

Why nature's future underpins the future of business



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Foreword



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As if carbon emissions weren't enough for companies and investors to grapple with, another set of environmental risks has been surging up the business and finance agenda - this time around nature and biodiversity. Long a somewhat overlooked cousin of the climate-focused COP conferences, the UN's most recent biodiversity summit in Montreal drew an unprecedented crowd of private-sector executives, eager to stay on top of this fast-developing conversation, and present their businesses as part of the solution.

As Sarah Murray's excellent report makes clear, the challenges here are serious and growing. So great is the reliance on nature of the world economy, and of countless individual companies, that worsening biodiversity loss threatens to create real instability.

Advances in technology, and in information gathering, are heartening. But the endless complexity of this field will continue to create headaches for even the best resourced businesses. And even as private-sector initiatives such as the Taskforce for Nature-related Financial Disclosures tackle these issues, they are under scrutiny from critics who worry that big business is exerting too great an influence on the future direction of policy and regulation in this field.

Whether you're in business or government, academia or civil society, this subject will loom ever larger in the months and years to come. This report will help you get a grip on the key elements of this complex but vital debate.

Simon Mundy
Moral Money Editor
Financial Times

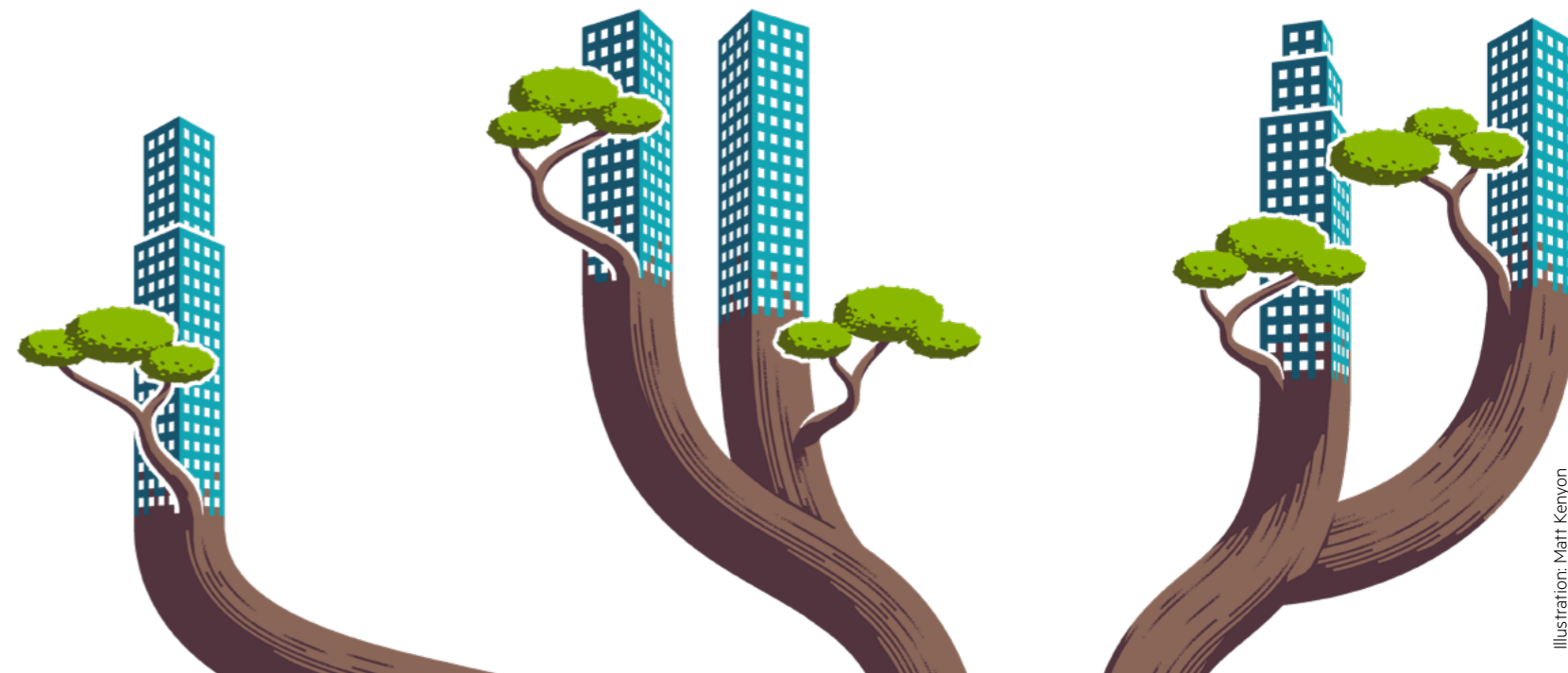


Illustration: Matt Kenyon

Why nature's future underpins the future of business

Managing biodiversity can be even more complex than reducing carbon emissions. But the costs of inaction are becoming clear, writes *Sarah Murray*

For anyone wanting to put a monetary value on nature, Californian farmers can offer a compelling example. They are seeing a rising incidence of bee burglary. So essential are these pollinators to farmers that the state's beekeeping association now offers rewards of up to \$10,000 for information leading to the arrest and conviction of hive thieves.

The global economy's dependence on nature is becoming clearer. According to the US Department of Agriculture, pollinators underpin one in every three bites of food eaten on the planet, while the World Economic Forum has estimated that, through everything from water retention to carbon sequestration, \$44tn of economic value (more than half global gross domestic product) is "moderately" or "highly" dependent on nature.

Given the accelerating rate of nature loss, the WEF's figure is alarming. Scientists say that, unless measures are taken to slow the drivers of biodiversity loss, many of the roughly 1mn animal and plant species currently threatened by extinction will disappear within decades.

Among the dire potential consequences is the impact on efforts to tackle climate change. By taking vast amounts of carbon from the atmosphere and storing it, natural systems such as soils, forests, grasslands and oceans act as "carbon sinks" that are essential to stabilising the world's climate.

If losses in nature (the natural world) and biodiversity (the variation in that world) pose a dire threat to humanity, they also present risks to business and finance, both through companies' impact on natural resources and their direct or indirect dependency on them.

Companies are likely to face costlier and scarcer raw material supplies, reputational risk, pressure from campaign groups, legal challenges and tightening regulation. And investors worry that those risks could show up in their portfolios.

Moreover, because nature's costs are not currently being accounted for, companies have a false sense of security, says Paula DiPerna, author of *Pricing the Priceless*. She compares it with staff costs. "If you could get away with not paying any of your workers, your books would look a lot better," she says. "We're getting away with not paying nature, the ultimate worker."

Last year's UN biodiversity summit in Montreal attracted

an unprecedented level of interest by private-sector companies, who turned out in force on the sidelines. The conference ended with an agreement by governments to put 30 per cent of the planet under formal protection by 2030 – and to impose nature reporting requirements for companies.

Meanwhile, the final recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD) came out in September, giving companies a framework similar to that developed by the Task Force on Climate-related Financial Disclosures (TCFD), which galvanised corporate reporting on climate risks.

Critically, governments are drawing links between climate change and nature, with funding for nature conservation and biodiversity promotion available through green government programmes such as the US's Inflation Reduction Act, the European Green Deal and Brazil's National Green Growth Program.

"These are not only about climate change," says Simon Zadek, executive director of non-profit NatureFinance. "They are where the nature agenda and the climate change agenda hit the industrial and economic strategy agenda."

Not all FT Moral Money readers are worried. "Are there big risks?" wrote one in response to our survey. "There could be reputation risk in egregious cases. But broad public concern is just not there, and the 'concern bandwidth' is already taken up with climate, inequality, and other issues."

However, most see dangers ahead. "The loss of biodiversity is a greater danger to human life than carbon emissions," wrote one, while another argued that inaction would risk "system collapse".

Those who agree see plenty of work ahead, from financial innovation to protecting the resources one FT Moral Money reader describes as "silent contributors to a company's success". And while nature's complexity may leave some feeling overwhelmed, scientists, economists, sustainability experts and others argue that companies and investors must push nature and biodiversity up their list of strategic priorities.

"This is not a corporate social responsibility issue for business and finance," says Tony Goldner, TNFD executive director. "It's a central strategic risk management issue because the future cash flows of business are dependent on the flow of nature's services."

Accounting for nature

In 2011, the sportswear business Puma did something unusual: by imposing internal accounting measures such as a price per tonne of carbon and per cubic metre of water, it added up the cost of its use of ecosystem services. The resulting "environmental profit-and-loss" account statement was striking. Against that net earnings for 2010 of €202mn, it estimated aggregate environmental costs of some €145mn.

Mandatory environmental profit-and-loss accounting might be some way off, but the risks to business are not. "Every single company is in that situation," says DiPerna. "People keep investing in companies based on a false sense of their investability."

Some blame can be assigned to traditional measures of success such as gross domestic product, wrote the University of Cambridge's Sir Partha Dasgupta in an influential 2021 review of the economics of biodiversity commissioned by the UK government. GDP, he wrote, is "wholly unsuitable" for measuring sustainable development, particularly since "eroding natural capital" is how most nations have achieved economic growth.

Links between nature and business fall into two buckets. In one are dependencies on natural resources – a drinks company's water consumption, a pulp and paper company's need for trees, a food company's reliance on pollinators and so on. In the other are the effects that business activities have on those resources.

Both are equally important, argued one FT Moral Money reader, who told us: "For individual companies and investors, impacts and dependencies on biodiversity must be assessed and addressed like any other material business risk."

In the food and beverage sector, where companies rely almost entirely on naturally produced ingredients, one of the biggest dependency risks is soil degradation. "The more that soils are degraded, the less productive and efficient they become," says Owen Bethell, who leads environmental public affairs for Nestlé, the world's biggest food company by sales.

For financial institutions, meanwhile, credit risks loom large. As Dasgupta highlights in his review, the degradation or collapse of ecosystems would disrupt the supply chains of many companies, denting their ability to service their debt and increasing their likelihood of default.

If dependencies on nature pose tangible threats to companies and investors, the consequences of industry's negative impact on nature are no less worrying. These include tightening regulation, reputational damage and the increasingly loud voices of local communities in affected areas.

Zadek at NatureFinance points to a further risk: that investment portfolios contain assets linked to criminal activities such as wildlife trafficking, illegal deforestation and pollution. According to the Financial Action Task Force, such crimes generate up to \$281bn annually in illicit gains.

"No financial institution wants to be accused of investing in enterprises that benefit directly from nature crimes," he says.

In November, a legal opinion published in Australia created fresh jeopardy for board directors by concluding that they could be held personally liable for breaching diligence and duty-of-care obligations if they did not consider nature-related risks.

Threats of legal action may serve as a wake-up call for companies and investors who have often proved slow to respond to warnings on nature loss.

The language around nature is part of the problem, says DiPerna. She cites the word biodiversity, which for her conjures up something beautiful but non-essential. "It sounds like jewellery. It doesn't sound like what it is: an engine that makes all economic activity possible."

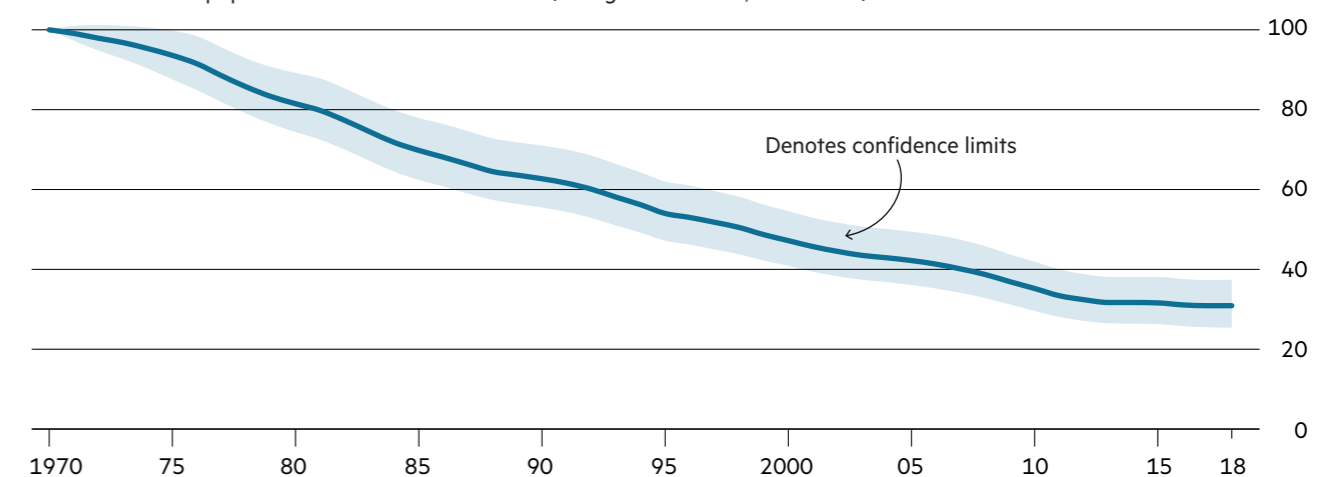
For the TNFD, use of terminology familiar to business and finance was important when developing its recommendations. "We took on board the approach of thinking about nature as natural capital," says Goldner. "That provides the kind of language system for thinking about nature that is accessible to market participants."

Another way of looking at companies' exposure to nature and biodiversity loss is as an enterprise risk similar to cyber security, says Chris Goolgasian, Wellington Management's climate research director.

"At one point, cyber security wasn't an enterprise risk, but it certainly is today," he says. "Why is this any different? Once you realise how material it is to a company's operations, then you'd say it's an enterprise risk – we probably need a board expert on it, and we need to fund it."

Global wild animal species populations have fallen sharply

Global vertebrate population* relative to 1970 levels (Living Planet Index, 1970=100)



* Index value measures the change in abundance in 31,821 populations across 5,230 species
Source: Zoological Society of London via Our World in Data

New financial tools

In the race to tackle threats to nature, financial innovation is being used to harness capital for the protection of ecosystems while delivering returns for investors. Piloted in Tahoe National Forest, California, the Forest Resilience Bond pays for the removal of the undergrowth and shrubs that act as tinder for wildfires.

To develop the bond, non-profit Blue Forest designed a structure similar to a pay-for-success contract. Investors, including Calvert Impact Capital and the Rockefeller Foundation, provided \$4mn in upfront capital to pay for forest management services across 15,000 acres of national forest.

“The priceless bit is resilience,” says Paula DiPerna, who writes about the bond in her book. “So how do you value that? It’s tricky but you can quantify it if you look at the benefits.”

To do this, she explains, Blue Forest identified individuals and organisations – from insurers to California’s wildlife service and the local hydropower company – that stood to gain from improved forest management.

Benefits would show up in everything from lower insurance payouts to more funding for fire prevention and stable groundwater supplies for the hydropower company.

Beneficiaries pay back the funds over time with a premium. The bond, says DiPerna, sets out the benefits, quantifies them and then “secures investment upfront to securitise those benefits”.

Launched in 2018, the bond is currently repaying investors at contracted rates and has enabled forest restoration projects to be completed in four years, instead of the projected 10 to 12 years. Blue Forest is now developing a portfolio of similar forest projects.

The nature of nature

How do you measure and manage a resource that – as is the case for insects and fish, and for rivers and oceans – is constantly on the move? Given the sheer complexity of life on earth, there are no easy answers.

Moreover, nature’s economic value and relative health varies regionally. “None of this is universal,” says Goolgasian. “Everything is location-based. An acre of land in Brazil has a very different value from an acre of land in California or Congo.”

Even more challenging is the fact that much of nature consists of invisible forms of life that are not well understood. Katie Critchlow, former chief executive of NatureMetrics – which provides a biodiversity monitoring and reporting service based on eDNA (collected from a variety of environmental samples) – points to everything from genetic diversity within species to the beneficial bacteria that populate our guts.

“We’re starting to understand the importance of a world that we know very little about,” she says. This makes measuring carbon emissions, with a single key metric – a tonne of carbon dioxide – look simple.

And while carbon can be traded globally, nature cannot, says Thomas Crowther, a professor of ecology at ETH Zurich who studies the connections between biodiversity and climate change. “You can’t destroy a tropical forest in Brazil and plant some trees in Scotland,” he says. “With climate change, you suck a ton of carbon out anywhere on the planet and it has a global benefit.”

“It’s a very different case with nature,” agrees Leslie Cordes, who oversees the climate and energy, water, and food and forest teams at Ceres, a sustainable investing network. “Investors are also facing challenges in assessing the nature-related risk in their portfolios because it is so localised.”

One headache for investors is that the restoration of

natural ecosystems does not happen overnight. “You have conservation projects that are all about biodiversity but that require an investment period and a time horizon that’s challenging for investors,” says Maria Teresa Zappia, global head of impact at asset manager Schroders.

In 2020, the Financing Nature report estimated that shifting from conventional to sustainable agriculture practices on croplands can take up to seven years. Support needed while yields and farmer incomes adjust could total up to \$420bn a year globally by 2030, according to the Paulson Institute, The Nature Conservancy and the Cornell Atkinson Center for Sustainability, which produced the report.

Still, private-sector executives may be energised by a growing realisation that nature and biodiversity are tightly linked to two other more familiar sustainability issues: climate change and water scarcity.

“Water is a key driver in nature and biodiversity loss so if we don’t think about water, we’re not going to succeed in protecting nature and building biodiversity,” says Kirsten James, senior director of the water team at Ceres.

Meanwhile, given the power of natural resources such as soils and forests to act as carbon sinks, companies with ambitious climate goals should have powerful incentives to invest in the protection of those resources.

Still, there is a danger that companies could use nature’s complexity as an excuse for inaction. Andrew Deutz, managing director for global policy and conservation finance at The Nature Conservancy, has heard this argument before.

“Some companies get it,” he says. “But I’ve had conversations with colleagues in the private sector who say, ‘Look, we’re just getting our head around climate, and that’s an existential threat – we don’t have the bandwidth to get our heads around nature.’”

Deutz’s response? “You have to deal with both.”

‘No data’ is no excuse

In a 2021 survey of investors by Credit Suisse, 70 per cent of respondents said that a lack of data was the key barrier to making investments supporting biodiversity. Two years on, the data landscape has transformed. New reporting frameworks are emerging and technologies such as satellite imaging and remote sensing are generating unprecedented amounts of information on the state of the world’s ecosystems and natural resources.

This does not make accounting for nature and biodiversity easy. In fact, companies and investors may well run up against nature’s version of the acronym-heavy “alphabet soup” that has characterised measurement and reporting standards in the environmental, social and governance space. And while the TNFD’s recommendations for corporate nature reporting have made an impact, they have not received universal acceptance.

With members from 40 large corporations and financial institutions, and with millions of dollars in funding from the Australian, Dutch, French, German, Norwegian, Swiss and UK governments, the TNFD has developed a global framework that can be used to measure, manage and disclose nature-related risks.

And as with the TCFD, governments may start requiring companies to file disclosures using the TNFD framework.

This worries some. In May, non-profit groups including the Rainforest Action Network, Global Witness and Greenpeace signed a letter to the TNFD’s co-chairs setting out criticisms of the recommendations for, among other things, insufficient emphasis on both human rights and supply chain transparency. They also highlighted the fact that the TNFD’s membership was dominated by executives from major corporations.

Goldner says that TNFD has since engaged with the non-profit groups through webinars. “They made a number of valuable written submissions which informed our thinking,” he says. “Many of their suggestions were incorporated into the final recommendations and accompanying guidance.”

Debates over the best way to account for nature will no doubt continue. And the TNFD is not alone in coming up with frameworks. For example, the UK’s Lancaster University has produced a Navigation Guide on Reporting on Nature to highlight best practice, while WWF (a TNFD partner) has produced a guide to help businesses identify and address biodiversity risks.

“There’s definitely an arms race in frameworks and standards,” says Wellington’s Goolgasian. “For an asset owner

and management it can be difficult to determine what to prioritise to stay on top of all this.”

Nevertheless, he says, companies and investors can take some comfort from the fact that the TNFD based its framework on the TCFD, with which many in business and finance are now familiar. “This fits within existing systems. That’s very important.”

Meanwhile, technology is providing extraordinary new insights into what is happening on the ground, in the air and in the world’s water bodies.

Some systems supercharge ancient human practices. For example, a software tool called CyberTracker equips Bushmen in Africa, known for their animal tracking skills, with mobile devices that allow them to capture digitally the observations they collect on animal movements and combine that with data from satellite navigation systems.

And with more than 200 satellites, the fleet of Planet Labs, a US earth observation company, orbits the earth every 90 minutes, capturing its entire landmass daily. “We’re way past the date where we needed more technology to be able to assess things at a large spatial scale,” says Crowther, the ecologist.

Among the technologies emerging, he sees promise in bioacoustics, which involves planting microphones planted in ecosystems to monitor animals and birds. “You can hear the soundscape of the ecosystem,” he says. “And while you can’t tell every species that’s in there, you can still tell how that soundscape is more or less complicated compared to a natural soundscape.”

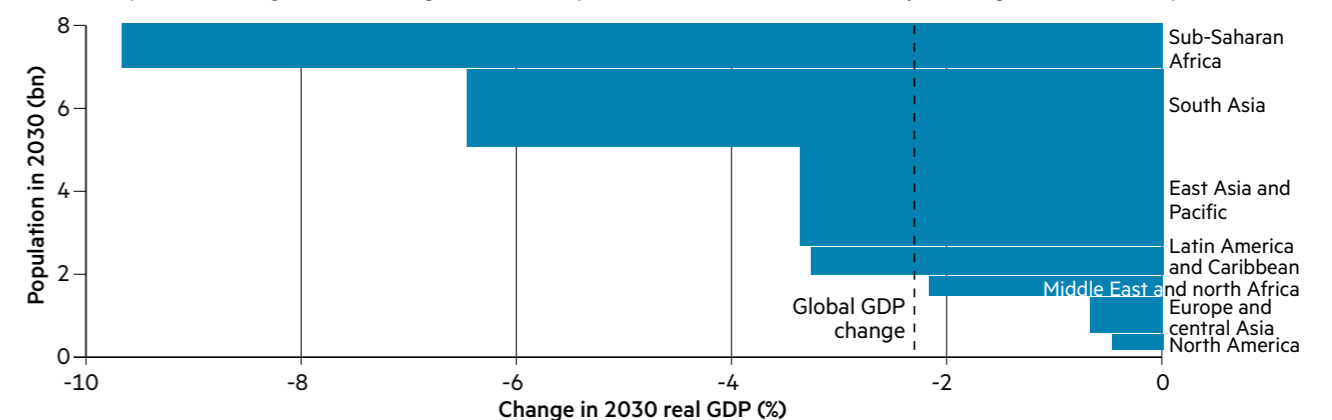
Crowther and his team are working on research that, using bioacoustics, is showing the positive results of Costa Rica’s decades-long programme of using a carbon tax to pay forest owners for ecosystem services. “The country has moved towards a more complex mix of high- and low-frequency sounds that reflect the recovery of life,” he says.

The ability to track levels of biodiversity accurately, and compare the relative success of different restoration treatments, makes it harder for companies to claim “lack of data” as a justification for not addressing their nature and biodiversity impacts and dependencies.

“That is starting to be challenged,” says Tamsin Ballard, chief initiatives officer at the UN Principles for Responsible Investment. “Yes, there’s different levels of granularity in different geographies, sectors and ecosystems, but there’s enough to get going.”

The global economy could suffer serious decline from biodiversity losses

Estimated potential change in 2030 real gross domestic product, under a scenario with major damage to natural ecosystems



Source: JA Johnson et al, 'The Economic Case for Nature'

One step at a time

When we asked FT Moral Money readers whether their organisation had a biodiversity strategy with time-based targets, the largest group replied “No”. Getting going is not easy, it appears.

For companies that feel overwhelmed by the complexity of addressing their nature and biodiversity footprint, Walmart’s Kathleen McLaughlin has some advice. “Approach this first by understanding the most relevant concentrations of nature in your particular business, rather than trying to measure the nature impact of every single thing you do,” says McLaughlin, the retail chain’s chief sustainability officer.

Walmart is following this course of action. The US retailer started by working with non-profit group Conservation International on some calculations. “We worked out that very roughly it takes about 50mn acres of land and 1mn square miles of ocean to produce products our customers buy from us,” she says.

If this sounds daunting, McLaughlin says these kinds of calculations can be a starting point to help companies take practical steps to manage, conserve or restore nature and biodiversity. “For example,” she says, “the acreage analysis helped us identify the relative importance of engaging suppliers to adopt more regenerative agriculture practices in commodities such as row crops.”

The next step involves a process with which companies and investors are now familiar: determining materiality. A mining company, for example, could assess how its operations directly impact areas of high biodiversity value, while a computer manufacturer might track its sources of raw materials, how it uses those materials in its products, and how those products are consumed and recycled.

“It’s looking along the whole value chain,” says Samantha Deacon, principal for ecosystems solutions at Ramboll, an engineering consultancy. “And it will be different for companies in different sectors as to where they are in that value chain and the scale of their impact or dependency.”

But if companies feel unprepared for the challenge of managing their nature and biodiversity footprints, a growing number of tools are being developed to help them.

In fact, these tools are emerging so rapidly that the World Business Council for Sustainable Development has produced Eco4Biz, an overview of the existing tools that is designed to help companies decide which to use. BSR, a corporate social responsibility consultancy, also reviews and reports on new tools for measuring corporate impact on ecosystems.

Moreover, lessons learned from other types of sustainability strategies can be applied to nature and biodiversity. Walmart’s McLaughlin sees the “circular economy” approach as being especially relevant. “It’s a shift from an extractive mindset to one that’s about

restoration, renewal, replenishment and resilience,” she says. “Essentially it’s regenerating the resources that get put to use.”

And while nature and biodiversity present different challenges, companies and investors can build on the sustainability strategies they have already developed.

This is the case for Nature Action 100, a new investor coalition following the model used by Climate Action 100+, which broke new ground by pushing companies to tackle climate-related risks.

Members of Nature Action 100, which is co-led by Ceres, are engaging around nature and biodiversity risks with 100 companies in sectors such as pharmaceuticals, chemicals, consumer goods, food, pulp and paper, and metals and mining.

Work done on climate change is paying off in other ways. Zadek at NatureFinance notes that the TNFD developed its framework in 18 months, compared with several years for the TCFD. “All that innovation and learning from the climate change agenda means we’re moving much more quickly to internalise nature-related analysis into financial institutions, central banks and financial regulators,” he says.

For companies, resources developed to tackle other sustainability challenges can be used to manage nature and biodiversity dependencies and impacts. This is true for Nestlé, which has a team of about 700 agronomists who work closely with farmers in its supply chain. “We’ll expand that existing resource so that it covers more than the traditional topics,” says Bethell.

He also stresses the need to connect climate and nature when it comes to developing in-house leadership. “Rather than having a biodiversity tsar, the approach at Nestlé is to integrate climate and nature,” he says.

This is critical, stresses Zadek. “You can’t sequence climate and nature – it’s not, ‘We’ve done climate so now we should get on with nature’,” he says. “The science tells us that these two things are completely interrelated.”

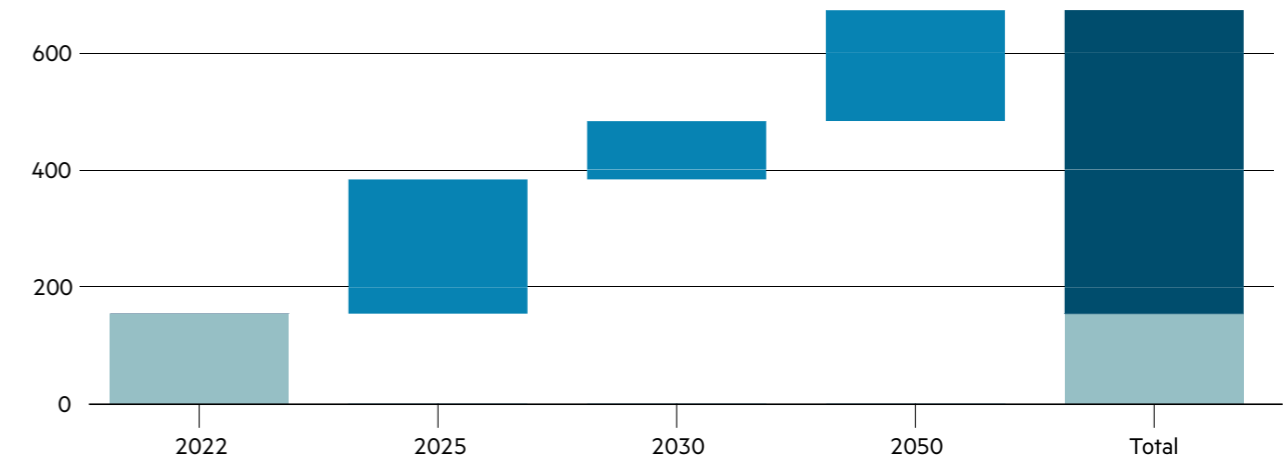
But Critchlow, the former NatureMetrics chief executive, warns of the dangers of replicating one mechanism used to tackle climate change: carbon credits. While she likes the idea of biodiversity credits generating finance for the restoration of nature, Critchlow worries they could come with the same credibility problems that have dogged carbon markets. “We need much better governance before everyone races ahead,” she says.

Nature’s complexity and regional variation mean biodiversity credit markets cannot operate in the same way as their carbon equivalents, she adds. “There’s no one fundamental price for nature as there is for carbon,” Critchlow says. “And you can’t kill a hippo in one place and save a rhino in another.”

‘There’s no one fundamental price for nature as there is for carbon. And you can’t kill a hippo in one place and save a rhino in another’

\$520bn in investment beyond 2022 levels is needed in nature-based solutions by 2050 to limit climate change to 1.5°C while halting biodiversity loss and net land degradation

\$bn (2022)



\$11tn investment is needed in the natural environment to slow rising temperatures

The cumulative investment required from 2022 to 2050 to limit global warming to 1.5°C



Source: UNEP

Eyes on nature’s prize

When companies first started tackling their carbon emissions, they found some quick and easy wins. Energy efficiency initiatives, for example, had an immediate effect on the bottom line in the form of lower fuel bills. Such rapid returns on investment are harder to find when addressing nature and biodiversity.

But if the risks and opportunities presented seem less tangible, Ramboll’s Deacon points to a compelling reason for companies to start paying attention to nature. “You’re making your business more resilient for the future,” she says.

Bound up in this resilience are benefits that range from reduced risk of legal challenges, enhanced ability to attract ESG-focused investors and environmentally conscious consumers and employees, greater price stability of raw materials, and the ability to get ahead of future regulation.

Some FT Moral Money readers are convinced of these benefits. “Any company creating and implementing a biodiversity strategy will be safeguarding the ecosystem services on which it depends,” one wrote.

Another noted that rising concern about biodiversity will come with “new investment opportunities, in companies seeking to stop biodiversity loss”.

Financial innovation is also opening new avenues for investors. Ecuador’s debt-for-nature swap, for example, gives the country lower repayment rates on a \$656mn loan, on the condition it uses some of the savings to fund environmental conservation. Investors include Legal & General, the UK’s largest asset manager, which purchased \$250mn of the debt deal.

“Financial innovation is really important, and some of that is about new instruments like nature-linked sovereign debt and debt-for-nature swaps,” says Zadek. “That’s a rapidly emerging space.”

But perhaps the most powerful argument for taking nature and biodiversity seriously is an existential one, says Deacon. “You want to avoid diminishing natural resources till they run out,” she says. “Then you cease to be able to function as a business.”

Advisory Partners

The FT Moral Money Forum is supported by its advisory partners, *Diageo*, *High Meadows Institute*, *Vontobel* and *White & Case*. They help to fund the reports.

The partners share their business perspectives on the forum advisory board. They discuss topics that the forum should cover but the final decision rests with the editorial director. The reports are written and edited by Financial Times journalists and are editorially independent.

Our partners feature in the following pages.

Each profiles their business and offers a view on biodiversity. Partners' views stand alone. They are separate from each other, the FT and the *FT Moral Money Forum*.

How can food and beverage companies improve biodiversity outcomes using regenerative agriculture?

Andy Griffiths, head of sustainable procurement, Diageo

The Financial Times notes that the language around nature is part of the problem of companies and investors proving slow to respond to warnings on nature loss. They describe the word “biodiversity” conjuring up “something beautiful, but non-essential” and therefore compounding the lack of urgency.

In recent years the term “regenerative agriculture” has created similar challenges. It’s become the buzzword that promises to mark a new future for farming and business — yet its practicalities feel hard to adopt. But if we’re able to scale regenerative agriculture, and bring farmers along on the journey, the effect could be game-changing.

We believe regenerative agricultural farming practices should leave the soil, biodiversity, water and the environment in a better state than we found it. This has the potential to bring significant benefits to nature, water and climate, as well as improve the resilience of our communities across our supply chains around the world.

The raw materials that we source are central to Diageo products. With biodiversity under threat, industries are under increasing pressure to adapt in order to continue growing the crops they need, to make the products we all love to eat and drink.

We need to involve farmers every step of the way. By enabling our global network of farmers to adopt more sustainable practices, we can address climate change and help foster stronger communities in the process.

We’re also looking to identify where we can optimise resources and costs. We know from an assessment conducted across 44 farms in Ireland as part of our Guinness regenerative agriculture programme, that 75 per cent of the carbon footprint of barley production is generated by nitrogen fertilisers. That is why our programme is hoping to achieve a 30 per cent reduction in emissions through the implementation of low-carbon fertilisers and cover crops in the first phase.

Initiatives such as the Landscape Enterprise Networks model are a real step in the right direction for enabling effective, shared interest investment into the regeneration of landscapes for farmers and communities. Implementing the LENs model into our supply chain helps us to build resilient, nature-based solutions, which in turn benefits biodiversity.

But there is still a lot more to do.

Regenerative agriculture should be central to efforts to build climate resilience and adaptation — but for this to work at scale, organisations need to collaborate better. We want to see co-operation accelerating innovation in regenerative agriculture, to create a tangible positive impact on biodiversity. We hope this will be a key takeaway from COP28.

This requires us all to reimagine where we can collectively direct our creativity and funding, to meet the scale and pace of progress required to create meaningful change for a long-term sustainable business. This level of collaboration is a key way to change industry practices in a way that benefits agricultural communities and the landscapes they call home.

Advisory Partner



Chris Pinney, president, High Meadows Institute

The rapid rise of biodiversity as a leading sustainability concern gets to the core of the challenge facing humanity, namely our destruction of nature, the operating system on which human development depends. A WWF (2022) report referred to the current situation as a “code red” alert for humanity, noting an average 69 per cent decline in global populations of mammals, fish, birds, reptiles and amphibians between 1970 and 2018.

A better understanding of the impact of our current economic model on nature, using frameworks like the recently released Taskforce on Nature-related Financial Disclosures, is an important first step in understanding and “pricing in” the cost of biodiversity loss. As with climate, however, making serious progress on biodiversity requires more than better reporting. As the TNFD report notes: “Nature is no longer a corporate social responsibility issue, but a core and strategic risk management issue alongside climate change.” As with climate, protecting biodiversity requires a fundamental change in mindset and a rethink of the high-carbon, extractive economic model under which most companies currently operate. It means accelerating the transition to a low-carbon sustainable economy that minimises negative climate and biodiversity impacts and enhances the natural ecosystem.

A good example of the kind of transition now needed is the circular economy. The benefits of a circularity model are many. By maintaining the value of products, materials and other resources in the economy for as long as possible, enhancing their efficient use in production and consumption, and returning them to the product cycle at the end of their life, the circular economy business model reduces the need for resource extraction and reduces wastewater use, carbon emissions and pollution. This in turn can significantly help reduce the rate of biodiversity loss. At the same time, a recent EU study found that moving towards a more circular economy could increase competitiveness, stimulate innovation, boost economic growth, and create 700,000 new jobs in the EU alone by 2030.

Greater investment in the transition to a low-carbon economy from private and public markets is key. To fulfil this role, however, requires moving beyond the assumptions and limitations of current market orthodoxy and modern portfolio theory, which focuses narrowly on efficiency and risk management. It requires moving to a systems perspective that balances efficiency with resilience and integrates and considers the contributions and impact of the financial system on the natural systems environment in which it operates and in which risk cannot be “diversified” away.

Large institutional investors, as universal owners acting in the long-term interests of their beneficiaries, have a dual role to play here. In addition to investing directly in circular economy and regenerative business activities, they are well positioned through their investment stewardship function to ensure the mainstream economy companies they invest in are actively pursuing strategies to ensure their transition to a sustainable low-carbon business model that protects biodiversity.

Beyond engaging with equity markets, it will also be important to explore how the broader financial and capital market systems can support the low-carbon transition. To date, 90 per cent or more of the efforts on sustainable finance have focused on the \$101.2tn global public equity markets. While this is a crucial step, it leaves us with little insight into the larger half of financial markets, the \$129.8tn global bond markets, and the role it needs to play in helping address the biodiversity challenge. The approximately \$500bn currently invested in green bonds has just scratched the surface in this regard.

While the engagement of private capital in addressing the biodiversity and climate crises is urgently needed, public sector leadership and public investment remain key in ensuring progress. While adaptive instruments such as blended finance are important tools for attracting greater private capital investment in higher-risk transition ventures, particularly in emerging markets, private markets cannot be expected to replace effective public policies and investment in addressing the biodiversity crisis.

Advisory Partner

Biodiversity is essential for a strong and sustainable global economy

Christel Rendu de Lint, head of investments, Vontobel

Healthy biodiversity is necessary for sustaining life on earth, but we’ve let it degrade into a pernicious situation that also threatens our global economy. The statistics around biodiversity are sobering: only 23 per cent of species and 16 per cent of habitats under the EU’s Nature Directives are considered in good health and we are facing what the UN refers to as a “nature apocalypse”. Until now climate change has been the focus of many efforts to address the dangerous position of our environment, and while global warming affects nature, we’ve yet to zoom in on the degradation of our ecosystems with the same level of alarm and subsequent action.

The bitter irony is that while much of the erosion of a dynamic biodiversity is due to economic development, its destruction will boomerang back and have a damaging effect on the global economy. With all this in mind, seeking to deliver future-proof investment solutions must involve the consideration of biodiversity and natural capital at large. Nature loss is a systemic risk, and investors must address it. Investors increasingly need to integrate nature into their investment decisions. But how should they do this?

Nature as an economic building block

Thinking about nature in economic terms, biodiversity is valued at an estimated \$44tn, roughly twice the GDP of the US, and close to half of the world’s GDP. Biodiversity is also a fundamental building block of industry and manufacturing and any impact on nature has a flow-on effect into the global economy. Consider that soil health and quality are key for land fertility and crop yields, yet land degradation has already reduced the productivity of 23 per cent of global land. And while 70 per cent of global water consumption is used for agricultural purposes, we have already seen examples of major multinational companies forced to close manufacturing sites in India and Pakistan due to water scarcity.

Even though nature is under pressure, the demands being placed on it will not decrease. The human population continues to expand at a rapid rate, and demand for these increasingly scarce resources will grow. With scarcity comes pricing pressure, which has the potential to radically affect the investment decisions people, companies and governments take with the help of investment managers. Resources, and their pricing, are at the very core of investing and investors can take a page from how we already assess commodities and apply it to other natural resources.

Vontobel

Resources

We already formally price natural resources like commodities, but we struggle to make the link elsewhere (eg water purification, clean air, soil quality). The UN has created a System of Environmental-Economic Accounting that integrates nature capital contributions, but thus far, it is not a widely used framework. To truly understand our exposure to nature-related risks, corporations should be transparent about their full value chains, and publicly map out their asset locations.

Despite the fact that we’ve made great strides on the accessibility of geospatial data with complex layers, from biomass to species, thus far we still see challenges in mapping relevant data for investors with value chain asset location. Ascertaining a company’s activities/manufacturing assets is often inaccurate. Supply chain mapping is often based on the assumption that access to resources will remain unfettered and ongoing, as will the trade resulting from that access.

Promising steps

So where does this uncertainty leave investors concerned about healthy biodiversity? The past few years have included some major steps forward in terms of countries and companies taking biodiversity and nature more seriously from a financial and economic perspective. As Sarah Murray mentions, last year’s UN biodiversity summit in Montreal was an important milestone, as it made clear that private sector companies are showing an increasing interest in protecting biodiversity. The conference ended with an agreement to impose nature reporting requirements for companies. In addition, more than 190 countries adopted the Kunming-Montreal Global Biodiversity Framework in December 2022 which, among other targets, calls for conservation of 30 per cent of the earth’s land and seas by 2030.

In 2020, we also saw the development of the EU’s Biodiversity Strategy for 2030 and the EU taxonomy for sustainable activities (with objectives 3 and 6), which emphasises its commitment to protecting nature and reversing the degradation of ecosystems. More specifically, the EU’s deforestation-free regulation came into force in June 2023, which establishes strict due diligence requirements for companies that place certain raw materials such as timber and soy and derivative products on the European market or export them. Finally, the Corporate Sustainability Reporting Directive, which came into operation in January 2023, requires businesses to disclose all policies relating to biodiversity and ecosystems and other environmental and social topics.

It’s clear: companies cannot continue to value aspects of nature like water, and even clean air, as “free” resources — they are finite, and unfortunately increasingly scarce. We must make further progress on understanding how to price these resources to ensure a sustainable economy and society.

Advisory Partner

WHITE & CASE

One year on from The Kunming-Montreal Global Biodiversity Framework: Legal perspectives

Clare Connellan, Seth Kerschner,
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The Kunming-Montreal Global Biodiversity Framework adopted last December at COP15 aims to halt and reverse biodiversity loss by 2030, and features 23 non-legally binding targets for States. Target 15 concerns tools that enable businesses to assess and disclose biodiversity-related risks throughout their own operations and value chains.

Such tools are taking their legal shape. The Taskforce on Nature-related Financial Disclosures (TNFD) spent two years developing its nature-focused international corporate disclosure framework, finally released in September 2023. Much like the TCFD framework and ISSB standards, the TNFD framework is expected to be incorporated into some national regulatory frameworks in the coming years. The UK government has signalled its intention to implement the TNFD framework into domestic legislative architecture, in line with Target 15.

At a regional level, the EU has already introduced mandatory nature-related reporting obligations under the Corporate Sustainability Reporting Directive (CSRD), by obliging companies to report in line with the European Sustainability Reporting Standards (ESRS). Some of the ESRS integrate aspects of the TNFD's guiding approach, including the specific ESRS on pollution, water and marine resources, and biodiversity and ecosystems.

Certain jurisdictions have therefore underscored the need for companies to tackle the twin risks of climate change and biodiversity loss in an integrated way. Both risks are embedded into the architecture of the TNFD, which is built around the TCFD's 11 recommended disclosures, but through a nature lens. Strategic litigants are also requiring companies to view both risks in tandem.

An increase in strategic litigation that attempts to connect biodiversity loss with climate change is expected in some jurisdictions, with such claims focusing on corporates' duties to adequately manage nature-impacts in recognition of either a biodiversity-climate nexus, and/or biodiversity-human rights nexus. For example, in Australia, a new claim was brought in November 2023 by a shareholder against a financial institution, seeking the production of internal risk management documents relating to both climate change and biodiversity loss.

In some jurisdictions, directors could face allegations of personal liability for breaching their duty of care and diligence for failing to adequately manage nature-related risks (as recognised by the October 2023 Australian legal opinion referred to in the main report). In November 2023, the European parliament and Council reached an agreement on the revised directive on "the protection of environment through criminal law", which provides that strict criminal sanctions could be imposed (including prison sentences) on companies and/or directors complicit in "offences comparable to ecocide". The EU's Deforestation Regulation, targeting forest protection for specific commodities, is already in force.

The explosion of "greenwashing" litigation against companies in the past year points to a new potential frontier of "nature-washing" claims. The European parliament and Council are close to finalising the revised consumer protection directive on "unfair commercial practices" (UCPD) which has been frequently deployed in recent years as the legal basis for greenwashing claims before European domestic courts and consumer protection authorities. The revised directive expressly prohibits companies from making unsubstantiated generic 'green' claims such as "nature's friend" about their products or services.

Greenwashing accusations have also been levelled against companies relying on carbon credits, allegedly in place of direct greenhouse gas emissions reductions. In a previous FT Moral Money Forum report, we commented on how the voluntary carbon market has been met with controversy due to concerns around integrity and the end-use of credits. The voluntary biodiversity credit market (VBM) is evolving gradually — for example, New Zealand recently launched a consultation on a proposed biodiversity credit system, and carbon markets standard-setter Verra, released its biodiversity credit standard for consultation. The VBM could expose companies to similar litigation and reputational risk, if they rely on unsubstantiated or exaggerated biodiversity credits claims in their corporate disclosures or consumer-facing adverts.

Although a rare breed to-date, biodiversity-related shareholder resolutions are set to feature more prominently at future AGMs. In some jurisdictions, shareholder scrutiny is expected to increase across all industries, as Nature Action 100's 'eight key sectors' from which target companies will be drawn include:

1. Biotechnology and pharma
2. Chemicals
3. Household and personal goods
4. Consumer goods retail
5. Food production
6. Food and beverage retail
7. Forestry and paper
8. Metals and mining

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