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Tim Manuel | Mark Hill | David Vyravipillai Gabriel Micheli | Bruce Jackson | Rebecca Woods Paul de Zylva



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Despite the controversy over the world cup being staged in Qatar, when the football kicked off it proved a memorable tournament for the right reasons.

It will be remembered for its shocks with Saudi Arabia beating eventual champions Argentina, Japan overcoming Germany and Spain, Cameroon defeating Brazil, and Tunisia beating France. Then there was Morocco, who triumphed against Belgium, Spain and Portugal on their way to the semi-finals.

That wasn't expected. Morocco came to the world cup under the radar but made global headlines. People started talking about them.

In a way, that's similar to biodiversity. It's always been there. We know it's there, but now it's giving us a reason to talk about it.

What makes me say this? Well, at the end of each year we speak to the asset managers and consultants in our ESG Club to find out what they expect to be discussing with institutional investors in the year ahead.

In December, there was a noticeable trend with seven of the 10 managers I spoke to saying: "biodiversity", up from three a year ago.

So, why is it so important? Well, the natural world supports life on Earth. It feeds us, provides us with medicines, purifies the air, fights climate change and, if we look after it, could protect us from natural disasters and disease.

From an economic perspective, around half of global GDP is believed to be dependent on nature. So, if nature does not function as it should, economies will struggle and, therefore, so will we.

This issue has been eclipsed for years by concerns over climate change. But has widespread flooding and Covid highlighted the importance of protecting the ecosystem?

With this in mind we decided to look at such a growing and important theme in greater detail. We invited institutional investors and fund managers along with a campaigner to discuss what investors need to know about factoring the natural world into their investment decisions.

Mark Dunne

Editor

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BIODIVERSITY IN FIGURES

44%

The level of GDP (\$31trn) in cities around the world at risk of disruption from nature loss.

Source: World Economic Forum

\$4.5trn

The potential value of the biodiversity and nature market by 2030 based on efforts to make food and land use more regenerative, productive and circular.

Source: Food and Land Use Coalition (Sept 2019)

\$711bn

The annual funding gap to reverse the decline in biodiversity globally between 2019 and 2030.

Source: Paulson Institute

11%

The percentage of MSCI ACWI Index constituents that have the potential to cause deforestation.

Source: MSCI

\$1.3bn

The combined assets under management of the 11 biodiversity restoration and ecosystem services funds, up from \$525m in two years.

Source: Broadridge/Pictet Asset Management

69%

The decline in wildlife populations globally between 1970 and 2018

Source: World Wildlife Fund/Zoological Society of London

59 million

The jobs created by 2030 if \$583bn is invested in naturebased solutions for infrastructure and on interventions that release land to nature. This includes 21 million jobs dedicated to restoring and protecting ecosystems.

Source: World Economic Forum

PARTICIPANTS



Mark Hill
Climate and sustainability lead
The Pensions Regulator

Mark Hill is responsible for developing the regulatory response to climate change along with sustainability disclosure requirements. Prior to joining the regulator, Hill led on climate change and sustainability at the Ministry of Defence. Here he developed an energy and emissions strategy and helped mobilise third-party capital to invest in renewables across the defence estate. He also supported cross-sector work to integrate climate risks into sustainable land management, specifically brownfield development.



Bruce Jackson
Responsible investment senior analyst,
stewardship

Universities Superannuation Scheme (USS)

Bruce Jackson's responsibilities at USS include updating its voting policy and overseeing company and collaborative engagements.

A geologist by training, Jackson spent more than 25 years in environmental consultancy and contracting before joining USS, working on projects including pipelines in Georgia, a port development in Qatar and investigating ordnance factories in the UK and Israel. He also spent six years with ESG service provider GES and Sustainalytics where he led company engagements on sustainability issues, such as human rights and storing the by-products of mining.



Tim Manuel
Partner, co-head of responsible investment
Aon

Tim Manuel leads the development and implementation of Aon's responsible investment policies. As a senior member of Aon's investment consulting practice in the UK, Manuel helps pension scheme trustees and other institutional investors understand the implications of responsible investing and supporting them through making such decisions.



Gabriel Micheli
Senior investment manager
Pictet-ReGeneration strategy

Gabriel Micheli is a senior investment manager in the thematic equities team at Pictet Asset Management. He also co-manages the Global Environmental Opportunities strategy and leads the Regeneration strategy which was launched in December.

Micheli joined Pictet in 2006 and co-managed the Pictet Timber strategy for 10 years until 2018 and the Pictet Clean Energy strategy between 2017 and 2010.



David Vyravipillai Investment manager, sustainable ownership (ESG) Railpen

David Vyravipillai provides ESG research on cyclical companies for Railpen's fundamental equity portfolios. He is also the lead sustainable analyst, monitoring private market deals. Prior to joining Railpen, Vyravipillai spent six years as a research analyst at Southeastern Asset Management, a US long-only value investor. The law graduate from the University of Cambridge started his career as an analyst for Goldman Sachs.



Rebecca Woods
Stewardship analyst, lead on biodiversity and nature
Church Commissioners for England

Rebecca Woods is an ESG research analyst for the Church of England's endowment fund. Focusing on natural capital and deforestation, she works on engagement, particularly in identifying the issues companies face.



Paul de Zylva Senior analyst Friends of the Earth

Paul de Zylva leads Friends of the Earth's work on nature, biodiversity and ecosystems. This has seen him design a campaign to reverse the decline of Britain's 267 bee species, which led to all four UK nations drawing up bee and pollinator recovery plans. A founding member of the London Sustainable Development Commission, de Zylva has advised all three of London's mayors on making the capital more sustainable. In this role he helped put sustainability at the centre of the 2012 Olympics and Paralympics.



Biodiversity

Compared to climate risk, biodiversity as an investment strategy is in its infancy. Yet conserving our ecosystem is just as important as reducing the carbon in our atmosphere when it comes to building a sustainable future. We cannot survive without the plants, animals and micro-organisms that live around us, making protecting the natural world important.



But how can the stewards of private capital, such as pension schemes and insurers, not only reduce biodiversity loss, but help our ecosystem to thrive? This was one of the issues we focused on when sitting down with asset owners, fund managers and a campaigner to discuss what looks set to become one of the biggest themes in sustainable investing.





If there was ever a topic built for stewardship it is biodiversity.

Tim Manuel, Aon

How important is biodiversity to long-term investors?

Bruce Jackson: People cannot survive without nature. As a pension scheme we have a primary duty to invest in the best financial interests of our members and their beneficiaries.

Systemic financial risks need to be taken account. Biodiversity is increasingly looking like one of those financial risks. I heard on the radio that we are going through an extinction event. It is human induced and unless we get a handle on it, we do not have much of a future.

David Vyravipillai: We recognise the threat the world is under from nature loss. Railpen is responsible for our members' financial futures and that means taking biodiversity risk into account.

There is literature that points to the role financial institutions have to play in this space. For example, The Dasgupta Review, published at the beginning of 2021, explains how financial institutions should shape the future of our planet.

What are the big biodiversity issues that investors should consider?

Rebecca Woods: Biodiversity can be looked at through a number of areas. Deforestation is one way we approach it.

Then there is the food sector, looking at how crops are reliant on biodiversity and the links that certain issues can have, such as pesticides. Other areas in which biodiversity can be looked at include plastics and the ways toxic emissions are entering our planet.

Gabriel, what biodiversity issues do you consider when building portfolios?

Gabriel Micheli: Biodiversity is part of our investment process. Pictet has had environmental strategies for more than 20 years in water, clean energy and timber, but 10 years ago we started looking at how we could measure our impact.

All companies say that they solve an environmental problem, but maybe in solving one they create another. It is, therefore, important to take a holistic view of the issues.

Biodiversity is important because it is the health of the planet. We use a combination of metrics to calculate it. Land-use change, for instance, has a big impact on biodiversity, while climate change is another.

We have also developed a methodology to assess biodiversity impact because we are not getting enough data from companies. I hope it improves with the Taskforce on Nature-related Financial Disclosures (TNFD).

We are trying to focus more on biodiversity and in December launched a ReGeneration strategy that focuses specifically on the issue. It is important because biodiversity loss is happening at a staggering rate.

The universe we have created around biodiversity metrics has outperformed the market. You could say that this is due to there being more asset light businesses that depend less on natural resources.

Then there are companies that may have issues sourcing materials because of biodiversity loss. When that value chain breaks down you get inflation. Companies that are less tied to those risks tend to do better and we are seeing investors giving more value to them.

It is an important theme. Allocating capital to companies that have the right impact on biodiversity is the smart thing to do.

What do investors want to know when discussing biodiversity?

Tim Manuel: What appeals about biodiversity is that it feels much more tangible than talking about climate change. You see it around you, you see it on television, you understand the stories. People buy into it intuitively. You cannot look up to the sky and see carbon, but you can see land being degraded around you.

Pension funds are asking where they start, because this can be a difficult topic to get going with. What helps with climate change is that there are some key pillars that everyone has gathered around, especially with there being a helpful, if not perfect, metric of emissions.

With biodiversity, the issues are more complex and nuanced, there are so many more considerations and they can be localised. There is not necessarily a central hook that everyone can grab on to.

Is adopting a deforestation policy enough to fight biodiversity loss?

Paul de Zylva: It's a good start, but it is not enough. Companies and investors are building up massive risk profiles on climate and biodiversity loss as they are adopting false solutions.

They are going for offsets and plantation forestry, which will burn down because it is usually the wrong trees in the wrong place. These risk profiles are building up.

Everyone says they are coming round to biodiversity, but it is not a new issue. We do not have time to grab the wrong lever. Deforestation is a great way of approaching it. You can look at it globally and across supply chains as well as what happens locally in how it is embodied in building projects.

Deforestation is a good way in, but you could pick other issues. Marine aggregates, for example. Marine dredging is plundering our resources, but because it is below the surface no one sees it.

Don't worry about where you start, but quickly join the dots and try not to put things in pigeonholes, because that is not the way the world works.

What biodiversity issues is the regulator concerned about?

Mark Hill: It comes back to climate and nature being intrinsically linked. You cannot get to net zero without looking at biodiversity and nature-related risks.

From our perspective, it is making sure that investment decisions are taking a holistic approach. Otherwise, there is the risk of unintended consequences. For instance, investing in agriculture, and inadvertently funding deforestation at the same time.

It is also about avoiding stranded assets. If you look at the move towards sustainable palm oil production, in Indonesia, I believe from memory, some 28% of concessions are now seen as stranded assets because they involve deforestation. This comes back to making informed investment decisions that are holistic.

In what instances can investors consider biodiversity and climate together?

Jackson: There is scope in agriculture to increase the biodiversity of farmland through introducing mixed woodland, hedgerows and animal migration pathways. There is an awful lot there and that's just in the UK.

Most of the world's food is grown on farms smaller than five hectares. That being the case, it would not take much to wean people off pesticides and get back to a more natural way of fertilising the soil.

If you can sort the soil degradation problem, you will go a long way to sorting the climate problem. If you increase the organic matter of soil to a healthy 3%, that is a big carbon sink. If you make sure it is vegetated throughout the year, that is another carbon sink and it stops heat being reflected into the atmosphere and halts that warming feedback loop.

There are so many opportunities, but you have to find ones which also have a positive social impact because you cannot look at this in isolation.

de Zylva: Governments are realising that the way we manage land, in general and through farming, is unsustainable and counterproductive to the aims they have set.

There are investors interested in helping to improve how the land is managed, but farms are being picked off with bad investments. Farmers have sold their land because of the state they are in, and they have been bought to put plantation forestry in, which is the flavour of the month and is usually the wrong trees in the wrong place.

That is the market working, but is it working to allow farms to operate? There are investors who perhaps have not picked up

on the potential to help farmers lock in their carbon for a chunk of the profits.

The concept of natural capital is a double-edged sword, because you cannot put a price on everything. The theory is that natural capital exists, but how do we turn that into money so investors can get a dividend? That is the trick we are missing.

Manuel: Should you consider nature and climate together? Sometimes yes, sometimes no. The solution has to be bigger than the problem. We cannot go into a room full of pension funds and explain that we are pumping emissions into the sky and the Amazon is disappearing at a rate of several football pitches a week, so let's try to fix it. We are in the wrong forum to have that conversation. There is no solution those people have to that problem.

What I mean by the solution has to be bigger than the problem is that it is okay to scale a problem so the people in the room can find solutions to it. If that means only thinking about climate from how much you invest in fossil fuel producers, that's okay. If you are thinking about the extent to which you might have deforestation exposure or climate interdependencies in your portfolio, that's okay. It will help the people who are faced with a decision to reach an outcome which will have a positive trajectory.

It is important to be careful about how these problems are framed depending on the audience you are trying to interact with and what is within their gift to achieve.

de Zylva: The science shows we are running out of time on climate and on nature, whether you treat them separately or together. The problem is that investors are not hearing

sufficiently enough that there is a problem coming down the road. I bet that the risk profile of most investors looks pretty dodgy if you ran it through the science. Tim is right in that the solution has to be bigger than the problem. There are so many solutions in our gift, but we are not backing them enough.

Micheli: Usually, if you solve biodiversity loss, you help solve climate change, as they are clearly interlinked. An example is regenerative agriculture. There are companies which are trying to make a connection with farmers by creating credits that will be paid by companies that want to improve their footprint.

Unilever and Nestlé are just two companies that have pledged to do more regenerative agriculture. We are seeing companies starting to sell those credits, whose impact should be more carbon in the soil, better water retention and better food quality. This makes us relatively optimistic that there could be a big change. Then there are consumers and legislation. Companies will adapt quickly if regulation or consumer preferences change.

Many of the technologies are there. Some markets have to improve, but farmers have to trust in that change and may not want to change as fast.

We are seeing companies using bacteria or microbes instead of pesticides, but adoption is slower than expected.

We will probably not see a hockey stick, but there will be a clear acceleration in these things. The technologies are there and a lot of research is happening. It is amazing what solutions companies are working on.

Hill: Do you see nature-based solutions as an emerging asset class in its own right?



No one is saying that they are a leader in biodiversity because we do not know what a leader in biodiversity looks like yet.

Rebecca Woods, Church Commissioners for England





People cannot survive without nature.

Bruce Jackson, USS



Micheli: If people care about it and create the market, we could have that at some point. Until there is a clear functioning biodiversity market, we need to decide which metrics to use to define it. A lot of people are working on this.

On climate, we have this already, but on biodiversity it is years

Vyravipillai: The breadth of biodiversity is huge. With climate, we can use the key performance indicator of carbon emissions to determine the intensity of a project or company. But for biodiversity there is an abundance of metrics, making it difficult to identify a positive solution, because it is not so clear cut.

To Gabriel's point, we are trying to understand this landscape better to see where we can have the most material impact in terms of dedicating capital to a particular asset class or solution.

Jackson: TNFD will help push that. It also comes down to metrics. If there is something I can talk to my portfolio managers about which they can grasp, then I'm halfway there.

de Zylva: That is an interesting point. There is a danger in looking for a single biodiversity metric to sit alongside the climate metric because different sectors will choose different things. An architect would choose embodied carbon, while a farmer would look at how much carbon they are storing. So, it is not straightforward.

In biodiversity there is a danger of reductionism. That is why nature-based solutions is a dirty phrase for me. Someone comes up with a catchy term to get countries to adopt naturebased solutions, like peat restoration. Now that there is a label on it, Heathrow, for example, can add a third runway and put

some money towards peatland restoration. They should be reducing emissions anyway, not using it as a bargaining chip. That is why 'nature-based solutions' is, like offsetting, getting a dirty reputation.

Jackson: On the point about plantations: it's a monoculture, it's not diversity. I'm sick of reading reports saying: "We are going to do carbon capture and storage and if that doesn't work, we will do nature-based solutions."

Where appropriate, companies should start the nature-based solutions now and do it properly. Then if their carbon capture and storage works, they are going to get to net zero sooner.

It always seems to be a "Plan B" for a lot of companies. They see climate as a man-made problem, so they want a man-made solution. In reality, nature is a solution in itself.

Do your nature-based solutions now - making sure they are proper ones, not monocultures of trees - and you will be halfway there.

de Zylva: The UK Climate Change Committee came up with an interesting report in October which exposed carbon offsets and nature offsets as unreliable. It called for proper regulation of the bad claims being made for these offsets.

That is a massive risk profile for investors. It is in stranded asset territory, but if everyone is going to it there is a risk of people buying into the wrong thing, when money needs to be going into the real solutions.

Manuel: These projects need capital, so what's the appeal to an investor with that capital? What are you going to offer the people making decisions about their capital to direct it towards





You cannot get to net zero without looking at biodiversity and naturerelated risks.

Mark Hill, The Pensions Regulator

these important solutions? It is not fair to say that offsets are completely unreliable. There is a spectrum.

de Zylva: I am not saying there is no role for offsets. What I am saying is that everyone wants to carry on as normal. Take the aviation industry, for example. They want to continue expanding while doing a little bit of the good stuff on the side. They have to fundamentally change.

Going back to the point about land, where are the investors willing to play the long game over decades, arguably centuries? There are property investors who no longer build on a plot of land and then sell it. Instead, they maintain the asset and become good landlords. It is a different business model. Where are the investors who will take the same approach through their stewardship?

Micheli: That is what we do. Pension funds ask us to engage more with companies to make them accountable.

de Zylva: It feels like corporate social responsibility, which is so 1990s. I do not know which investors are challenging their companies to be where they need to be. It is different from: "Let's do some green investments."

Micheli: We do that. We are open to working with other organisations. We have partnerships with Ceres, FAIRR and other non-governmental organisations and have signed the Finance for Biodiversity Pledge.

Ten years ago, engagement was not always taken seriously by companies. Today, they have more people to answer questions. It has changed and will continue to do so.

de Zylva: I see a lot of spin, not much substance. I look at these reports, the PR, the adverts and read the Financial Times and I could not name a company that is well on its way to moving from four stars to five stars in the next two years.

Manuel: Nobody's perfect, but if there was ever a topic built for stewardship it is biodiversity. With climate there is a central pillar where you can translate a global problem into a portfolio problem into a company problem. That does not exist in the same way with biodiversity.

Fund managers tell us that where they are engaging on this topic, companies are lapping it up. Everyone wants to know more. Everyone recognises that there is a challenge.

It does not matter that we do not have the metrics or the data to show the progress we are making individually or at a portfolio level. Everyone needs to engage and learn from others.

Woods: There are a lot of engagements taking place that people are much quieter about than they would be on climate. When it comes to climate there are clear metrics people can use to set targets, while on biodiversity, due to there being so many aspects to the issue, people are engaging on smaller sub-sections.

No one is saying they are a leader in biodiversity because we do not know what a leader in biodiversity looks like yet. There are different actions taking place, like the Finance for Biodiversity Pledge, Nature Action 100 and Investors Policy Dialogue on Deforestation (IPDD), which engages with countries on policy. There are fragments of biodiversity engagements taking place, but these people are not claiming to be a leader in biodiversity.

Manuel: This has spawned a new term: "green hushing". It's where people are afraid to put their head above the parapet because it is too easy to be shot down.

There is a client we work with who has 100-year liabilities.

The planet. One of our most influential advisors.



They are one of the most responsible investors we work with because it is obvious to them that due to their investment horizon these issues are relevant.

They have never said anything in public about what they do because they see it as a risk to discuss what they are invested in rather than just engaging.

de Zylva: No one is perfect, but I want to know if companies or institutions are on the journey. If they are, we will have that conversation. We will give them some slack. It does not mean we will not be critical, but we will have an understanding.

This is different from the PR spin happening on the climate front, where analysis says that most claims do not add up. If you are failing to meet climate targets on your own terms, with climate being more advanced than biodiversity, then we are in trouble.

But let's have that conversation, because we could decide how to get there and what it would look like. We are not going to pull our punches, but we would have an understanding. It is a different type of relationship.

Micheli: It is still relatively light on the biodiversity side. We have a programme - FinBio - in partnership with the Stockholm Resilience Centre and biodiversity scientists. We also have a biodiversity expert who is building a platform called Restor, which covers many of the world's restoration projects. We are building a framework, and now is probably the time to think about it every time we talk to a company.

We have thematic funds, so we invest almost forever, as long as the companies are there and doing well. We are in a pretty good position to engage with companies for years and make them accountable.

If NGOs write reports on which companies are doing this or not, it is helpful because everybody sees it and will feel the need to do more. Anything that we can tell companies that they should be doing, we are eager to hear it so that we can give that message.

This is important for the long-term value of a company. It will become a risk and the ones doing something positive will potentially have a positive stock re-rating.

Where does this fit in with Railpen's priorities in terms of stewardship?

Vyravipillai: In the past couple of years, the attention climate has received versus biodiversity has been incomparable. What we are faced with now is a watershed moment where we could have something similar to the Paris agreement on climate come out of COP15. Governmental pressure and guidance in this direction creates incentives for asset owners and fund managers to tackle this issue more vigorously.

To counter Paul's point, I have worked in the industry as a financial analyst for the better part of a decade, and over that

period I have seen huge change in how we, as investors, look at stewardship and company engagements. Today, we are much more targeted, and as a result more effective. At Railpen, our members care deeply about these issues and are more vocal than ever.

Manuel: Will TNFD work for pension funds?

Hill: Yes, in the sense that if you are building on the Task Force on Climate-Related Financial Disclosures (TCFD) and not treating it as a box-ticking exercise. You are looking at the intent and the outcome in that you are focusing on identifying material risks. You are looking at the impact your investment decisions have on the natural capital and eco-system services they may well be reliant upon.

There are tensions because there is also the social dynamic and the just transition that have to be considered.

Will TNFD get more investors to be actively engaged in this?

Hill: I believe it will. The regulator has committed to adopting the TCFD recommendations and like the schemes we regulate, we are not going to want to publish something that says we are not good at doing this and haven't adequately considered the risks. We also want to lead by example and be seen to do so.

That is what I believe will happen with the TNFD recommendations. Funds will adopt them and factor nature risks into investment decisions, as best they can. It will provide the nudge to focus the mind on what they need to do and when they need to do it by.

Manuel: One of the big benefits of TCFD is transparency. That influences behaviours, so there is a huge nudge aspect to it. Ultimately, TCFD and TNFD are a means to an end. That is all they are. They are a framework for thinking about and disclosing risks, on climate and nature.

You mentioned commitment. Nowhere within those frameworks do you need to make a commitment. What is important is how everyone thinks about their objective and the role they play and how that can translate into a goal.

TCFD and TNFD are ways of structuring how you are going to deliver on the goal and provide some degree of data to help others understand their position in their relationship with you. But my concern about frameworks is that if there is nothing about the end goal, it is only ever about the means.

Hill: I agree. The end goal, the outcome, is critical.

Micheli: When we look at companies, we do not find much data on biodiversity. Companies do not usually know their impact. Some do but for a big company it is difficult.

We welcome companies being forced to report more on that and have metrics for it, but are they going to do something because of that? At least we have something we can talk to them about and over time it will evolve.

It will not be perfect from the start and it will change, but it



Usually, if you solve biodiversity loss, you help solve climate change as they are clearly interlinked.

Gabriel Micheli, Pictet-ReGeneration strategy



gives us a good tool to engage with companies. At least it is a start.

Manuel: You said the Church is doing something about deforestation, could you tell us more about it?

Woods: We have signed a commitment to be net-zero deforestation. A lot of investors have done that, so now there is a collaborative engagement initiative. We are working with Global Canopy [a not-for-profit that seeks to halt the destruction of nature] and all the investors that signed the letter to start engaging with certain companies. There are four companies that are specifically the lead on this.

Everyone was waiting for someone to set up this engagement. Now we have been able to get it off the ground we are starting conversations with companies.

Manuel: What are you going to ask in those engagements? Woods: It is focusing on soft commodities, looking at whether companies have sustainable palm oil, soy, timber, beef and paper.

We have come up with some ideas of what best practice is. Some companies will be able to help steer us and maybe add to that best practice. It is also about having conversations to see how companies are working towards it.

It is a supply chain issue and, as an investor, we keep coming

up against the problem that there is not always disclosure about supply chains. Just signalling to companies that they need to understand their supply chain is a way to get some improvement.

Are these companies receptive to this signalling?

Woods: These conversations are just starting, so we will wait and see. They are company specific because some have started and are doing things that they are proud of but may not be talking about this. They are worried that if they say something publicly they are likely to come under scrutiny.

de Zylva: We could have a better conversation if companies were more open. This sits alongside disclosure, which is becoming an obligation. The World Wide Fund for Nature (WWF) produced a Risky Business report more than five years ago which opened up a load of conversations when people realised that the stuff in their biscuits was once rain forest.

That worked on the consumer level and interesting conversations started taking place with companies. But there is still an air of denial. There are still those not wanting to be exposed. Operational issues will leak out. It is like influencers being shocked that they bought into a fast fashion company that has a sweatshop in Bangladesh and is polluting the local river. "I





Companies and investors are building up massive risk profiles on climate and biodiversity loss as they are adopting false solutions.

Paul de Zylva, Friends of the Earth

never thought that would be associated with this glamorous clothing I bought for £5." Those things are going to get exposed.

What is harder to expose are the companies with complex supply chains. Cadbury has been found out. They deny it saying that they have a code of practice, but it is not doing anything unless you are monitoring it. We are going to find you out, so let's have a mature conversation.

Woods: The question then arises, if we want companies to make more information public, we have to decide how we handle it when they are doing something wrong.

It was mentioned that chocolate companies potentially have child labour in their supply chain. When Tony's Chocolonely said they were aware of children working in their supply chain, how did we handle that conversation?

There is always this complicated balance between encouraging companies not to hide their problems versus how we handle the fact that there are going to be problems.

Jackson: The first step for any company is acknowledging that there is a problem.

I used to deal with mining companies and they would often deny that there was a social problem. Then they do their own investigation and find out that there is one. Then the question is, what are you doing about it?

Either a company has to be exposed or they identify their own problems. I like them when they identify their own problems, then you know they are being open and honest.

As long as somebody is showing you that there is a problem, you can have that conversation, but you have to ask yourself what do you want the company to do? So, have a goal that the engagement can work toward, otherwise, if you go into it halfhearted, not knowing what you want out of it, then you are not going to get anywhere.

Hill: What needs to be done to create a credible pipeline of investments? That is what I see as the elephant in the room.

Vyravipillai: It comes through meeting with companies, doing your research and ultimately taking a view. This should be a comparative exercise.

I do not want to keep going back to there being a lack of data, but when that improves we will be better positioned to determine if we want to invest in Company X or Company Y.

Jackson: There has to be a willingness to look at companies which have identified a problem but have not yet addressed it. They are the ones with potential upside.

Do you invest in a dark brown company that is going to transition, or in a light green one that is transitioning? The upside is on the dark brown one. The downside is that our carbon footprint will go through the roof in the short term. How do we explain that to our investors?

It is the same with biodiversity. If you have a company which has a massive negative impact but a plausible transition plan, I would be tempted to invest, because there is potentially more capital gain than a company that is already transitioning.

Manuel: Part of the answer is solutions, but a much bigger part of it is behaviours, which goes back to stewardship. Realistically, if you are investing in a nature-based solution, most of the risk is going to exist within a broad and diversified portfolio.

It is good to remind trustees that they sit at the top of an enor-

mous pyramid of decisions which are being made in their name. They have more power than many of them appreciate in terms of how they can influence those decisions if they set the tone from the outset, and the top. The mechanism for delivering that is stewardship.

If trustees are clear on what is important to them, what they believe in and how others should act when making decisions on their behalf, then the impact is not always measurable but there is a trickle-down effect.

Micheli: It will have an impact. We have our own metrics, so we know which companies provide solutions and which are light brown or dark.

We invest in the solution providers, but we engage with the others. If a food company wants more regenerative agriculture, they will want the solutions from the companies in our portfolio, so it will help them.

We launched that strategy in December. We have another called Positive Change, which also invests in brown companies. It identifies companies that are doing more than others in that they have identified an issue that can be solved and as it improves you get a re-valuation.

So, considering biodiversity when investing is a driver of alpha, not just reducing risk?

Micheli: For us it is. We have had biodiversity as a financial factor in our scoring for almost 10 years. It adds quite a lot of value financially.

It could be that sector allocation is the main driver, but there is also a re-valuation when companies reduce their risk. This is something that is starting to be incorporated by the market but is more evident for climate than biodiversity.

Woods: Should investors aim to be a biodiversity lead or a lead in a sub-category of biodiversity, because we said if we break it down into smaller categories we will miss the links between them? Is someone being a biodiversity lead greenwashing because there are so many areas that you could not cover?

de Zylva: I like people to be good at what they do in their sector. Wouldn't it be great if water companies were doing such a fantastic job that there were positive implications for soil and farming? If you get your piece of the pie right it will have impacts elsewhere and you could probably take some credit for

There are some corporations whose tentacles spread so far and wide so they are in every sector pretty much, but there are others who specialise. I work with people who want to go on the journey and be as good as they can be.

Manuel: It is okay for investors to focus or pick out themes. Some pension funds we work with have a natural link to a theme or campaign, maybe through their corporate sponsor, or that the individuals on the trustee board believe is important. If you try to solve all the world's problems, you are going to fail. If you channel your energy into things that matter to you, then you are more likely to get better outcomes.

To return to a point discussed earlier, if you put your head above the parapet and say: "I'm doing this and I'm doing it great," it opens you up to having a stick poked at you about the other stuff you may or may not be doing. Investors are effective when they focus on things that matter to them.

Railpen is responsible for our members' financial futures and that means taking biodiversity risk into account.

David Vyravipillai, Railpen







Jennifer O'Neill is an associate partner in Aon's responsible investment team

BIODIVERSITY RISKS AND OPPORTUNITIES: PRACTICAL STEPS FOR INVESTORS

Tackling biodiversity loss has, so far, taken a back seat to carbon reduction strategies and net-zero targets. Yet, healthy ecosystems, like forests and oceans, are essential in the fight against climate change given their role in re-capturing carbon emissions.

Regulations and disclosure requirements to address climate change have, to date, been centred on the issue of identifying and targeting carbon emissions. However, to accelerate global efforts, it is necessary to broaden the scope of solutions to include protecting nature and restoring biodiversity losses. Economists, such as those at Stockholm Resilience Centre of Stockholm University, are increasingly taking a broader view through their research and modelling, evidenced by the development of the theory of 'planetary boundaries', representing the necessary conditions to "regulate the stability and resilience of the Earth system".

Addressing the risks to nature, and of biodiversity loss, is set to become key to business and investment decision-making too. As with climate change, it is now increasingly understood that asset owners can play an important role, through their investment allocations, to reduce risks and negative impacts on nature and the environment, and to drive positive outcomes. Furthermore, expectations of investors around this are set to grow. The Taskforce on Nature-related Financial Disclosures (TNFD) made up of financial institutions, corporates and market service providers is on a mission to build a global framework, for adoption from September 2023, for organisations to report and act on evolving nature-related risks, such as those identified above. Their goal is to support the "shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes".

So, what practical steps can investors take?

Understand the risks

Firstly, it's important to understand the risks and impact of specific investments in portfolios on nature - and the ways in which biodiversity loss poses long-term risks to businesses, the economy and society.

In its Handbook for Nature-related Financial Risks, the Cambridge Institute for Sustainability Leadership (CISL) identifies three types of nature-related risks:

- 1. Physical risks: These occur when ecosystems are damaged, impacting air quality, water security and food provision among other things. Physical risks affect governments and businesses which in turn can impact revenue, increase costs and lower production.
- 2. Transition risk: This happens through the process of trying to solve the issues caused by nature loss. Changes in regulation, technology, innovation and consumer behaviours can impact the viability of certain companies, industries and economies – and therefore people's livelihoods.
- 3. Liability risks: These impact companies, individuals, and governments in the form of legal settlements, fines, reputational risks and insurance costs incurred because of biodiversity loss.

Appraising investments through the lens of these risks can help bring clarity to future investment strategy, decisions and portfolio outcomes.

Through Aon's partnership with the CISL, we also conducted a study to determine the dependencies of equity indices on the natural environment and ecosystems.

This work supports investors to better understand the risks in their portfolio, providing a baseline from which to measure progress.

Active stewardship

Using stewardship and the power of asset ownership, asset owners and managers can set expectations for companies to engage on the key themes of nature loss. A good example can be found in Nature Action 100+, an investor-led initiative engaging with key companies and policy makers to achieve their goal of reversing nature loss.

Taking an active approach to stewardship – through voting and engagement activity - can be powerful for driving change. Investors can achieve this through a combination of clear dialogue and communication with asset managers, holding them to account for action and progress, and critically evaluating the impact of this activity over time.

Consider 'nature-positive' investments

Investment choices can be "nature-positive" – like investing in solutions that reduce pollution. For example, sustainable equity strategies may include innovative companies which are acting to capture micro-plastics in marine transportation and shipping; improving water infrastructure and sanitation provision; and developing clean energy solutions.

Investors can also contribute to natural carbon sinks through allocations to responsible forestry, or which align with a lowcarbon energy transition - such as allocating to greenfield renewable energy infrastructure developments, which serve to bring more energy generation capacity to the grid and reduce reliance on fossil fuel burning.

At Aon, we have been supporting our clients to examine the solutions available - and increased activity in this area is driving asset managers to take action and innovate for addressing biodiversity risks and opportunities.



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BIODIVERSITY: WHY INVESTORS SHOULD CARE

For too long, businesses and investors have ignored the threat biodiversity loss presents to human prosperity and growth.

The past 30 years have seen a bigger improvement in human prosperity than all of the past centuries combined. We have built more roads, buildings and machines than ever before. More people are living longer and healthier lives and access to education has never been better.

However, such progress has come at a great cost. As humanity has thrived, nature has suffered. Humans are driving animal and plant species to extinction and destroying their habitats to feed an ever-increasing population.

As a steward of global capital, the financial industry is uniquely positioned to help build an economy that works with, rather than against, nature. It can facilitate a nature-positive transition, by transforming the way it allocates capital and developing new models to price biodiversity risks and opportunities more accurately. The finance industry must add its heft to the global effort to reduce the damage, while also enhancing nature's recovery.

All of this explains why Pictet Asset Management has become a founding partner in a new four-year global research programme geared to helping the financial industry develop strategies to protect natural capital and halt biodiversity loss.

The Finance to Revive Biodiversity (FinBio) programme, which will be overseen by the Stockholm Resilience Centre at the University of Stockholm, aims to develop valuable research that should help the finance industry transform current practices – which reward growth at the expense of biodiversity – to a new model which accurately captures – and attaches an economic value to – the nature-positive quality of a business.

Funded by the Swedish Foundation for Strategic Environmental Research (Mistra), the programme will break new ground by bringing together a diverse consortium of academic researchers that rarely interact, as well as financial-sector partners. The consortium has set itself ambitious targets.

The first task is to translate biodiversity and natural capital data into metrics that asset managers and asset owners can understand and use.

The second objective is to establish a financial framework that will facilitate the development of a new class of nature-aligned securities, capital that can be harnessed to achieve biodiversity goals and build a genuinely sustainable economy.

The financial industry - banks, asset managers and asset owners - has for too long ignored the threat biodiversity loss presents to human prosperity and growth. It must now acknowledge the crucial role it has to play in repairing the biosphere and placing the economy on a more sustainable footing.

Biodiversity finance

Even if businesses and investors advance their understanding of how they impact and are impacted by biodiversity loss, such efforts will come to nothing without an accompanying revolution in biodiversity-related capital.

There have been high-profile launches of funds investing in companies specialised in biodiversity restoration and ecosystem services in the past couple of years, with nine out of 11 such funds having debuted since 2020.

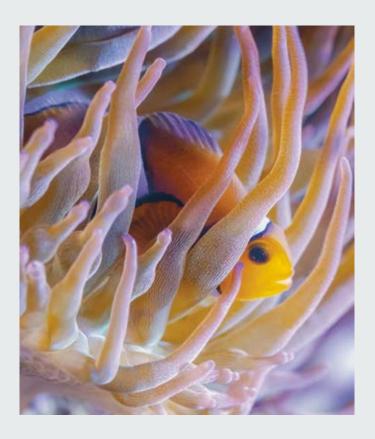
Funds investing in biodiversity and natural capital aim to help embed more sustainable and regenerative business practices across a whole value chain, involving industries such as agriculture, forestry, IT, fishery, materials, real estate, consumer discretionary and staples, utilities and pharmaceuticals.

Conclusion: designing a nature-positive financial system

For more than 10,000 years, human prosperity has centred on the drawing down of natural capital – the world's stock of food, clean air, water and fertile soil. But in recent decades, those resources have been used at a faster rate than they can be replenished.

This unsustainable approach to economic development has had a devastating effect on ecosystems. Encouragingly, momentum is building among policymakers and regulators to establish a new, legally binding global accord to reduce biodiversity loss.

Attempts by governments and regulators to measure - and attach a value to - nature's contribution to the economy represents considerable progress. But policymakers cannot turn the



tide on their own. The corporate and financial sector must also do more to place the world on a path to sustainable growth.

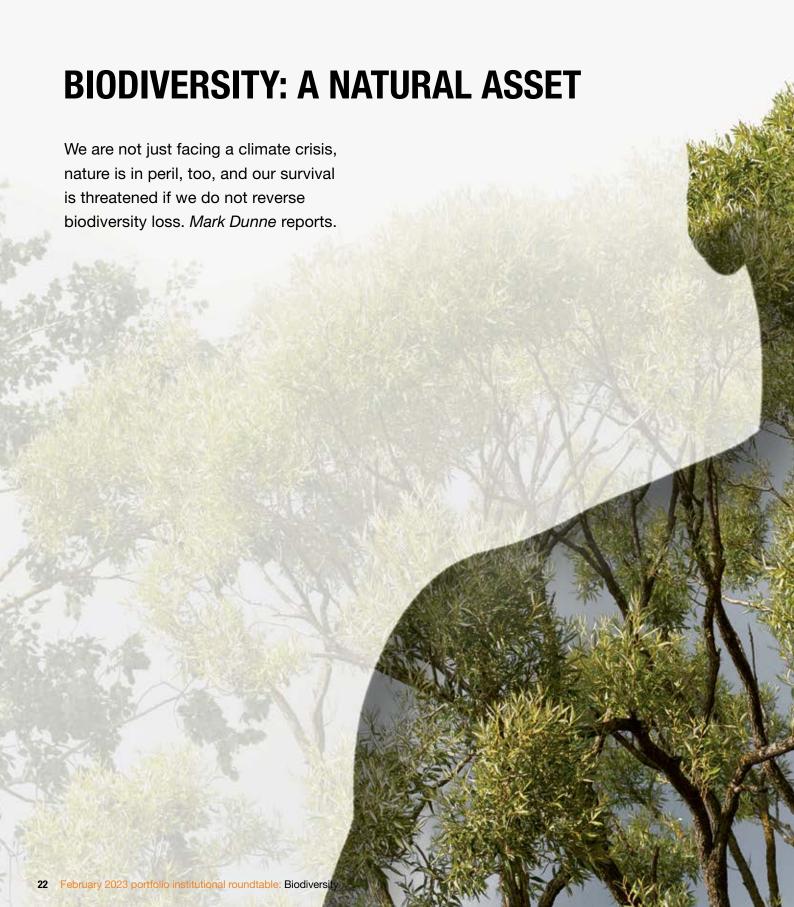
To begin with, businesses and investors require a clearer understanding of the risks biodiversity degradation presents to their bottom line and portfolios. The threats are not just physical. They are regulatory, legal and reputational as well.

Yet the financial industry and the investment community can also make a bigger contribution to help restore what has been lost. By developing a thriving natural capital market, investors can help shift capital flows away from businesses and projects that degrade the natural environment and towards regenerative initiatives.

Nature has always been the economy's most important asset. It is time the finance industry recognised that.



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What is the point of wasps? They appear to be nothing but an irritant. They can make it almost impossible to enjoy an ice cream on a sunny day and they have a sting. But there is more to them than this.

When they are not bothering you, when you do not notice them, they are playing an important role in sustaining life on

They are pollinators who make it possible for plants and crops to grow. They also eat the pests that damage our crops. Without wasps and bees there would be less food in the world.

Wasps are insects and insects, along with other animals, plants, fungi and microbes, make up the natural world, and are collectively known as biodiversity. These species and organisms work together to support our lives by providing food, freshwater, clean air and medicines.

The problem is that, as we have developed the built environment, invented more efficient ways of traveling and with growing demand for energy and consumables, the impact on the natural world has been huge.

Cutting down trees, tarmacking green spaces, overfishing and pollution have been the main drivers of biodiversity loss, resulting in natural disasters, a lack of freshwater, rising instances of disease and soil which you cannot grow crops on. Our support system is no longer supporting us in the way that it should.

The depth of the issue is highlighted in a report by the World Wide Fund for Nature (WWF) and the Zoological Society of London. It found that the world's wildlife populations shrank by 69% between 1970 and 2018. Freshwater species have seen the greatest overall global decline during the period at 83%, the report says.

Hand in hand

Cutting greenhouse gas emissions from portfolios is a popular policy for institutional investors. It dominates their responsible investing priorities. However, this is changing. Biodiversity is coming more into decisions about protecting the environment as investors are realising that we cannot address global warming, in isolation. Tackling biodiversity loss is part of the solution.

A changing climate threatens the natural world, while biodiversity loss exacerbates climate change by reducing the ability of ecosystems to remove carbon from the atmosphere. It is becoming clear to asset owners that there is more to the environment than climate change.

"For the past few years, greenhouse gas emissions have been the focus, but biodiversity and deforestation are increasingly coming to the fore," says Amelia Tan, Legal & General Investment Management's head of responsible investing strategy.

A deeper look

It appears that biodiversity's time has come. "At some point, we

have to stop saying this issue is on the horizon and get into the nitty gritty," says Therese Niklasson, head of sustainable investment at Newton Investment Management.

"I have picked up on more practical work coming into the market around frameworks and applications for how to think about biodiversity. That should take us forward.

"If we feel that climate change is tricky, this is another beast, but it is important," Niklasson adds.

The move to start tackling this beast could be the result of investors examining environmental, social and governance (ESG) factors in a greater level of detail. Hannah Skeates, cohead of sustainable investing at Allspring Global Investments, believes that "in the detail" is a phrase we could hear regularly when discussing ESG in 2023.

"There is a lot we are aware of from a sustainability perspective, but we are getting more sophisticated, more into the detail about what it means, what the implications are and for whom," Skeates says.

Thinking about the issues affecting nature and biodiversity, such as water, deforestation and agriculture, in detail means considering the impact by location, an economy's dependency on nature and how to supply more information to investors.

"We have seen the climate-related impacts from water shortages and the link to a society's ability to produce food. Nature provides solutions to climate in tandem with the shift to a net-zero economy as well as supporting our everyday lives," Skeates says. "2023 is likely to bring a much wider investment industry understanding of the scale of the dependencies and impacts on nature, and its importance to us," she adds. "We will have more detailed discussions around how sustainable investment relates to natural assets across the realms of freshwater, marine, land and atmosphere."

This means mapping pollution and the degradation effects as well as looking at the physical climate risks locally.

"Practically speaking, that means understanding deforestation in a different level of detail, or what actions are occurring in biodiverse-sensitive areas, and what transforming those interactions looks like as a part of these wider industry transformations," Skeates says.

"We are going to get to a different level of understanding around how finance can link to conservation and appropriate restoration efforts," she adds. "So, taking more holistic approaches in how to think about the potential investment connections to restoration."

Many issues, one theme

The opportunities and risks linked to biodiversity come in many forms. Indeed, Caroline Ramscar, head of sustainable solutions at Legal & General Investment Management, is seeing interest from investors in tackling water pollution.

"It is an extension of biodiversity: an emerging theme in the past couple of years that has become much more pointed in 2023," she says. "Biodiversity, deforestation and water pollution are areas that clients are now focusing on and asking us what we are doing to improve things.

"What is interesting is that the market has been talking about anti-microbial resistance for quite a long time, often under the S considerations," Ramscar says. "Linking the S and the E in the food chain and in water pollution has been an interesting development.

"It is a nuanced discussion, but people want to know what we are doing with water companies on pollution and how those companies monitor and treat these issues," she adds. "This is about the results of engagement being more tangible."

It's good to talk

Ramscar's colleague Amelia Tan says they are working on tangible metrics because the sustainable industry is maturing and investors want to see results. "We have always talked about our stewardship activities but what people want to know more about are the outcomes of those engagements. In many ways, our clients expect us to better articulate that on an aggregated basis, within their portfolio holdings.

"It is a measure of success, but it is also the measure of the companies who have not responded. So what is the consequence of that non-response? This will be the overarching theme," Tan says.

For Niklasson, agriculture and food are areas Newton will continue to focus on. "The inflation situation, and the Russia-Ukraine situation, are putting pressure on the food system. That will definitely continue this year," she says.

Beating the drum

One asset manager who has been "beating the drum" to get more attention on biodiversity is BNP Paribas Asset Management. For Pieter Oyens, who is the asset manager's co-head of global product strategy, the hard work is paying off.

"This year will be progressively more about the critical role biodiversity and natural capital plays," he says. "Agriculture and forestry are going to be a far hotter debate, because people will understand that continuing high-intensity agriculture is simply not a solution. You have to change," he says.

Peter Mennie, chief sustainable investment officer for public markets at Manulife Investment Management, describes biodiversity as an existential challenge, just like climate change.

"It is important that people realise that nature is a crucial part of our economy. The goods and services nature provides are critical. "We have to act to address biodiversity loss in the same way that people are getting together to act on climate change," he adds. For Sandra Carlisle, head of sustainability at Jupiter Asset Management, it is not about wanting to focus on biodiversity...it is a must.

"We will see more focus on nature and nature-positive solutions this year," she says. "50% of global GDP is linked to nature. Due to our demand on nature, we are depleting it faster than it can regenerate itself. That is not sustainable in the long term, so we have to find innovative ways of protecting it."

Carlisle expects to see more innovative companies next year which will work to make the world more sustainable. "Our Ecology Fund is looking at lab-based meat, for example, because the population will continue to grow.

"Land is being stressed by water challenges, but also climate change. If you get more floods and encroaching on land, we are going to have to feed more people on less land and find different ways to do it.

"There will be opportunities in innovative new companies that emerge to solve these issues," she adds.

New policy

The good news here is that it is not just investors who are working to protect the ecosystem. In December, at the United Nations Biodiversity Conference, popularly known as COP15, in Montreal, Canada, governments announced a landmark agreement to protect the natural world.

The bid to halt species extinction and maintain genetic diversity includes targets for safeguarding rainforests and wetlands.

"It is truly a moment that will mark history as Paris did for climate," Steven Guilbeault, Canada's minister for the environment and climate change, was quoted at the time.

So, governments will now be making safeguarding biodiversity a policy alongside net zero. Another initiative is on the horizon. The Taskforce on Nature-related Financial Disclosures (TNFD) will be a framework that allows pension schemes and other institutional investors to include nature risks into their investment decisions. It is modelled on the Task Force on Climate-related Financial Disclosures (TCFD).

Such interest from governments and regulators is matched by growing investor interest. Indeed, assets managed by the 11 funds focused on biodiversity restoration and ecosystem services have more than doubled to \$1.3bn (£1bn) from \$525m (£426.8m) in the past two years, according to Broadridge and Pictet Asset Management.

With the annual funding gap to reverse the decline in biodiversity globally by 2030 put by the Paulson Institute at \$711bn (£578bn), such interest from investors, governments and those overseeing financial institutions is a great start, but it is clear that more is needed.

If the world is to achieve carbon neutrality by 2050, it will also have to reverse the damage to the natural world. We cannot achieve one without the other.

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