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BIODIVERSITY REPORT 2023



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Biodiversity Report 2023

JULY 2023

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Editor's letter

Ben Payton

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The time for investor action on biodiversity is now

The statistic that around half of global GDP is moderately or highly dependent on nature is often cited as a way to justify the need for investors, businesses and governments to take action on nature loss.

This strikes me as an odd way to think about the importance of nature. Humans live as a part of the Earth's ecosystems – if those ecosystems cease to function, we cease to exist. We depend on nature for the food we eat, the water we drink, the air we breathe. Without nature, there would be no humans – and global GDP would be zero.

It is now widely understood that the biodiversity crisis, alongside the interrelated climate crisis, is among the gravest threats facing the planet. Human activity is degrading soils, denuding rainforests, defiling oceans and decimating plants and animals.

And investors are not innocent parties. Billions of dollars continue to flow into the hands of companies engaging in activities harmful to habitats and ecosystems.

There are some signs that the tide is beginning to turn. COP15 produced a landmark agreement on halting nature loss. More investors are engaging with corporates on their nature-related risks, dependencies and impacts. Collective action initiatives are taking shape. Frameworks for more consistent reporting and disclosure are being rolled out.

In this special report, we explore how investors are a crucial part of the solution to the biodiversity crisis. A consistent message from experts is that investors cannot afford to wait for perfect data or reporting systems before taking action. Ultimately, as COP15 made clear, financial flows must be redirected away from activities that harm nature. The future of life on Earth depends on it.

Ben Payton

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Four trends to watch

Nature is finally clawing its way onto investors' agendas, with the launch of collective engagement initiatives and the development of disclosure frameworks

Policy action steps up a gear

Not so long ago, biodiversity was highly unlikely to crop up as a subject for boardroom discussion – unless, perhaps, an executive decided to share their experience of a weekend trip to the zoo. Within the past year, however, the picture has changed dramatically. Biodiversity has shot up the agenda to join

climate change as one of the top priorities for ESG-conscious investors, *writes Ben Payton.*

The startling shift in focus reflects the fact that policymakers are finally waking up to the scale of the crisis facing nature around the world.

Representatives of 198 countries, along with a host of high-powered business delegations, descended on Montreal last December for the UN's Biodiversity Conference. The stakes at COP15 could not have been higher. Humanity has pushed biodiversity to the brink of a sixth mass extinction event – the first on Earth since an asteroid strike wiped out the dinosaurs more than 65 million years ago.

"This conference is our chance to stop this orgy of destruction," said UN Secretary-General António Guterres.

It remains to be seen whether the world will rise to the challenge. But COP15 certainly delivered an ambitious agenda for protecting nature and setting the course towards a more sustainable use of the Earth's resources.

Among the key pledges in the Global Biodiversity Framework agreed at the conference was a commitment

to protect at least 30 percent of the world's land, inland waters, coastal areas and oceans by 2030. The loss of "areas of high biodiversity importance" is to be reduced to "near zero", while 30 percent of degraded ecosystems are to be restored.

Of key importance for investors is a target to require financial institutions to transparently disclose their risks, dependencies and impacts on biodiversity. The ultimate aim is to reduce the negative impact of investments on nature, and promote investment in "sustainable patterns of production".

It is against this backdrop that investors are scrambling to put in place strategies for disclosing their impacts on biodiversity and engaging with corporates to encourage nature-friendly practices.



Collective action

A plethora of initiatives have emerged over the past year as the investor community attempts to define a collective approach to biodiversity decline.

Among the key developments is the advent of Nature Action 100 (NA100),

which had its soft launch at COP15. Mooted as the nature equivalent of the Climate Action 100+ initiative, NA100 is set to engage with major companies in key sectors that have the largest impacts and dependencies on nature, with the aim of encouraging corporate action on addressing nature loss. A final list of companies to be engaged will be unveiled later this year.

The initiative is co-chaired by non-profit Ceres and the Institutional Investors Group on Climate Change.

Meanwhile, the UN-backed Principles for Responsible Investment is developing a collaborative stewardship initiative on nature, focusing initially on forest loss and land degradation.



Frameworks take shape

One of the key challenges facing investors on biodiversity is a lack of clarity on what kinds of data they should be collecting and disclosing.

There is no silver bullet for data dilemmas in this space. Impacts on biodiversity are not easy to quantify. They are even

harder to aggregate and compare in a meaningful way.

However, a major step in the right direction is expected in September, when the Taskforce for Nature-Related Financial Disclosures (TNFD) launches its final

recommendations. The TNFD aims to replicate the role of the Taskforce on Climate-Related Financial Disclosures, which has been instrumental in creating a common approach to disclosing greenhouse gas emissions.

Sonya Likhman, associate director at Federated Hermes, is optimistic that the TNFD will encourage progress. "What it will do is normalise and formalise the fact that companies and investors have to disclose on nature," she said at the RI Europe event in London in June. But she emphasised that disclosure should not be for disclosure's sake. "TNFD should be used as a tool to enable better decision-making," she said.

On p. 14-16, we explore whether investors are ready for the TNFD - and we find that the answer depends on the institution. Many investors - some of whom have only just got their heads around climate reporting - are daunted by the prospect of disclosing on nature.

But while the pace of adopting TNFD reporting will vary, the direction of travel seems clear. It is time to get started on reporting nature-related risks, dependencies and impacts.



High-risk industries in the spotlight

Given their large impacts and dependencies on nature, the food and agriculture and mining industries are an obvious starting point for investors' nature-related engagement efforts.

Snorre Gjerde, lead investment stewardship manager at Norges Bank Investment Management (NBIM), told *Responsible Investor's* Gina Gambetta that the manager of Norway's trillion-dollar sovereign wealth fund has been engaging mining companies on how they approach operations in sensitive areas, as well as how they incorporate Indigenous rights and engage said communities.

Gjerde says the majority have established policies to address their activities' environmental impacts. A number are aligning with NBIM's expectations on adopting international best practices, including the mitigation hierarchy approach, no net loss ambitions and commitments not to explore or develop mines in internationally recognised areas such as natural UNESCO World Heritage sites.

The leading firms have gone further by setting company-wide targets. Some companies aim to have a net-positive impact on biodiversity, and are employing new technologies to measure impact and progress.

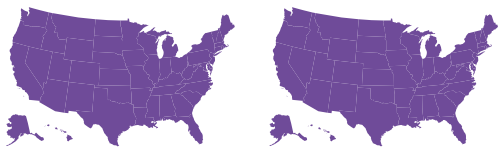
We delve into investors' efforts to engage with corporates on nature on p. 8-10 and take a deep dive into engagement with the mining sector on p. 22-24. ■

Crisis in numbers

Global biodiversity loss threatens a sixth mass extinction event - the first since the dinosaurs were wiped out 65 million years ago

420 million

Hectares of forest have been lost since 1990



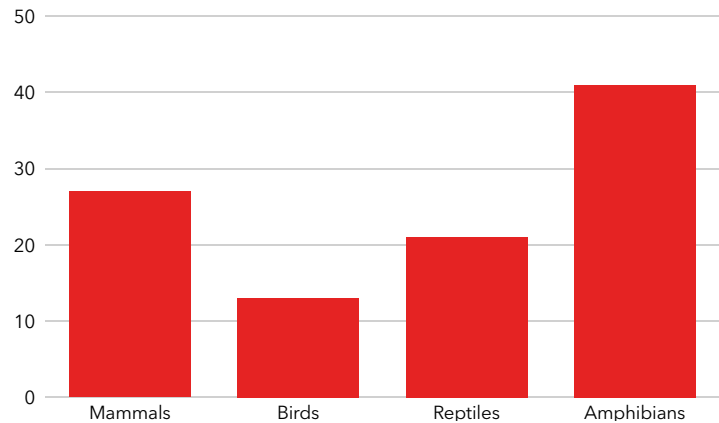
An area twice the size of the US has been deforested by humans since the last ice age

Source: FAO; OurWorldInData.org

42,100

Known species are threatened with extinction - far more species yet to be classified are at risk

Share of species threatened with extinction (%)



Source: IUCN Red List

69%

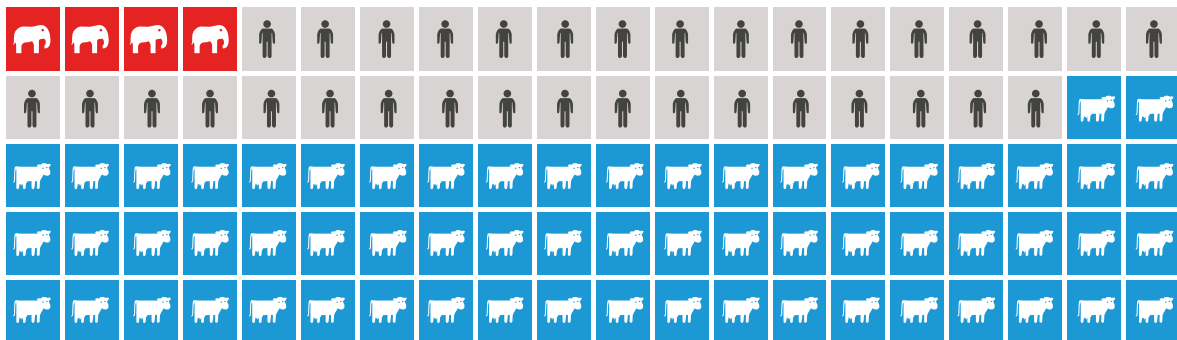
The average decline in monitored animal populations since 1970

Source: WWF Living Planet Report 2022

Wildlife has been reduced to a small fraction of the world's mammal biomass

Wild mammals **4%**

Humans **34%**



Livestock **62%**

Source: OurWorldInData.org





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KEYNOTE INTERVIEW

Growing the conversation around biodiversity



UBP's Victoria Leggett outlines the opportunity for corporate engagement on biodiversity

Ahead of the launch in September of the final recommendations from the Taskforce on Nature-Related Financial Disclosures (TNFD), we sat down with Victoria Leggett, head of impact investing at Union Bancaire Privée (UBP).

Most corporates are still getting their heads around biodiversity reporting practices, she says; however, with the regulatory landscape evolving quickly, disclosure is set to become a growing priority.

Q Nature-related disclosure is a complicated area. How aware are companies of their biodiversity impacts

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and how good are they at reporting them?

With biodiversity, corporates are probably about five years behind carbon in terms of disclosure. According to CDP data, 18,600 companies reported on climate last year, but only 3,900 reported on water and just over 1,000 on forests, as proxies for biodiversity.

However, the situation is changing quickly. We're at a tipping point, following the adoption of the Global Biodiversity Framework at COP15 last December, plus the launch of the

TNFD framework later this year.

The understanding that companies have on biodiversity issues varies enormously. With climate change, most businesses are aware of carbon reduction targets, and those with the biggest climate impact have typically been the best at disclosing them.

But when I talk about biodiversity with companies – from S&P 500 businesses to UK small-caps – there doesn't seem to be a pattern. Consumer-facing multinationals with complex supply chains in biodiversity hotspots are active in reporting. But for companies operating further up the value chain, the quality of nature-related disclosure is generally very weak.

Q What are you asking companies to do in terms of biodiversity reporting?

At this early stage, the most important thing is willingness to engage. Does a company have a biodiversity policy? Do they measure biodiversity-related outputs such as water use or waste? Do they participate in any industry groups? It's important to get a sense of the company's mindset. There's no point in collecting data from a business if the strategy behind it isn't strong.

Q Why aren't more companies reporting their nature-related risks?

First, it's complex: as a company, where do you begin? Do you keep your focus narrow and report on forests, or water, or waste? Or do you collaborate with a stakeholder group to establish what biodiversity net gain might look like?

The other challenge is bandwidth. Businesses are receptive to engaging, but wary of spending a huge amount of time and resources on measuring outputs that might not be useful or relevant. They have spent a lot of time and resources getting up to speed with their carbon-related disclosure obligations and some feel biodiversity is yet another topic to get their heads around.

Q What help do they need?

The primary engagement investors can have is to emphasise the opportunities around biodiversity. For the topic to really gain traction with corporates, it's important to shift perception away from just risk.

This foundation enables much more productive conversations on the fast-evolving reporting landscape and regulatory frameworks. These include TNFD, the Science Based Targets Network (SBTN) – which recently issued targets for nature – and the EU's Corporate Sustainability Reporting Directive, which comes into force for some companies as early as next year.

As investors, we can help companies with the practical application of

rules and standards, identification of the right metrics and alleviating some of the corporate confusion and fatigue.

At the same time, companies we talk to feel that biodiversity has yet to penetrate the consumer conscience in the way climate change has. They are searching for messaging to make it resonate with their customers, and we can facilitate conversations around that.

Q Are those conversations better to have bilaterally or in a wider context?

As investors, our role is to link up the network of people interested in promoting systems change. The idea that you can run a fund and talk to companies individually to effect system-wide change is very naïve. A big problem needs a big solution.

The most powerful thing we can offer corporates is a genuine multi-stakeholder approach. For example, as part of our impact franchise, UBP hosts a biodiversity committee headed by Tony Juniper, chair of Natural England, which includes NGOs such as the Cambridge Conservation Initiative and the Peace Parks Foundation. It generates a sort of magic when we bring together conservationists, who do not often partner with corporates and can be sceptical about their commitment, and businesses, which struggle to connect the pieces and are concerned about making a mistake.

Q In addressing biodiversity impacts and dependencies, what opportunities are there for companies?

We look for three things in an investment: a supportive regulatory backdrop, innovation around that regulation and an end demand. Businesses have a significant opportunity to address gaps in the market and satisfy the demand created by new regulations that aim to build a nature-positive economy. For instance, the EU's Farm to Fork Strategy, which promotes a sustainable food system as part of its Green Deal, seeks

to reduce the use of fertilisers and pesticides. There's an opportunity there for suppliers, such as farm machinery producers and technology providers, to offer alternatives.

Q As an investor, how do you make your way through an intricate landscape of frameworks and standards?

It's important to identify the initiatives that make sense to you, and that are on the way to becoming an industry standard and ultimately a regulatory obligation. TNFD is at a pivotal moment and follows in the footsteps of the TCFD (Taskforce on Climate-Related Financial Disclosures). The introduction of science-based targets for climate has been a game changer in terms of disclosure and commitment to carbon emissions reduction targets. So, the SBTN offers a very powerful tool for biodiversity.

Q And finally, to what extent does reporting on climate and biodiversity overlap?

Pollution is an obvious crossover. Fossil fuel combustion is a big climate change driver, but it also has a detrimental impact on biodiversity. Deforestation and land conversion diminish habitats and contribute to emissions; conversely, as a corporate, if you restore a forest as part of your net-zero strategy, you're also improving biodiversity.

However, taking the carbon approach of collecting individual metrics and applying that to biodiversity is problematic. For instance, focusing on mean species abundance as a measure ignores variety and connectedness, which is critical to the survival of an ecosystem.

Another key difference is that biodiversity restoration can be local, while climate change is a global phenomenon. A multinational that decides biodiversity is important can meaningfully reduce the impact of supply-chain shocks, regulatory changes or litigation. Working to strengthen biodiversity gives businesses more control of outcomes. ■

Investors ramp up engagement on nature loss

*Investors are putting corporates on notice and asset owners are calling on managers to intensify engagement – but biodiversity is yet to make headway at AGMs, writes **Gina Gambetta***



When thinking of potential topics for engagement between investors and corporates, the blood of horseshoe crabs might not immediately spring to mind. However, BNP Paribas Asset Management's dialogue with pharmaceutical companies on replacing the substance with synthetic alternatives highlights how investors are becoming increasingly proactive in protecting nature.

Only a few years ago, investor engagement on biodiversity was completely different. "There wasn't even enough to be a theme in an engagement report, and if it was, it was mainly on deforestation," says Maria Nazarova-Doyle, head of responsible investments and stewardship at Scottish Widows.

A landmark report published by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in 2019 provided clarity on the drivers of biodiversity loss, says Peter van der Werf, head of engagement at Robeco. The

IPBES found that out of an estimated eight million animal and plant species, around one million are threatened with extinction, due to factors including land use changes and the over-exploitation of resources.

"It kickstarted conversations among investors that the time for waiting was over," says van der Werf. "We need to get our hands dirty and get to work on developing frameworks and expectations, so we can hold corporates and sovereigns to account."

Investors take action

Since then, investors have been getting into the weeds and engaging companies – which brings us back to the horseshoe crab.

About 18 months ago, Adam Kanzer, BNPP AM's head of stewardship for the Americas, learned about the rufa red knot, a bird with one of the world's longest migration routes.

As part of its migration from the southernmost tip of South America to northern Canada, the rufa red knot feeds on horseshoe crabs' eggs off the east coast of the US. But the bird is declining – it is classified as 'threatened'

under the US Endangered Species Act.

The rufa red knot's plight appears to be mainly the result of a drop in the number of crab eggs. This is partly caused by overfishing, but also by pharma companies using the crabs' blood to test and manufacture injectable products, like vaccines, and devices implanted in the body, like pacemakers.

"In theory, the use of the blood is no problem as it saves lives and efforts are made, at least in the US, to maintain horseshoe crab populations, but we are in the midst of a mass extinction crisis," says Kanzer. "Human health is relying on a keystone species that could disappear. More pandemics will come. Our need for endotoxin testing will only increase."

Kanzer discovered a lab-made alternative used by pharma company Eli Lilly, which is more scientifically robust and cheaper. The company has had four drugs that use the substitute approved by the US Food and Drug Administration.

BNPP AM wrote to 14 pharma companies in late 2021, asking whether they would discuss switching to the synthetic alternative. Some seemed to



In the red:
the rufa
red knot is
among one
million plant
and animal
species
at risk of
extinction

Corporates respond to pressure

Collaborative investor initiatives are also taking shape, including the development of Nature Action 100 (NA100) – billed as the biodiversity equivalent to Climate Action 100+.

In June 2021, *Responsible Investor* revealed Robeco, the World Bank, the World Benchmarking Alliance and the Finance for Biodiversity Foundation were exploring how to develop the initiative with several unnamed investors. Since then, heavyweights, including Storebrand Asset Management, BNPP AM and Federated Hermes, have come onboard.

In November, the Institutional Investors Group on Climate Change and Ceres were named co-leads of Nature Action 100's secretariat and corporate engagement workstreams. The Finance for the Biodiversity Foundation and Planet Tracker were appointed co-leads of the technical advisory group.

The initiative was then “soft launched” at COP15 the following month. In June, it outlined investor expectations of companies, as well as the eight sectors from which the companies targeted for engagement will be drawn. A final list of firms will be unveiled later this year.

Corporates are starting to take notice. Stephanie Hime, director of Little Blue Research, which works with corporates to measure their impacts and dependencies on nature, sees a willingness to meet investor demands.

“There is also an understanding that it's not a quick tick-box undertaking. Nature is more all-encompassing than climate and there are data challenges and gaps.”

She notes that some firms are starting to integrate nature and biodiversity into decision-making. However, environmental initiatives are siloed in many organisations.

“They'll have knowledgeable environmental specialists on particular things, but how they feed into procurement, risk assessment and governance at board level shows there are gaps.”

be moving in the direction, but most did not respond, despite multiple follow-ups.

Not one to give up, Kanzer contacted the Pharmaceutical Supply Chain Initiative, which subsequently published a paper urging its members, including 75 of the world's largest pharmaceutical companies, to adopt alternative technologies and minimise the demand for naturally derived testing materials.

“Now that we have a peer-developed set of good practices, we are going to go back to companies in our portfolios to see if we can restart the discussion,” Kanzer says. “This is a win-win-win as it relates to biodiversity loss, human health and solid business practices. We're looking for more opportunities like this.”

Alongside this work, Kanzer reports that BNPP AM is also engaging on deforestation, water, pesticides, hazardous chemicals and oceans. “There are so many issues to work on – investors should focus on the key pressures on nature that scientists have identified and get started. It is a fast-moving, multi-faceted crisis. But there are solutions.”

“We need to get our hands dirty and get to work on developing frameworks and expectations, so we can hold corporates and sovereigns to account”

PETER VAN DER WERF
Robeco

Fixed-income focus

Nature is becoming a feature of bond engagements

David Zahn, head of European fixed income at Franklin Templeton, says the investor sent a sustainability questionnaire to 150 corporate issuers in 2022. Around one-third of respondents operated near a biodiverse risk area. A follow up this year asked what issuers are doing to mitigate threats to high-risk areas.

“The response rate was high, with action varying from developed plans, to responders acknowledging the risk but yet to take action,” says Zahn. When the firm has reviewed answers, it will follow up with companies to make their policies more robust. It is also working on engaging sovereigns on biodiversity.

Data challenges

One barrier to engagement noted by investors is data. “It’s not that there isn’t data. It’s just I find it’s either really broad but shallow, or in-depth but only for a small number of companies,” Nazarova-Doyle says.

The Taskforce on Nature-Related Financial Disclosures is set to help clarify data reporting requirements when it launches its finalised disclosure standards for companies to report on biodiversity risks and opportunities in September.

AXA Investment Managers, meanwhile, is aiming to get the most out of data that is currently available. In 2022, the French investor sought to continue the integration of biodiversity in its engagements and go beyond efforts on deforestation by extending the scope of companies and engagement.

“Our engagement initiatives were underpinned by the integration of new, biodiversity-specific data and a new metric – biodiversity footprint,” says Liudmila Strakodonskaya, ESG analyst at AXA IM.

“We used this new data from an experimental modelling approach designed by Iceberg Data Lab to help us select and prioritise sectors and companies which present a significant biodiversity footprint, and to focus our engagement efforts accordingly.”

Strakodonskaya says AXA IM will continue to enhance and inform engagement campaigns using biodiversity-specific data developed by Iceberg Data Lab.

Manager engagement

Asset owners are also starting to hold their managers to account; Scottish Widows has recently begun asking its managers to disclose their biodiversity policies and detail the engagements they carry out.

While all Scottish Widows’ managers are active on biodiversity, their public disclosure and thought leadership varies significantly. Of its three main asset managers, one has good disclosure and has shared its commitments, targets and activity on the topic; another has publicly discussed the scale of the topic and their commitment to it; while a third has minimal public disclosure on policies or activity in this area.

Scottish Widows will also be encouraging its managers to respond to consultations and engage in policy discourse on the barriers companies face,

to encourage greater progress on halting biodiversity loss.

Before and during COP15 in Montreal, investors were proactively involved in the negotiations of the Kunming-Montreal framework. Policy advocacy is likely to continue.

Nazarova-Doyle says that Scottish Widows wants to hear about both successful and unsuccessful examples of engagement and how asset managers plan to escalate. “We will hold them to account through asking about specific biodiversity shareholder resolutions as they become more widespread,” she says.

AGMs in 2024

While investor stewardship is beginning to flourish, biodiversity is yet to become a prominent feature at AGMs. Analysis by Planet Tracker shows that between 2010 and 2022, only 38 proposals on biodiversity emerged – most were on deforestation, followed by genetics, with only a handful explicitly referencing biodiversity or nature.

A follow-up study published in May shows that investors were relatively un-supportive of these proposals. Of the 26,500 votes cast on biodiversity proposals in the same period, 62 percent were either cast against, or the voter abstained or did not vote.

Funds cited the overly prescriptive nature of some of these proposals as a reason for voting against, while also pointing to insufficient shareholder benefits and companies already having relevant policies.

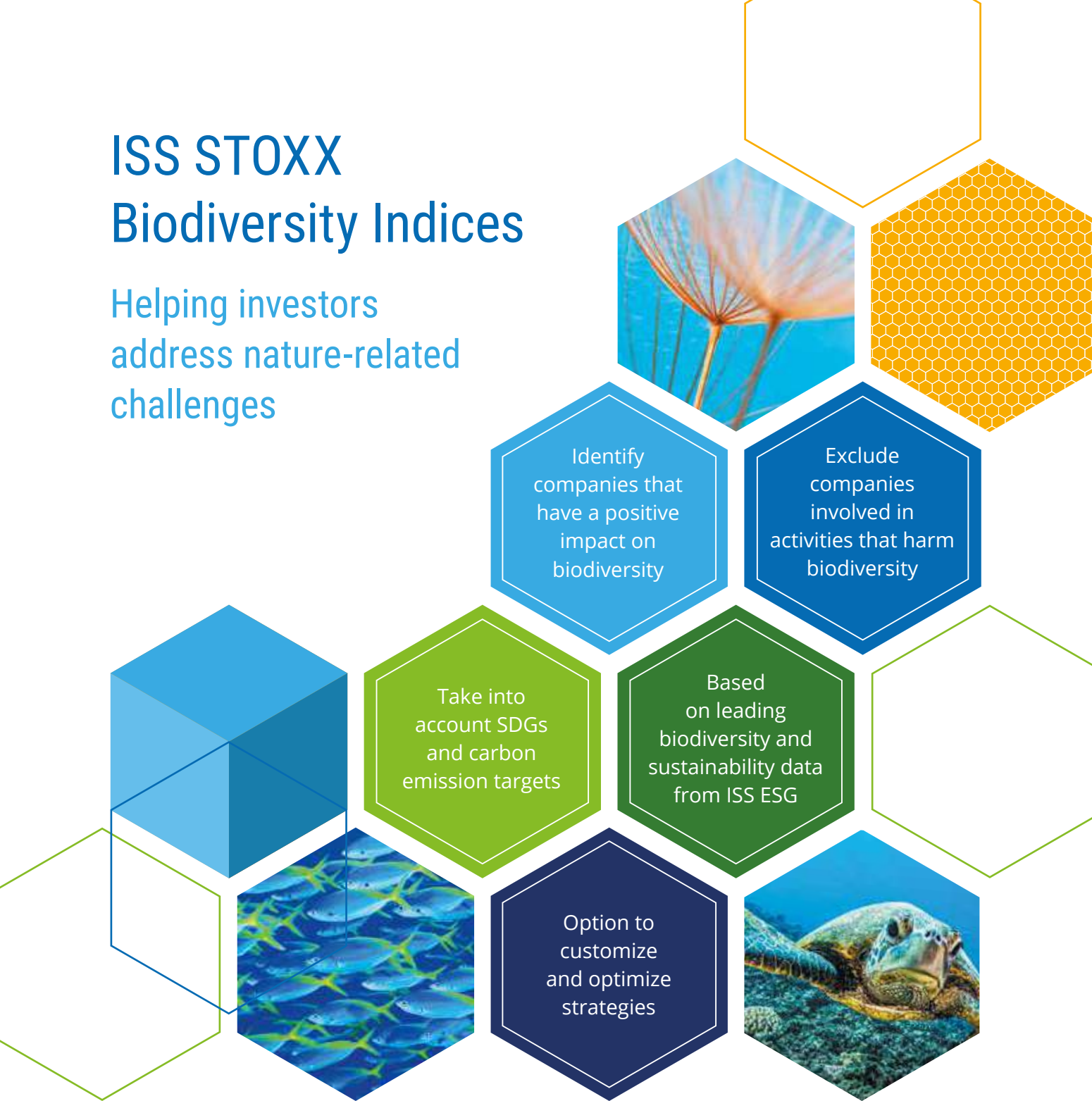
Several investors told *RI* that 2024 is likely to see an increase in biodiversity-related resolutions, however.

Ultimately, BNPP’s Kanzer says he expects to see progress. “I am hopeful that we are entering a new phase of investor engagement on nature loss,” he says. “At a minimum, we expect all large companies to assess their key impacts and dependencies on nature and to develop a transparent and comprehensive strategy to address them. We hope to see all large investors embrace this as an urgent priority.” ■



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KEYNOTE INTERVIEW

Meeting investors' biodiversity data demands



STOXX's Antonio Celeste and ISS ESG's Hernando Cortina describe the data demands of building a biodiversity index

In May, Qontigo's index provider STOXX launched the ISS STOXX Biodiversity indices with ISS ESG. The suite of products enables investors to track companies that score highly in terms of the UN Sustainable Development Goals (SDGs) that relate to biodiversity and climate. The indices also highlight biodiversity leaders, that generate at least 25 percent of their revenues from activities making a positive net contribution to a selection of biodiversity or climate-related SDGs.

Antonio Celeste, STOXX's director for sustainable product management, and Hernando Cortina, ISS ESG's head of index strategy, talk us through the complexities of collecting



biodiversity data and explain how investors can use it.

Q Why have you partnered to develop indices focused on biodiversity?

Antonio Celeste: There is momentum and clear demand. The investor community realises that biodiversity is as important as climate, and the two are related. The World Wildlife Fund's *Living Planet Report 2022* reveals that global wildlife populations have dropped by an average of 69 percent over the past 50

years. Asset managers and owners require solutions that address this.

The indices provide a starting point for dialogue, not a destination. They are a tool that investors can use to engage with companies on biodiversity, encourage them to disclose more relevant data, and perhaps even alter their business models to address biodiversity-related risks and opportunities.

Hernando Cortina: Biodiversity might seem like a new topic, but it really isn't. What is new is linking it to corporate performance. That has been the missing data piece. But we can now assess businesses through a biodiversity lens. We can expand on the Principal Adverse

Impact requirement from the EU Sustainable Finance Disclosure Regulation (SFDR) to report any negative biodiversity impact and provide a scale that quantifies that impact.

Collaboration between ISS and STOXX isn't new either. We've launched several climate-related indices over the past five years. STOXX brings the index construction expertise, and we bring the ESG data. For investors, biodiversity could become as significant as climate, driven by several developments, including the EU Taxonomy and SFDR, the Global Biodiversity Framework, and national initiatives, like France's Article 29 and its climate-related obligations.

Q How are investors using biodiversity-related tools?

AC: Some investors require solutions specifically designed around biodiversity. Others want to embed some components of our biodiversity framework into their existing products, such as our Paris-Aligned Benchmark (PAB) or Climate Transition Benchmark (CTB), to reduce their biodiversity footprint.

Investors in countries like France, the Nordic countries and the Netherlands have led the way, but now interest in biodiversity is becoming widespread. We see clear interest coming from Southern Europe as well – we're in discussions with two major Italian firms. Momentum is picking up and biodiversity is quickly joining climate as a key concern.

Q Biodiversity data is location-specific. How do you collect it?

HC: Conceptually, the topic spans from fungi to blue whales, and everything in between. It's a very dynamic field but still several years behind climate, and relies almost entirely on models. Neither of our two key indicators – mean species abundance (MSA) and potentially disappeared fraction of species (PDF) – are widely reported by companies. In their absence, we're looking

for indicators that enable us to piece performance together.

Keeping our coverage broad, to model biodiversity impacts we use several databases and sources included within ISS's Biodiversity Impact Assessment Tool, such as revenue by activity and region, supply-chain linkages, lifecycle and lifecycle impact assessments. When available, to enhance the modelled data we include what we call 'refined scores', drawn from disclosed company data. This might be where a business sits on the Forest 500 ranking, for instance.

Q How do you ensure data you collect is consistent, reliable and accurate?

HC: We're providing data due to market demand. Like all estimated data, it's not perfect. Ideally, companies would disclose PDF and MSA data. That will improve with time, as frameworks such as the Taskforce on Nature-Related Financial Disclosures (TNFD) are adopted. We expect that to happen over the next 12-24 months, just like it did with climate, following the Taskforce on Climate-Related Financial Disclosures.

We carefully select the databases we use, and conduct quality checks to ensure consistency across company types and size. Looking forward, we'd like to see companies attach standardised latitude and longitude information to their assets, which would help us refine the data and fill gaps. It's something that we're collecting ourselves, but it's a work in progress.

Q How do you capture supply-chain data?

HC: Biodiversity is analogous with Scope 3 emissions data, except biodiversity is more complex because of the geographic element. We use input-output models – if business A is making product X, then its supply chain typically includes products B, C, and D – and apply averages to quantify impact. If the business discloses supply-chain information, such as lifecycle data, we can go further and refine the data.

Q How is the data used to construct the indices?

AC: First, we exclude companies whose activities harm biodiversity, like pesticide manufacturers or those that use animal testing. Second, while it's impossible to have zero biodiversity footprint, we select companies with the least impact by benchmarking their PDF and MSA measurements. There are differences among sectors. Some sectors such as food and beverage or utilities have a greater impact on biodiversity.

Third, using the UN SDGs framework and ISS research, we look at businesses that sell products and services that have a positive biodiversity impact.

Finally, biodiversity and climate are related – we need to decarbonise the economy to reduce biodiversity loss – so we add an additional layer that seeks to reduce the portfolio's carbon footprint by 30 percent. From this starting point, we can raise that level of decarbonisation and eventually align the index with PAB/CTB emissions trajectories.

Q How will the quality of biodiversity-related data evolve?

AC: There's a huge gap in terms of what is needed and what we have. With the introduction of the EU's Corporate Sustainability Reporting Directive, from 2025 we'll start to get more data from the largest corporates. In the meantime, the TNFD framework will provide guidance on how to disclose portfolio companies' exposure to biodiversity risk and opportunities.

But to stop biodiversity loss, we can't simply rely on disclosure. Companies need to act. Not having the data is not an excuse. Clients are already asking for forward-looking data, to see how a company will be positioned in three to five years and consider their risks but also opportunities. I see them becoming more vocal, using products like ours and others to take ownership of the topic and to start a dialogue with companies. This next step of engagement will really move the needle, and we cannot wait. ■

When the Taskforce on Nature-Related Financial Disclosures unveils its final recommendations in September, it will conclude an 18-month-long consultation process that has encompassed four draft versions, interaction with a 1,100-strong forum of institutions and stakeholders, and input from a number of geographically-defined consultation groups. The framework has been pilot-tested by around 130 entities, including 72 financial institutions. The window for final feedback closed in June.

For global long-term investors with exposure across sectors and portfolios “there’s nowhere to hide from nature-related risk”, says Tony Goldner, the TNFD’s executive director. “These investors can’t diversify their risk because they are exposed to everything everywhere. They’re very focused on this issue now.”

Expectations for the TNFD are high. The framework shares the same pedigree as the Taskforce on Climate-Related Financial Disclosures (TCFD), which has been instrumental in positioning greenhouse gas

emissions on corporate, government and stakeholder agendas globally.

“We hope the TNFD will play a similar role as the TCFD plays in climate-related disclosures by establishing a global framework through which to price in biodiversity risk and opportunity,” says Lucian Peppelenbos, climate and biodiversity strategist at Robeco. “That’s fundamentally what needs to happen.”

“There’s been a huge amount of investor engagement in the TNFD consultation process,” says Rupesh Madlani, senior adviser at NatureFinance, one of the TNFD’s 18 knowledge partners, which also include the Global Reporting Initiative and the International Sustainability Standards Board. “That’s partly because the TCFD established a climate track [for disclosure] that investors know well.”

Are investors ready?

The TNFD borrows heavily from its predecessor. It categorises physical, transition and systemic risks in the same way as the TCFD, retains the TCFD’s disclosure recommendation pillars (governance, strategy, risk management, and metrics and targets) and adopts its scope concept and scenario

analysis model. But there is a key distinction: the TNFD’s risk and opportunity assessment approach, LEAP (Locate, Evaluate, Assess and Prepare).

“LEAP is the best framework we’ve got for thinking through nature-related issues – how does an institution understand its relationship with nature, what are its impacts and dependencies, and what are the risks and opportunities that flow from that?” says Thomas Maddox, global director of forests and land at CDP.

The environmental disclosure specialist is also a TNFD knowledge partner and is exploring aligning its existing questionnaires with the new framework. “If you report to CDP, you have a good head start on the TNFD process, but the TNFD framework is more comprehensive,” Maddox notes.

But, beyond those investors who are already engaged with the TNFD, institutions vary considerably in their preparedness to meet its recommendations.

“There are early innovators who are very keen to adopt nature-related reporting because it aligns with their investor base, stakeholders and companies in their portfolio,” says Madlani. “At the other end of the spectrum, investors exposed to less nature risk are waiting to see how [the framework] develops and what reporting solutions evolve to help them respond.”

Maddox says: “Some institutions will be up and running quickly, particularly those who’ve been most closely engaged with the development of the TNFD. But there are going to be teething issues at the beginning.”

The newness of the topic is itself a major headache for many investors. While there is growing awareness of biodiversity and nature-related risks among investors and companies, there is fatigue at having to get to grips with yet another disclosure subject. “As an investor, you’ve just about got your head around climate, and now you’re being asked, what about nature? It’s an extra mile for investors to go,” says Madlani.

Currently, corporate disclosure

Great expectations for the TNFD

The TNFD’s recommendations will be released this autumn, changing the way investors think about nature-related risk. Victoria Robson asks whether investors are ready to adopt the framework

Data developments

Having adopted the Science Based Targets Network's (SBTN) definitions of impacts and dependencies on nature, the TNFD recommends that institutions use SBTN methods to set targets and measure performance.

However, collecting the necessary data is no easy task. Unlike reporting a global carbon footprint captured by a single emissions metric, nature-related data is highly local, specific and diverse. Data on nature also remains heavily reliant on models, proxies and assumptions.

“The lack of reported and granular location-specific data is a major challenge, which translates into disclosure challenges at both aggregate and detailed levels,” says Virginie Derue, head of ESG research at AXA IM. “More broadly, challenges also stem from the low level of maturity of the thematic, meaning that corporates will probably struggle defining most material topics and priorities.”

A further issue is the absence of established thresholds to benchmark progress. With climate-related disclosure, investors and their portfolio businesses can work toward net-zero targets. “Where are the science or policy-based biodiversity and nature thresholds that we can apply to assess individual companies?” asks Robeco’s Lucian Peppelenbos.

“To measure the impact on nature of a single company and its supply chain is incredibly complex, but that is what the TNFD is asking for. We hope that the science develops and the data improves.”



3,500

Pieces of feedback on the TNFD recommendations

around impacts on nature is minimal. According to a Nature Benchmark survey conducted last year of around 400 ‘influential’ companies across eight industries, only 5 percent have carried out a science-based assessment of their nature and biodiversity impacts. A meagre 3 percent have committed to a nature positive trajectory by 2030.

The introduction of the EU’s Corporate Sustainability Reporting Directive will “usefully complement current standards, provided all of them are consistently articulated”, says Virginie Derue, head of ESG research at AXA IM. However, the CSRD does not require the first set of companies to report until 2025 at the earliest.

Disclosure dilemmas

Goldner acknowledges that collecting the required data will be difficult. Not just investors and companies, but governments too, have raised their data concerns with the taskforce, he says. In response, the TNFD conducted a data gap analysis last year. Its conclusion: “There’s not a lack of data. There are data consistency and accessibility issues,” he says.

And then there is the task of addressing global variations in approach. “One of the challenges is trying to develop standardised definitions and methodologies for measuring the state of nature and doing it consistently around the world,” Goldner adds.

Following its study, the TNFD launched the Nature-Related Data Catalyst, which brings together more than 100 data providers to explore the challenges. It is also developing the idea of a nature public data utility, similar to the Net-Zero Public Data Utility. “And we’re starting to see a huge amount of innovation on the data and the analytics side,” Goldner notes.

“Most importantly the framework recognises that nature-related disclosures will be new to many organisations,” says Derue. “Starting with a limited scope, focusing on specific activities or priority locations that are the most

material, is a prudent but relevant approach.”

In any case, the absence of ideal data sets should not stop institutions from starting to report, says Maddox. “I don’t see data as the key bottleneck. Institutions can still do something even though it’s not going to be perfect, even though they might be using proxy data to begin with.”

Clear direction of travel

There is a sense of inevitability among investors and market practitioners that institutions and business will have no choice but to report their nature-related risks, impacts and dependencies. The business, legislative and reputational risks of not measuring the impact of nature loss on operations will become real if not addressed, says Madlani.

“I haven’t seen anyone make a strong argument as to why any company isn’t dependent on nature in some form,” he says. He expects reporting nature-related risks to become a regulatory and stock exchange requirement. And when it does, institutions that haven’t built a reporting capacity “will be behind the curve”, he adds.

“The longer a company waits, says the data is not available, it’s not quite clear what we should be doing or what framework to use, it’s going to

get more expensive [to catch up],” says Maddox. Looking forward, “companies that have jumped in and are starting to do something are going to be best positioned”.

The launch last December of the Global Biodiversity Framework at COP15, “is a clear signal of what’s to come”, says Maddox. Almost 200 nations signed up the GBF’s 23 targets, of which Target 15 advocates for legal, administrative and policy measures to encourage businesses, including financial institutions, to monitor, assess and disclose their biodiversity risks, dependencies and impacts.

While talk of the TNFD becoming mandatory might be premature, the release of the recommendations is expected, like the TCFD did for climate, to accelerate the global discussion around nature-related risks. “This is where the world is going. It’s where clients are going and science and legislation are headed,” says Peppelenbos. “With clients, biodiversity and nature are now just as much part of the conversation as climate.”

For the TNFD, following the publications of its recommendations, Goldner says the taskforce hopes to see companies get started. To help them, the TNFD has developed additional guidance to be launched in conjunction with the recommendations. “We recognise this is difficult, we recognise there are data challenges,” he says.

Going forward, “we hope to see increasing disclosure ambition over time as confidence and capabilities build, no doubt driven by the growing information demands and needs of investors”, Goldner says.

Although it might take some time – the TCFD issued its recommendations five years ago – Peppelenbos expects the market response to the TNFD to be as strong as to its predecessor. “It will take a number of years for sector guidance, thresholds, and transition models to develop for nature-related risks, but I would expect TNFD adoption to match TCFD’s.” ■

“There’s not a lack of data. There are data consistency and accessibility issues”

TONY GOLDNER
TNFD





What is the future of biodiversity credit markets?

*Biodiversity credits continue to divide opinion. NatureFinance executive director Simon Zadek tells **Ben Payton** that policy incentives are vital for the market to move beyond ‘toy town’ and help solve the nature crisis*

For some, biodiversity credits are a vital way to enable corporates to ‘offset’ any damage they might cause to biodiversity through funding the restoration of habitats elsewhere. Advocates insist that even companies that harm one part of an ecosystem could use biodiversity credits to restore or protect habitats in an adjacent area, thereby ensuring that they produce an overall ‘net gain’ in biodiversity.

To others, there could be no more glaring example of ‘nature washing’.

How, critics ask, can permanent damage to an ancient and intricate ecosystem be adequately offset? And are we really going to trust providers of biodiversity credits to ensure that protections for restored habitats are maintained in perpetuity?

The debate has intensified after high-profile media reports earlier this year raised questions over the credibility of carbon credit certification schemes.

On the other hand, there is an argument that carbon credits could become significantly more beneficial through

being combined with biodiversity credits. After all, a forest teeming with wildlife is clearly preferable to a monocrop plantation that merely absorbs carbon without producing other ecological benefits.

To understand the key trends in how this complex and still nascent market is developing, we spoke with Simon Zadek, executive director of the advocacy group NatureFinance.

He tells us that the future of biodiversity credits remains uncertain – effective governance will be vital, he believes, to ensuring biodiversity credits

can be a meaningful part of the solution to combating nature loss.

Q What does the market for biodiversity credits look like today?

There are multiple markets, all of which go under the name biodiversity credits. You've got philanthropic credits. You've got insetting – that's funding down value chains to increase resource productivity. You've got biodiversity-enhanced carbon credits. You've got national compliance offset programmes – there are, I think, 30 or 40 around the world.

And then you have the beginnings of a bigger conversation about the use of biodiversity credits as a way to channel funds across borders to countries, largely in the Global South, that need biodiversity-related financing, particularly for what we might call 'intact landscapes'.

So, what does that all mean? It means, first of all, it's a mosaic. The biggest volumes are at the national compliance offset level. No-one has really added up the numbers... they are in the billions a year, but not in the tens or hundreds of billions. To put that in context, the [total value of] global voluntary carbon markets was \$2 billion last year.

It's a very fragmented space. Is someone going to pull it together and figure out whether really these are scaled, global markets that can support nature restoration, using private capital? Or is this a side game that people will have forgotten about in three or four years? That's really the question on the table.

Q What factors will determine which way this market is going to head?

Factor one is an agreed approach to measuring the state of nature or the state of biodiversity. Factor two is building a high-integrity supply of biodiversity credits, which in our opinion, obviously involves project developers.

“You need these markets to be governed effectively, which is absolutely not the case for voluntary carbon markets”



But, learning from the voluntary carbon market space, that without doubt requires an enabling policy environment on the supply side. I think we have to stop relying on private developers in private certification schemes, because they simply don't have the robustness to work effectively at scale.

And then third, not surprisingly, we need credible and significant demand. And what does that mean? If you really ask the tough questions, then you have to conclude that purely voluntary demand will never scale. Let's stop pretending.

We will need a range of policy incentives – it doesn't have to be compliance,

it can be positive incentives as well, in order to stimulate the demand for biodiversity credits from the market. But there's no doubt that we need policy incentivised private demand in order to get beyond toy town.

Finally, we need a better way of distributing the economic rewards. We have to embed price arrangements to some extent in the way these markets work. And some of that can be sold through enhanced transparency through trader certification. In other words, by reducing the asymmetries of information and negotiation capability between the buyers and the sellers, you can get a better price deal.

Some of it can be solved by reducing the amount of OTC and increasing the amount of exchange-based trading. And some of it needs to be set through some level of price control. And there's nothing wrong with having price floors in markets. We've been doing it for a thousand years. The idea that that somehow kills markets is just nonsense, historically.

And then for all of that to work, you need these markets to be governed effectively, which is absolutely not the case for voluntary carbon markets.

Q What kind of governance mechanisms do you think are needed?

The solution is not a global biodiversity regulator. That's just not going to happen. We are already beginning to build nation-based regulatory arrangements and incentive systems that offer a really important part of the broader governance.

It's perfectly possible to argue that traders need to be accredited. You have the same in the pharmaceutical industry, you have the same in most of the financial industry, and that makes a lot of difference to the quality of those markets. So why can't we have the same for these existential markets, the carbon and biodiversity credit markets?

You can have much more transaction-level transparency, which allows for much higher-quality markets and price discovery. And then one can use digital infrastructure to enhance governance. The use of blockchain, the use of tokenisation, all of this, radically improves the quality of markets and allows for stakeholder voices to be attached to credit claims. Once you build a distributed ledger model as an underpinning, which is now perfectly possible – not expensive to do, or conceptually difficult to advance.

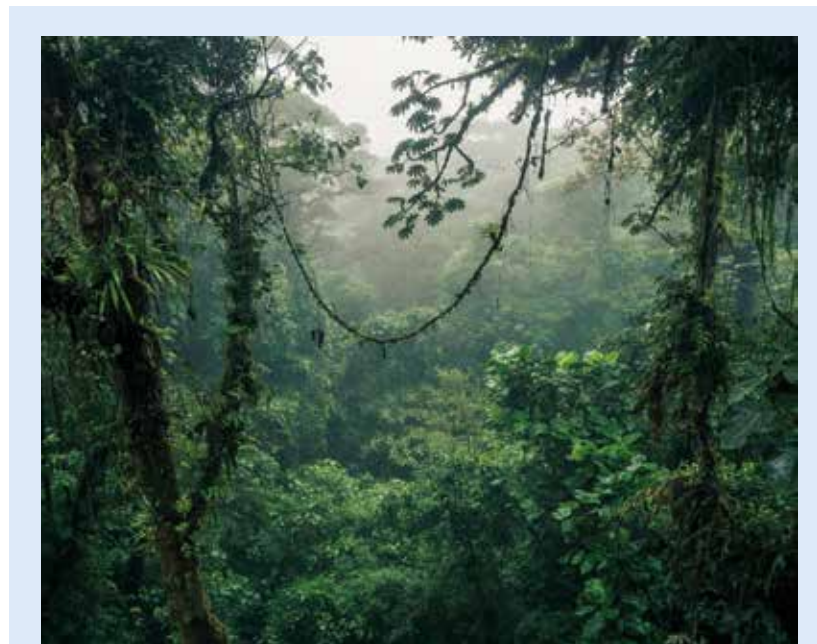
The answer to good governance is not a meta regulator way of thinking. There are a number of pieces of governance that will really ensure that these markets can work effectively. And you need several pieces of architecture. The advantage of what I describe is that very little of it requires an international regulator. It requires collaboration internationally. We can build a club model at the international level, supported by the critical actions that are needed at the national level.

Q What are the main lessons that people working on biodiversity credits need to learn from how carbon credits have developed?

Voluntary demand won't do it. Private certification won't do it. Additionality does not allow for all solutions that are needed to be addressed. In particular, as Gabon would say, how do you pay for standing forest, because they're not at risk and so they're not consistent with an additionality model. So, you've got to be careful on what the criteria of credits really are. That seems really key.

And you have to embed equity considerations in the actual running of the markets, rather than relying on the individual responsible traders. And that was never done in the development of voluntary carbon markets and should be done.

The reason why I [argue for] policy on the demand side, policy on the



UK-France initiative seeks to boost offsets

The UK and France announced a Global Roadmap to accelerate development of the biodiversity credits market following a summit in Paris on 22 June.

A UK government statement claimed that the roadmap will “facilitate the sharing of best practice on the governance mechanisms for credit funding, monitoring regimes to ensure biodiversity improvements, and the fair distribution of income to Indigenous peoples and local communities”.

As part of the roadmap, an advisory panel is set to guide working groups on different aspects of the biodiversity credit markets ahead of the COP16 biodiversity conference in Turkey next year.

supply side, equity embedded in the core, higher levels of transparency, use of digital infrastructure, is because those are the lessons that we draw from, frankly, the train wreck that is today's voluntary carbon markets.

Q What's your top-level view on what the market for biodiversity credits will look like 10 years from now?

Option one is that we find mechanisms for conserving and regenerating nature by financing those activities in an effective and equitable way. And the biodiversity credit markets will be

part of that ecosystem of financing approaches – it's not the answer, but it's a part of the story. Model two is that biodiversity credits and that broader ecosystem fail to materialise at scale.

We have a choice. And the choice is quite clear, which is if biodiversity systems collapse around the world, not only do we have rapidly increasing levels of temperature, but we have huge social unrest and massive increases in refugee movements. And so, the biodiversity credit market is not the difference between those two options, but it is part of the difference. ■

A year of nature crisis



The landmark COP15 agreement has helped focus investors' minds on biodiversity – but threats to nature continue to escalate

COP15 concludes with historic biodiversity move

The UN Biodiversity Conference, COP15, concluded in Montreal with an agreement guiding global action on nature until 2030. Chaired by China and hosted by Canada, it resulted in the adoption of the Kunming-Montreal Global Biodiversity Framework. This addresses biodiversity loss, ecosystem restoration, Indigenous rights, and aims to protect 30 percent of the planet and 30 percent of degraded ecosystems by 2030, while increasing finance for developing countries. Target 15 of 23 calls for financial institutions and transnational companies to disclose their risks, dependences and impacts on biodiversity.

NOV 2022

DEC

JAN 2023

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Companies failing to follow through on nature commitments, data shows

A survey published by non-profit CDP found that 55 percent of companies that had made biodiversity commitments had failed to take follow-up action within the past year. The survey also revealed that 70 percent of companies do not assess the impact of their value chain on biodiversity. On the positive side, 31 percent of companies that responded to the survey had made public commitments or endorsed biodiversity initiatives, with another 25 percent planning to do so within two years.



More species join the extinction list

The Chinese paddlefish, one of the largest fish in the world, was among numerous species of animals and plants that were officially declared extinct in 2022. Other species lost forever include two types of frogs from Australia, a Polynesian tree snail and the giant Atlas barbel, a fish that was endemic to Morocco. The International Union for Conservation of Nature lists 42,100 species as threatened with extinction – but the true number of vulnerable species is likely to be vastly higher, since many species go extinct before they can be officially classified.

UNDP targets ‘tiger ecosystem bond’ to fund conservation activities

Responsible Investor reported that the UN Development Programme (UNDP) is holding discussions with several investment banks and governments around issuing a ‘tiger ecosystem bond’. The bond would be designed to fund landscape-scale conservation activities within the tiger’s ecosystem; as the apex predator, the feline serves as the ‘keystone’ species that has a vital role in the functioning of the ecosystem. The bond would generate revenues partly through carbon and biodiversity credits.

Nature Action 100 prepares to engage key companies

Nature Action 100, a global engagement initiative that aims to encourage corporations to enhance their efforts to combat nature loss, took another step forward at the end of June. NA100 will serve as the nature-focused equivalent of investor-led engagement initiative Climate Action 100+. In preparation for its formal launch, NA100 outlined eight sectors from which it will select companies to engage. A final list of companies will be unveiled later in 2023. The initiative’s secretariat and corporate engagement working group are jointly led by Ceres and the Institutional Investors Group on Climate Change, while the technical advisory group is co-led by the Finance for Biodiversity Foundation and Planet Tracker.



MAR

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The TNFD releases final beta framework

The Taskforce on Nature-Related Financial Disclosures (TNFD) published the fourth and final beta version of its disclosure framework, the last step before releasing final recommendations in September. Among several updates, the TNFD outlined its approach to the metrics that will support its disclosure recommendations. The proposed metrics consist of core global metrics, core sector metrics and additional metrics tailored to specific industries and nature-related issues. The approach is designed to provide market participants with comparability across and within sectors.



Science Based Targets Network releases first nature goals

The Science Based Targets Network (SBTN) published ‘science-based targets’ for nature, as a way to help firms assess their environmental impacts and prioritise actions. The first area of focus for the targets will be on freshwater and land. *RI* reported that as a next step, 17 global companies – including GSK, H&M, Kering, Nestlé and Tesco – are preparing to set and submit targets for validation, with a full roll-out to all companies participating in the network in early 2024.



The 'clean' energy sources of the future depend on an industry that has long been regarded as 'dirty'. Huge volumes of the critical minerals that are needed for wind turbines, solar panels and electric vehicle batteries will need to be extracted from the earth if net zero is to become a reality.

Consulting firm Benchmark Minerals Intelligence estimates that 74 new average-sized lithium mines are needed by 2035 to meet the demand from electric vehicles. A further 97 natural graphite mines, 72 nickel mines and 62 cobalt mines will also be needed.

Growing demand for critical minerals will put sensitive ecosystems under greater pressure from mining. The world's largest lithium reserves, for example, are found in the salt flats of the Atacama Desert in South America, while large deposits of rare earth elements have been discovered at sites in the Arctic. Globally, around 20 percent of mine sites are located in biodiversity hotspots, which are also often important areas for Indigenous communities.

Investor interest

As with other industries, investors in mining are beginning to focus on biodiversity. "Investors are becoming more aware of the risks associated with biodiversity loss and are building a better understanding of the impacts and dependencies of the sector," says Gemma James, a member of the Global Investor Commission on Mining 2030's secretariat, and head of biodiversity and nature at advisory firm Chronos Sustainability. "The sector needs to evolve to meet expectations and keep up with new developments."

Rohitesh Dhawan, CEO of the International Council on Mining and Metals (ICMM), which represents 25 of the world's largest mining companies, concedes the industry has a less than stellar reputation for protecting nature.

"I fully acknowledge that in the history of mining, you can probably point

Critical minerals: A critical threat for biodiversity?

*Investors are becoming concerned that an energy transition mining boom will have adverse effects on nature, writes **Ben Payton***



to more examples of biodiversity conservation and protection gone wrong than you can to conservation protection gone right,” he says.

Dhawan stresses that the largest players in the mining industry have been working for many years to improve their biodiversity performance. But while many companies have made progress in reducing negative impacts on biodiversity, a large share of prospecting for critical minerals is being carried out by less-experienced players. “Many of those operators will not currently be large organisations with the resources, capacity and public commitments to protecting and enhancing nature,” Dhawan warns.

Smaller companies that make significant discoveries are likely to become acquisition targets for larger players. Large companies must therefore “emphasise that we are much more likely to be interested in buying a project if

“You don’t always need the perfect data – you just need the right data to get started”

EMINE ISCIEL
Storebrand Asset Management

it has been set up correctly from the start”.

Dhawan says investors also have a vital role in encouraging best practice. Investors, he tells us, should make it clear that they will not fund mining projects of any kind unless they can be confident that they are “compatible with a nature-positive future”.

There is an “uptick in the interest from the investor community” around how mining affects biodiversity. This may reflect requirements under the EU’s Sustainable Finance Disclosure Regulation for investors to report principle adverse impacts on biodiversity. Yet, most investors lack in-depth understanding of the issues involved, Dhawan says.

“The industry knows a lot more about nature and biodiversity than the investment community does. We’re having to educate a lot of the investment community as to why our work on nature and biodiversity is important.”

Many investors are still mapping where companies in their portfolios operate mine sites that are likely to impact areas of high importance to biodiversity.

The Exploring Natural Capital Opportunities, Risks and Exposure (EN-CORE) tool, developed by the Natural Capital Finance Alliance, provides high-level information to help investors screen portfolios for dependencies and impacts related to biodiversity. Several data providers have also developed geospatial tools to allow investors to overlay mine sites in their portfolio against biodiversity hotspots.

Digging for data

RepRisk launched a dataset last October in partnership with the Integrated Biodiversity Assessment Tool Alliance, which shows the proximity of extractive sector projects to environmentally sensitive areas.

Alexandra Mihailescu Cichon, RepRisk’s chief commercial officer, says the firm decided to develop the dataset

Mountain of trouble: mining often has a dramatic impact on landscapes and ecosystems



Analysis

in response to growing demand from clients for data on biodiversity impacts. “Especially in the last 12 to 18 months, it’s one of the number-one topics that we talk about with our clients.”

She describes RepRisk’s dataset as a “conversation starter” for investors to use for engaging mining companies. According to the dataset, 18 percent of UNESCO World Heritage Sites are within 1km of a mine, while 70 percent of mining projects are found within 30km of a key biodiversity area.

Emine Isciel, head of climate and environment at Storebrand Asset Management, says the availability of data has been a challenge for investors attempting to engage on biodiversity issues. She adds, however, that progress in recent years on developing tools covering issues such as deforestation has been “impressive”.

“You don’t always need the perfect data – you just need the right data to get started.” A lack of data, she cautions, can be used as an “excuse for inaction”.

Excluding and engaging

Storebrand has already sharpened its policies to exclude companies it deems to be linked to destructive activities. The firm announced last December that it was excluding four mining companies due to new policies against investing in companies that dispose tailings waste in rivers or seas, or are involved in deep-sea mining.

“There are certain biodiversity-sensitive areas where mining should not happen,” says Isciel. She describes the

asset manager’s policy on deep-sea mining as a “moratorium”, based on the need for “more scientific knowledge on the impact of these activities”.

Meanwhile, investors seeking to understand best practices in how the mining sector manages biodiversity and other ESG issues could be forgiven for feeling confused by the plethora of standards and certification schemes in the industry. Bringing greater clarity is one of the aims of the Global Investor Commission on Mining 2030, which launched in January.

The commission, chaired by the Church of England Pensions Board, has identified biodiversity as one of 10 focus areas on which it will engage the mining industry.

James says it is difficult for investors to get their heads around the biodiversity data supplied by mining companies. “Investors ultimately want to report at a portfolio or cross-asset level, which runs counter to the reality that biodiversity is a site- and location-specific issue. Metrics, approaches and measurements used are not comparable for aggregated corporate-level disclosure.”

“The challenge may be that while the industry has a long track record of managing biodiversity, new frameworks and the evolving landscape on nature mean that companies are having to adapt and translate existing site-level approaches.”

She points out that greater engagement can help investors to become better informed. “Engagement is also an opportunity for investors to learn



about the nuances of measuring, monitoring and managing biodiversity for a global diversified mining company.”

Mitigation hierarchy

It is not just investors that face disclosing biodiversity impacts. Companies that use critical minerals in their products are increasingly required to conduct due diligence into environmental and social impacts in their supply chains. Electric vehicle manufacturers are set to face more stringent due diligence requirements under the EU’s planned Corporate Sustainability Due Diligence Directive and its revised battery regulation.

Scrutiny from investors, customers and regulators means mining companies are under growing pressure to

Critical mineral needs for clean energy technologies

	Copper	Cobalt	Nickel	Lithium	REEs*
Solar PV	High	Low	Low	Low	Low
Wind	High	Low	Moderate	Low	High
Hydro	Moderate	Low	Low	Low	Low
Electric networks	High	Low	Low	Low	Low
EVs and battery storage	High	High	High	High	High
Hydrogen	Low	Low	High	Low	Moderate

* Rare earth elements
Source: International Energy Agency



In a flap: the world's largest lithium reserves are found in Chile and Bolivia's ecologically sensitive salt flats

demonstrate good performance. In response, some businesses have argued that, partly through the use of offsetting and post-closure remediation measures, they can ensure 'no net loss' of biodiversity, or even have a 'net-positive' effect.

Global mining company Anglo American, for example, has set a target of achieving a net-positive impact on biodiversity by 2030.

Putting aside the debatable logic of such pledges, most experts agree that investors should focus on engaging with companies to address their negative impacts on biodiversity.

"Before you start to look at being net-positive, there's so much work to be done in terms of avoiding the negative impacts, and reducing and minimising

them as much as possible," says Sonya Likhtman, associate director at Federated Hermes. "It's important not to jump to that net-positive point before scrutinising all the actions that companies need to take to reduce the negative impacts."

Dhawan agrees. The most important question that investors should ask mining companies, he says, is how they apply the mitigation hierarchy. This involves first seeking to avoid negative impacts; then minimising any impacts that cannot be completely avoided; restoring ecosystems after operations cease; and only turning to offsets as a last resort.

"The most important thing when it comes to offsets is to have them at the end of the queue of your mitigation

hierarchy," says Dhawan. He adds that, "to the absolute extent possible, offsets should be in the same region and ecosystem where the disturbance has taken place".

It will be decades before the full impact of the critical minerals boom on nature can be judged. What is clear is that the mining sector's claim to be at the vanguard of a 'green' transition will ring hollow unless the industry can demonstrate a strong capability to minimise damage to biodiversity.

Investors have plenty of work to do to fully understand the complexities of mining's relationship with biodiversity, and to engage with companies in granular detail to ensure that best practice is followed at the hundreds of sites where critical minerals will be mined. ■

“Investors should focus on the key pressures on nature that scientists have identified and get started. It is a fast-moving, multi-faceted crisis. But there are solutions”

Adam Kanzer of BNP Paribas Asset Management calls for investors to join efforts to protect nature

“With biodiversity, corporates are probably about five years behind carbon in terms of disclosure”

UBP’s Victoria Leggett on the need for investors to catch up on biodiversity reporting

“It’s not that there isn’t data, it’s just I find it’s either really broad but shallow, or in-depth but only for a small number of companies”

Scottish Widows’ Maria Nazarova-Doyle says investors cannot wait for perfect data before taking action

The last word

Biodiversity is rising up the investor agenda, but time is running out to tackle the global nature crisis

“As an investor, you’ve just about got your head around climate, and now you’re being asked, what about nature? It’s an extra mile for investors to go”

Rupesh Madlani of NatureFinance acknowledges investor fatigue on environmental disclosures

“We hope the TNFD will play a similar role as the TCFD plays in climate-related disclosures by establishing a global framework through which to price in biodiversity risk and opportunity”

Robeco’s Lucian Peppelenbos on the potential impact of the Taskforce on Nature-Related Financial Disclosures

“Businesses and investors must be allies of nature, not enemies”

UN secretary-general António Guterres told COP15 that investor action on nature loss is a vital part of building a sustainable economy