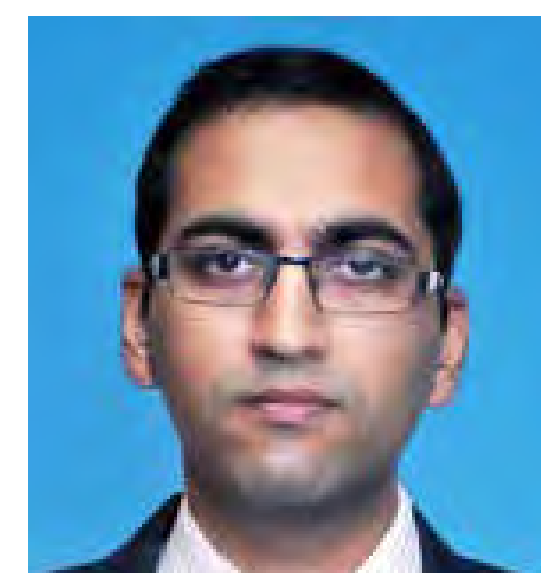
The oil and gas targets cover Scope 1, 2 and 3 emissions, accounting for the operations of HSBC’s clients as well as the end use of their products.



**Sriharsha Pappu, Global Sector Head Chemicals Research, Energy Transition Coordinator, HSBC**



**Andrew Porteous, Co-Head European Consumer Retail Research, HSBC**



**Puneet Gulati, Analyst – FIG, Industrial and Natural Resources & Energy, HSBC**



**Evan Li, Director, Head of Energy Transition (Asia-Pacific), Head of Conglomerates (HK & China), HSBC**

HSBC’s on-balance-sheet financed emissions for Oil and Gas in 2019 were 35.8 million tonnes of carbon dioxide equivalent. Reducing that absolute figure by 34% by 2030 is aligned with the pathway set out by the International Energy Agency (IEA)’s net zero emissions by 2050 scenario, calculated to limit global warming to within 1.5°C.

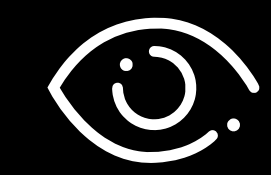
HSBC also outlined a plan to reduce the intensity of financed emissions for power and utility clients by 75%, recognising that the world’s total energy usage will continue to grow as it becomes cleaner. Targets for the coal, aluminium, cement, iron, steel and transport sectors will follow in 2023.

This marks the first time HSBC has disclosed its financed emissions, following through on its decision to join the Partnership for Carbon Accounting Financials (PCAF), a global initiative to harmonise reporting of greenhouse gas emissions financed by loans and investments, in 2021.

“From here on in we will be incorporating financed emissions into business decision-making to help achieve our 2030 science based targets for Oil and Gas, and Power and Utilities,” said **Dr Celine Herweijer, Group Chief Sustainability Officer, HSBC**. “We’ll also be engaging with clients to review their transition plans for compatibility with our net zero 2050 ambition.”

HSBC has also committed to enhance its disclosure around the transition of its portfolio and will publish a bank-wide transition plan each year, starting in 2023.





# Research notes

## Is nuclear the future?

The push for net zero carbon emissions is strengthening the investment case for nuclear energy, according to **HSBC Global Research**.

To its proponents, nuclear power can help solve the decarbonisation equation, providing electricity at scale without the carbon emissions that come from burning fossil fuels. Others, however, see concerns around waste, safety and costs as insurmountable hurdles.

HSBC analysts led by **Adam Dickens and Evan Li** argue that nuclear power is not a silver bullet, nor is it an irrelevant relic. Nuclear power has a long history as a proven low-carbon technology, and innovation (such as small modular reactors) is helping attract fresh capital to the sector.

For this revival to take hold, nuclear needs to play to its strengths by showing it can be cost competitive and reliable, whilst addressing its unique drawbacks such as concerns around hazardous waste and safety.

The report predicts that almost all new investment in nuclear power will come from emerging markets, including China and India, on account of rising energy demand.

Developed countries, which today account for around 75% of the world's nuclear generation, are instead likely to replace their aging nuclear fleets with renewable energy or natural gas, given the political hurdles associated with restarting nuclear investment and well-documented safety concerns around the running of reactors and disposal of radioactive waste. Cost overruns and unrest in Kazakhstan (a major producer of uranium) are also hurdles.

Globally, nuclear power investment remains insufficient for it to play a credible role in the transition to net zero. The International Energy Agency's net zero scenario foresees a need for global nuclear capacity to roughly double today's levels of around 400 gigawatts by 2050. Current plans, however, fall far short of that target, implying a requirement for over US\$1 trillion of further cumulative investment.

## The adaptation gap

The world is not doing enough to prepare for future temperature rises, according to the latest report from the UN's climate science body, the Intergovernmental Panel on Climate Change (IPCC).

In his analysis of the report, **Wai-Shin Chan, Global Head of ESG Research at HSBC**, finds that current adaptation levels are falling short of the transformational adaptation that is required to address long-term risks.

Closing this adaptation gap is difficult because the goals are not clearly defined and some countries are more vulnerable than others. However, the IPCC also calls out the lack of finance as a constraint,

noting with high confidence the "widening disparities" between the estimated costs of adaptation and documented finance. The latest IPCC report presents the analysis of Working Group II on Impacts, Vulnerability and Adaptation. It provides policymakers with the best available science on which to base their national climate agendas, and repeats the case for urgent action in order to limit the impact of climate change around the world.

Among the key messages, the report confirms that climate change is already being felt in every part of the world and highlights that adaptation will become more difficult – and expensive – as temperatures rise. By 2100 the value of global assets at risk from coastal flooding is projected at US\$7.9-\$12.7 trillion under an intermediate emissions scenario, rising to US\$8.8-\$14.2 trillion under a high emissions scenario.

Biodiversity and natural ecosystems are given special attention, as is the opportunity for climate-resilient development.

HSBC's Chan presents 10 key takeaways from the 3,500 pages of findings from the 270 authors.

## China's carbon agenda

Green investment is set to take off in China with the goal of stabilising the economy in the short-term and driving growth in the long term, according to HSBC Global Research.

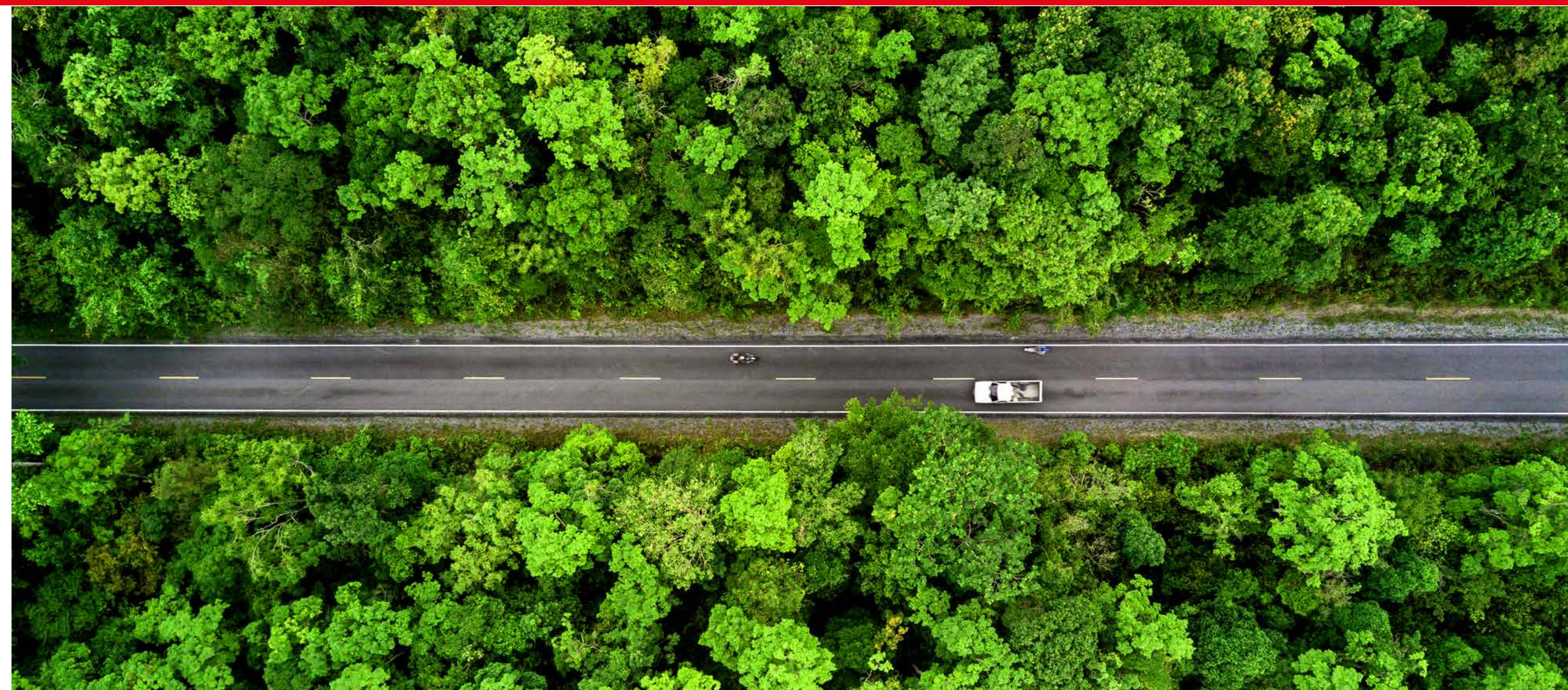
China's policymakers reinforced the importance of low-carbon investment at the Central Economic Work Conference in December, laying the foundations for a jump in green projects as tougher disclosure rules and emission controls are put in place.

**Jing Liu, HSBC's Senior Economist, Greater China**, sees green investment as a key growth driver that can help fill the gap in GDP growth left by the cooling property sector. Major public projects, including a RMB380 billion investment in 38 ultra-high voltage transmission lines, are already underway.

But she argues that private investment will be essential to supporting China's growth and meeting its decarbonisation ambitions. The China Green Finance Committee estimated that RMB487 trillion will be needed in the next 30 years.

Carbon pricing, Liu writes, is the most cost-effective lever to reduce carbon emissions and will be key to mobilising private capital. It internalises the environmental cost for producers and sends a financial signal to investors.

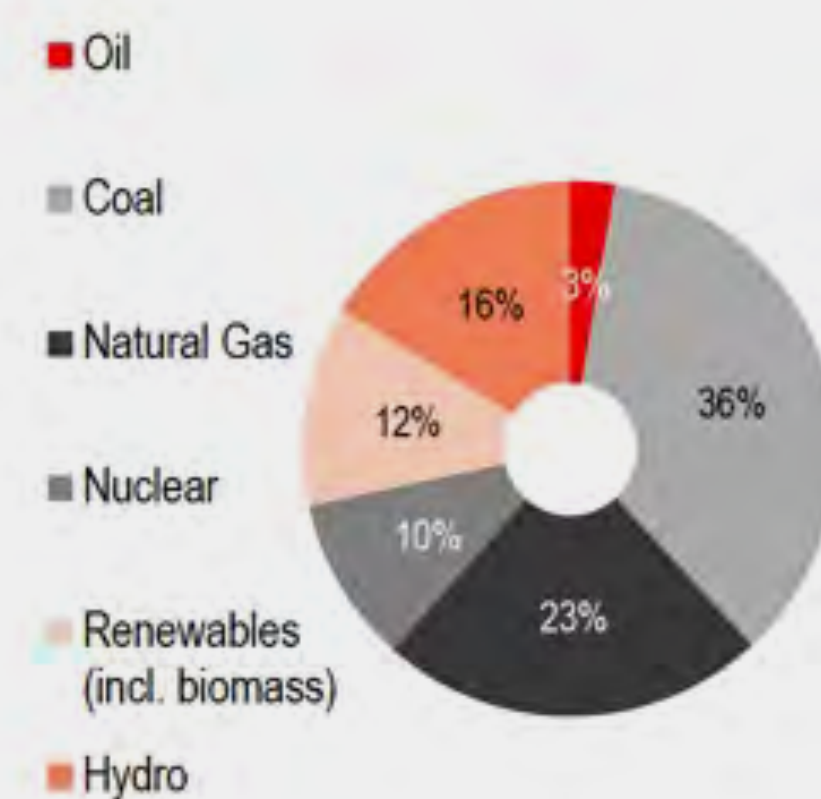
China launched its first national emissions trading scheme (ETS) in July 2021 and has pledged to gradually expand its application. Liu expects this will become a key policy instrument and could develop along similar lines as the European ETS – especially as Europe rolls out cross-border carbon tariffs in the future.



### Generational diversity

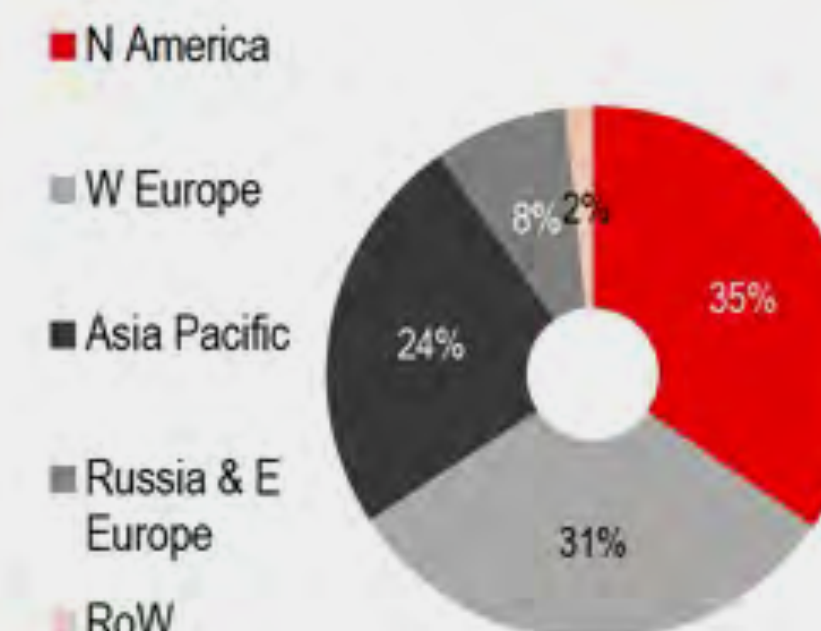
Emerging markets will drive new demand for nuclear power

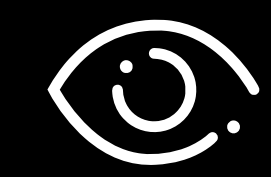
#### Global electricity generation by source (2020)



Source: IEA

#### Global nuclear generation by region (2020)





# Renewing Australia's energy infrastructure

**Find out how we supported Neoen on a wind power project that will bring clean and efficient energy to 100,000 homes Australia's far north.**

The 157 MW Kaban Green Power Hub, under construction near Cairns in Australia's far north, in the State of Queensland, a wind power project and a key plank of its energy transition strategy.

Kaban will be the cornerstone of the new Northern Queensland Renewable Energy Zone, the first of three zones planned to help the state reach its target of 50% renewable energy by 2030 on the way to net zero emissions by 2050.

As well as providing 457 GWh of affordable clean energy each year, enough to power some 100,000 Queensland homes, the Kaban project also involves the upgrade of a 320 km transmission line to support the new capacity and plans for a 100 MW utility-scale battery.

Queensland's wind project complements a number of major solar installations, adding resilience to the grid by ensuring a stable supply of electricity when the sun is not shining.

The upgrades will bring additional stability and efficiency to the electricity network and allow up to another 500 MW of capacity to be added to the grid in the future.

Kaban brings world-class technology to the region. The project sponsor, Neoen, is France's biggest independent renewable power producer, and the 28 turbines, manufactured by wind specialist Vestas, will be among the country's largest, each with a capacity of 5.6 MW.

Neoen is rapidly becoming one of the world's fastest-growing renewable energy producers, with 4.8GW of solar, wind and battery storage projects in operation or under construction. The French company's Australian projects have been a particular success and Australia is now the company's single biggest market with a portfolio of over 2GW.

"We are grateful for the support of our lenders, local

partners and the Queensland government, who share our vision of a low-carbon future for Australia," said Neoen Australia Managing Director Louis de Sambucy.

The AUD370 million project financing also comes with global standards, being certified according to the Green Loan Principles. The loan's proceeds are 100% dedicated to the construction of the facility.

HSBC has committed resources to the long-term financing as a mandated lead arranger on the green project loan.

"This operation consolidates our position as a leading bank with this strategic client," says Agathe Mouillard, Global Relationship Manager, Commercial Banking, HSBC Continental Europe.

Local support was key to the deal's success. Government-owned electricity generation and trading company CleanCo Queensland has agreed to purchase all energy generated for 15 years, and the transmission line upgrade will be done in partnership with Powerlink Queensland, the state's electricity transmission operator.

"Our global connectivity and local expertise enabled us to support Neoen's green financing ambitions in Australia, said Nadia Ladak, Head of International Subsidiary Banking, Commercial Banking, HSBC Australia. "The project is set to provide significant economic benefits to the region and generate 457 GWh of affordable clean energy each year from 2023. We have had a longstanding relationship with Neoen globally in France and locally in Australia, enabling us to support cross-border collaboration on the France - Australia Corridor, a rapidly developing Green Corridor."

- Visit [HSBC.com](https://www.business.hsbc.com/sustainability/inspiration-from-our-clients) for more Inspirations from our clients <https://www.business.hsbc.com/sustainability/inspiration-from-our-clients>





# ABC of ESG

The world of ESG has its own sometimes dizzying array of acronyms and terms. Get to grips with some of the key concepts here

## CARBON CAPTURE AND STORAGE (CCS)

A process whereby CO<sub>2</sub> is captured from industrial facilities and transported for storage, often in a geological formation such as an oil and gas reservoir. This process prevents the CO<sub>2</sub> from entering the atmosphere. The IPCC estimates that CCS has the capacity to reduce the costs of stabilising CO<sub>2</sub> in the atmosphere by 30% or more – but some critics believe it can discourage the transition to lower-carbon processes and technologies.

## CARBON OFFSET

Allows companies or individuals to compensate for their CO<sub>2</sub> emissions by buying a corresponding reduction in emissions elsewhere. Companies can use carbon trading schemes or pay carbon taxes, while individuals can use offset schemes to neutralise their carbon footprint.

## CARBON FOOTPRINT

The total CO<sub>2</sub> emissions caused by an organisation or individual over time.

## CARBON TRADING

Enables companies to buy or sell permits that allow for the emission of a particular amount of CO<sub>2</sub>. The European Union Emissions Trading Scheme (EU ETS) is the largest of these schemes and works on the cap-and-trade principle, where a cap is placed on the total amount of CO<sub>2</sub> that can be emitted within the trading zone and that limit is reduced over time. Pricing carbon in this way can also promote investment in low-carbon technologies.

## CLIMATE CRISIS

Term used to describe the consequences of global warming and subsequent climate change. If the world fails to limit global warming below 2 degrees centigrade from pre-industrial levels through decarbonisation, there will be significant consequences for

biodiversity, ecosystems, food and water security and infrastructure from extreme weather events. Some believe that the climate crisis has already begun.

## CRYPTOCURRENCY

An encrypted digital token based on blockchain technology, such as Bitcoin. Some cryptocurrencies have been criticized for the energy-intensiveness of “mining,” or updating the blockchain and creating new tokens.

## DECARBONISATION

The process of reducing the carbon emissions of an organisation or economy. Techniques for decarbonisation include reducing the use of fossil fuels, increasing renewable energy use, switching to electric transport, agricultural change and CCS.

## ESG

The acronym for Environmental, Social and Governance is used to refer to the non-financial policies and activities of an organisation and its commitment towards responsible behaviour and sustainable growth. Financing and investment in accordance with ESG principles are growing exponentially.

## ELECTRIFICATION

Road transportation accounts for around 18% of total global emissions and will need to make significant CO<sub>2</sub> reductions for economies to meet net zero targets. Vehicles using electricity from renewable sources can make a key contribution to this goal.

## GREEN HYDROGEN

Hydrogen does not generate greenhouse gases at point of use, but most current methods of producing hydrogen involve fossil fuels. Using renewable energy to power the electrolysis that produces hydrogen makes “green” hydrogen emissions-free.

## GREEN TAXONOMY

A green taxonomy is a classification system that establishes a list of sustainable economic activities, providing a common basis for companies and investors to use. The EU has recently created a green taxonomy that may well become the global standard.

## GREENHOUSE GASES (GHG)

Gases in our atmosphere that include water vapour, carbon dioxide (CO<sub>2</sub>), nitrous oxide and methane. These gases absorb infrared radiation and trap heat in our atmosphere, causing global warming.

## GLOBAL WARMING

The increase in global surface air and sea temperatures over a 30-year period caused by human activities that emit greenhouse gases. Global warming is expressed relative to pre-industrial temperatures. New global commitments aim to keep global warming well below 2°C by the end of the century aim to avoid catastrophic climate change.

## INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

The United Nations body for assessing climate change science. It provides regular reports on climate change impacts and risks as well as options for adaptation and mitigation. The IPCC is considered the most reliable and credible source of climate change science.

## NET ZERO

Describes the situation in which no additional emissions are being added to the atmosphere. While emissions will continue to be released, an equivalent amount will be absorbed either through natural carbon sinks such as forests or through technology such as CCS.

## PARIS AGREEMENT / COP21

The 21st Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change was held in Paris in 2015. A legally binding international treaty was agreed at COP21, called the Paris Agreement. Adopted by 196 parties, the treaty sets out the goal to limit global warming to well below 2°C.

## RENEWABLE ENERGY

Electricity that comes from a sustainable source such as solar power, wind or waves. These sources do not emit carbon dioxide or other greenhouse gases. Green hydrogen also has potential as a source of emissions-free energy.

## SDGS

The United Nations’ Sustainable Development Goals (SDGs) are a blueprint for a more sustainable future for people and the planet. There are 17 interlinked goals that recognise that ending poverty and deprivation can only be achieved through a range of goals including health, education, reducing inequality and tackling climate change.

## TCFD

The Taskforce on Climate-Related Financial Disclosures was established in 2020. It provides recommendations on financial disclosures that are becoming accepted as the gold standard globally. These disclosures will aid understanding of exposure to climate risks and help investors better take these into account in their decision-making.

## UNPRI

Launched in 2006, the United Nations Principles for Responsible Investment is a voluntary set of investment principles that provide a framework for incorporating ESG considerations into investment processes and decisions. There are now more than 3,000 signatories with collective assets under management of over US\$1 trillion.



# ESG Matters! Find out how and why

The second edition of the HSBC ESG handbook is out, with new sections on the urgency of climate action in 2022 and the importance of ESG factors on bond investment, alongside topics ranging from “green” hydrogen to plastic pollution and more.

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